STRUCTURAL CASE ASSIGNMENT IN KOREAN

by

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ABSTRACT OF THE DISSERTATION

Structural Case Assignment in Korean

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In this dissertation, I aim to provide a theory on the distribution of structural Case in Korean. I propose the following Structural Case Assignment Hypothesis (SCAH) regarding the assignment of structural Case: "Structural Case is assigned by phase heads (C: nominative; v: accusative) to every argument in the c-command domain of the phase head at the completion of each strong phase." Based on this hypothesis, I provide an analysis on the distribution of structural Case in the following three constructions in Korean: passive constructions, Double Nominative Constructions and the ECM construction.

There are several notable properties in the above constructions. First, in the passive construction of the DOC, the theme argument is marked with nominative case, while it is marked with accusative case in English counterpart. Also in the Possessor Raising Construction (PRC), the second accusative DP can be marked with either nominative or accusative case in the passive construction of the PRC. I propose that this nominative-accusative alternation results from the different order in the application of Possessor Raising and A-movement. Secondly, with respect to the DNC, I show that there are two kinds of DNCs. In one type, the predicates are one-place intransitive predicates. In

the other type, the predicates are two-place psychological state verbs. Regarding the second type of DNC, I propose that the projection of the light verb which assigns accusative Case is dependent on the existence of an external argument. Lastly in the ECM construction, I show that the ECM construction has a finite embedded CP and places some semantic restriction on the embedded predicate. For the ECM construction, I propose that the embedded subject moves to [Spec, CP] and is assigned a [+Prominence] feature. Then, the embedded subject is assigned accusative Case at [Spec, CP] by the matrix v. Also by being assigned a [+Prominence] feature, the embedded subject requires the predicate to denote an inherent or permanent property of it.

To conclude, in this dissertation I consider the exceptional distribution of structural Case in various constructions in Korean and show that SCAH can successfully explain it.

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Chapter 1 Introduction

1.1 Overview of the issues

In this dissertation, I will examine the distribution of structural Case in Korean. There are several extraordinary properties with respect to the assignment of structural Case in various Korean constructions such as passive constructions, Double Nominative Constructions (DNCs) and ECM constructions. For example, Korean does allow multiple nominative marked arguments. Also Korean does not allow accusative case in the passive of the Double Object Construction, which contrasts with English. In the ECM construction, the ECMed subject is assigned accusative Case across a CP boundary, which is not common in other languages. Those uncommon properties among Korean constructions have posed many problems to previous syntactic theories so far. So in this dissertation, I aim to provide a well-organized theory that can explain those uncommon properties regarding the assignment of structural Case in Korean.

With respect to the notion of Case, generative grammar distinguishes two types of Case: morphological case and abstract Case. There can be three possible positions to take with respect to the relation between abstract Case and morphological case (a little modified from McFadden 2004:9):

(1) (A) Morphological case is the direct spell-out of abstract Case features.

(B) Morphological case is related to abstract Case features but can also be affected by other factors.

(C) Morphological case is determined without reference to abstract Case.

Among the three possible positions, the first position would be conceptually the most desirable one. But when we consider some cases like Icelandic in which quirky case-marked DPs are realized as the subject while nominative arguments appear in non-subject positions, taking the position would require a loosening of the connection between abstract Case and morphological case. That is because the morphologically quirky case-marked subjects are assumed to be assigned structural nominative Case abstractly (cf. Chomsky 2000), which breaks down the direct connection between the morphological and abstract Case.

McFadden (2004) takes the third position that morphological case is determined without reference to abstract Case. What he argues is that morphological case is largely determined by the structure that the syntax passes on to the morphological component. According to him, morphological case is a phenomenon of the post-Spell-Out PF branch of the derivation and it must be separate from whatever handles abstract Case within the pre-Spell-Out narrow syntax. [1]

In this dissertation, I take the first position and argue that structural Case is morphologically realized solely based on the abstract Case feature assigned in the narrow syntax. The abstract Case feature will be passed on to the morphological component later at Spell-Out. One of the arguments against the first position (1A) discussed by McFadden (2004) is that there exists a mismatch between abstract Case and grammatical relation.

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[1] In fact, McFadden (2004:277) proposes that there is no need for syntactic Case, i.e., DP-licensing. He proposes the following (syntactic) Case-less hypothesis:

(i) Nominal phrases do not require abstract licensing beyond what is needed for integration into the semantic interpretation.

If we adopt the hypothesis that there is no such thing as syntactic Case (i.e. abstract DP-licensing), the third position would be as conceptually attractive as the first one.

According to Chomsky (2000), Icelandic quirky Case-marked subject is assigned abstract nominative Case in addition to its morphological quirky Case. McFadden (2004) also follows the position and argues that the existence of such quirky Case-marked subjects make the first position (1A) less attractive.

However I argue that morphological case is the direct realization of an abstract Case feature assigned in the narrow syntax. In Chomsky (2000), the quirky case-marked subject should be assigned abstract nominative Case by T, otherwise the uninterpretable ϕ-features of the probe T would not be deleted, resulting in the crash of the derivation. But in this dissertation, I argue that functional categories like T and *v* are not defective in itself. So there is no need to assume that the quirky case-marked subject must be assigned abstract nominative case in addition to its quirky morphological case. Then McFadden's (2004) argument against the first position (1A) does not pose a problem in my theory.

1.2 Issues in the distribution of structural Case in Korean

In this section, I briefly introduce several issues surrounding the distributions of structural Case in Korean. The first issue that I will consider is concerned with Korean passive constructions. O'Grady (1991:47) notes that Korean exhibits two types of passive structures: a lexically restricted 'morphological' passive formed with the suffix *-i-* (*-li* after [l]; *-ki* after nasals, [kk] and [s]; and *-hi* after other fricatives and stops) and a more productive 'compound (or analytic) passive' formed with a passive auxiliary verb *-ci-* 'get/become' (preceded by the 'infinitive marker *-a/e*). The two types of passive constructions show different properties with respect to the distribution of nominative and

accusative Case as is shown in the following examples:[2]

(2) a. Nay-ka John-ul chayk-ul cwu-ess-ta.
I-N John-A book-A give-PST-DEC
'I gave John a book.'

b. John-i chayk-i/*ul cwue-**ci**-ess-ta.
John-N book-N/*A give-**CI**-PST-DEC
'John was given a book.'

(3) a. John-i Mary-lul son-ul cap-ass-ta.
John-N Mary-A hand-A catch-PST-DEC
'John caught Mary by the hand.'

b. Mary-ka son-i/*ul capa-**ci**-ess-ta.
Mary-N hand-N/A catch-**CI**-PST-DEC
'It is Mary, whose hand came to be caught.'

c. Mary-ka son-i/ul cap-**hi**-ess-ta.
Mary-N hand-N/A catch-**PSV**-PST-DEC
'It is Mary, whose hand was caught.'

It seems that (2a) and (3a) are similar in its appearance in that there are two accusative arguments. But they have different syntactic/semantic properties. While (2a) is a typical Double Object Construction which takes two independent objects, the verb *cap* 'catch' in (3a) is not a ditransitive verb, but a simple transitive verb. In fact the two accusative arguments in (3a) hold a close semantic relationship of body-part. Also while (2a) allows

[2] The following abbreviations will be used in the glosses throughout the dissertation:
1, 2, 3 (first, second, third person), A(ccusative), AGR(eement), AUX(iliary), C(omplementizer), D(ative), DEC(larative), FEM(inine), G(enitive), H(onorific), INF(initive), MASC(uline), NEUT(ral), NML (Nominalizer), N(ominative), PERF(ective), PL (plural), PROG(ressive), PRON (pronoun), PST (past), PSV (passive), PTC (participle), REFL(exive), SG (singular), SH (Subject Honorific), T(opic), Q(uestion particle),

only the *ci*-type passive construction, (3a) allows both *ci*- and *i*-type passive constructions. In the *ci*-type passive constructions, that is to say (2b) and (3b), both arguments are assigned nominative case. But in the *i*-type passive construction (3c), the second argument *son* 'hand' can be marked with either nominative or accusative case.[3]

The distribution of nominative case shown in (2b) is especially noteworthy when we consider the following corresponding English ditransitive construction (4a&b):

(4) a. God gave me her (in marriage).
b. I was given her (in marriage).

In (4b), the accusative case on the theme argument *her* is retained in the passive construction. This contrasts with the corresponding Korean passive construction (2b) in which the accusative case of the theme argument *son* 'hand' is lost. The distribution of accusative case in (4b) seems to be similar to the example (3c) in which accusative is retained in the passive. But it should be noted that the two accusative arguments in (4a) are independent objects, while the two accusative arguments in (3a) are not. Also even the distribution of structural Case in the example (3c) is not the same as the English passive construction (4b) in that the example (3c) allows either nominative or accusative case on the theme argument. These issues will be discussed in more detail in Chapter 3.

The second issue that I will consider is the so-called Double Nominative Constructions (DNCs):

[3] The *i*-type passive construction is lexically restricted to a certain type of verbs. But the *ci*-type passive construction is very productive, so it is available to almost all the verbs in Korean, even to verbs that are compatible with *i*-type passivization. For example, in (2b), the ditransitive verb *cwu* 'give' cannot be combined with the lexically restricted passive morpheme *-i*. But in (3c) the verb *cap* 'catch' can be combined with both *ci*- and *i*-passive morphemes.

(5) Swuni-ka emeni-ka/*lul yeppu-ta.[4]
Swuni-N mother-N/A beautiful-DEC
It is Swuni whose mother is beautiful.'

(6) Swuni-ka Minho-ka/*lul coh-ta.
Swuni-N Minho-N/A like-DEC
'Swuni likes Minho.'

In the above DNCs, both DPs in each example are assigned nominative case. However, the two examples (5) and (6) have different internal structures. In the first type of DNC (5), the first nominative DP *Swuni* holds a close semantic relationship of kinship to the second nominative DP *emeni* 'mother'. In fact, the two nominative DPs are in a relation like possessor-possessum. So the nominative case marker on the first DP *Swuni* in (5) can be substituted with the genitive marker *-uy*: [5]

(7) Swuni-**uy** emeni-ka yeppu-ta.
Swuni-**G** mother-N beautiful-DEC
'Swuni's mother is beautiful.'

[4] The status of a predicate like *yeppu-ta* 'be pretty' is controversial between adjective and verb. Kim, M-J (2002), argues that those adjective-like predicates are in fact [+stative] verbs. According to Kim, M-J (2002), Korean does not have a distinct and open class of adjective category. She provides several arguments in support of the claim. First, when the so-called adjectives are used predicatively, they occur by themselves without the copular verb *i* 'be'. Second, the so-called Korean adjectives can bear tense, aspect, and mood markings just like verbs. Lastly, they lack adnominal function. That is to say, they cannot modify nouns by themselves. They must be accompanied by a relative marker *-n* to modify a nominal. Based on these properties, Kim (2002) argues that those adjective-like predicates are not adjectives but verbs. In this dissertation, I follow her argument and assume that NPC predicates are [+stative] verbs.

[5] These alternations between nominative and genitive are apparently associated with subtle differences in meaning that are generally ignored in the syntactic literature (see O'Grady 1991). But, in this dissertation, I will show that the subtle differences may have some important meaning that should not be ignored.

But in the second type of DNC (6), the two nominative DPs do not hold such a close semantic relationship with each other. So the first nominative marker cannot be substituted with the genitive marker *-uy*:

(8) *Swuni-uy Minho-ka coh-ta.
Swuni-G Minho-N like-DEC
'(intended) Swuni likes Minho.'

One of the issues surrounding the first type of DNC (5) is whether the nominative case on the DPs is structural or not. If it is structural, then it needs to be explained how multiple (structural) nominative cases can be assigned in a single clause. On the other hand in the second type of DNC (6), the second nominative DP is more like an object as is shown in the translation. Then a question arises as to why the object-like argument is not assigned accusative case. These issues will be discussed in Chapter 4.

The last issue that I will consider is concerned with the ECM construction. Let us consider a typical example of Korean ECM construction:

(9) a. Tom-un Swuni-ka chencay-la-ko mit-nun-ta.
Tom-T Swuni-N genius-DEC-C believe-PRS-DEC
'Tom believes that Swuni is a genius.'
b. Tom-un Swuni-**lul** chencay-la-ko mit-nun-ta.
Tom-T Swuni-**A** genius-DEC-C believe-PRS-DEC
'Tom believes Swuni to be a genius.'

(9a) is a typical transitive construction with an embedded CP clause. But in (9b), the embedded subject is marked with accusative case, which is traditionally called an ECM construction. However, it is noteworthy that the complementizer *ko* is present even in the

ECM construction (9b). This means that the embedded clause in Korean ECM construction is a CP rather than an IP.

In English ECM construction, it has been a standard assumption that accusative Case is assigned to the embedded subject by the matrix verb across an embedded IP. If the embedded clause is a CP rather than an IP, it would be impossible for the matrix verb to assign accusative Case to the embedded subject, since CP is considered to be a barrier to structural Case assignment. So in this construction, it will be crucial how to explain the assignment of accusative case across a CP boundary. This issue will be discussed in more detail in Chapter 5.

1.3 A brief history of Case theory

In this section, I briefly review a few theories that have been proposed to explain the distribution of structural Case within two main frameworks, that is to say, the Government and Binding theory and the Minimalist theory.

1.3.1 Case theories in the GB era

Standard Case theory in the GB era distinguishes abstract Case from morphological case. Abstract Case is part of universal grammar, but the degree of morphological realization of abstract Case varies parametrically from one language to another. Abstract Case can be divided into two types, structural and non-structural. Typical examples of structural Case are Nominative, Accusative and Genitive Case. On the other hand, non-structural Case can be subdivided into lexical and inherent Case.[6]

[6] In this dissertation, my primary concern is about the assignment of structural Case. However, for more discussions of non-structural Case, refer to Zaenen, Maling, and Thráinsson 1985, Yip, Maling, and

With respect to abstract Case, including both structural and non-structural Case, it has been thought as a syntactic licensing condition on DP arguments, realized as the Case Filter:

(10) The Case Filter
*NP if NP has phonetic content and has no Case (Chomsky 1981, 49)

The apparent effect of the Case Filter is to rule out clauses with overt DPs in a position where abstract Case is not assigned. However, the Case Filter can also trigger DP-movement from a non-Case position to a position to which structural Case can be assigned. In fact abstract Case has been seen as one of the driving forces for movement in a variety of constructions such as passive, raising, and unaccusative constructions.

There have been several approaches to the distribution of structural Case in the GB era. In one approach, structural Case is assigned under Government. That is to say, accusative Case is assigned to objects by transitive verbs or prepositions under Government and nominative Case is assigned to subjects by finite Infl under Government. Since Government is a notion based on structural hierarchy, the structural positions of Case assigners and Case assignees are important in this theory.

In another approach, subject DPs are assigned nominative Case through Spec-head agreement (see Koopman 1987, Kayne 1989, Mahajan 1990, and Chomsky 1995 among others). Chomsky (1995) extended the Spec-head analysis, which was proposed for the assignment of nominative Case to the subjects, to the assignment of accusative Case to the objects. In this approach, Chomsky argues that T raises to Agr_S forming [$_{AgrS}$ T Agr_S] and

Jackendoff 1987, Holmberg and Platzack 1995, Maling 2002, Jónsson 2003, and Woolford 2006 among many others.

V raises to Agr_O forming [$_{AgrO}$ V Agr_O]. In this theory, structural nominative Case is assigned to the DP that raises to the Spec of the complex [$_{AgrS}$ T Agr_S] and structural accusative Case is assigned to the DP that raises to the Spec of the complex [$_{AgrO}$ V Agr_O] either overtly or covertly. To conclude, this Spec-head account is also based on the structural position of a DP.

The last theory to consider in the GB era is Burzio's Generalization (BG, Burzio 1986:185):

(11) Burzio's Generalization
$\theta_s \leftrightarrow A$

The BG states that all and only the verbs that can assign a θ-role to the subject can assign accusative Case to an object (Burzio 1986:178) and vice versa.[7] In this theory, the assignment of structural accusative Case is related to the assignment of a θ-role to the subject. But, BG has been criticized both empirically and conceptually. For example, it is a questional assumption that the assignment of accusative Case to an object is affected by the assignment of a theta role to the subject that will be performed later in the derivation.[8]

1.3.2 Case theory in the Minimalist Theory

In the early era of Minimalism (Chomsky 1995), abstract Case is treated as a feature on DPs. The Case feature must be checked by a functional head rather than being assigned by

[7] In some literatures, the terms 'subject θ-role', 'external argument' and 'external θ-role' are used interchangeably (e.g. Haegeman (1994) and McFadden (2004)). But I distinguish 'subject' from 'external argument', since the term 'subject' is a notion representing grammatical relation, but 'external argument' is a term representing 'thematic structure' (see Williams (1981) and Grimshaw (1990) and references cited there for more discussions on external argument).

[8] See Haider (2000) and Reuland (2000) for more discussions on conceptual problems of BG.

such a functional head. Depending on the strength of the Case feature, the timing of feature checking is determined. If the feature on a functional head is strong, the checking must occur before Spell-Out, overriding the Procrastinate principle which prefers covert movement.

In the more recent framework of Minimalism (Chomsky 2000, 2001), structural Case is manifested as an ancillary operation of Agree. Agree is an operation that erases the uninterpretable features of probe and goal. When the uninterpretable ϕ-features of a probe match the interpretable ϕ-features of a goal, Agree is set up between the goal and the probe. When the uninterpretable ϕ-features of the probe delete, the goal DP is assigned structural Case as an ancillary operation of the Agree. In this framework, the manifestation of structural Case depends on the interpretable features of the probe. If a goal is in Agree with finite T, it is assigned nominative Case. On the other hand if a goal is in Agree with a light verb *v*, it is assigned accusative Case.

1.4 The proposal

With respect to the assignment of structural Case, I propose the following Structural Case Assignment Hypothesis (SCAH).[9]

(12) Structural Case Assignment Hypothesis (SCAH)
Structural Case is assigned by phase heads (C→nominative/*v*→accusative) to every argument in the c-command domain of the phase head at the completion of each strong phase (C and *v**[10]).

[9] I intend SCAH to be a general principle that applies to multiple languages in the end. However, I leave the project of examining SCAH with respect to various languages for future research.
[10] *v** is a light verb that introduces a verbal phrase with full argument structure (Chomsky (2001:fn.8)). *v**P is distinguished from *v*P in that the latter lacks an external argument (Chomsky (2001:12)).

There are several important points to note with respect to SCAH. First, SCAH states that structural Case is assigned at the completion of each strong phase. In the Minimalist Theory (Chomsky 2001), Chomsky distinguishes between a strong phase and a weak phase. The distinction is crucial in this theory. In the Minimalist framework, there are two strong phases in a simple transitive clause, that is to say *v**P and CP. Since structural Case assignment takes place at the completion of each strong phase, it takes place twice, that is to say *v**P and CP phase. But in the passive construction of a simple transitive construction, there is only one strong phase (CP) and one weak phase (*v*P). So structural Case assignment takes place just once at the completion of the final CP phase

There is an important thing to note concerning a structural Case assigner in the passive construction. In the Minimalist framework (Chomsky 2001), the light verb *v* does not form a strong phase in the passive, since it fails to form a full argument structure, lacking external argument. Along with the distinction, Chomsky (2001) argues that the light verb *v* in the passive cannot assign accusative Case. But in this dissertation, I argue that even the light verb *v* in the passive construction can assign accusative Case, although it cannot form a strong phase.

The second point to note is that structural Case is assigned by phase heads like C and *v*.[11] SCAH states that C assigns nominative Case and *v* assigns accusative Case to the arguments in their domains. The argument differs from the Minimalist assumption that structural Case is manifested by functional heads like T and *v* via Agree. In the Minimalist framework, T manifests nominative Case and *v* manifests accusative Case.

[11] In fact, I argue that structural nominative Case is assigned by a phase head C in conjunction with T. This issue will be discussed in more detail in Chapter 2.

The last point to note concerning SCAH is that structural Case assigners can assign structural Case to multiple arguments in their domains. This argument is especially important in explaining the distribution of multiple nominative/accusative cases in languages like Korean and Japanese. However, the argument that structural Case assigners can assign structural Case multiple times may seem to be too strong for languages like English, which does not seem to have multiple nominative or accusative constructions. But, I will show that SCAH is not too strong for languages that do not allow multiple nominative/accusative cases. [12]

1.5 Organization

In Chapter 2 I will present arguments to support the SCAH. First I will present evidence that Case assignment is independent of ϕ-feature checking, which is contrary to the Minimalist claim that Case assignment is dependent on the ϕ-feature checking of probe and goal. Also I will present evidence that probes are not defective by themselves. This argument is also against the Minimalist assumption that probes have uninterpretable ϕ-features and must be deleted by a goal with interpretable ϕ-features. If the uninterpretable ϕ-features are not deleted, the derivation crashes. But in this dissertation I will show that probes are not defective by themselves, contrary to the Minimalist assumption. Lastly, I will argue that structural Case can be assigned multiple times by a structural Case assigner.

[12] In fact, English does have double object construction in which an indirect object and a direct object are assigned accusative case. Although it is controversial whether the accusative case is structural or not, English double object construction allows two accusative case-marked arguments. In this dissertation, I will show that even English double object construction benefits from the discussions developed for the languages which have multiple nominative/accusative constructions.

In Chapter 3, I will consider the distribution of structural Case in the passive constructions of Korean. I will present two types of double accusative constructions and consider the distribution of structural Case in each passive construction. Especially I will focus on the different types of passive constructions, that is to say the *ci*-type and the *i*-type passive constructions. With respect to the so-called *ci*-type passive construction, I will argue that *ci* is not a passive morpheme contrary to the traditional assumption. Instead, I argue that *ci* can be used as an unaccusative auxiliary verb when it is combined with a transitive verb. Also with respect to the *i*-type passive construction, I show that it allows either accusative or nominative case on the remaining theme argument of the double accusative construction. With respect to the property, I will show that SCAH can naturally explain the distribution of structural Case in these passive constructions.

In Chapter 4, I will consider the Double Nominative Constructions (DNCs) in Korean. In this chapter, I will show that there are two types of DNCs and each type of DNC has a different internal structure, hence must receive a different analysis. In one type of DNC, I will show that the predicates are in fact one-place predicates although there are two nominative-marked arguments. In the other type of DNC, the predicates are two-place predicates. In the first type of DNC, accusative case cannot be available, since the predicates are intransitive. But in the second type of DNC, it should be explained why accusative is not available when the predicates are two-place predicates. I will argue that the predicates do not project an external argument in this type of DNC, although they are two-place predicates. In fact, I argue that they project two internal arguments. Hence they do not project a light verb that assigns accusative Case. If a light verb *v* is not present, accusative Case is not available according to SCAH.

In Chapter 5, I will consider the ECM construction in Korean. Some non-canonical properties of Korean ECM construction will be discussed in this chapter. With respect to the ECM construction, I will argue that the embedded subject moves to [Spec, CP] of the embedded CP and is assigned accusative Case by the matrix *v*. Extending Chomsky's (2001) analysis of Object Shift to Korean ECM constructions, I will also argue that when an argument is placed in a specific position in a configuration, a specific interpretation is assigned to the argument. A sentence crashes when the interpretation is not compatible with the argument. This assumption will explain why the ECMed argument requires specific type of predication in Korean ECM construction.

In Chapter 6, I review previous theories on the assignment of structural Case. I review theories in GB framework and Minimalist framework and apply them to some problematic Korean constructions such as Double Nominative Constructions, the passive constructions of Double Object Construction and the ECM construction. Considering the previous theories with respect to problematic Korean data, I show that they have serious empirical problems in explaining Korean data.

In Chapter 7, I present some remaining issues and summarize major arguments of this dissertation. I consider some issues regarding case-marked adverbs and case-stacking phenomena in Korean. I propose that the case on such adverbs is not structural, since the appearance of case has much to do with the animacy/inanimacy of the subject and stativity/instativity of the verb. Also I consider a way of explaining case-stacking under my theory. I propose that DPs may have two types of abstract Case features, one for inherent Case and the other for structural Case. In Icelandic, it is prohibited to have both abstract Case features assigned a value, while it is possible in Korean. In this way, the case

alternation shown in Dative Subject Construction may be explained in Korean.

Chapter 2 Theoretical Issues

In this chapter, I will consider theoretical issues concerning the SCAH proposed in Chapter 1, repeated below as (1):

(1) Structural Case Assignment Hypothesis (SCAH)

Structural Case is assigned by phase heads (C→nominative/*v*→accusative) to every argument in the c-command domain of the phase head at the completion of each strong phase (CP and *v**P).

In the following sections, I will discuss three major issues regarding the SCAH. The discussion will challenge some fundamental assumptions of the Minimalist Theory (Chomsky 2000, 2001).

2.1 The separation of structural Case and ϕ-feature agreement

In GB and Minimalist framework, it has been argued that structural Case assignment and ϕ-feature agreement are closely related to each other. For example, according to a GB theory, nominative Case is assigned to the subject by Infl under government. Along with the Case assignment, the subject agrees with Infl and triggers subject agreement. Hence Infl is responsible for both nominative Case assignment and subject agreement in this theory.

The relationship between Case and agreement is even closer in the Minimalist framework (Chomsky 2000 & 2001). In the Minimalist framework, T's ϕ-features set up Agree with a goal and structural nominative Case is manifested on the goal as an ancillary operation of Agree. That is to say, structural nominative Case assignment depends on the

Agree between the ϕ-features of T and the goal argument in the Minimalist theory. Structural accusative Case is also assigned as an ancillary operation of the Agree between a light verb *v* and a goal.

But SCAH states that structural Case is assigned to arguments by phase heads without referring to the ϕ-features of the arguments. That is to say, nominative Case is assigned to arguments by a complementizer C and accusative Case is assigned by a light verb *v*. With respect to the timing of structural Case assignment, SCAH states that structural Case is assigned at the completion of each strong phase.[1] Strong phase is a level that Spell-Out takes place (Chomsky 2001:18). Spell-Out is an operation that removes LF-uninterpretable material from a syntactic object and transfers it to the phonological component. So I argue that structural Case is morphologically realized on DPs along with Spell-Out. In following sections, I will provide some empirical and conceptual evidence supporting the argument.

2.1.1 Korean/Japanese Dative Subject Constructions (DSCs)

In this section, I consider Ura's (2000:103) argument that T's ϕ-feature checking may be executed independently of T's nominative Case checking. His argument is based on the subject honorification property of Korean and Japanese Dative Subject Constructions (DSCs). In Korean, only honorific arguments with subject function can induce the subject honorific marker *si* (O'Grady 1991:156-157):

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[1] The idea that the domain of structural Case assignment must be restricted to a phase is not novel. McFadden (2004) also proposes the following hypothesis of restricting the domain of Case assignment to a phase (McFadden 2004:204):

(i) Case Domain
The case domain for a DP is equal to the minimal phase in which it is contained.

Although he does not distinguish between the strong and the weak phase, the basic rationale for the proposal is similar to my idea in that Case assignment needs to be restricted to a phase.

(2) a. Kyoswu-nim-i haksayng-tul-ul ttayli-**si**-ess-ta.
professor-H-N student-PL-A beat up-**SH**-PST-DEC
'The professor beat up the students.'

b. Haksayng-tul-i kyoswu-nim-ul ttayli-(*si)-ess-ta.
student-PL-N professor-H-A beat up-(*SH)-PST-DEC
'The students beat up the professor.'

In (2a), the subject *kyoswu-nim* 'teacher-H' is honorific, so the honorific marker *si* is triggered. But in (2b), the subject honorific marker *si* is not possible, since the subject *haksayng-tul* 'students' is not honorific enough to trigger the subject honorific marker.

Now let us consider a dative subject construction in Korean.

(3) a. Sensayng-nim-eykey haksayng-i philyoha-**si**-ta.
teacher-H-D student-N need-SH-DEC
'The teacher needs students.'

b. *Haksayng-eykey Sensayng-nim-i philyoha-**si**-ta.
student-D teacher-H-N need-SH-DEC
'Students need a teacher.'

In the above example, the subject honorific marker *si* in (3a) must be triggered by the dative argument *sensayng-nim* 'teacher-H', not by the nominative argument *haksayng* 'student', since the latter is not deferential enough to trigger the subject honorific marker. This becomes more obvious in (3b) where neither the non-deferential argument with dative case *haksayng-eykey* 'student' nor the deferential argument with nominative case *sensayng-nim-i* 'teacher-H-N' can trigger the subject honorific marker *si*. So it must be the

deferential dative argument that triggers the subject honorification in (3a). This shows that the dative marked argument - NOT the nominative marked argument - is the subject in the DSC.

With respect to the subject honorification, Ura (1999), following Toribio (1990), argues that subject honorification is induced by spec-head agreement which is mediated by ϕ-features. Then the subject honorification observed in (3) must be the relation between the ϕ-features of the dative subject and that of T. Also if we adopt the general assumption of the GB theory that nominative case is assigned by Infl/T under Government, the lower argument *haksayng-i* 'students-N' in (3a) must be assigned nominative case by T. Combining these two facts, it can be concluded that T's nominative Case is assigned to the lower DP, while T's ϕ-feature checking is performed by the dative subject. This supports the claim that nominative Case assignment and ϕ-feature checking must be separated from each other.

2.1.2 Agreement in Icelandic

Another piece of evidence supporting the argument that structural Case assignment and ϕ-feature checking must be separated from each other comes from the intervention effect discussed in Chomsky (2000:130-131). Chomsky (2000) introduced the following Icelandic example to argue that only the head of an A-chain blocks matching under the closest c-command locality condition (Chomsky 2000:130):

(4) a. Mér þóttu [þær vera duglegar].
me(D) thought(3PL) they(N.PL) be industrious
'I thought they were industrious.' (Sigurðsson (1996))

b. ??Mér$_i$ virðast t_i Jóni líka hestarnir.
me(D) seems(PL) John(D) to-like horses(PL.N)
'It seems to me that John likes horses.' (a little modified from Schűtze (1997))

In (4a), the matrix T associated with the verb *þóttu* 'thought(pl)' agrees with the embedded nominative argument *þær* 'they(pl.nom)' with respect to number. But in (4b), the matrix T associated with the verb *virðast* 'seem(pl)' cannot agree with the embedded nominative argument *hestarnir* 'horses(pl.nom)' with respect to number. Chomsky argues that it is because the ϕ-features of *Jóni* 'John(D)' block the T-associate relation between *virðast* 'T-seem' and nominative *hestarnir* 'horses(PL.N)'.

However, Hiraiwa (2001) points out that (4b) becomes grammatical if a default singular agreement is realized instead as in (5) (Hiraiwa 2001:78):

(5) Mér virðist/***?**virðast Jóni líka hestarnir.
Me(D) seem(default)/*?seem(PL) John(D) to-like horses(N.PL)
'It seems to me that John likes horses.'

Then a question arises as to how the embedded argument *hestarnir* 'horses(N.PL)' is assigned nominative Case when there is an intervening argument *Jóni* 'John-(D) blocking the Agree between the matrix T and the goal *Jóni* 'John-(D). If structural nominative Case assignment is dependent on the ϕ-feature checking of a probe, the structural nominative Case feature of *hestarnir* 'horses' cannot be checked in (5) either, since the Agree between the probe T and the goal is blocked by the intervening argument *Jóni*, inducing Defective Intervention Constraint (DIC). But the sentence (5) is grammatical with the default case

marking contrary to the expectation. This can be explained if we assume that nominative Case assignment of the embedded argument *hestarnir* 'horses(N.PL)' is separated from the ϕ-feature checking of it.

2.1.3 Swahili Compound Tense Constructions

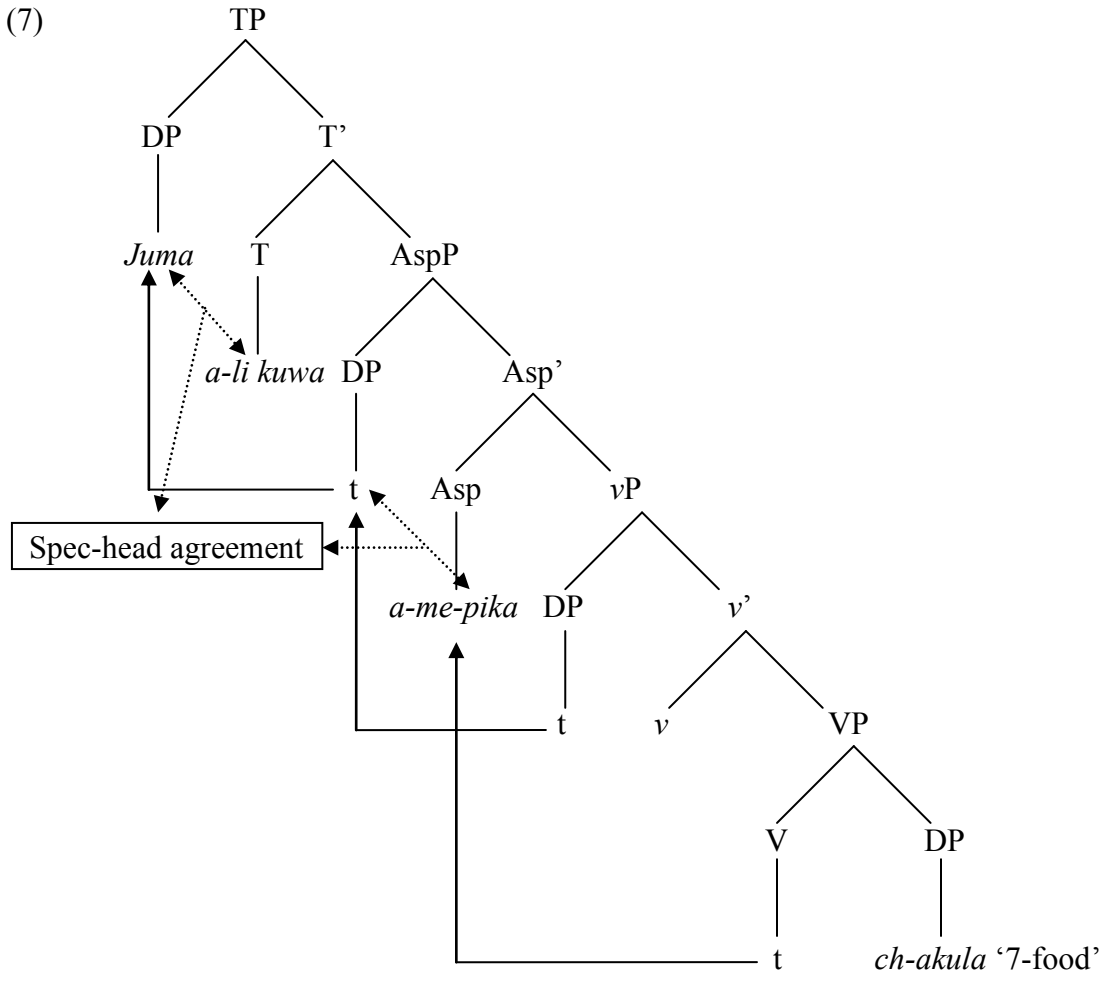
The last argument for the separation of Case assignment and ϕ-feature checking comes from the presence of multiple ϕ-complete agreements in the following Compound Tense Constructions (CTCs) in Swahili (Carstens 2001:150):

(6) a. Juma a-li-kuwa a-me-pika ch-akula
Juma 3SG-PST-be 3SG-PERF-cook 7-food
'Juma had cooked food.'

b. (Mimi) ni-li-kuwa ni-ngali ni-ki-fanya kazi
(1SG-PRON) 1SG-PST-be 1SG-still 1SG-PERF-do 9-work
'I was still working.'

In Swahili CTCs, tense morphology appears as an affix on the verb 'be', which also inflects for agreement with the surface subject and verbs with aspectual morphemes follow it, each agreeing with the subject. It is noteworthy that the ϕ-features within the CTCs are identical. That is to say, in (6a) the person and number feature on the verb *pika* 'cook' is *a* '3sg', which is the same as that on the auxiliary verb *kuwa* 'be'. The analyses given in Kinyalolo (1991), Carstens (2001) and Demuth & Gruber (1994) state that the subject DP undergoes successive cyclic A-movement into [Spec, TP], giving rise to multiple agreements on the verb *pika* and the auxiliary verb *kuwa*. The structure of (6a) is given in (7) (a little modified from Carsten (2001) and Collins (2004)).

(7)



Considering that the two verbs *pika* 'cook' and *kuwa* 'be' have the same ϕ-features, there are two agreement relations, one between *pika* 'cook' and the subject *Juma* and the other between *kuwa* 'be' and the subject *Juma*.

However in Minimalism (Chomsky 2000 & 2001), only one of the agreeing heads must be ϕ-complete and the other heads must be ϕ-incomplete for an argument to undergo successive cyclic movement. That is because if the agreeing head is ϕ-complete, then the Case feature of the goal argument will be checked off and no further movement will be possible

But in the above CTC, each agreeing head inflects for all available ϕ-features of the subject. That is to say, each agreeing head is ϕ-complete. So if Case assignment is dependent on Agree, the multiple agreements in the Swahili CTC are expected to result in multiple Case assignments. But the multiple agreements are performed only by the DP *Juma*. If the Case feature of *Juma* is checked off through Agree with the first agreeing head, the DP can no longer set up additional Agree with the next agreeing head, since its Case feature is already checked off. But in Swahili CTCs, both agreeing heads show agreement with the subject.

Thus the multiple agreement property of CTCs of Swahili challenges Chomsky's (2000, 2001) argument that Case assignment takes place as an ancillary operation of Agree. As long as we stick to the assumption that structural Case assignment depends on the ϕ-feature agreement, Swahili CTCs cannot be explained properly. This problem can be avoided if we assume that Case assignment and ϕ-feature checking are separate operations.

2.1.4 Summary

In the Government and Binding era, it was assumed that finite Infl assigns structural nominative Case to its subject under Government while verbs assign structural accusative Case to their objects. In this theory, Infl/T is responsible for both ϕ-feature agreement and Case assignment. On the other hand, in the framework of Minimalism, Chomsky (2000:123) argues that structural Case assignment takes place as an ancillary operation of Agree. The manifestation of structural Case depends on the interpretable features of the probes: finite T assigns nominative Case, the light verb *v* assigns accusative Case and control T assigns null Case.

However, in this section, I have argued that structural Case assignment must be separated from the agreement of ϕ-features. If the arguments are on the right track, the argument that Infl/T is responsible for both the ϕ-feature agreement and structural Case assignment should be abandoned. For structural Case assignment and ϕ-feature checking, I argue that the nominative Case of a subject is assigned by a complementizer C, which is the head of CP phase, while the ϕ-features of the subject agree with T.[2] With respect to the object, I argue that the accusative Case of the object is assigned by a light verb *v* and the ϕ-features of it are checked by a lexical category, that is to say verb.

This view has a conceptual advantage over the Minimalist argument that nominative Case is assigned by T but accusative Case is assigned by *v*. In Chomsky (2001), Chomsky argues that T must be construed as a substantive category rather than a functional one, while the light verb *v* is a functional one. If we adopt the Minimalist argument that nominative Case is manifested by T while accusative Case is manifested by *v*, then there raises a question why nominative Case is manifested by a substantive category while accusative Case is manifested by a functional one. By arguing that structural Case is assigned by phase heads, we can avoid such inconsistency, since it generalizes the assignment of structural Case to be uniformly performed by phase heads (C and *v*), which are functional categories.

[2] In Chomsky (2008), he proposes that T inherits the Agree and Tense-feature from C. In this respect, both Case and Agree of ϕ-features may be properties of phase heads C and *v*, which produces a more consistent result. This proposal is a lot similar to my proposal which will be discussed in the section 2.4.

2.2 Non-defectiveness of probe

In the Minimalist framework (Chomsky 2000, 2001), Agree is driven by the uninterpretable ϕ-features of the probe. Uninterpretable features must be deleted for legibility. Chomsky (2000:102) argues that all CFCs (Core Functional Category; probes) may have ϕ-features which are uninterpretable (obligatory for T and *v*).[3] Thus according to the Minimalist framework, probes are defective in themselves, since they obligatorily have uninterpretable ϕ-features which must be deleted via Agree. If the uninterpretable ϕ-features of the probe are not deleted, the derivation crashes.

But in this dissertation I argue against the claim that probes are defective in themselves. Instead I argue that clause do not become ungrammatical because of a probe with uninterpretable ϕ-features. To support the claim, I show that there are grammatical constructions even when the ϕ-features of a probe are not deleted.

2.2.1 Accusative case in passive constructions

One of the crucial assumptions of passivization in traditional GB theory is that it absorbs accusative case. But there are many languages in which accusative case is not absorbed in the passive construction, which suggests that accusative Case assigner may still be active in the passive construction. One of the most transparent cases that accusative case is available in the passive construction occurs in those languages which suppress the Agent

[3] However, in the earlier framework of Minimalism (Chomsky 1995), Chomsky (1995:231) argued that the ϕ-features and tense feature of T/verb are optional features, while the categorial and some ϕ-features of nouns are intrinsic. Optional features are added as LI enters the numeration. According to this view, it is plausible to assume that uninterpretable ϕ-features of probes may not be present when they are not necessary, which is to be supported in this dissertation.

but make no other alteration in the structure of the active clause, as in Ulcha, a variety of Manchu-Tungus (Yeon 2003:101; Foley and Van Valin 1984: p155):

(8) Ti du:se-we ho:n-da ta-wuri.
that tiger-A how-Q do-PSV
'What's to be done about that tiger?'

Although no agent appears in the Ulcha passive construction (8), the patient remains with the accusative case. In the above example, the agent is demoted, while the accusative case of the patient is intact. Similar passive constructions are found in Nanai, another Manchu Tungus language (Yeon 2003; Foley and Van Valin 1984), Finnish (Yeon 2003: Comrie 1977) and Ukrainian (Sobin 1985:649):

(9) Ej daNsa-wa tej erincie xola-o-xan bicin. (Nanai)
the book-A that time read-PSV-PST Aux (PST)
'The book had already been read by that time.'

(10) Hän-et jätettiin kotiin. (Finnish)
3SG-A was left at home
'He was left at home.'

(11) Stadion bulo zbudovano v 1948 roc'i. (Ukrainian)
stadium(A.MASC.) was-NEUT build-PSV-NEUT. in 1948
'The stadium was built in 1948'

According to the Minimalist framework (Chomsky 2000 & 2001), accusative Case assignment depends on the presence of a light verb *v*. The fact that accusative case is present in the passive construction leads to the hypothesis that the light verb *v* is still

present in the passive construction and retains the ability to assign accusative case even in the passive construction. So I argue that passivization only demotes the external argument of an active sentence (see. Perlmutter & Postal 1983 for a view that passive is a promotional phenomenon) and do not get rid of the ability of the light verb to assign accusative Case.

However, the proposal that there remains a light verb in the passive construction and it can assign accusative Case faces a problem in the Minimalist Theory. In the Minimalist Theory, accusative Case assignment depends on the Agree relation between a light verb *v* and the goal. If accusative case is present in the passive construction, then there must be a light verb with uninterpretable ϕ-features that can manifest accusative case on the argument. Also T with uninterpretable ϕ-features is obligatory for all tensed clauses. But in the above passive constructions ((8) ~ (11)), the external argument is demoted and only one argument is left, while there are still two probes with uninterpretable ϕ-features, that is to say T and *v*. Since only one of the probes can have its uninterpretable ϕ-features deleted, the other probe will be left with its ϕ-features undeleted and this would lead to the crash of the derivation in the Minimalist theory. But the above passive constructions (8) ~ (11) are grammatical with uninterpretable ϕ-features present. This supports my claim that probes are not defective in themselves.

2.2.2 Icelandic inherent case

The second argument for the non-defectiveness of the probe comes from Icelandic data. Let us consider the following Icelandic data from Marantz (1991:18).

(12) a. María óskaði (Ólafi) alls goðs.
Mary-N wished Olaf-D everything-G good-G

b. Þess vas óskað
this-G was wished

c. Henni var óskað Þess.
her-D was wished this-G

The above examples have a double object verb *óskaði* 'wished'. The goal argument is assigned dative case and the theme argument is assigned quirky genitive case. According to Chomsky (2000:127), every quirky Case-marked DP has a structural Case feature in addition to its theta-related inherent Case. Then the structural Case feature of *Henni* 'her-D' in (12c) must be deleted by T, while the structural Case feature of *Þess* 'this-G' must be deleted by another probe, that is to say the light verb *v*. Thus (12c) suggests that there must be two probes to set up Agree with the two arguments. But the ϕ-features of the same light verb *v* cannot be deleted in (12b), since there is no argument left to set up Agree with the light verb *v*. However (12b) is grammatical, although the uninterpretable ϕ-features of the light verb are not deleted. This also supports the hypothesis that probes are not defective in themselves.

2.2.3 Summary

So far, I have argued that probes are not defective in themselves. I have shown that even if the ϕ-features of a probe are not deleted via Agree, sentences can be grammatical. In this respect, I argue that what makes a sentence ungrammatical is not a mere presence of a probe with uninterpretable ϕ-features.

2.3 Multiple Case assignments

Under the Minimalist framework, structural Case is manifested as an ancillary operation accompanying Agree. In this theory, a probe can assign structural Case to only one DP, since once Agree is set up between a probe and a goal, the uninterpretable ϕ-features of the probe are valued and the probe can no longer set up Agree with another goal. But this argument has empirical problems in explaining the well known multiple nominative/accusative constructions in languages like Korean and Japanese. Let us consider the following examples:

(13) a. Swuni-ka emeni-ka yeppu-ta.
Swuni-N mother-N beautiful-DEC
'It is Swuni whose mother is beautiful.'

b. Nay-ka John-ul chayk-ul cwu-ess-ta.
I-N John-A book-A give-PST-DEC
'I gave John a book.'

In (13a), the predicate *yeppu-ta* 'be beautiful' is intransitive. So there is only one structural Case assigner, that is to say the finite T. However there are two nominative DPs whose case must be assigned by the case assigner. This suggests that the nominative case assigner can assign nominative Case to multiple DPs. On the other hand, there are two accusative marked DPs in (13b). I assume that there is only one light verb *v*, which is an accusative Case assigner. This also leads to the same assumption that the accusative Case assigner can assign accusative Case to multiple arguments.

Considering the distribution of structural Case in Korean, it is necessary to supplement the original version of the Minimalist Theory, making multiple case assignments possible in some ways.[4] In fact in the early stage of Minimalist Theory (Chomsky 1995:286), Chomsky proposed that [-Interpretable] feature is not necessarily erased when checked and deleted, as a parameterized property. If this parameter is exercised, the Case assigning feature of T and V may assign multiple nominative or accusative cases to multiple arguments.

However, instead of positing a parameterized property, I propose that phase heads can assign structural Case to every DP in their c-command domain as a universal principle. Along with the proposal that probes are not defective in themselves, I will show that this proposal can successfully explain problematic data in Korean and other languages.[5]

2.4 Structural Case assignment and Complementizers

According to SCAH, structural Case is assigned by phase heads to every argument in the c-command domain of the phase head. So every argument will be assigned structural Case, since every argument belongs to a phase and every phase heads a phase head. Hence no sentences will be ungrammatical due to the lack of abstract Case. For example, consider the following example from Haegeman (1994:166):

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[4] To deal with these multiple nominative/accusative constructions under the Minimalist framework, Hiraiwa (2001) proposes Multiple Agree theory. In the Multiple Agree theory, a single probe can set up Agree with multiple goals at the same time, assigning structural Case to multiple arguments. This will be dealt with in more detail in Chapter 6.

[5] In fact, the idea that a functional head can assign structural Case to multiple arguments is not novel. Bobaljik and Branigan (2006) also propose that a functional head can assign structural Case to multiple arguments. Although they propose that each argument is assigned different Case depending on the structural position, it is noteworthy that multiple arguments can be assigned Case by the same functional head. They argue that the ability of a single head to check distinct Case on multiple arguments is permitted by UG, but only as a marked option, when necessary for convergence.

(14) a. *[Him to attack Bill] would be illegal.

b. [That he should have attacked Bill] was surprising.

The ungrammaticality of (14a) has been explained by the Case Filter in the traditional GB Theory. In the traditional GB theory, the overt DP *him* in (14a) cannot have abstract Case, since there is no Case assigner. But according to SCAH, structural Case is assigned by a phase head. If we assume that there is a non-overt/overt phase head C in every clause, including the embedded clause in (14a), the overt DP *him* will be assigned structural Case by the non-overt phase head C in (14a).

With respect to the assignment of structural nominative Case, I argue that structural nominative Case is assigned by C in conjunction with T. For example, there are four overt complementizers in English: *that*, *if*, *whether* and *for*. Complementizers introduce a clause (IP/TP). The complementizers *that* and *if* select finite clauses; *for* selects an infinitival clause and *whether* selects either type. The first two complementizers, that is to say *that* and *if*, are generally followed by finite T and they assign nominative Case to the arguments in their domain. So I assume that overt complementizers *that* and *if* assign nominative Case to the arguments in its domain in conjunction with finite T. However, non-finite T may follow *that* and *if* in subjunctive clauses and conditionals respectively:

(15) They insisted that **he** leave.

(16) If **he** were to be elected, he would be happy.

In both examples, nominative Case is assigned to the subject even when the clause is non-finite. So I argue that overt complementizers *that* and *if* assign nominative Case regardless of whether the clause is finite or non-finite.[6]

On the other hand, there are some cases where the C can be omitted under at least some circumstances in many different kinds of clauses such as main clauses, certain relative clauses, and certain complement clauses and so on.

(17) [$_{CP}$ She has gone].

(18) I know the girl [$_{CP}$ you met yesterday].

(19) I think [$_{CP}$ you may be right].

In the above examples, the overt complementizer *that* does not appear but nominative case is assigned. In my theory I assume that there is a complementizer C which heads the strong CP phase in every clause. So there must be a non-overt complementizer C in the above examples and it must be responsible for the nominative Case in conjunction with the finite T. This leads to the conclusion that non-overt C in conjunction with finite T assigns nominative Case.

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[6] In Korean, there are different complementizers for declaratives and interrogatives:

(i) a. Chelswu-ka Yenghi-lul cohaha-n-ta.
Chelswu-N Yenghi-A like-DEC
'Chelswu likes Yenghi.'
b. Chelswu-ka Yenghi-lul cohaha-ni?
Chelswu-N Yenghi-A like-Q
'Does Chelswu like Yenghi?'

It can be seen that both overt complementizers assign nominative Case to the subject in conjunction with finite T.

With respect to *for*, it is always followed by non-finite T and it assigns accusative Case to the argument in its domain.[7] However, *whether* poses a few problems. If we follow the general assumption that *whether* is a maximal projection occupying [Spec, CP] (suggested in Borer 1989:76 and Kayne 1989 & 1991), then the head of the *whether* CP must be the non-overt complementizer C. Let us consider the following examples:

(20) a. I don't know [$_{CP}$ whether C [$_{TP}$ John will go to the party]].

b. I don't know [$_{CP}$ whether C [$_{TP}$ *PRO* to go to the party]].

The embedded subject *John* in (20a) is assigned nominative Case by the non-overt complementizer C. But in (20b), the same non-overt complementizer C assigns null Case to PRO. This inconsistency can be explained if the embedded non-overt C assigns structural nominative Case in conjunction with the embedded finite T, which is already argued above in relation to the examples (17) ~ (19). But in (20b) the embedded clause has non-finite T. So non-overt C assigns null Case when the following TP is non-finite.

Then what makes the sentence (14a) ungrammatical? I argue that the ungrammaticality results from the wrong structural Case assigned to the overt DP. In (14a), the non-overt C takes nonfinite TP as its complement. So the non-overt C is supposed to assign null Case to the embedded subject due to the nonfinite T. But the overt DP is

[7] On the other hand, there are some complementizers like *than* and *as*, which show different case-marking depending on whether they are introducing a clause or not:

(i) a. He is smarter than I am
b. He is smarter than me
(ii) a. He is as smart as I am
b. He is as smart as me.

However, I suspect that they are homonyms with a different meaning. So I assume that the *than* and *as* in the (b) examples are prepositions rather than complementizers.

assigned accusative Case instead of null Case which is only assigned to non-overt DPs. So the ungrammaticality of (14a) results from the assignment of null Case to the overt DP.

On the other hand, the argument *he* in the embedded clause in (14b) is assigned structural nominative Case by the overt C in conjunction with the finite T. The analysis can also explain the grammaticality of the following example:

(21) $[_{CP2}\ C_2\ [_{CP1}\ C_1\ [_{TP1}$ PRO to attack Bill]] $[_{TP2}$ would be illegal]].

The non-overt complementizer in CP1 takes non-finite TP1 as its complement, hence the non-overt complementizer assigns null Case to the PRO in conjunction with the non-finite T. On the other hand, the non-overt complementizer C_2 in CP2 takes the finite TP_2 as its complement and it would assign nominative Case to the DPs in its domain. But since there is no argument to be assigned nominative Case, nominative Case is assigned vacuously. However, as I noted above, it does not cause the derivation to crash, since what matters is the undeleted structural Case feature of DPs, not probes. After all, what matters is not the absence of structural Case on an argument, but whether an argument is assigned correct structural Case or not.

To summarize, overt complementizers *that* and *if* assign nominative Case regardless of whether the following TP is finite or infinite. Also *for* is always followed by non-finite T and assigns accusative Case. But non-overt complementizer C assigns either null Case or nominative Case depending on whether the following TP is finite or non-finite.

2.5 Summary

In this chapter, I have examined some issues concerning SCAH. I have discussed three major issues, that is to say the separation of structural Case assignment and ϕ-feature checking, non-defectiveness of probe and multiple Case assignments. Although my overall theory is based on the Minimalist framework (Chomsky 2000, 2001 & 2008), some of the arguments are against Minimalist assumptions.

First of all, I argue that structural Case assignment must be separated from the ϕ-feature checking of a probe. This opposes to the Minimalist assumption that structural Case is manifested as an ancillary operation of Agree. In support of my argument, I have presented Korean, Icelandic and Swahili examples in which structural Case assignment and Agree do not coincide.

Secondly, I argue that probes are not defective in themselves. This also opposes to the claim that probes have uninterpretable ϕ-features and they must be deleted via Agree, otherwise the derivation crashes. To support the argument, I have shown that there are grammatical sentences even when the ϕ-features of a probe are not deleted.

Thirdly I argue that phase heads can assign structural Case to multiple arguments. This also does not conform to Minimalist assumptions. In the Minimalist Theory, once Agree is set up, the ϕ-features of a probe are deleted and no more Agree is possible for the probe. For languages which allow multiple nominative/accusative constructions, Chomsky (1995) proposed a parameter that allows multiple assignments of structural Case. But SCAH allows multiple assignments of structural Case as a general principle rather than a parameter.

Lastly, I have considered complementizers in English to argue that it is not C alone, but C in conjunction with T that determines the structural Case to assign. I have shown that overt complementizers *that* and *if* assign nominative Case regardless of whether the complement TP is finite or non-finite, while non-overt complementizer C assigns different abstract Case depending on whether the following TP is finite or non-finite.

Chapter 3 Structural Case assignment in passive constructions

3.1 Introduction

In this chapter, I will present an analysis on the distribution of structural Case in transitive and ditransitive constructions and their passive constructions in Korean. The analysis of active constructions in Korean is not much different from that in English. However the analysis of Korean passive constructions is quite different from English passive constructions.

With respect to the passive constructions in Korean, O'Grady (1991) notes that there are two types of passive structures[1] - a lexically restricted 'morphological' passive construction formed with the suffix *-i-* (*-li* after [l]; *-ki* after nasals, [kk] and [s]; and *-hi* after other fricatives and stops) and a more productive compound passive construction formed with the help of the morpheme *-ci-* 'get/become' (preceded by the infinitive marker *-a/e*).

The first issue that I will consider in this chapter is how to explain the distribution of structural Case in the following *ci*-passive construction.

(1) a. Nay-ka John-ul chayk-ul cwu-ess-ta.
I-N John-A book-A give-PST-DEC
'I gave John a book.'

[1] A third type of passive construction can be identified, that is to say the lexical passive construction. For example *chi-ta* 'hit' or *ttayli-ta* 'hit' can be passivized as *mac-ta* 'be hit'. Also *ha-* 'do' compound verbs can be given passive meanings by replacing the verb *ha-* 'do' with other verbs like *toy-*'become', *pat-*'receive', or *tangha-* 'suffer', which have inherently a passive meaning. So *hyeppak-ha-ta* 'threat-do-DEC' can be passivized as *pyeppak-tangha-ta* 'threat-Psv-Dec'. Since the issues regarding lexical passive forms are lexical rather than syntactic, I will not deal with these lexical passives in this dissertation.

b. John-i chayk-i cwue-**ci**-ess-ta.
John-N book-N give-**CI**-PST-DEC
'John came to be given a book.'

Ditransitive verbs like *cwu-ta* 'give', *kaluchi-ta* 'teach' and *ponay-ta* 'send' allow only the *ci*- passive construction. The morphological *i*-passive constructions are not available for ditransitive verbs. In fact, the *i*-passive morpheme is lexically restricted to some verbs. That is why the *i*-passive construction is called a morphological passive construction. So for example, passive forms like **cwu-**i**-ta* 'give-PSV-DEC', **kaluchi-**i**-ta* 'teach-PSV-DEC' and **ponay-**i**-ta* 'send-PSV-DEC' are not possible.[2] In the above example, it is noteworthy that both the goal and the theme DPs in the passive construction (1b) are marked with nominative case. The distribution of structural Case in (1b) contrasts with that in English ditransitive construction:

(2) a. God gave me (A) her (A) (in marriage).
b. I was given **her** (A) (in marriage).[3]

In the passive construction (2b), the remaining theme argument *her* is marked with

[2] There are some more verbs that do not allow the morphological *i*-passive in addition to the ditransitive verbs (Yeon 2003:109):

(i) the verb *hata* 'do' and all of the verbs derived with -*hata*.
(ii) benefactive verbs such as *etta* 'acquire'
(iii) experiential verbs such as *alta* 'know'
(iv) symmetric verbs such as *mannata* 'meet'
(v) verbs whose stems end in a vowel -*i*, such as *tencita* 'through'.

Since the above verbs are simple transitive verbs, the issues that concern the ditransitive constructions do not arise with these verbs.

[3] It was proposed that the accusative case on the theme argument is not structural. For example, the accusative case may be default or inherent. But I argue that the accusative case is structural. The issue will be discussed in later sections.

accusative case, not nominative case, which contrast with the Korean example (1b). A few questions arise as to the above difference between English and Korean: why and how both arguments are assigned nominative case in the passive construction of Korean double object construction, while the theme argument *her* in the English counterpart (2b) is assigned accusative case.

The second issue that I will consider is the Possessor Raising Construction (PRC) and its passive construction:

(3) a. Chelswu-ka ku namu-**lul** kaci-lul cal-lass-ta.
Chelswu-N the tree-A branch-A cut-PST-DEC
'John cut the tree of its branch.'

b. Ku namu-ka kaci-ka/lul cal-li-ess-ta.
the tree-N branch-N/A cut-PSV-DEC
'The tree's branch was cut.'

The PRC (3a) looks like the ditransitive construction (1a) in that there are two accusative marked arguments. But the two constructions differ in that the first accusative argument in (3a) bears a possessor relationship to the following argument, while the two accusative arguments in (1a) do not bear such semantic relationship with each other. In fact the verb *cal* 'cut' in (3a) is a simple transitive verb that takes an argument, while the verb *cwu-ta* 'give' in (1a) is a ditransitive verb that takes double objects.

There are two views with respect to the origin of the possessor DP *ku namu* 'the tree' in (3a). In one view, the possessor DP *ku namu* is base-generated in the surface position. But in the other view, the possessor DP *ku namu* is raised from the possessor position of the second accusative DP *kaci* 'branch' to the surface position and this is why the construction

is called Possessor Raising Construction (PRC).

The PRC displays some noteworthy properties. First, the PRC allows both types of passive constructions, i.e. the morphological *i*-passive construction (3b) and the *ci*-passive construction (4):

(4) Ku namu-ka kaci-ka cala-ci-ess-ta.
the tree-N branch-N cut-CI-PST-DEC
'It is the tree whose branch came to be cut.'

Secondly, as is shown in (3b), the *i*-passive construction of the PRC allows either nominative case or accusative case on the possessed DP. These properties will be discussed in following sections.

3.2 The mechanism of structural Case assignment

Before I consider the distribution of structural Case in Korean passive constructions, I will briefly explain how structural Case is assigned in my theory through English transitive and ditransitive constructions and their passive constructions.

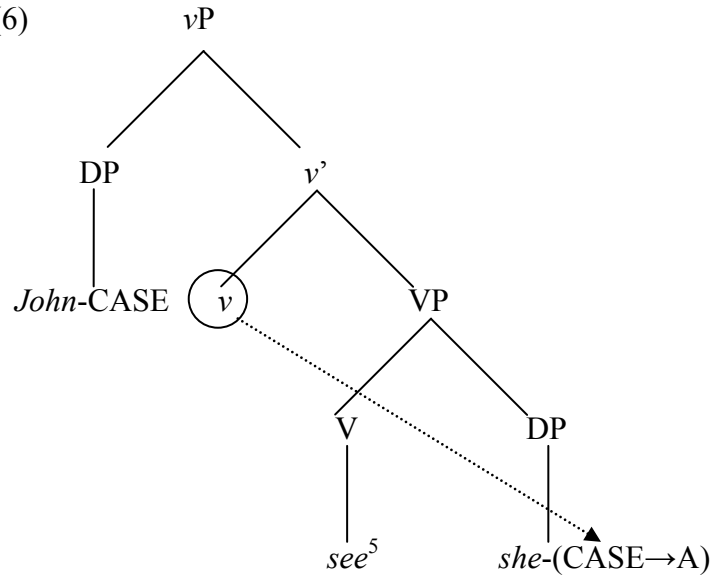
3.2.1 Simple transitive construction in English

Let us begin with a simple English transitive construction and see how structural Case is assigned step by step:

(5) John saw her.

First I assume that every DP in an argument position is put into the derivation with an abstract Case feature CASE. In (5), the object *her* comes out as *she-CASE* from the Numeration and it merges with the verb *see*, forming a VP. Then a light verb *v* merges with the VP and the external argument *John-CASE* is merged with the light verb projection, forming a *v*P. As soon as the light verb is merged with the VP, the strong phase head *v* assigns accusative Case feature to eligible DPs. When the external argument is merged, the first strong phase *v**P is completed and Spell-Out takes place. Along with the Spell-Out, the abstract accusative Case feature which is assigned by the light verb is assigned a morphological form in the Morphological Component as is shown in (6).[4]

(6)



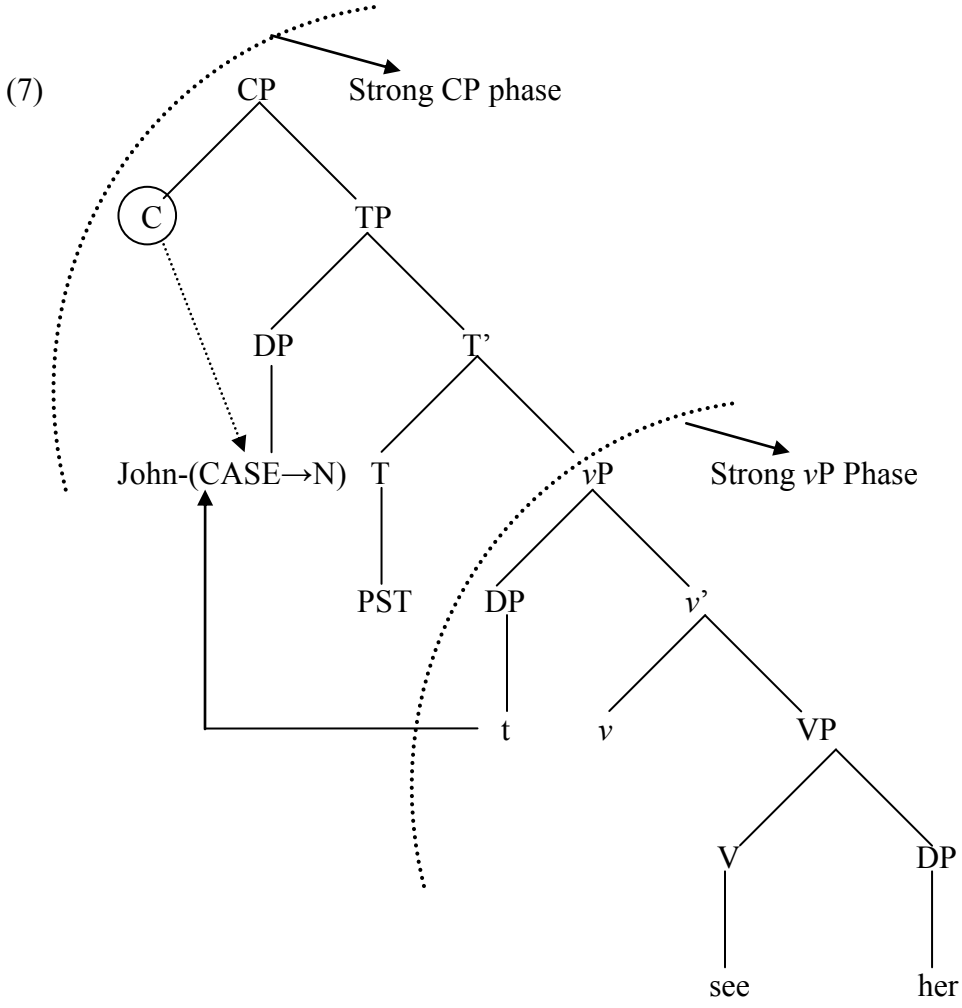
However, the external argument *John-CASE* is not assigned any structural Case at this point, since it is not in the domain of the light verb *v*. After the first Spell-Out, the second

[4] The exact structure of the VP is not very crucial in my analysis, for example, various kinds of APPL phrases do not harm, unless APPL is taken to be a phase head.

[5] The verb *see* raises to the light verb *v* and ultimately to T depending on the theory. But I do not indicate the movement in detail here, since the position of the verb is not crucial in explaining the distribution of structural Case.

phase begins with a merger of T. The external argument is raised to [Spec, TP] due to the EPP and the second phase is completed with the merger of a complementizer C.[6] As soon as the complementizer C is merged with the argument in [Spec, TP], abstract nominative Case is assigned to the DP. At the completion of the second strong phase, the second Spell-Out takes place and the abstract nominative Case feature is assigned a morphological form. The complete structure of the transitive construction is shown below.

(7)



The phase head C cannot affect the structural accusative Case of the object, since the

[6] I assume that there is a CP projection in matrix clauses even though we do not see an overt complementizer in most languages.

structural accusative Case of the object is already assigned a morphological form along with the first Spell-Out. I assume that once abstract Case feature is assigned a morphological form, it is not affected by another Case assignment.

Now let us consider the passive counterpart of the transitive construction:

(8) a. John saw her.
b. She was seen (by John).

One of the differences between the active construction (8a) and the passive construction (8b) is that the passive construction does not have a strong *v**P phase. According to Chomsky (2001:12), passives and unaccusative constructions do not have a full argument structure, lacking an external argument. Hence they are called weak phases.[7] Since SCAH states that structural Case assignment takes place only after a strong phase, it takes place only once after the final CP phase in the passive construction.

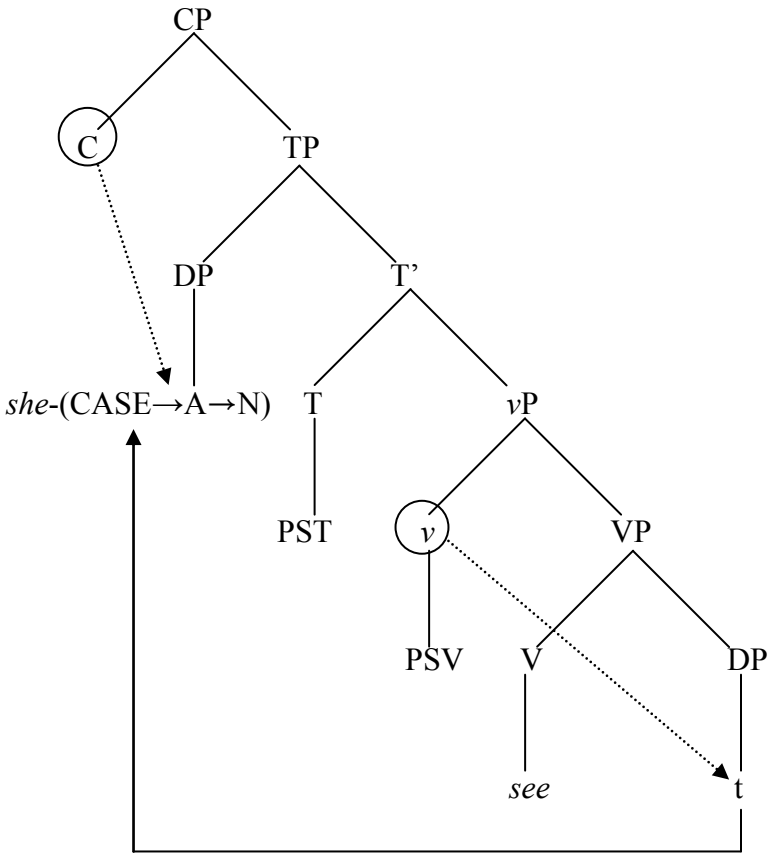
Now let us consider the derivation step by step. The passive construction (8b) begins with the merge of an internal argument '*she-CASE*' and the verb *see*, forming a VP. Then a light verb *v* is merged with the VP, forming a *v*P. As soon as the light verb *v* is merged with the VP, the internal argument is supposed to be assigned accusative Case feature. However, since the *v*P does not form a strong phase in the passive construction, the derivation proceeds without Spell-Out. Then T is merged with the *v*P and the internal argument raises to [Spec, TP] due to the EPP. The strong CP phase is completed with the merger of a complementizer C. Now the complementizer C assigns a nominative Case feature to

[7] Chomsky (2001:12) notes some similarities and differences between the strong and weak phase. First of all they share some common properties in that they are both reconstruction sites and have a degree of phonetic independence. However, they differ in that only the strong phases are potential targets for movement.

eligible DPs.

What matters here is the derived subject in [Spec, TP]. It is already assigned an accusative Case feature when the light verb *v* is merged. However, the accusative Case feature is not assigned a morphological form yet, since Spell-Out has not taken place yet. So I assume that the accusative Case feature assigned in the previous weak phase may be overridden by another structural Case assignment operation done by the complementizer C. So the derived subject ends up with a nominative Case feature. The complete structure is shown below:

(9)



When the strong CP phase is completed, Spell-Out takes place and the nominative Case

feature is assigned a morphological form.

3.2.2 Double object construction in English

English double object constructions have two accusative case-marked objects:

(10) God gave me her (in marriage).

The distribution of accusative case in English double object construction has been a problem to many syntactic theories. One of the issues surrounding the double object construction is whether the two accusative cases are structural or not. Structural Case is assumed to be assigned depending on the structural position of the argument. So the structural accusative case on the object is to be changed to nominative case in the passive construction as it moves to the subject position. For example, the goal argument *me* in (10) is assigned nominative case when it promotes to the subject in the passive construction in (11b).

(11) a. God gave **me her** (in marriage).
b. **I**$_{i}$ was given t_{i} **her** (in marriage).

Considering that the goal argument is assigned nominative in the passive construction, the accusative case in the active must be structural, since the accusative case changes to nominative in the passive construction.

However, it is not easy to determine whether the accusative case of the theme argument is structural or not, since it cannot move to the subject position in the passive

construction (12) in American English:

(12) *She$_i$ was given me t_i.

It can be explained by a simple principle of locality, preventing the lower argument from raising to the subject position across the higher goal argument.[8] Thus I present two pieces of evidence that the accusative case of the theme is structural rather than inherent. The first piece of evidence comes from the dative construction. There have been many proposals that the double accusative construction and the dative construction are transformationally related (see, among many others, Emonds 1972, 1976, 1993, Oehrle 1976, Baker 1988, Larson 1988 and den Dikken 1995).[9] Let us consider the following dative construction and its passive counterpart.

(13) a. God gave her to me.
b. She$_i$ was given t_i to me.

The theme argument *her* in the active (13a) moves to the subject position in the passive construction (13b) and it is assigned nominative case. This is a typical property that can be observed in the passive construction of a normal transitive construction, which suggests that the theme argument *her* in the dative construction (13a) has structural accusative case.

The theme argument *her* in the double object construction (11a) and the one in the dative construction (13a) hold the same thematic relationship to the same verb *give*. Then it

[8] This generalization has been captured under various theories of the constraints on syntactic dependencies, including Relativized Minimality (Rizzi 1990) and economy conditions on movement (Chomsky 1995).
[9] See Gropen et al. (1989), Pesetsky (1995), Mulder (1992), and Harley (2000) among others for a different idea that it is the lexicon rather than syntax that relates the two constructions.

follows that the two arguments which fulfill the same thematic function with respect to a given predicate are supposed to occupy the same underlying position in the syntax according to UTAH.[10] Then the theme argument *her* in the dative construction in (13a) also must be assigned structural accusative Case, since the accusative Case is affected by the passivization. From the data, we can see that the verb does not assigns lexical/inherent Case to the theme argument *her.* Then the theme argument in the double object construction must be assigned structural Case, since the verb *give* does not assign lexical/inherent Case.

Another piece of evidence comes from British English. In British English, the lower argument as well as the higher goal argument can raise to the subject position (Ura 1996:174):

(14) a. The book was given her (by John).
b. These letters were sent her (by John).[11]

Since it is clear that the subjects are nominative in (14a&b), we can conclude that the accusative case of the theme must be structural in the double accusative construction.

Now if we admit that the accusative case of the theme argument in the double accusative construction is structural, there arises another question with respect to the passive counterpart of the double object construction: why is the structural accusative case

[10] Uniformity of Theta Assignment Hypothesis (UTAH, Baker (1988))
Identical thematic relationships between items is represented by identical structural relationships between these items at the level of D-structure

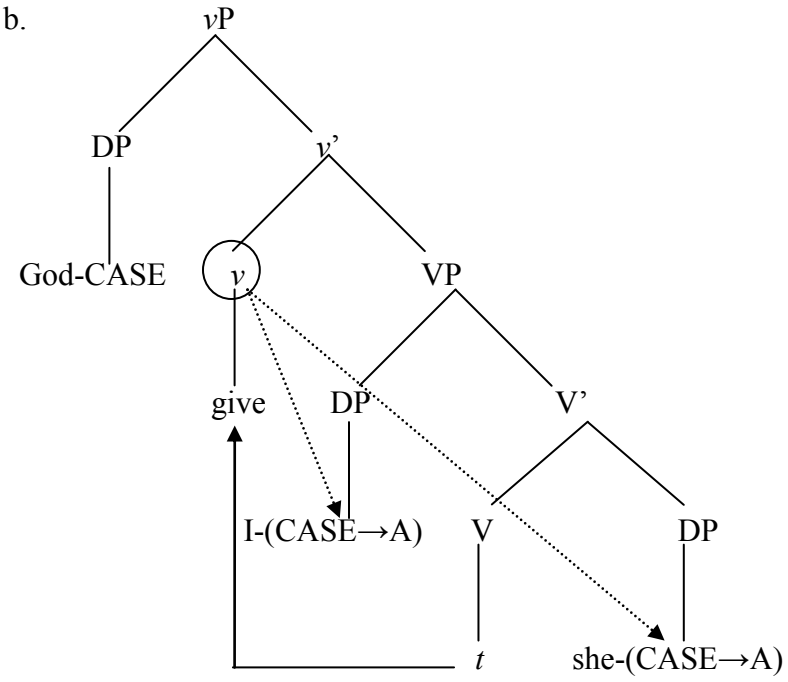
[11] With respect to the raising of the theme argument, Ura (1996) proposes that both objects are equidistant for the purpose of movement. In the British example, he proposes that both objects move into multiple specifiers of the causative light verb at the top edge of the verb phrase. From this position, the two objects are equally close to the subject position, so either one can move there. However McGinnis (1998) notes that this usage is very limited in that the goal must be a pronoun or a short name.

of the theme argument in (11b) not affected in the passive construction? The problem can be explained by SCAH. According to SCAH, the light verb in the passive construction does not lose the ability to assign accusative Case. So it is possible for the in situ theme argument to be assigned accusative case as long as it is in the domain of the light verb *v*.

Now let us see how structural Case is assigned in the double object construction (11a) in more detail. Regarding the structure of the double object construction, I assume that the theme argument is merged with the verb and the verbal complex is merged again with the goal argument as is shown in (15b) (see Aoun and Li 1989, Pesetsky 1995 and Radford 1997 for similar proposals: cf. Larson 1988):

(15) a. God gave **me her** (in marriage).

b.

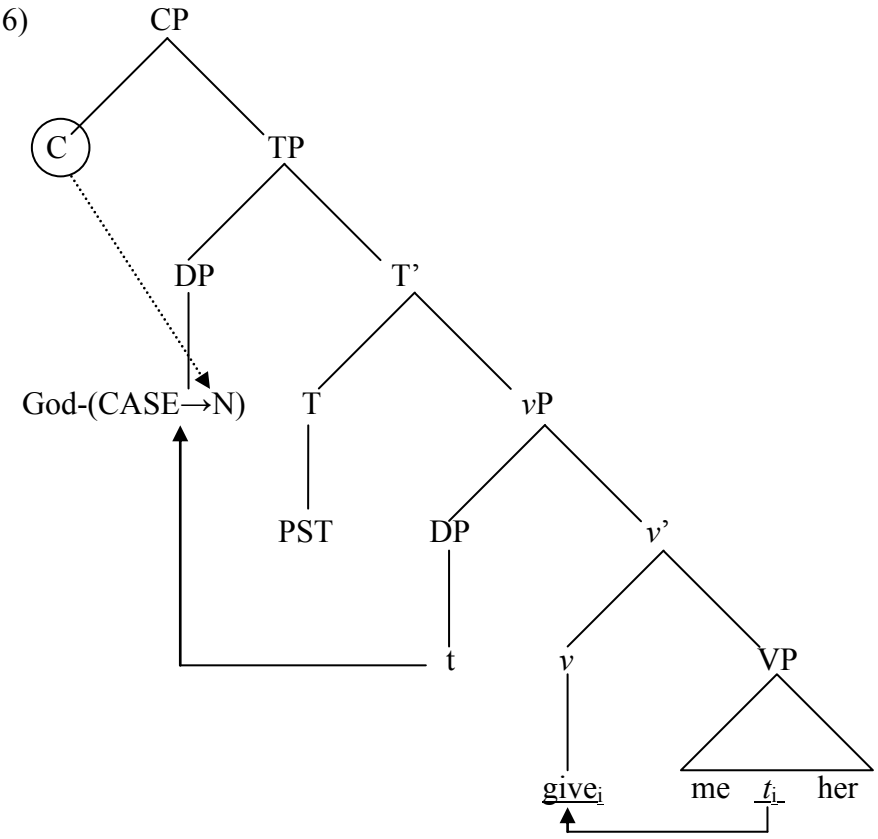


The verbal complex is further merged with a light verb *v*. As soon as the light verb is merged, it assigns accusative Case to the DPs in its domain. Both arguments are assigned

an accusative Case feature, since they are both in the domain of the light verb. Finally the external argument is merged with the *v*P and the first strong phase is completed. At the completion of the first strong phase *v*P, Spell-Out takes place and the accusative Case features of the two internal arguments are assigned morphological accusative case forms.

In the next phase, the external argument moves to [Spec, TP] and the second strong phase is completed with the merger of a complementizer C. The raised external argument is assigned nominative Case by the C and the nominative Case feature is assigned a morphological form at Spell-Out as is shown below.

(16)

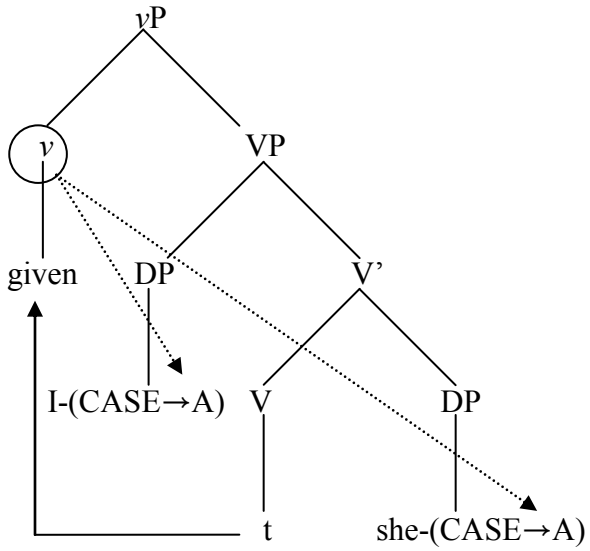


Now let us consider the passive counterpart of the double object construction.

(17) a. God gave me her (in marriage).
b. I was given her (in marriage).

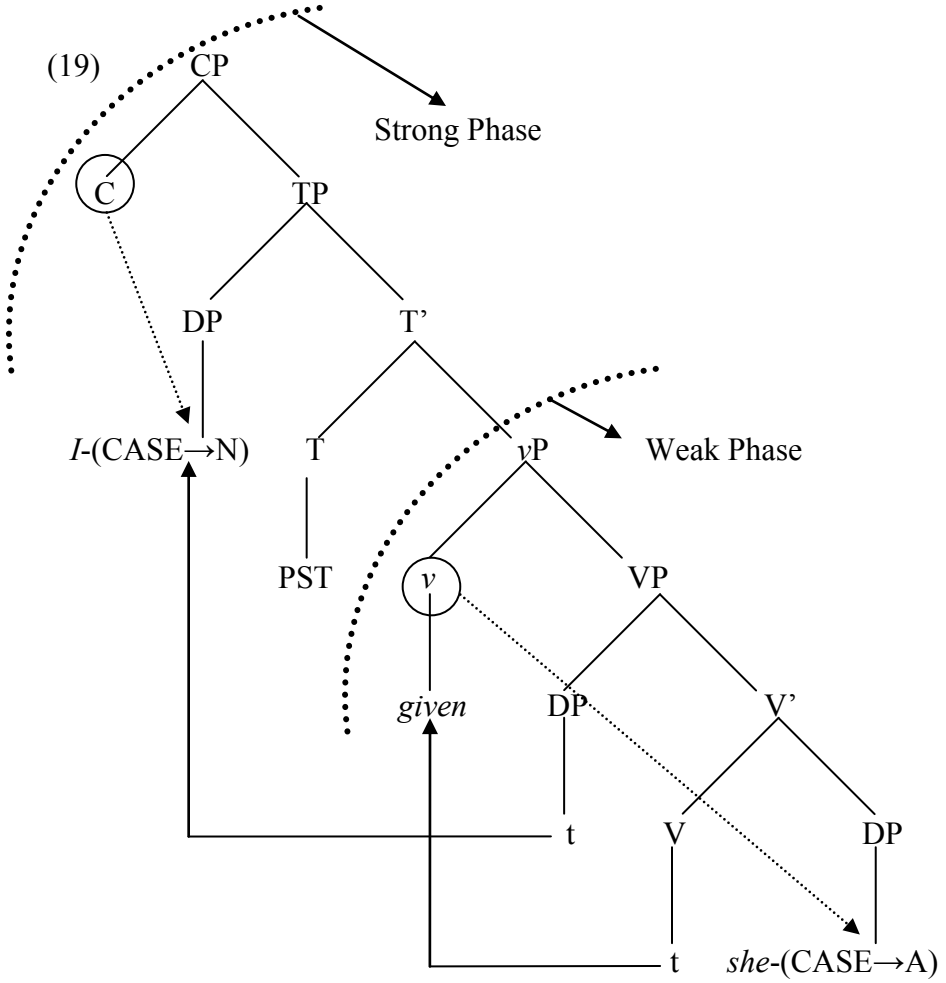
The derivation of the passive construction (17b) begins with the merge of the theme argument *she-CASE* and the verb *give*. Then the goal argument *I-CASE* is merged with the VP and the VP is merged with a light verb *v*. As soon as the light verb is merged, it assigns an accusative Case feature to the DPs in its domain and the two internal arguments are assigned an accusative Case feature. Since the external argument is demoted in the passive construction, the *v*P phase is completed with the merger of the light verb *v* as is shown below.

(18)



However, the derivation proceeds without Spell-Out, since the *v*P in the passive construction does not constitute a strong phase. In the next phase, T is merged with the *v*P and the closest argument, that is to say the goal argument *I*-(*A*), is raised to the [Spec, TP]

due to EPP. With the merger of a complementizer C, the final CP phase is completed. As soon as the C is merged, it assigns nominative Case to the DP in its domain. There is only one eligible DP in [Spec, TP] in the domain of the complementizer C. But the DP is already assigned accusative Case in the previous weak *v*P phase. Here I assume that the accusative Case assigned in the previous weak phase can be overridden by the later assignment of structural Case, since the accusative Case feature is not morphologically realized through Spell-Out. When the final CP phase is completed, Spell-Out takes place and structural Case features are assigned a morphological form. The complete structure is shown below.



3.3 The analysis of Korean passive construction

Now I consider the distribution of structural Case in Korean passive constructions. The analyses of transitive and double object constructions in Korean are similar to those of English counterparts. But the passive counterpart of the double object construction shows different properties. In this section I will focus on the passive counterpart of the double object construction and present an analysis of it.

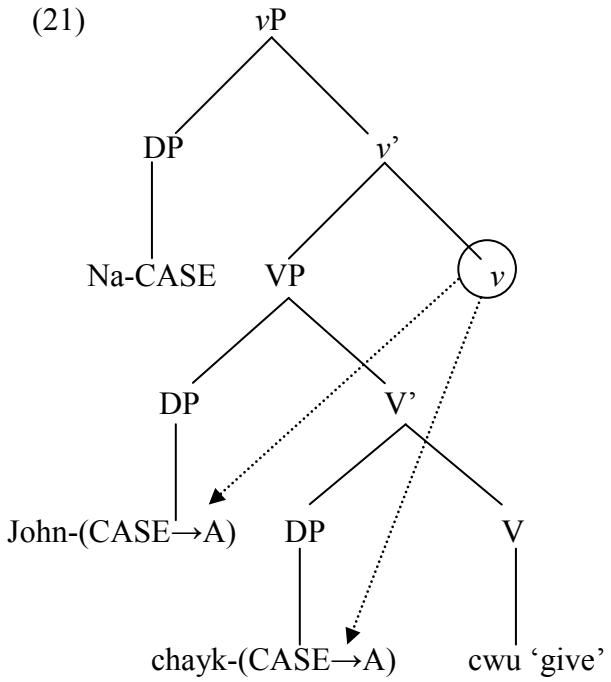
3.3.1 Double object construction in Korean

The structure of Korean transitive construction and its passive counterpart is not much different from that of English. So I begin with a double object construction of Korean. The analysis of the double object construction in Korean is very similar to that of the double object construction in English. Let us consider a double object construction in Korean.

(20) Nay-ka John-ul chayk-ul cwu-ess-ta.
I-N John-A book-A give-PST-DEC
'I gave John a book.'

I assume that the basic structure of the double object construction in Korean is the same as in English. First the theme argument *chayk* 'book' is merged with the verb and then the goal argument *John* is merged with the VP. After that, a light verb *v* is merged with the VP and accusative Case is assigned to the DPs in its domain. The first strong phase is completed with the external argument being merged. The structure is shown below:

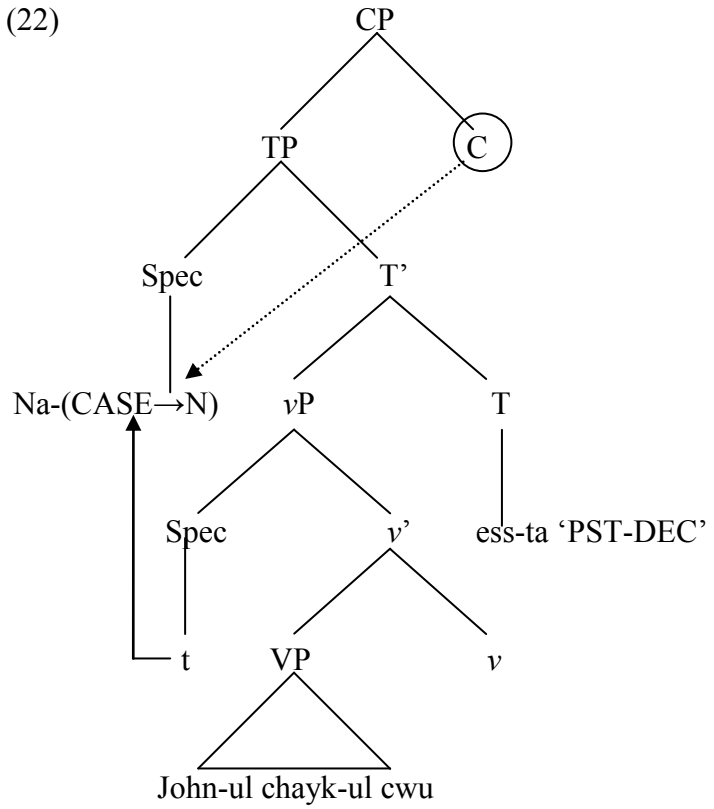
(21)



At the completion of the strong *v*P phase, Spell-Out takes place and the abstract Case features are assigned morphological forms. But since the external argument is not in the domain of the light verb, it is not assigned accusative Case.

The second phase begins with the merger of T. Then the external argument moves to [Spec, TP] due to EPP and a complementizer C is merged with the TP, completing the strong CP phase. The raised external argument is assigned nominative Case by the complementizer C as is shown below.

(22)



Along with the Spell-Out, the nominative Case feature is assigned a morphological form. Since the two objects are already assigned a morphological form, their morphological case is not affected by the structural Case assignment performed in the CP phase.

3.3.2 The passive counterpart of the double object construction

Now let us consider the passive counterpart of the double object construction in Korean.

(23) a. John-i Mary-lul chayk-ul cwu-ess-ta.
John-N Mary-A book-A give-PST-DEC
'John gave Mary a book.'

b. Mary-ka chayk-i cwue-**ci**-ess-ta.
Mary-N book-N give-CI-PST-DEC
'Mary managed to be given a book.'

The ditransitive verbs do not combine with the morphological *i*-passive morpheme:

(24) *Mary-ka chayk-i/ul cwu-**i**-ess-ta.
Mary-N book-N/A give-PSV-PST-DEC
'(intended) Mary was given a book.'

What is crucial in (23b) is why the theme argument *chayk* 'book' is assigned nominative case, unlike in English counterpart where the theme is assigned accusative case.

It has been a standard assumption that *ci* is a productive passive auxiliary verb in Korean. But in this dissertation, I question the standard assumption and argue that *ci* shows a little different property from the canonical passive morpheme *-i*. That is to say, I argue that *ci* is an unaccusative auxiliary verb denoting a change of state. In the following section, I will consider some issues concerning *ci*.

3.3.2.1 Three usages of *ci*

As is mentioned in Introduction, O'Grady (1991) argues that Korean exhibits two types of passive structures, that is to say a lexically restricted morphological passive construction formed with the suffix *-i-* and a more productive compound passive construction formed with an auxiliary verb *-ci-* 'get/become'. Traditionally, the morphological passive with *i*-passive morpheme and the compound passive with *ci* auxiliary verb have been regarded as synonymous in Korean. But there are some proposals that the two passive constructions

have different meanings (see Lee, K. D. 1987 & 1993, Yeon 2003). In this section, I reconsider the assumption that *ci* is a passive auxiliary verb and argue that *ci* is an unaccusative auxiliary verb which denotes a change of state.

Kang, Sun-Young (1996) notes that the morpheme *ci* has three usages. First, *ci* can be used as a main verb, either as a transitive or intransitive verb. The following is a typical example in which *ci* is used as a transitive main verb.[12]

(25) Chelswu-ka ku pwutam-ul **ci**-ess-ta.
Chelswu-N the burden-A bear-PST-DEC
'Chelswu bore the burden.'

The verb *ci-ta* 'bear-DEC' takes an object *ku pwutam* 'the burden'. Since there is no other verb except the verb *ci* 'bear', it must be used as a main verb. *Ci* also can be used as an intransitive main verb as is shown below:

(26) Hae-ka seccok-uro **ci**-ess-ta.
Sun-N to the west set-PST-DEC
'The sun set to the west.'

There is no object and no other verb in (26). So the verb *ci* must be an intransitive verb. According to Pae (1986:49), the instances of *ci* as a main verb have the same core meaning of falling motion from high to low and the resulting state of being low or at bottom. In fact, the *ci* in (25) suggests that the person involved is weighed down with the heavy burden of responsibility.

[12] Some more examples are *pic-ul ci-ta* 'owe money', *ssawum-eyse ci-ta* 'lose a battle', *cangma-ka ci-ta* 'a rainy season comes' and so on.

Secondly, *ci* can be used as a passive auxiliary verb. O'Grady (1991) notes that *ci* can form a productive compound passive construction while another passive morpheme *-i-* forms a lexically restricted morphological passive construction. The following is an example of this usage:

(27) a. Chelswu-ka sangca-lul mantul-ess-ta.
Chelswu-N box-A make-PST-DEC
'Chelswu made a box.
b. Sangca-ka mantule-ci-ess-ta.
box-N make-CI-PST-DEC
'A box managed to be made.'

It seems that the *ci*-passive construction (27b) displays some crucial properties of typical passive constructions. For example, the external argument is demoted and the object is promoted to subject retaining the same theme θ-role in (27b). Also the accusative case of the object in (27a) is changed to nominative case in (27b). So it seems natural to assume that *ci* is a passive morphology.

Lastly, Kang (1996) argues that *ci* can be used as an unaccusative marker, combining with unaccusative verbs:

(28) a. Nwun-i nok-ass-ta.
snow-N melt-PST-DEC
'Snow melted.
b. Nwun-i noka-ci-ess-ta.
snow-N melt-CI-PST-DEC
'Snow became melted.'

In this usage, the morpheme *ci* combines with an intransitive verb *nok* 'melt', denoting a change of state. [13]

To summarize, Kang (1996) argues that *ci* has 3 different usages. First, it can be used as a main verb. In this usage, all the instances of *ci* have the same core meaning of falling motion from high to low and the resulting state of being low or at bottom. Secondly, it can be used as a passive auxiliary verb when it is attached to a transitive verb. In this usage, *ci* combines with a transitive verb and it shows typical properties of passivization: the external argument is demoted and the object is promoted to the subject with accusative case lost. Lastly, it can combine with a certain type of intransitive verbs, that is to say unaccusative verbs, denoting a change of state.

3.3.2.2 *Ci* as an unaccusative auxiliary verb

Among the three usages presented by Kang (1996), I challenge the second argument that *ci* can be used as a passive morpheme. Instead I argue that *ci* is an unaccusative auxiliary verb after a transitive main verb, displaying properties of unaccusative verbs.

There are several pieces of evidence that *ci* is not a passive morpheme after a transitive verb. First, it is possible to combine *ci* with the morphological passive morpheme *-i-* in Korean. Consider the following example.

---

[13] There are some examples which look similar to (28):

(i) ppa-ci- 'fall', phe-ci- 'spread', che-ci- 'lag', sala-ci- 'disappear', ssule-ci- 'fall down' ...

In (i), the morpheme *ci* is not a passive auxiliary, since the verb roots are not transitive verbs. In fact, the verb roots without *ci* are not independent words. For example, *ppa-ci-ta* 'fall-DEC' is a grammatical word, but **ppa-ta* is not a legitimate Korean word. However, I do not consider this type of usage as a distinct category, since this usage of *ci* in (i) is somewhat similar to the usage presented in (28) in that the words in (i) denote an inchoative meaning or result in a change of state.

(29) a. Chelswu-ka ku namu-lul cal-ass-ta.
Chelswu-N the tree-A cut-PST-DEC
'Chelswu cut the tree.'
b. Ku namu-ka (Chelswu-ey uyhay) cal-li-ess-ta.
The tree-N Chelswu-by cut-PSV-PST-DEC
'The tree was cut (by Chelswu).'
c. Ku namu-ka (Chelswu-ey uyhay) cal-li-eci-ess-ta.
The tree-N Chelswu-by cut-PSV-CI-PST-DEC
'The tree managed to be cut (by Chelswu).'

In (29c) the passive morpheme *-li-* is followed by *ci*. If we assume an economy principle prohibiting two functional morphemes which serve the same function within a VP,[14] it would be reasonable to think that only one of the two passive morphemes serves as a real passive morpheme.

Secondly, there are some verbs which allow both *i*-passive construction and *ci*-passive construction. Let us consider the following example:

(30) a. Chelswu-ka ku namu-lul cal-ass-ta.
Chelswu-N the tree-A cut-PST-DEC
'Chelswu cut the tree.'
b. Ku namu-ka cal-li-ess-ta.
tree-N cut-PSV-PST-DEC
'A tree was cut.'
c. Ku namu-ka cal-aci-ess-ta.[15]

[14] Compare this argument with the Thematic Uniqueness Condition (Carlson 1984:271), which means that no verb can assign the same thematic role to two or more of its arguments.
[15] In fact, it is possible to add a *by*-phrase in (30b&c):

the tree-N cut-CI-PST-DEC
'The tree came to be cut.'

The above examples (30b) and (30c) are both grammatical. Now I assume a similar economy principle that there is no need for positing two constructions that serve the same function. If one of the constructions is the passive construction of the transitive construction, then the other must serve some other function than the passive. In fact, there is a slight semantic difference between (30b) and (30c). The *i*-passive construction (30b) strongly implies that the act of cutting the tree was done by an agent. But the *ci*-passive construction (30c) does not imply the existence of such an agent. Rather it just describes the resulting state of the cutting. Thus *ci* and *i* must be a different functional morpheme. This leads to the conclusion that if *i* is a passive morpheme, then *ci* must be something else.

The third argument that *ci* is not a passive morpheme comes from the fact that *ci* can be attached even to an intransitive verb:

(31) a. Nwun-i nok-ass-ta.
snow-N melt-PST-DEC
'Snow melted.
b. Nwun-i nok-aci-ess-ta.
snow-N melt-CI-PST-DEC
'Snow became (to be) melted.'

(i) a. Ku namu-ka Chelswu-ey uyhay cal-li-ess-ta.
the tree-N Chelswu-by cut-PSV-PST-DEC
'The tree was cut by Chelswu.'
b. Ku namu-ka Chelswu-ey uyhay cal-aci-ess-ta.
the tree-N Chelswu-by cut-CI-PST-DEC
'The tree came to be cut by Chelswu.'

Comparing (ia) with (ib), it seems that (ia) implies that the act of cutting the tree was done by *Chelswu* himself. But the agentive reading of the *by*-phrase in (ib) is a lot weaker than in (ia).

Intransitive verbs cannot be passivized in general, since they do not have an object. But the above example shows that *ci* can be attached to the intransitive verb. This suggests that *ci* is not a simple passive morpheme, but something else.

Lastly, one of the crucial differences between the passive construction and the unaccusative construction is that the former implies the existence of an agent, while the latter does not. So for example, consider the example (30), repeated below as (32).

(32) a. Chelswu-ka ku namu-**lul** kaci-lul cal-lass-ta.
Chelswu-N the tree-A branch-A cut-PST-DEC
'John cut the tree of its branch.'

b. Ku namu-ka kaci-ka/lul cal-li-ess-ta.
the tree-N branch-N/A cut-PSV-DEC
'The tree's branch was cut.'

c. Ku namu-ka kaci-ka cal-aci-ess-ta.
the tree-N branch-N/A cut-CI-DEC
'The tree's branch came to be cut.'

The above double accusative construction (32a) allows both the *i*- and *ci*- passive constructions. But there is a semantic difference between the two constructions. The *i*-passive construction implies the existence of an agent, while the *ci*-construction does not. So the addition of an adverb like *cecello* 'of itself' is not possible with the *i*-passive (33a), but the adverb is good with the *ci*-construction (33b), since the *ci*-construction does not imply the existence of an agent.

(33) a. *Ku namu-ka kaci-ka/lul cecello cal-li-ess-ta.
the tree-N branch-N/A of itself cut-PSV-DEC
'The tree's branch was cut by itself.'
b. ?Ku namu-ka kaci-ka cecello call-aci-ess-ta.
the tree-N branch-N/A cecello cut-CI-DEC
'The tree's branch came to be cut by itself.'

Then what is the syntactic identity of *ci*? In addition to the usage as a main verb, I propose that *ci* can be used as an unaccusative auxiliary verb, which is attached to a transitive or intransitive verb, resulting in the unaccusativization of the verb. In fact, unaccusative verbs share many syntactic properties with passive verbs. The following are some well-known properties of the passive construction:

(34) Major properties of the passive construction
a. External argument is demoted.
b. Internal argument is promoted to the subject.
c. Accusative case is lost.
d. Passive morphology is present.

The above properties are also observed in the unaccusative construction. For example, external argument is absent in the unaccusative construction and an internal argument is promoted to the subject position. Also accusative case is not present in the unaccusative construction as well as in the passive construction. However, there are some differences between the two constructions too. First of all, passive verbs generally imply the existence of an agent but unaccusative verbs do not. In fact under generative theories, passive verbs are typically derived from transitive verbs by adding the passive morphology, while

unaccusative verbs are not.

With respect to the *i*-passive construction, I assume that the morphological passive morpheme *-i-* in Korean does not get rid of the light verb projection (*v*P) in the passive construction. English passive construction is like Korean *i*-passive construction in that it retains the light verb projection. But, I argue that *ci* is an unaccusative auxiliary verb, which is the head of an unaccusative Verb Phrase (*u*VP). The unaccusative verb projection *u*VP crucially differs from the light verb projection *v*P in that it cannot assign structural accusative Case.

A piece of evidence that *ci* is an unaccusative auxiliary verb comes from the Serial Verb Construction (SVC). One of the essential properties of SVC is the object sharing (Baker 1989). Consider the following examples of SVC (Kang 1996:126).

(35) a. Chelswu-ka Yenghi-lul mile ssulettuli-ess-ta.
Chelswu-N Yenghi-A push knock down-PST-DEC
'Chelswu pushed Yenghi and knocked her down.'

b. Yenghi-ka (Chelswu-eykey) mil-lie ssulettulie-ci-ess-ta.
Yenghi-N (Chelswu-D) push-PSV knock down-CI-PST-DEC
'Yenghi was pushed and knocked down (by Chelswu).'

In the above example, the object *Yenghi* in (35a) is shared by the two verbs *mile* 'push' and *ssulettuli-ta* 'knock-down'. (35b) is the passive construction of (35a). The first verb *mil-lie* 'push-PSV' is the passive form of *mil-ta* 'push-DEC' and the second verb *ssulettulie-ci-ta* 'knock down' is the compound verb of *ssulettuli-ta* 'knock down-DEC' and *ci*. Therefore the surface subject in (35b) must have been raised into the subject position from the object position. This A-movement is a typical property in the passive construction. With this

background in mind, consider the following example.

(36) Yenghi-ka (salamtul-ey uyhayse) mil-lie ttele-ci-ess-ta.
Yenghi-N (people-by) push-PSV fall-CI-PST-DEC
'Yenghi was pushed by the people and fell down.' (Kang 1996)

(36) is also a SVC. The subject *Yenghi* must be shared by the two passive verbs. Considering the A-movement property in the passive construction, the subject *Yenghi* must be raised from the underlying (shared) object position of the verbs *mil-lie* 'push-PSV' and *ttele-ci-* 'fall-CI'. The first verb *mil-li* 'push-PSV' is the passive form of the verb *mil* 'push'. But the second verb *ttele-ci* 'fall-ci' poses a problem. The morpheme *ci* in the second verb cannot be a passive auxiliary, since the verb *ttele-ci-* 'fall down' does not have an active counterpart. The base form *ttel* does not mean any act of falling. In fact, a close transitive counterpart of the verb *ttele-ci-* 'fall down' is *tteletturi* 'drop'. So the morpheme *ci* in *ttele-ci* 'fall' cannot be a passive auxiliary under the assumption that passivization is only possible with transitive verbs. Then what causes the A-movement of the shared internal argument?

Given the properties of the SVC, the second verb *ttele-ci* 'fall down' in (36) must have the A-movement property as the preceding passive verb *mil-lie* 'push-PSV'. Unaccusative verbs resemble passive verbs with respect to this property. Unaccusative verbs are assigned an underlying object but no subject. So the internal argument must move to the subject position as in the passive construction to satisfy the EPP. In the above example (36), the verb *ttele-ci* 'fall down' must have the property of A-movement as the preceding passive verb. But since *ci* cannot be a passive morpheme, it must be an unaccusative auxiliary verb

which has the same A-movement property as the passive morpheme.

There is another piece of evidence that *ci* is an unaccusative auxiliary verb. That is to say, *ci*-compounds denote a change of state (Yeon 2003):

(37) a. Ku mul-i malk-ta.
the water-N cler-DEC
'The water is clear.'

b. Ku mul-i malka-ci-n-ta
the water-N clear-CI-PRS-DEC
'The water becomes clear.'

When *ci* is used with (descriptive) verbs, it expresses an 'inchoative' meaning or a change of state.[16] Under the assumption that unaccusative verbs contain primarily verbs of movement and verbs that indicate some state or a change of state (Zaenen (1987a, 1987b), Vn Valin (1989) and Tenny (1989c)), I argue that *ci*-compounds in Korean are unaccusative verbs and *ci* is an unaccusative auxiliary verb.

To summarize, I have argued that *ci* is not a passive morpheme but an unaccusative auxiliary verb. But passive verbs and unaccusative verbs share many properties in common. In fact, passive verbs, raising verbs, and raising adjectives are all assumed to belong to the class of the unaccusatives in the wider sense of the term (Haegeman 1994:336, Ouhalla 1994:189). In fact, it shares several properties with passive morphology. So I will use the familiar terminology, that is to say the *ci*-passive, when the issue is not crucial.

[16] Yeon (2003) notes that *ci* may also denote potentiality when it is used with intransitive verbs or transitive verbs.

3.3.2.3 The Analysis of the *ci*-construction

Now let us review the *ci*- construction (24), repeated below (38):

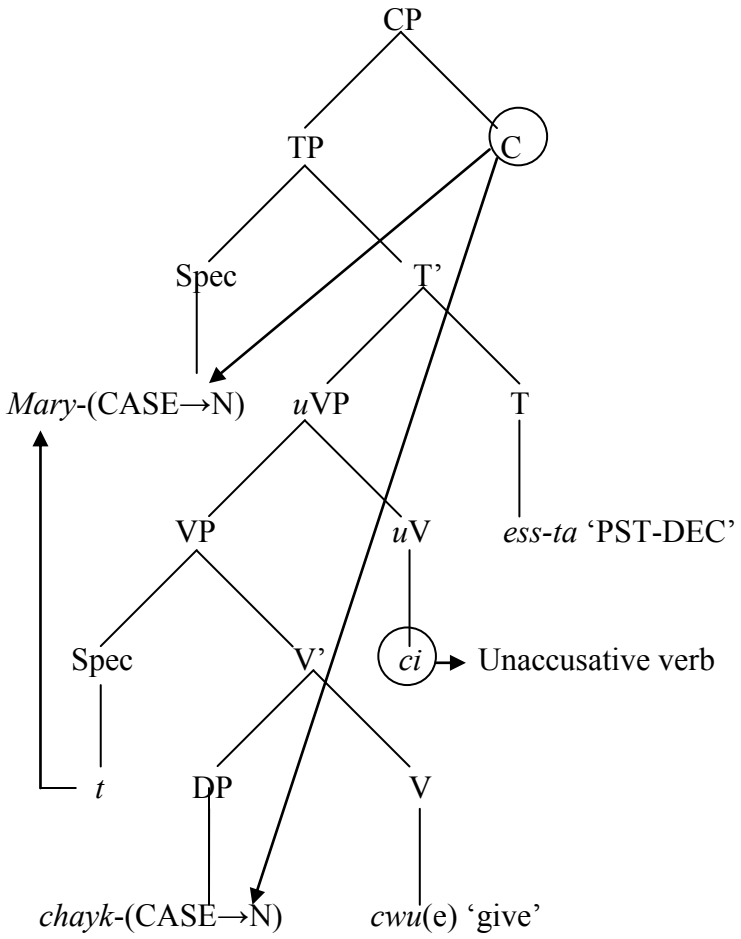
(38) Mary-ka chayk-i cwue-**ci**-ess-ta.
Mary-N book-N give-CI-PST-DEC
'Mary came to be given a book.'

One of the crucial properties of the unaccusative auxiliary verb *ci* is that it lacks an external argument and causes the internal argument to raise to the subject position. A crucial difference between the unaccusative *ci*-construction and the *i*-passive construction is that the former lacks the light verb projection entirely, while the latter retains it. I assume that the light verb is projected only when it is necessary. For example, if there is an external argument, a light verb is needed to provide a position for the external argument. The light verb projection is retained even when the verb is passivized. But unaccusative verbs do not project a light verb projection at all, since they lack an external argument. If there is no light verb projection, accusative Case is not available.

Now let us consider the derivation of the *ci*-construction step by step. The derivation proceeds as in the transitive construction. First the theme argument *chayk* 'book' is merged with the verb *cwu* 'give'. Then the goal argument *Mary* is merged with the verbal complex. The resulting VP is merged again with the unaccusative verb *ci*. The light verb projection *v*P is not projected, since the unaccusative auxiliary verb *ci* does not take external argument. Since there is no light verb projection, the derivation proceeds and T is merged with the *ci*-*u*VP. Since T has an EPP feature to be satisfied, the closest DP is raised to the [Spec, TP]. As soon as a complementizer C is merged, nominative Case is assigned to the DPs in its

domain. The structure is shown in the following tree.

(39)



3.3.3 Possessor Raising Construction and its passive construction

Possessor Raising Construction (PRC) is a construction in which the genitive case of an argument which holds a possessor relationship to the following argument can alternate with accusative or nominative case. Let us first consider a PRC in which the genitive case alternates with accusative case:

(40) a. Chelswu-ka ku namu-**uy** kaci-lul cal-lass-ta.
Chelswu-N the tree-G branch-A cut-PST-DEC

'Chelswu cut the tree's branch.'

b. Chelswu-ka ku namu-**lul** kaci-lul cal-lass-ta.
Chelswu-N the tree-A branch-A cut-PST-DEC
'Chelswu cut the tree of its branch.'

There are two approaches with respect to the origin of the possessor-like DP *ku namu-lul* 'the tree-A' in (40b). In one approach, the DP is argued to be generated in the surface position, that is to say the object position. In the other approach, it is argued to be generated in the possessor position of the following DP and raised to the surface position. So it is called Possessor Raising Construction (PRC).

In this section, I adopt the raising theory and argue that the first accusative case-marked argument is raised from the possessor position of the possessed argument via Possessor Raising (PR). The raised argument is then assigned structural Case by a Case assigner.

3.3.3.1 The Background of Possessor Raising

In Korean, there are constructions in which genitive case alternates with accusative or nominative case:

(41) a. Chelswu-ka ku namwu-**uy** kaci-lul cal-ass-ta.
Chelswu-N the tree-G branch-A cut-PST-DEC
'Chelswu cut the tree's branch.'

b. Chelswu-ka ku namwu-**lul** kaci-lul cal-ass-ta.
Chelswu-N the tree-A branch-A cut-PST-DEC
'Chelswu cut the tree of its branch.'

(42) a. Mary-**uy** tali-ka yeppu-ta.
Mary-G leg-N pretty-DEC
'Mary's leg is pretty.'

b. Mary-**ka** tali-ka yeppu-ta.
Mary-N leg-N pretty-D
'As for Mary, her leg is pretty.'

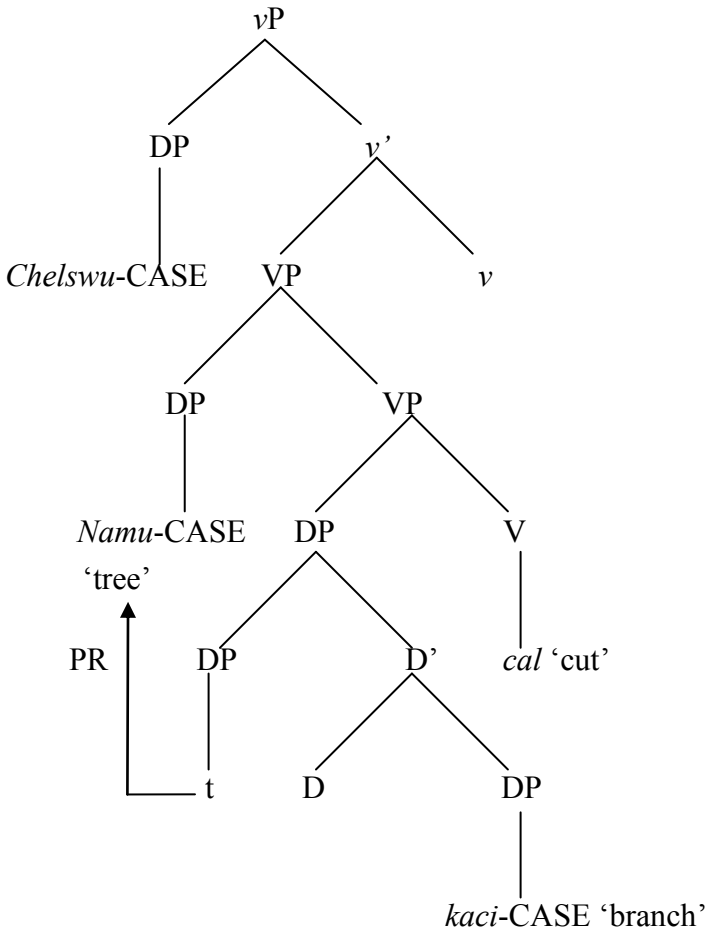
In (41) the genitive case marker of the possessor DP *ku namu* 'the tree' alternates with accusative case. In (42), the genitive case marker of the possessor DP *Mary* alternates with nominative case. There are two types of approaches with respect to the generation of the nominative/accusative possessor DP. In one proposal, the nominative/accusative possessor DP is base-generated in the surface position (e.g., Park 1973, Saito 1985, Yoon 1986, Yim 1985). In the other approach, the possessor DP is generated in the possessor position of the following DP and raised to the surface position (e.g., Kuno 1973, Y.-S Kang 1985, Choe 1985, G. Kim 1986, Szabolcsi (1983, 1994) and Tsujioka 2001).

In this section, I argue that the possessor DP is generated as a possessor of the possessed DP and raises to the surface position via Possessor Raising (PR). So in (41a), the possessor DP *namu* 'tree' is generated as a possessor of the DP *kaci* 'branch' and it is raised out of the DP to a higher position, adjoining to the VP via PR.[17] If the possessor DP remains inside the DP, it would be assigned genitive case, which is to be assigned inside a DP. If it is raised out of the DP, it is assigned structural Case by a structural Case assigner

[17] However, Ura (1996:129) proposes that the possessor DP raises to the outer spec of *v*P. This is a necessary assumption under the Minimalist framework (Chomsky 1995), since accusative Case feature checking takes place at the spec of *v*P between an object and a light verb under in the framework. However, the assumption is not necessary in my theory, since structural Case is assigned to the DPs that are in the c-command domain of the Case assigner.

depending on the position. The following is a basic structure of the PRC:[18]

(43)



Based on the above structure, I will present an analysis on the distribution of structural Case in the PRC.

3.3.3.2 The analysis of the PRC

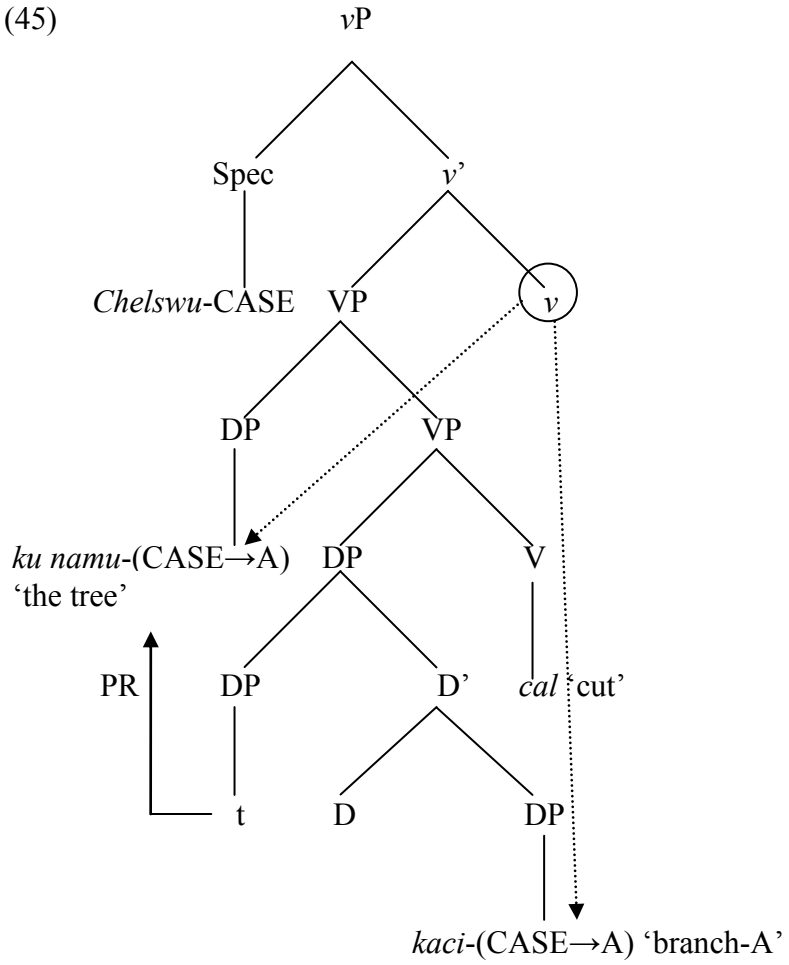
Now let us consider the PRC with two accusative DPs:

[18] Also the structure in which a possessor DP is raised from the subject position is similar to (43). In that case, PR follows the movement driven by the EPP and adjoins the possessor DP to TP.

(44) Chelswu-ka ku namu-lul kaci-lul cal-ass-ta.
Chelswu-N the tree-A branch-A cut-PST-DEC
'Chelswu cut the tree of its branch.'

In (44), the first accusative DP *ku namu* 'the tree' holds a possessor relationship to the following accusative DP. So I argue that the two accusative DPs form a constituent and it is merged with the verb. Then only the possessor-like first DP undergoes PR and adjoins to the VP. Then a light verb is merged and accusative Case feature is assigned to the arguments in its domain. The first strong phase is completed with the merger of the external argument *Chelswu*. The structure is shown below.

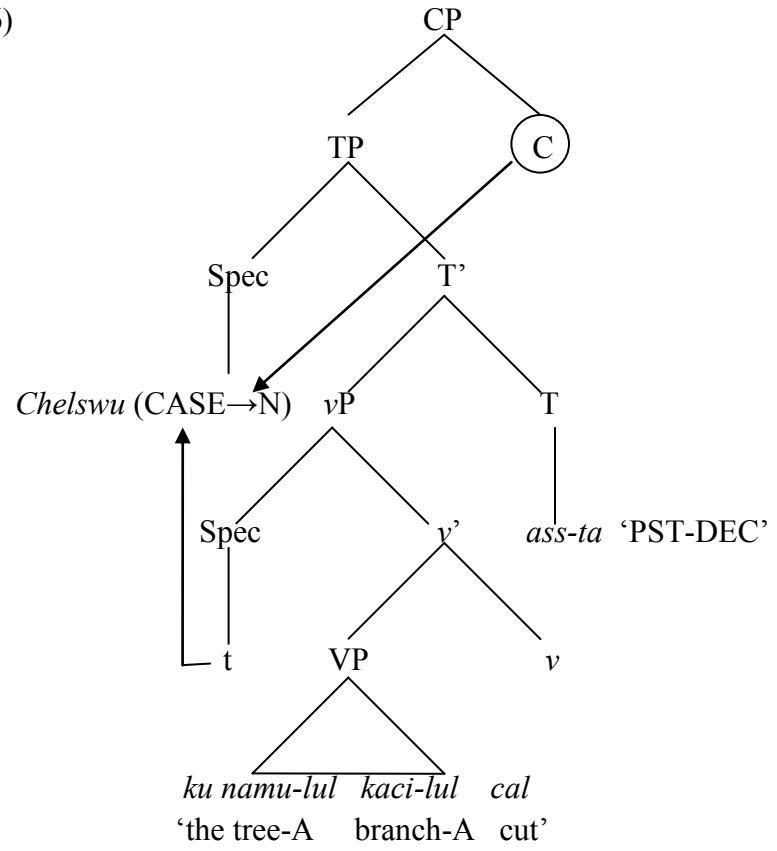
(45)



At the completion of the strong *v*P phase, Spell-Out takes place and the accusative Case features are assigned a morphological form.

The second phase starts with the merger of T. The external argument *Chelswu* moves to [Spec, TP] and the second strong phase is completed with the merger of C and nominative Case is assigned to the argument in its domain. Along with the Spell-Out, the nominative Case feature is assigned a morphological form.

(46)



3.3.3.3 The passive constructions of the PRC

The analysis of the passive counterpart of the PRC is more complex, since it allows both morphological *i*-passive and *ci*-unaccusative constructions. In the morphological *i*-passive construction, the possessed DP can be marked with either nominative or accusative case as is shown below:

(47) a. Chelswu-ka ku namu-**lul** kaci-lul cal-ass-ta.
Chelswu-N the tree-A branch-A cut-PST-DEC
'John cut the tree's branch.'

b. Ku namu-ka (Chelswu-ey uyhayse) kaci-**ka** cal-li-ess-ta.
the tree-N (Chelswu-by) branch-N cut-PSV-DEC

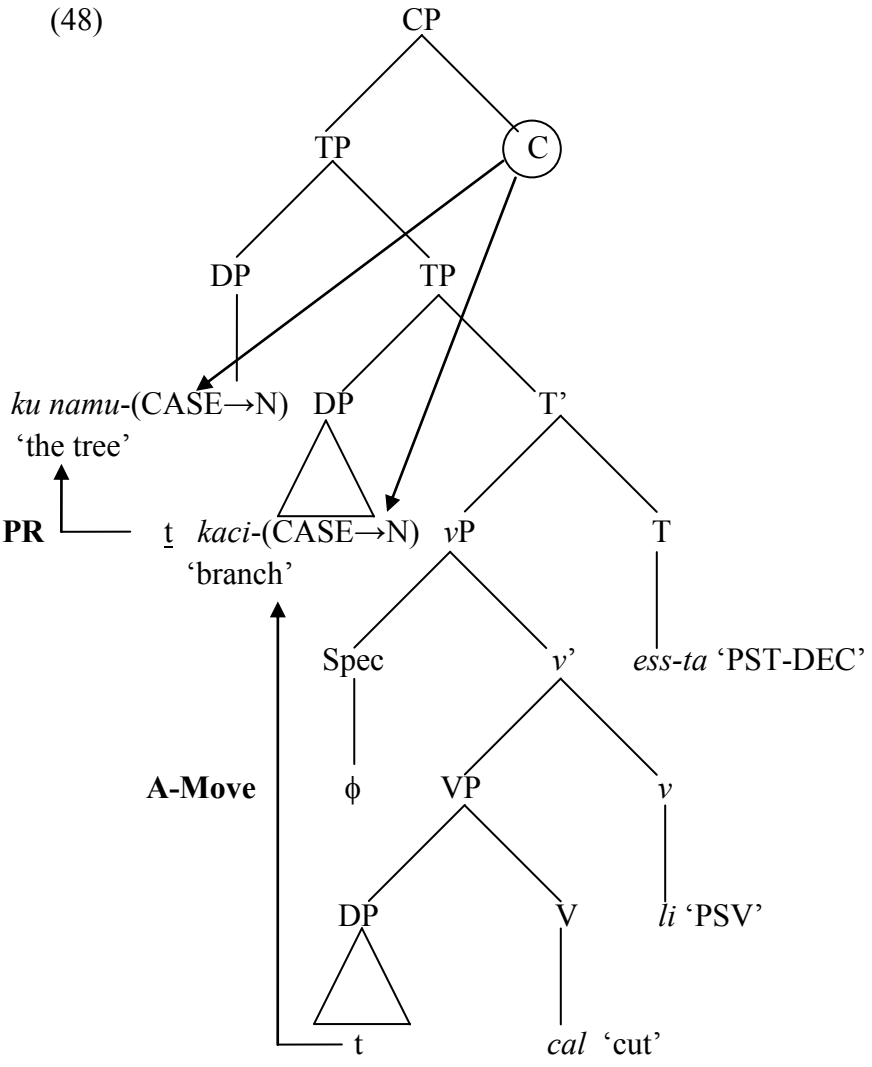
'It is the tree whose branch was cut (by Chelswu).'

c. Ku namu-ka (Chelswu-ey uyhayse) kaci-**lul** cal-li-ess-ta.
the tree-N (Chelswu-by) branch-A cut-PSV-PST-DEC
'The tree was cut of its branch (by Chelswu).'

In the passive construction, the possessor DP *ku namu* 'the tree' moves to the subject position due to EPP. Once the possessor DP moves to the subject position in the passive construction, the remaining DP *kaci* 'branch' can be assigned either nominative (47b) or accusative case (47c). I argue that the different realizations of the Case on the remaining object are attributed to the different order between PR and A-movement.

First, let us suppose that PR takes place after the A-movement in the passive construction. The derivation proceeds as in the normal transitive construction. First the whole DP including the possessor DP is merged with the verb. Then the light verb *v* is merged with the VP and accusative Case is assigned to the DPs in its domain. Since Spell-Out takes place only at the completion of a strong phase, the derivation proceeds without Spell-Out in the weak phase. Then the whole DP including the possessor and the possessed DP undergoes A-movement to the [Spec, TP]. After the A-movement, PR takes place. The PR raises the possessor DP in the subject position out of the possessive DP to a higher position. Lastly the complementizer C is merged and nominative Case is assigned to the DPs in its domain. Though the DPs are already assigned accusative Case, it is overridden by the late structural Case assignment, since they are not assigned a morphological form yet. When the strong CP phase is completed, structural Case features are assigned a morphological form. This is shown in the following tree:

(48)

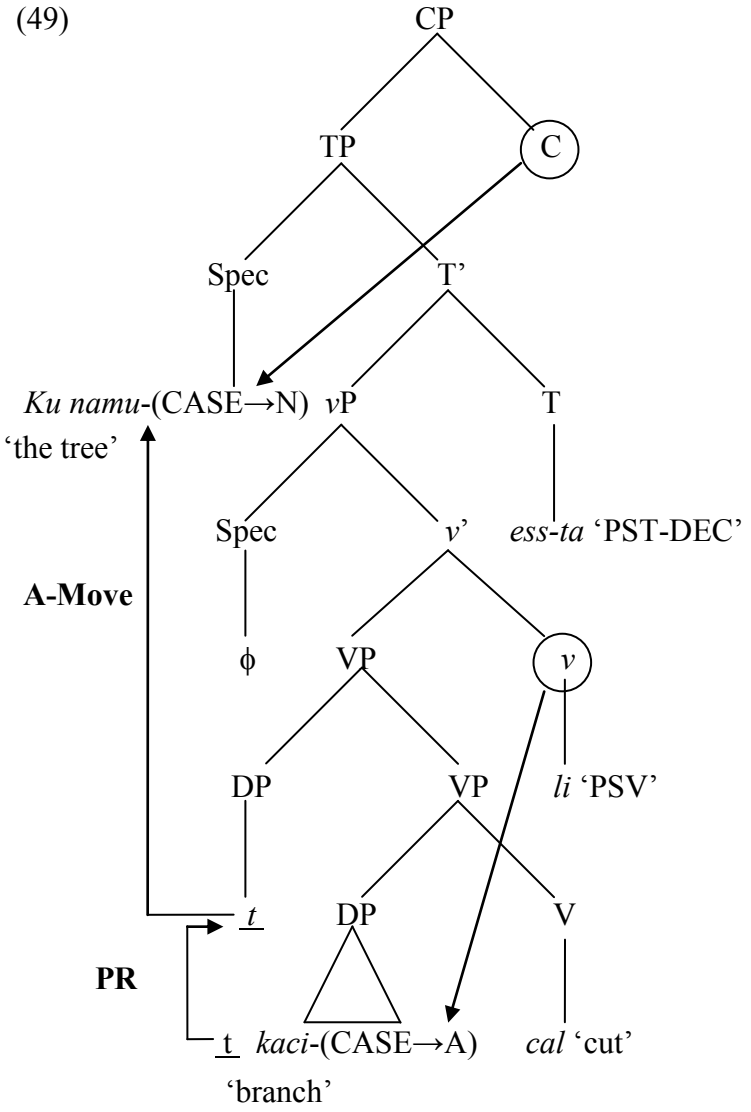


In the above tree, the A-movement of the DP including both the possessor and the possessed DP takes place before the PR. Then PR applies only to the possessor DP. Since both arguments *ku namu* 'the tree' and *kaci* 'branch' are in the domain of the complementizer C, both of the DPs are assigned nominative Case.

Now let us consider the other option. In this option, PR takes place before A-movement. First the whole DP is merged with the verb. Then the possessor DP undergoes PR to a higher position above the possessive DP. Since the verb *cal* 'cut' is a transitive verb, a light verb *v* is projected and accusative Case is assigned to the arguments

in its domain. Since the light verb *v* does not constitute a strong phase in the passive construction, the derivation proceeds without Spell-Out. Then only the possessor DP undergoes A-movement to [Spec, TP], leaving the possessed DP within the c-command domain of the light verb. When C is merged, nominative Case is assigned to the DPs in its domain, After the strong CP phase, Spell-Out takes place and every argument is assigned a morphological form. The structure is shown below:

(49)



To summarize, the case alternation seen in the *i*-passive construction of the PRC can be explained by alternating the order between A-movement and PR. If A-movement takes place before PR, both arguments will be outside of the light verb and will be assigned nominative Case by C. On the other hand, if PR takes place before the A-movement, the possessed DP will still be in the domain of the light verb and it will be assigned a morphological accusative case after Spell-Out.

Now let us turn to the *ci*-unaccusative construction:

(50) Ku namu-ka (Chelswu-ey uyhayse) kaci-**ka**/***lul** cala-ci-ess-ta.
the tree-N (Chelswu-by) branch-N/A cut-CI-PST-DEC
'It is the tree whose branch came to be cut (by Chelswu).'

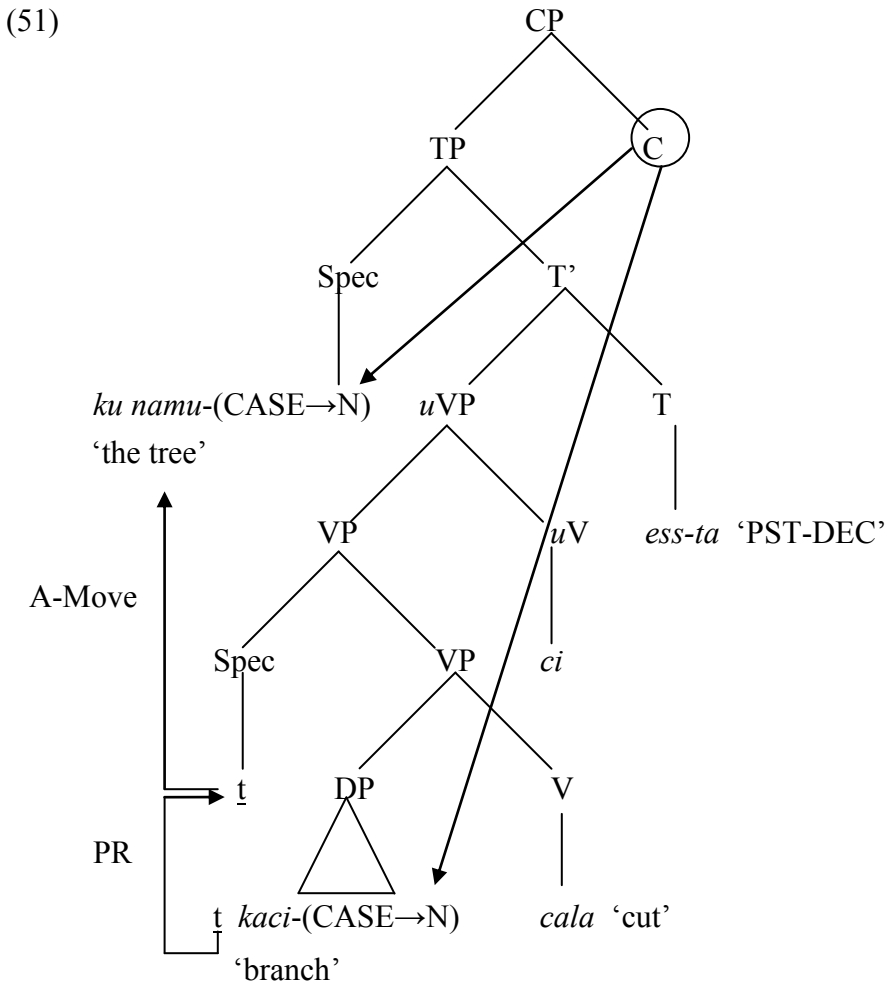
In this construction, every argument is assigned nominative case and accusative case is not available at all. The analysis of the *ci*-unaccusative construction is not much different from the one that is proposed for the *ci*-unaccusative construction of the double accusative construction. What I argue is that the unaccusative verb *ci* does not project a light verb projection. Hence accusative Case is not available.

The derivation proceeds just like a normal passive construction except that it does not project a light verb projection. First the internal argument is combined with the verb. If PR takes place before the A-movement, the possessor DP is adjoined to the VP.[19] Then the verbal complex is combined with the unaccusative verb *ci*. In this construction, the light verb *v* is not projected, since unaccusative verb does not need to project a light verb *v*. After T is merged with the unaccusative verb phrase *u*VP, only the posssessor DP undergoes an

[19] In fact, it does not matter whether the PR takes place before the A-movement or after the A-movement, since accusative Case will not be available in either case due to the absence of the light verb projection.

A-movement to [Spec, TP]. The strong phase is completed with the merger of a complementizer C and nominative Case is assigned to the DPs in its domain. The structure is shown below.

(51)



Since there is no light verb projection, accusative Case is not available and both arguments are assigned nominative Case by the complementizer C and the accusative feature is assigned a morphological form along with Spell-Out.

3.4 Summary

In this chapter, I considered the distribution of structural Case in transitive/ditransitive constructions and their passive constructions. With respect to the transitive and ditransitive construction, I have argued that structural Case is assigned depending on the structural position of the argument. So in the ditransitive construction, the two objects are assigned accusative Case, since they are in the domain of the light verb *v*. The accusative Case feature is assigned a morphological form after Spell-Out, which takes place after each strong phase.

With respect to Korean passive construction, it has been assumed that there are two types of passive morphemes: the morphological passive morpheme -*i*- and the more productive compound passive morpheme *ci*. By the way, the two passive morphemes have different properties with respect to the assignment of structural Case. With respect to the passive constructions of the PRC, the *i*-passive construction allows either accusative or nominative case to be assigned to the remaining theme argument, while the *ci*-construction does not allow accusative Case at all.

With respect to *ci*, I argue that it is an unaccusative auxiliary verb rather than a passive morpheme. Unaccusative verbs share many properties with passive verbs. In fact passive verbs may belong to unaccusative verbs in the wider sense of the term. Both of them neither allow an external argument nor assign accusative Case. However, there are crucial syntactic differences between the two constructions. Passive constructions are argued to be derived from transitive constructions via a transformational operation. So the light verb *v* is retained even in the passive construction. But the light verb projection is not generated in the unaccusative construction, since there is no need to project it. If there is no light verb

projection, structural accusative Case is not available regardless of the structural positions of the arguments.

With respect to the morphological *i*-passive construction of the PRC, I have shown that the order between PR and A-movement is crucial in determining the structural Case assigned to the remaining argument. If PR takes place before A-movement, the PR will raise only the possessor DP and the remaining argument will be in the domain of the light verb *v*, being assigned accusative Case. On the other hand, if A-movement takes place before PR, the whole DP including the possessor and the possessed DP raise to the subject position via the A-movement. Then only the possessor DP raises to a higher position via PR. Then both DPs will be in the domain of a C and will be assigned nominative Case by the C.

Chapter 4 Structural Case assignment in Double Nominative Constructions

In this chapter, I will examine Double Nominative Constructions (DNCs) in Korean and propose an analysis of the distribution of structural Case in DNCs. The DNC is a construction in which two nominative DPs appear in a clause. I classify the DNC into two types based on the grammatical relation of the arguments, that is to say Nominative Possessor Construction (NPC) and Nominative Object Construction (NOC). I show that they have different syntactic structures, hence should receive different analyses with respect to the assignment of structural Case.

4.1 Introduction

In Korean and Japanese, there are a number of stative verbs that have more than one DP marked with nominative case. Consider the following examples:

(1) Swuni-ka emeni-ka yeppu-ta.
Swuni-N mother-N beautiful-DEC
'It is Swuni whose mother is beautiful.'

(2) Nay-ka Minho-ka coh-ta.
I-N Minho-N like-DEC
'I like Minho.'

In the above examples, both DPs in each example are marked with nominative case. These constructions are called Double Nominative Constructions (DNC). [1]

[1] These constructions have been called various names like double subject construction (DSC; e.g, Park

There are two major issues surrounding the DNCs. The first issue is about the subjecthood of the nominative DPs. Traditionally nominative case has been considered to be a reflex of subjecthood. Since there are two nominative DPs in each sentence, it is questionable whether both nominative DPs are a subject or only one of them is a subject. If only one of the nominative DPs is a subject, then which one is the subject? These issues about the subjecthood of the nominative DPs will be discussed in this chapter. The second issue is concerned with the nature of the nominative case. Are both nominative cases in the DNC structural or only one of them is structural? If they are both structural, then how could both arguments be assigned the same nominative Case? These two issues will be discussed in this chapter.

4.2 Classifying the DNCs

DNCs can be classified into several types based on various criteria. For example, Moon (2000:240) classifies DNCs into three types based on semantic and syntactic criteria.[2] But his classification is not appropriate to understand syntactic properties of DNCs, since one

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1982 among others), multiple subject construction (MSC:e.g. Park (1973) and Yim (1985), Ura 1996, Ura 1999 among others) or multiple nominative construction (MNC). However, there are controversies whether multiple nominative cases imply multiple subjects or not. So in this dissertation, I use the term DNC rather than MSC, DSC, since the term DNC could refer to a broader range of data, including the cases where some nominative DPs are not subjects. However, see Yoon (2006) and references cited there for the claim that there can be multiple subjects in a clause.

[2] Moon (2000) proposes the following three types of the DNCs:

(i) Inalienable Possessor Relation
Swuni-ka meri-ka kil-ta.
Swuni-N hair-N long-DEC
'Swuni has a long hair.'

(ii) Alienable Possessor Relation
Chelswu-ka catongcha-ka kocangnass-ta.
Chelswu-N car-N out of order-DEC
'Chelswu's car is out of order.'

(iii) Nominative Object Construction
Swuni-ka Chelswu-ka silh-ta.
Swuni-N Chelswu-N hate-DEC
'Swuni hates Chelswu.'

of the criteria are based on the semantic criteria of alienable versus inalienable possessor relation.

On the other hand, Yeon (2003) introduces multiple criteria to classify DNCs. He classifies DNCs into two types, i.e., Type 1 and Type 2, based on the following 4 syntactic and semantic criteria:[3]

(3) Criteria for classifying DNCs (Yeon 2003)
  (i) The number of the arguments that a predicate takes
  (ii) Semantic relatedness restriction or possessive relationship between the first and the second NP
  (iii) The availability of dative-nominative alternation of the first NP
  (iv) The subjecthood of the arguments

Yeon's classification assumes that all the above criteria show consistent results with respect to the classification of the DNCs. But the expectation turns out to be incorrect. For example, consider the following example with a verb *manh-ta* 'be plentiful' with respect to the above criteria:

(4) Minswu-ka ton-i manh-ta.
  Minswu-N money-N much-DEC
  'It is Minswu, who has a lot of money.'

Regarding the first criterion (3i), the predicate *manh-ta* seems to be a two-place predicate,

[3] Type 2 DNC differs from Type 1 DNC in 4 ways (Yeon 2003 54). First, the predicate in Type 1 is a one place predicate while the predicate in Type 2 is a two place predicate. Second, there is no relatedness restriction or possessive relationship between the first DP and the second DP in Type 2. Thirdly, there are alternative constructions for Type 2, that is to say the first DP can be marked with the dative. Lastly, in Type 2, the first nominative DP functions as the subject of the whole sentence.

which suggests that it belongs to the Type 2. For the second criterion (3ii), there is no possessive relationship between the first nominative DP and the second nominative DP, which also suggests that it belongs to the Type 2. For the third criterion (3iii), the first nominative DP can alternate with the dative marker *-eykey* as is shown below:

(5) Minswu-eykey ton-i manh-ta.
Minswu-D money-N much-DEC
'Unto Minswu, he has a lot of money.'

This also supports the claim that the example (4) belongs to the Type 2. Lastly Yeon (2003:55) argues that all syntactic behaviors including subject honorification, reflexive binding, and coordinate subject deletion show that the first nominative DP rather than the second nominative DP is the subject in (4) (Yeon 2003:55). This property also supports the claim that the example (4) belongs to the Type 2.

But there are some conflicting evidence regarding the verb *manh-ta* 'be many'. Contrary to Yeon's (2003) argument, Park (2008) argues that the verb *manh-ta* is a one-place predicate and the first nominative DP holds a close semantic relationship of possessor to the second nominative DP. In fact, the first nominative case marker can be substituted with a genitive case marker *-uy*, as is shown below (Park 2008).

(6) Minswu-uy ton-i manh-ta.
Minswu-G money-N much-DEC
'Minswu's money is much.'

The example (6) shows that *manh-ta* is a one-place predicate. It also shows that the first

nominal is in a possessive relationship with the second nominative DP. Thus Park's (2008) data shows that Yeon's (2003) argument needs some modifications. Also the third criterion (3iii) of Yeon (2003) is not dependable either. The first nominative case marker of the first argument in (4) can alternate with the genitive marker as well as the dative marker.

So in this section, I depend on a more reliable criterion, that is to say the fourth criterion of Yeon's (2003). I classify DNCs into two types depending on the grammatical relation of the arguments. I show that in one type of the DNC, only the first nominative DP satisfies the subjecthood tests, while in the other type, only the second nominative DP does. To determine the subjecthood of arguments, I introduce syntactic subjecthood tests in the following section.

4.2.1 Subjecthood tests

Many subjecthood tests were proposed for languages like Korean and Japanese. Here are some popular subjecthood tests.

(7) Yeon (2003:49-50)
   a. Reflexive Binding
   b. Subject honorification
   c. Coordinate subject deletion

(8) Ura (1999)
   a. Subject-oriented anaphor *caki* 'self'
   b. Controlling of PRO in an adjunct-subordinate clause
   c. Subject honorification

(9) Yoon (2006): Diagnostics for Grammatical Subjects[4]

a. Subject honorification

b. Equi controller in obligatory control

Among the above subjecthood tests proposed by various researchers, many subjecthood tests overlap with other subjecthood tests.[5] So I reorganize the above tests into the following 4 tests:

(10) a. Subject Honorification

b. Subject-oriented anaphor Binding

c. Coordinate subject deletion

d. The controller of PRO in an adjunct-subordinate clause

In this section, I adopt the above 4 subjecthood tests to determine the subjecthood of each argument in DNCs. Let me briefly explain the above subjecthood tests below.

First, consider the Subject Honorification test. When a subject is deferential in Korean, the subject honorific marker *-si-* should be triggered:[6]

(11) a. Sensayngnim-i Swuni-lul cohaha-**si**-n-ta.
teacher-N Swuni-A like-**SH**-PRES-DEC
'The teacher likes Swuni.'

[4] Yoon (2006) distinguishes two types of subjects: Grammatical Subject (GS) and Major Subject (MS). GS differs from MS in that GS is an argument of a predicate, while MS is not. A Grammatical Subject is the subject of the VP, an unsaturated predicate. The role of the Grammatical Subject is often borne by the external argument of the verb. On the other hand, a Major Subject is a subject on which the sentence consisting of the Grammatical Subject and VP are predicated.

[5] That is to say, (7a) and (8a); (7b), (8c) and (9a); (8b) and (9b) are the same subjecthood tests.

[6] The use of the subject honorific marker is not optional but mandatory. So the insertion of the subject honorific marker in a clause where it is inappropriate leads to strong ungrammaticality as is shown in (11b). Similarly, the omission of the subject honorific marker in a situation where it is required is considered very rude, consequently leading to syntactic ungrammaticality.

b. Swuni-ka sensayng-nim-lul cohaha-(*si)-n-ta.
Swuni-N teacher-H-A like-(*SH)-PRES-DEC
'Swuni likes (her) teacher.'

In (11a), the subject honorific marker *-si-* is triggered, since the subject *sensayng-nim* 'teacher-H' is deferential enough to trigger the subject honorific marker. However, in (11b) the sentence is ungrammatical with the subject honorific marker in spite of the presence of the same deferential argument *sensayng-nim* 'teacher-H'. That is because the deferential DP is not a subject but an object. The sentence (11b) becomes grammatical if the subject honorific marker is deleted.

Secondly, the subject oriented anaphor *caki* 'self' can only refer to a subject in Korean. Let us consider the following examples (Yeon 2003:35):

(12) a. John$_i$-i Mary$_j$-lul caki$_{i/*j}$-uy pang-ey katwu-ess-ta.
John-N Mary-A self-G room-in lock-PST-DEC
'John locked Mary in his room.'

b. Mary$_i$-ka John$_j$-eyuyhay caki$_{i/*j}$-uy pang-ey katwue-ci-ess-ta.
Mary-N John –by self-G room-in lock-CI-PST-DEC
'Mary was locked in her room by John.'

In (12a), the subject oriented anaphor *caki* 'self' can only refer to the subject *John*. It cannot refer to the object *Mary*. The subject oriented property of *caki* becomes more obvious in the passive counterpart (12b). Now the *caki* in (12b) can only refer to the derived subject *Mary*. Regardless of the thematic relation of the argument, *caki* can only refer to the syntactic subject

The third subjecthood test is concerned with the coordinate subject deletion construction. In a coordinate construction, the subject of the second conjunct can be deleted when it is coreferential with the subject of the first conjunct. Let us consider the following example:

(13) a. Mary$_i$-ka eme-nim-ul cohaha-ko [ϕ] sensayng-nim-ul conkyenghan-ta.
Mary-N mother-H-A like-and teacher-H-A respect-DEC
'Mary likes mom and (Mary) respects the teacher.'

b. *Mary-ka eme-nim-ul cohaha-ko Mary-ka [ϕ] conkyenghan-ta.
Mary-N mother-H-A like-and Mary-N respect-DEC
'(intended) Mary likes mom and respects her mother.'

In (13a), the missing argument in the second conjunct is understood as the subject of the first conjunct. However, the missing argument of the second conjunct in (13b) cannot be understood as the object of the first conjunct. This suggests that only the subject of the first conjunct can be omitted in the second conjunct.

The last subjecthood test is concerned with the property that only the subject can control the missing subject (PRO) of an adjunct-subordinate clause in Korean (Ura 1999). The following example shows that the PRO in Korean *-myense* 'though' construction cannot be controlled by any non-subjects (O'Grady 1991):

(14) [PRO$_{k/*i}$ haksayng-i-myense], John$_k$-i Harry$_i$-lul salhayhay-ss-ta.
student-be-though John-N Harry-A kill-PST-DEC
'Although PRO$_{k/*i}$ being a student, John$_k$ killed Harry$_i$.'

The controller of the PRO in (14) is the subject *John* of the matrix clause and the object

Harry cannot be the controller of the PRO.

With the above four subjecthood tests, I classify the DNCs into two types. In one type, only the first nominative DP satisfies the subjecthood tests, while in the other type only the second nominative DP satisfies the subjecthood tests.

4.2.2 Nominative Possessor Construction

The first type of DNC that I will consider is the following DNC in which only the second nominative DP satisfies the subjecthood tests:

(15) a. Swuni-ka emeni-ka yeppu-ta.
Swuni-N mother-N beautiful-DEC
'It is Swuni whose mother is beautiful.'

b. Sensayng-nim-i elin sonca-ka ttokttokha-ta.
teacher-H-N little grandchild-N smart-DEC
'It is the teacher, and only he, whose little grandchild is smart.'

In this construction, the first nominative DP holds a possessor relationship to the second nominative DP. So I call this type of construction Nominative Possessor Construction (NPC). In (15a) and (15b), the first nominative DPs hold a relationship of kinship to the second nominative DPs. So the first nominative case can be substituted with the genitive marker -*uy*:

(16) a. Swuni-**uy** emeni-ka yeppu-ta.
Swuni-**G** mother-N beautiful-DEC
'Swuni's mother is beautiful.'

b. Sensayng-nim-**uy** elin sonca-ka ttokttokha-ta.
teacher-H-**G** little grandchild-N smart-DEC
'The teacher's little grandchild is smart.'

The fact that the first nominative case can be substituted with the genitive marker suggests that the first nominative DP holds a possessive relationship to the second nominative DP.

In many literatures, it has been argued that the second nominative DP in NPC displays subject properties. But with respect to the first nominative DP of the NPC, it is controversial whether the first nominative DP also shows subject properties or not. If the first nominative DP as well as the second nominative DP is a subject, it would mean that there are two subjects in NPC. But if the first nominative DP is not a subject, although it is marked with a nominative case marker, then it would mean that subjecthood and nominative case marking do not coincide.

Now let us consider the subjecthood of the nominative DPs in NPC. First, let us consider the subject honorification test:

(17) a. Swuni-ka eme-nim-i yeppu-**si**-ta.
Swuni-N mother-H-N beautiful-**SH**-DEC
'It is Swuni, whose mother(H) is beautiful.'

b. Sensayng-nim-i elin sonca-ka ttokttokha-(***si**)-ta.
teacher-H-N little grandchild-N smart-(***SH)**-DEC
'It is the teacher, and only he, whose little grandchild is smart.'

In (17a), the sentence is grammatical with the subject honorific marker *-si-*. The first

nominative DP *Swuni* is not deferential enough to trigger the subject honorific marker.[7] So the subject honorific marker -*si*- must be triggered by the second nominative DP *emeni-nim* 'mother-H'. This means that the second nominative DP is the subject. This argument is further supported by the second example (17b). The first nominative DP *sensayng-nim* 'teacher-H' is deferential enough to trigger the subject honorific marker. But the sentence is ungrammatical with the subject honorific marker. This is because the first deferential nominative DP is not a subject.

The following examples also show that the first deferential nominative DP cannot trigger the subject honorific marker in (18a), while the second deferential nominative DP can in (18b):

(18) a. Ku eme-nim-i ayki-ka yeppu-(***si**)-ta.
the mother-H-N baby-N beautiful-(***SH**)-DEC
'It is the mother, whose baby is beautiful.'

b. Ku elin sonca-ka sensayng-nim-i ttokttokha-**si**-ta.
the little granchild-N teacher-H-N smart-**SH**-DEC
'It is the little grandchild, whose teacher is smart.'

On the other hand, there are some seemingly conflicting data proposed by Kang (1986) and O'Grady (1990). Consider the following examples in which the first nominative DPs seem to trigger the subject honorific marker:

(19) Kim-sensayng-nim-i kohyang-i koyngcanghi me-**si**-ta.
Kim-teacher-H-N hometwon-N very far-**SH**-DEC

[7] Calling by one's first name strongly implies that the person who is being called is not being honored. It is strictly forbidden in Korean to call a person by one's first name when the person is deferential.

'It's Prof. Kim(H) whose hometown is very far away(H).'
(modified from Kang, Y.-S (1986:140))

(20) Halapeci-ka pal-i khu-**si**-ta.
grandfather-N feet-N big-**SH**-DEC
'Grandfather's feet are big.' (O'Grady (1990:132))

In both examples, the first nominative DPs are in a possessive relation to the second nominative DPs, hence they are NPCs. However it seems that the first nominative DPs trigger the subject honorific marker. These examples seem to contradict the argument that only the second nominative DP can trigger the subject honorific marker in NPC. But it is noteworthy that the second nominative DPs in (19) and (20) are non-human or body-part, which is inherently not eligible for honorification. If we substitute the second nominative DP with a DP that is eligible for honorification, only the second nominative DP can trigger the subject honorific marker:

(21) a. Ku ape-nim-i ai-ka khu-(*si)-ta.
the father-H-N child-N tall-(*SH)-DEC
'It is the father whose child is tall.'
b. Ku ai-ka ape-nim-i khu-si-ta.
the child-N father-H-N tall-SH-DEC
'It is the child, whose father is tall.'

In (21a), both DPs *ku ape-nim* 'the father' and *ai* 'child' are human, hence both are eligible for honorification. However, the first nominative DP *ku ape-nim* 'the father-H' in (21a) cannot trigger the subject honorific marker. The subject honorific marker is triggered only

when the second nominative DP *ape-nim* 'father-H' is deferential as is shown in (21b). This result is consistent with the original argument that only the second nominative DP can trigger the subject honorific marker in NPC. [8]

To summarize, in spite of some conflicting data, it is clear that only the second nominative DP is the subject in NPC. I have shown that Kang's (1986) argument that the first nominative DP can trigger the subject honorification in NPC misses an important point. The second nominative DPs in Kang's examples are inherently not eligible for honorification. It turns out that if the second nominative DP is eligible for honorification, the first nominative DP cannot trigger the subject honorific marker.

Now let us apply the second subjecthood test to NPC. As is explained above, the subject oriented anaphor *caki* can only refer to a subject. Consider the following example by Yeon (2003:50):

(22) Swuni$_i$-ka emeni$_j$-ka caki$_{*i/j}$ nai pota celme-poin-ta.
Swuni-N mother-N self age than young-look-DEC
'It is Swuni$_i$, and only she, whose mother$_j$ looks younger than her$_{*i/j}$ age.'

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[8] With respect to the examples that were provided above by Kang (1986) and O'Grady (1990), I briefly introduce an idea proposed by Mark Baker (p.c.). He suggests the following hypothesis:

(i) an NP can be marked as [±Honorific] or [uHonorific]

(ii) The second nominative NP in NPC takes the priority of determining the deferentiality. If the second nominative NP is marked [±Honorific], then it will determine the honorific agreement on the predicate. On the other hand, if it is [uHonorific], then the first NP determines the honorific agreement on the verb.

*[uHonorific] stands for unmarked for the [Honorific] feature.

Suppose the DP *kohyang* 'hometown' is marked [uHonorific], since it is inherently not eligible for honorification. Then it cannot determine the deferentiality of the predicate. Then the first nominative DP can determine the deferentiality of the predicate. Since *Kim-sensayng-nim* is [+Honorific], the predicate is marked with the subject honorific marker *-si-* in agreement with the subject.

In (22), the subject oriented anaphor *caki* 'self' cannot refer to the first nominative DP. It can only refer to the second nominative DP *emeni* 'mother'. This suggests that the first nominative DP is not a subject. This data is also consistent with the previous argument that only the second nominative DP is the subject in NPC.

However, there are also some seemingly contradicting data noted by Kang (1986:140):

(23) John$_i$-i caki$_{i/*j}$-uy cip-eyse ayin$_j$-i casalha-ess-ta.
John-N self-Gen house-at lover-N suicide-PST-DEC
'It is John$_i$ whose lover$_j$ committed suicide at self$_{i/*j}$'s house.'

In (23), the subject oriented anaphor *caki* seems to be bound by the first nominative DP *John*. The subject oriented anaphor *caki* can refer to the first nominative DP *John* in (23), but it cannot refer to the second nominative DP *ayin* 'lover'. Based on the above data, Kang (1986) argues that the first nominative DP is the syntactic subject.

But Kang's (1986) argument misses an important point. It is noteworthy that the subject oriented anaphor *caki* is placed between the first nominative DP and second nominative DP. So it is structurally impossible for the anaphor to be bound by the structurally lower second nominative DP. In fact, if the subject oriented anaphor follows the second nominative DP *ayin-i* 'lover-N', then it can only refer to the second nominative DP as is shown below:

(24) John$_i$-i ayin$_j$-i caki$_{*i/j}$-uy cip-eyse casalha-ess-ta.
John-N lover-N self-G house-at suicide-PST-DEC
'It is John$_i$ whose lover$_j$ committed suicide at self$_{*i/j}$'s house.'

In (24), the subject oriented anaphor *caki* can only refer to the second nominative DP *ayin*. This result is also consistent with the initial argument that only the second nominative DP is the subject in NPC.

The third subjecthood test is the coordinate subject deletion test. Let us consider the following example.

(25) Swuni-ka emeni-ka yeppu-**si**-ko [ϕ] pucilenha-**si**-ta.
Swuni-N mother-N beautiful-**SH**-and ϕ diligent-**SH**-DEC
'It is Swuni, whose mother is beautiful and diligent.'
'*It is Swuni, whose mother is beautiful and Swuni is diligent.'

As is shown in the translation, only the second nominative DP *emeni* 'mother' can be understood as the missing subject of the second conjunct. This also supports the claim that only the second nominative DP is the subject in NPC.

However, as in the previous cases, there exist some superficially contradicting data in which the first nominative DP of the first conjunct is understood to be the missing element of the second conjunct. Consider the following example:

(26) Sensayng-nim-i tali-ka ccalpu-**si**-ko, [ϕ] cha-ka epsu-**si**-ta.
teacher-H-N leg-N short-SH-and car-N not have-SH-DEC
'It is the teacher, whose legs are short and who does not have a car.'

Considering that the subject honorific marker *-si-* is triggered in (26), it seems that the first nominative DP *sensayng-nim* 'teacher-H' of the first conjunct triggers the subject honorific marker on the predicate, since the second nominative DP *tali* 'leg' is ineligible to trigger

the subject honorific marker. However, the construction looks similar to the NPC data (19) and (20) in which the first honorific DP triggers the subject honorific marker. In (26), the second nominative DP is inherently not eligible for honorification either. So it is necessary to consider an example in which both arguments are eligible for honorification:

(27) Sensayngnim-i emeni-ka yeppu-**si**-ko [ϕ] pucilenha-**si**-ta.
teacher-N mother-N beautiful-**SH**-and ϕ diligent-**SH**-DEC
'It is the teacher, whose mother is beautiful and diligent.'

In the above example, both DPs in the first conjunct are eligible for honorification. As is expected, only the second nominative DP *emeni* 'mother' in (27) can be understood as the missing element of the second conjunct. In conclusion, the above data also supports the argument that only the second nominative DP is the subject in NPC.

Lastly, let us consider the controller of PRO in an adjunct-subordinate clause:

(28) Chelswu-ka$_i$ emeni-ka$_j$ [PRO$_{j/*i}$ cip-ey ka-lyeko] nolyekhay-ss-ta.
Chelswu-N mother-N PRO home-to go-C tri-PST-DEC
'Chelswu's mother tried to go home.' (O'Grady 1990:120)

(29) PRO$_{*i/j}$ Oykwukin-i-myense, Swuni$_i$-ka emeni$_j$-ka yeppu-ta.
PRO foreigner-be-though Swuni-N mother-N beautiful-DEC
'Although PRO$_{*i/j}$ being a foreigner, Swuni$_i$'s mother$_j$ is beautiful.'

As is shown in (28) and (29), only the second nominative DPs can be understood as the controller of the PROs. The subjecthood test also supports the conclusion that only the second nominative DP is the subject in NPC.

So far, I have considered the four subjecthood tests with respect to the subjecthood of each nominative DP in NPC. All the four subjecthood tests show that only the second nominative argument is the subject in NPC. Although there are some seemingly problematic data, I have shown that those data are not real problems to the argument.

4.2.3 Nominative Object Construction (NOC)

In this section, I consider the other type of DNC in which only the first nominative DP satisfies the subjecthood tests. Let us consider the following examples:[9]

(30) a. Nay-ka Minho-ka coh-ta.
I-N Minho-N like-DEC
'I like Minho.'

b. Sensayng-i haksayng-i philyoha-ta.
teacher-N student-N need-DEC
'Teachers need students.'

In this construction, the second nominative DPs act like an object as is shown by the English translation. I call this type of DNC Nominative Object Construction (NOC), since the second nominative DPs act like an object.[10]

Now let us apply the subject honorification test to NOC examples:

[9] The following verbs belong to the same class (O'Grady 1990:98): *kulip-ta* 'miss', *manh-ta* 'many, much', *neknekha-ta* 'sufficient', *chwungpwunha-ta* 'sufficient', *elyep-ta* 'difficult', *coh-ta* 'like', *mocala-ta* 'lack', *sayngkakna-ta* 'remember', *pwulep-ta* 'envious', *twulyep-ta* 'afraid', *mip-ta* 'hate', *swip-ta* 'easy', *silhcungna-ta* 'tired of' and so on.

[10] The construction has also been known as the experiential (Chun&Zubin 1990), psychological verb (Lee 1976, Kim, Y-J. 1989), sense adjective verb (Cho 1988) and so on.

(31) a. Sensayng-nim-i Minho-ka cohu-**si**-ta.
teacher-H-N Minho-N like-**SH**-DEC
'The teacher likes Minho.'

b. Minho-ka Sensayng-nim-i cohu-(*si)-ta.
Minho-N teacher-H-N like-SH-DEC
'Minho likes the teacher.'

(32) a. Sensayng-nim-i haksayng-i philyoha-**si**-ta.
teacher-H-N student-N need-SH-DEC
'Teachers need students.'

b. Haksayng-i sensayng-nim-i philyoha-(***si)**-ta.
student-N teacher-H-N need-SH-DEC
'Students need teachers.'

In (31a) and (32a), the first nominative DP *sensayng-nim* 'teacher(H)' can trigger the subject honorific marker *-si-*. But in (31b) and (32b), the second nominative DP with deferential meaning cannot trigger the subject honorific marker. These data show that only the first nominative DP is the subject in NOC.

Secondly, let us consider the subject oriented anaphor *caki* 'self' with respect to the NOC:

(33) Sensayng$_i$-nim-i haksayng$_j$-i caki$_{i/*j}$ suip-ul wihay philyoha-si-ta.
teacher-H-N student-N self income-A for need-SH-DEC
'Teachers$_i$ need students$_j$ for their$_{i/*j}$ income.'

In the above example, the subject oriented anaphor *caki* cannot refer to the second nominative DP *haksayng* 'student', but it can only refer to the first nominative DP. This

also supports the claim that only the first nominative DP is the subject in NOC.

Thirdly, consider the coordinate subject deletion construction:

(34) Nay-ka Minho-ka coh-ko [ϕ] Yonghi-ka silh-ta.
I-N Minho-N like-and ϕ Yonghi-N dislike-DEC
'I like Minho and dislike Yonghi.'
*I like Minho and Yonghi dislikes Minho.

As is shown in the translation, the missing element in the second conjunct must be understood as the first nominative DP of the first conjunct. Given that only subject can be deleted in the coordinate construction, the first nominative DP of the NOC must be the subject.

Lastly, consider the controller of PRO in an adjunct-subordinate clause:

(35) $PRO_{i/*k}$ Namca-i-myense, nay_i-ka $chinkwu_k$-ka philyoha-ta.
PRO man-be-though, I-N friend-N need-DEC
'Although $PRO_{i/*k}$ being a man, I_i need a $friend_k$.

In (35), only the first nominative DP can be construed as the controller of the PRO. This also supports the argument that only the first nominative DP is the subject in NOC.

To summarize, all the four subjecthood tests show that only the first nominative DP can satisfy the subjecthood tests in NOC.[11]

[11] In the case of the NOC, there is relatively little controversy or conflicting data with respect to the subjecthood of the first nominative DP. I assume that it is because both arguments in NOC do not hold any semantic relationship with each other, while the two nominative arguments hold a close semantic relationship with each other in NPC. In NPC, both nominative DPs hold a close semantic relationship with each other, hence the honorific feature of the first nominative DP may percolate to a higher projection including the second nominative DP, triggering the honorific agreement *si* on the predicate. But in NOC,

4.2.4 Theoretical issues surrounding DNCs

DNCs have posed several theoretical challenges to Case theories under various syntactic frameworks. For example in a GB framework, nominative Case is assigned to a DP by a finite Infl under government. But this theory faces a problem when applied to NOC examples. Let us reconsider an NOC example below.

(36) Nay-ka Minho-ka coh-ta.
I-N Minho-N like-DEC
'I like Minho.'

In the above example, the second nominative DP is like an object. So I assume it to be generated as an internal argument of the verb. If the second nominative DP is internal to the VP, it cannot be governed by a finite Infl and if it is not governed by a finite Infl, it cannot be assigned nominative Case.[12]

The DNC also poses a problem to Burzio's Generalization (BG, Burzio 1986:185):

(37) $\theta_s \leftrightarrow A$

BG states that all and only the verbs that can assign θ-role to the subject position (or subject θ-role) can assign accusative Case to an object. According to the BG, accusative case must

such percolation of a feature is not possible, since both nominative DPs do not hold such a semantic relationship with each other.

[12] Shibatani (1990:306) argues that the second nominative argument is also a subject. His argument is mainly based on the fact that the second nominative argument is marked with nominative case. But nominative case marking do not always coincide with syntactic subject. For example, syntactic subjects do not have a subject marking, as in dative subject constructions. Instead, the grammatical relation must be determined based on the syntactic relationship between participants.

be available in NOC, since the first nominative DP is a subject and it is assigned an Experiencer theta role. But accusative case is not available in NOC contrary to the prediction.

Lastly the DNC is also problematic under the Minimalist theory (Chomsky 2000, 2001). Under the Minimalist framework, structural Case is determined by functional heads like T or *v* as an ancillary operation of Agree. When the uninterpretable ϕ-features of a probe match the ϕ-features of a goal, the uninterpretable ϕ-features of the probe delete and the uninterpretable structural Case feature of the goal is assigned structural Case as an ancillary operation of the Agree. In this theory, T manifests structural nominative Case and the light verb *v* manifests structural accusative Case. However once the uninterpretable ϕ-features of a probe are deleted, the probe is no longer active and it can no longer setup Agree with another DP. But in the DNC, there are two nominative DPs. Since T cannot setup Agree with multiple DPs, only one DP can be assigned nominative Case by the T. Thus the other DP cannot be assigned nominative Case without further stipulation.[13]

In the following sections, I present an analysis of the DNCs based on the hypothesis SCAH.

4.3 Structural Case assignment in NPC

In this section, I argue that the first nominative DP in NPC is generated as a possessor of the second nominative DP and moves to a higher position above TP via Possessor Raising (PR). Since both DPs are in the domain of a complementizer C, they are assigned nominative Case.

[13] Hiraiwa (2004) tries to explain multiple nominative/accusative case constructions within the Minimalist framework. This will be discussed in more detail in Chapter 6.

4.3.1 The analysis of NPC

NPC predicates are generally one-place predicates. I have already shown that only the second nominative DP is the subject in NPC. Before I provide an analysis of the NPC, I start with NPC predicates which have only one argument.

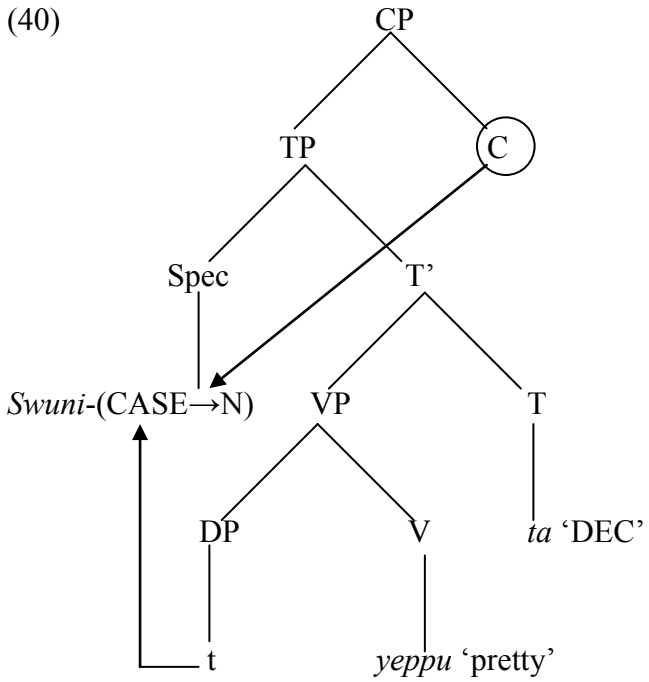
(38) Swuni-ka yeppu-ta.
Swuni-N pretty-DEC
'Swuni is pretty.'

(39) Sue-ka (cal) talli-n-ta.
Sue-N (well) run-Pres-DEC
'It is Sue, who runs well.'

Although the two NPC predicates look similar, they differ in their internal structures. According to a general assumption that unaccusative verbs denote non-volitional actions or states and unergative verbs denote willful and volitional actions (Perlmutter 1978), the verb *yeppu-ta* 'be pretty' is an unaccusative verb, while *tallin-ta* 'run' is an unergative verb. Unergative verbs have an agentive external argument, while unaccusative verbs have a VP-internal argument. So in fact the two intransitive verbs have different internal structures.

In the unaccusative construction, the sole argument is generated as the internal argument of the VP and moves to the subject position. The basic structure of the unaccusative construction is the following:

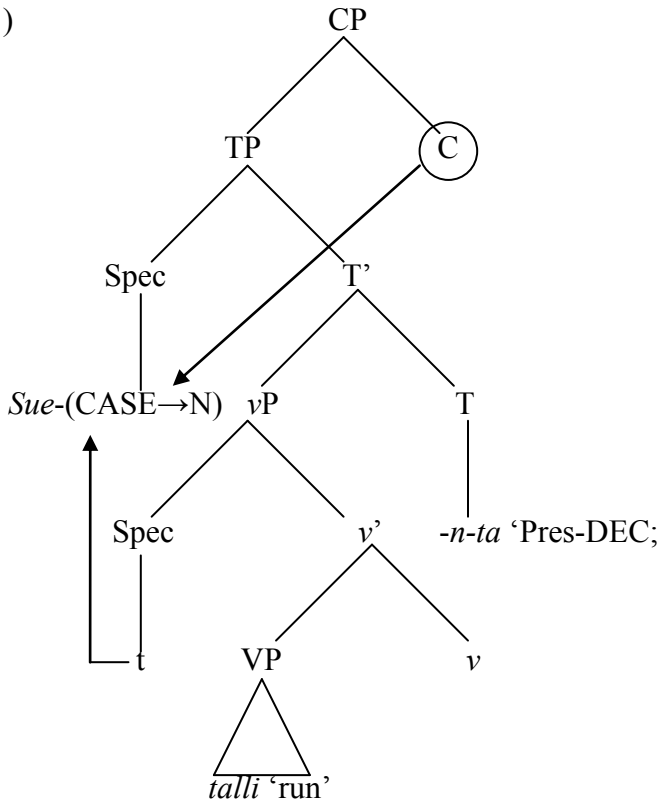
(40)



The sole argument in (40) is generated inside the VP and moves to [Spec, TP]. It is assigned nominative case by the C. In the unaccusative construction, the light verb *v* is not projected, since there is no agent. Hence accusative Case is not available.

On the other hand, unergative verbs have their sole argument generated as an external argument. The external argument is generated in the specifier position of the light verb *v* as is shown below.

(41)



The subject is generated in [Spec, *v*P] and moves to [Spec, TP]. The subject is also assigned nominative Case by the complementizer C. Although there is a light verb *v*, the subject cannot be assigned accusative Case, since it is outside of the c-command domain of the light verb *v*. [14]

[14] Although both unaccusative and unergative predicates may be NPC predicates, their internal structures are different. This difference in the internal structure can be observed in the following Serial Verb Construction.

(i) Ku pemin$_i$-un chinkwu$_j$-ka mil-lie $t_{*i/j}$ neme-ci-ess-ta.
the criminal-T friend-N push-PSV fall-down-CI-PST-DEC
'As for the criminal, his friend was pushed and fell down.'

(ii) Ku pemin$_i$-un chinkwu$_j$-ka mil-lie $pro_{i/*j}$ tomangka-(a)ss-ta.
the criminal-T friend-N push-PSV run-away-PST-DEC
'As for the criminal, his friend was pushed and he ran away.'

The example (i) is a serial verb construction. In this construction, the first predicate *mil-lie* 'push-PSV' is attached with a passive morpheme *-(l)i-*, so it requires an A-movement of the internal argument. The second predicate *neme-ci-ta* 'fall-CI-DEC' is also attached with an unaccusative auxiliary verb *-ci-* and it also requires a raising of the object. Hence the raised subject *chinkwu* 'friend' can be shared by both verbs. In the second example (ii), the first predicate is also attached with a passive morpheme, which also

Now let us turn to NPC examples with two nominative DPs (O'Grady 1990:118):

(42) Swuni-ka emeni-ka yeppu- ta.
Swuni-N mother-N beautiful- DEC
'It's Swuni whose mother is pretty.'

(43) Sue-ka cha-ka cal tallin-ta.
Sue-N car-N well run-DEC
'It is Sue whose car runs well.'

In the unaccusative type of NPC (42), it has already been shown that only the second nominative DP is the subject. I argue that the first nominative DP is generated as a possessor of the second nominative DP. First the possessive DP [$_{DP}$ Swuni-CASE [$_{D'}$ D [$_{DP}$ emeni-CASE]]] is generated as an internal argument of the VP and the whole DP moves to [Spec, TP] due to EPP. Then only the possessor DP *Swuni*-CASE undergoes PR and adjoins to the TP.[15] When a complementizer is merged with the TP, nominative Case is assigned to the DPs in its domain. At the completion of the strong CP phase, Spell-Out takes place and nominative Case features are assigned a morphological form. The structure is shown below:

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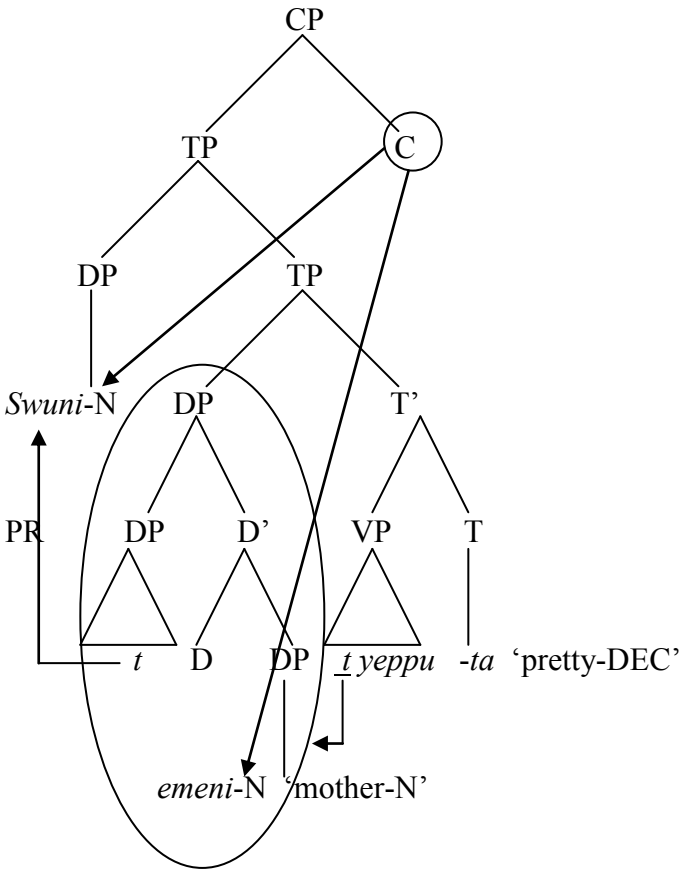
requires an A-movement of the internal argument. By the way, the second verb *tomangka-ss-ta* 'run-PST-DEC' is an unergative verb. Hence it does not have an object to share with the passive verb. So the raised subject *ku pemin* 'the criminal' cannot be shared by the second verb. The missing argument of the second verb must be a *pro*, which is coreferent with the topic.

[15] In Chapter 3, I have shown that the order between PR and A-movement may affect the distribution of structural Case. Likewise, the order between PR and the EPP-driven movement may matter in (44). But, the order between the two operations does not affect the distribution of structural Case here, since there is no light verb that assigns accusative Case.

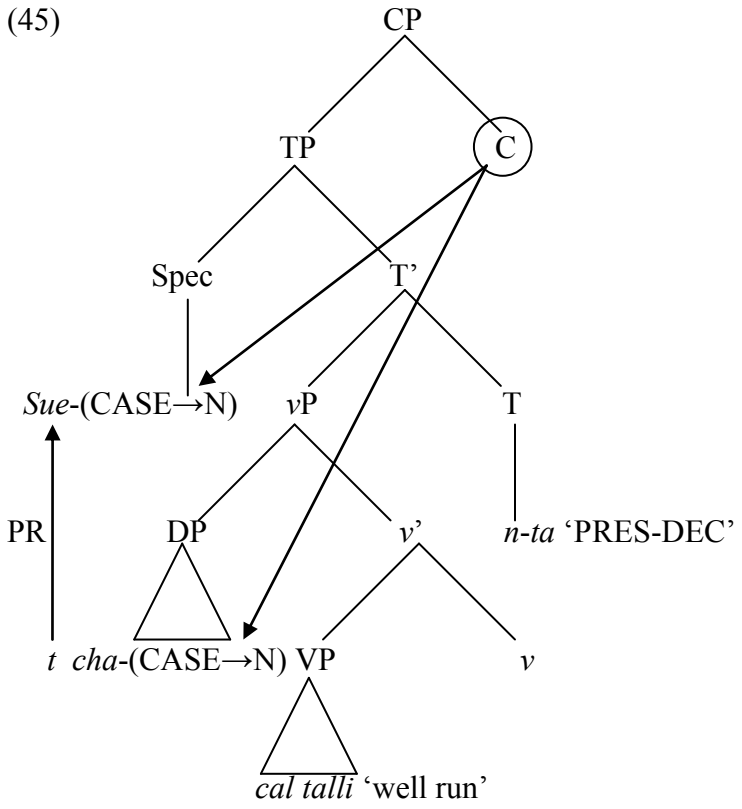
(44)



The unergative type of NPC is not much different from that of the unergative construction. The possessive DP is generated as the external argument and only the possessor DP undergoes PR to [Spec, TP]. In this construction, a light verb is projected. But since both arguments are above the domain of the light verb, they are not assigned accusative Case:[16]

[16] It is also possible that an EPP-driven movement takes place before the PR, raising the whole DP to [Spec, TP] rather than the possessor DP as in (41). However, this does not matter with respect to the distribution of structural Case, since in either case both arguments are outside the c-command domain of the light verb.

(45)



4.3.2 Issues with the derivational approach

With respect to the NPC, I have argued that the first nominative argument is derived from the possessor position of the second nominative DP. This kind of derivational approach was criticized by Yeon (2003). He presented some arguments against the derivational approach like Kuno's (1973) Subjectivization Rule. Kuno (1973) proposed to derive the DNC from its possessive counterpart through the following syntactic rule of Subjectivization:

(46) Subjectivization (Kuno 1973:71)

Change the sentence initial NP-[GEN] to NP-[NOM], and make it the new subject of the sentence.

Let us see how the above subjectivization rule applies to the NPC. The subjectivization rule applies to (47a) and changes the genitive marker *-uy* to the nominative marker *-ka* (47b).

(47) a. Swuni-uy son-i yeppu-ta.
Swuni-G hand-N pretty-DEC
'Swuni's hand is pretty.'

b. Swuni-(uy→ka) son-i yeppu-ta.
Swuni-(G→N) hand-N pretty-DEC
'It is Swuni, whose hand is pretty.'

Yeon (2003:53) presents three arguments against the derivational approach. Although the analysis proposed in this dissertation is a lot different from Kuno's Subjectivization rule, I will consider Yeon's (2003) arguments against the Subjectivization rule and show how my analysis is not subject to the criticisms.

First, Yeon (2003) argues that the NPC is semantically different from its possessive counterpart. For example, he argues that the first nominative DP in (48b) is put into Focus, producing an 'exhaustive listing' (cf. Kuno 1972, 1973) reading, while the 'exhaustive listing' reading is not available in the possessive counterpart (48a):[17]

[17] The 'exhaustive listing' is defined as follows: "(of all the people under discussion) X (and only X) is such that ...." or "(of all the things under discussion) it is X that ...". Thus (47b) gives the reading: it is Swuni, and only she whose hand is pretty.

(48) a. Swuni-uy emeni-ka yeppu-ta.
Swuni-G mother-N beautiful-DEC
'Swuni's mother is beautiful.'

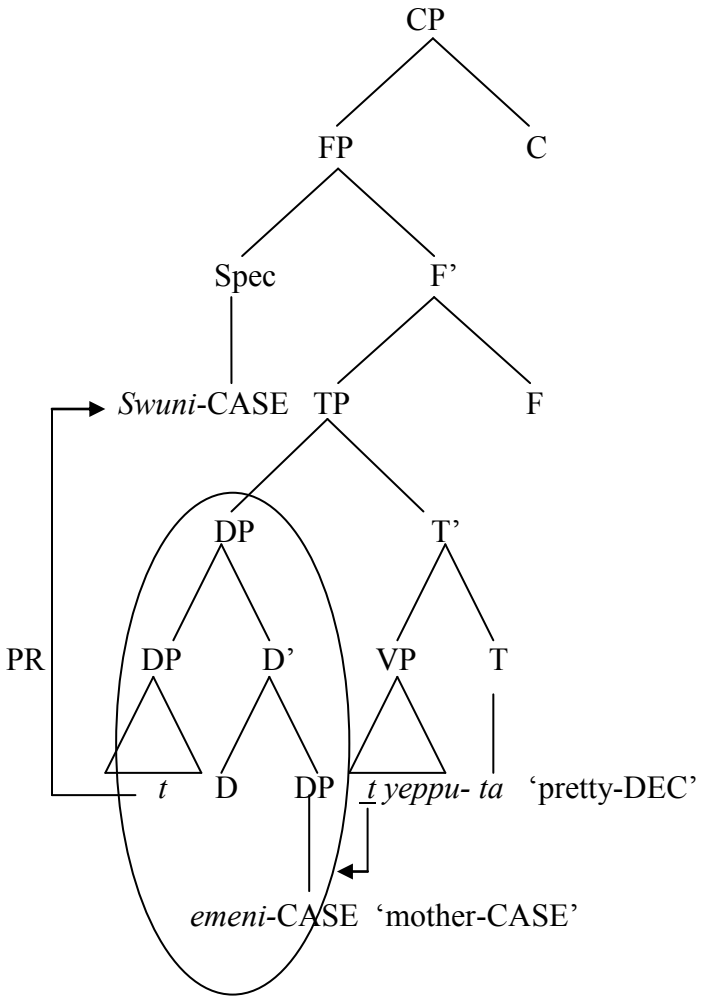
b. Swuni-ka emeni-ka yeppu-ta.
Swuni-N mother-N beautiful-DEC
'It is Swuni, and only she, whose mother is beautiful.'

Certainly Kuno's (1973) Subjectivization rule is subject to Yeon's (2003) criticism, since the Subjectivization rule simply changes the genitive marker to a nominative marker. So it cannot explain the different interpretations between the NPC (48b) and its possessive counterpart (48a).

But the different interpretations do not matter in my theory. Suppose that the whole DP including the possessor and the possessee is raised to [Spec, TP]. Then PR raises only the possessor DP to a higher position. I assume that there is a Focus Phrase and it moves to the specifier position of the Focus phrase as is shown below:[18]

[18] In this dissertation, I argue that an argument may move to [Spec, CP] for [+prominent] feature, becoming a topic. This will be discussed in more detail in Chapter 5.2.2. I also assume that there is a Focus Projection above TP (cf. Lee and Cho (2003)) and arguments may move there to get a [+New] feature, hence producing a focus reading for the moved argument (see Choi 1996).

(49)



If we follow the assumption that the 'exhaustive listing' reading is obtained at a distinct projection, namely a Focus Projection, it can be explained why the 'exhaustive listing' reading is available only in the NPC. In the possessive counterpart, the possessor DP remains inside the possessive DP, hence the 'exhaustive listing' reading is not available. But in the NPC, the possessor DP moves to a higher position, that is to say the [Spec, FocP] and is assigned the 'exhaustive listing' reading.

The second argument against the derivational approach is concerned with the idiomatic reading of a phrasal predicate. Consider the following example (Yeon 2003:53):

(50) a. [Swuni-uy son]-i khu-ta.
Swuni-G hand-N big-DEC
‘(literal meaning) Swuni’s hands are big.’

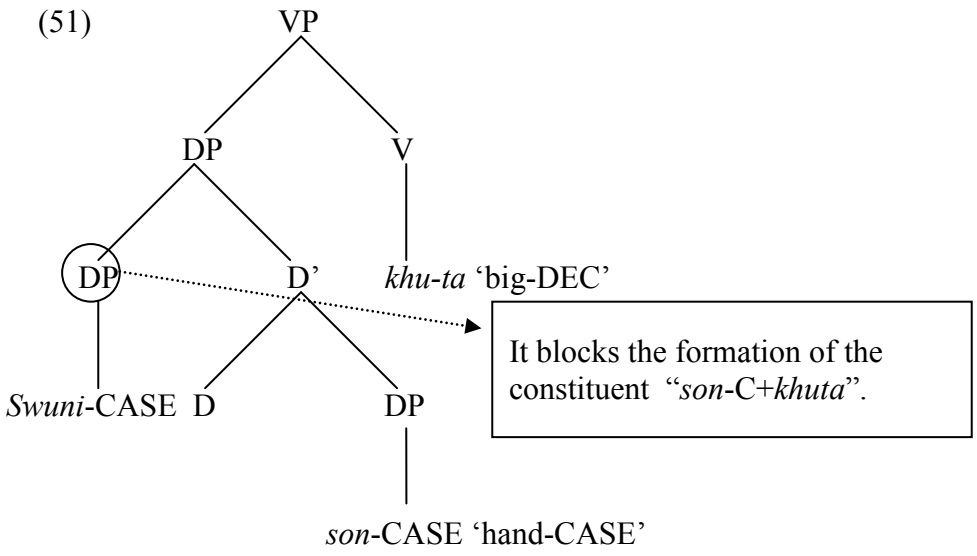
b. [Swuni-ka [son-i khu-ta]].
Swuni-N hand-N big-DEC
‘(idiomatic meaning) Swuni is very generous.’
‘(literal meaning) Swuni has large hands.’

The NPC example (50b) has an idiomatic reading as well as the literal reading, but the possessive counterpart (50a) lacks the idiomatic reading. This difference in the interpretation cannot be explained with the Subjectivization rule, for it simply changes the genitive marker to a nominative case marker.

But in my theory, the possessor DP originates as a complement of the verb and the whole possessive DP moves to [Spec, TP]. Then only the possessor DP undergoes PR to a higher position [Spec, FocP] and thus be assigned a [+Foc] feature as is shown in (49). Now the first nominative DP can be interpreted either at the original position or moved position. If it is interpreted at the original position, the NPC will get the same literal interpretation as the possessive construction (50a). But if the first nominative DP is interpreted at the raised position, that is to say at [Spec, FocP], the idiomatic reading is obtained.

Now let us consider why the idiomatic reading is not available in (50a). There is a general assumption that the idiomatic reading is obtained only when a predicate and its argument form a constituent. If the predicate cannot form a constituent with the argument, it cannot have the idiomatic reading. This is shown in the following tree.

(51)



In the above structure, the predicate *khu-ta* 'big-DEC' and the argument *son*-C 'hand-C' cannot form a constituent due to the intervening DP *Swuni-C*. The intervening DP *Swuni-C* forms a constituent with the DP *son*, then the DP complex will combine with the predicate. So the DP *son*-C cannot form a constituent with the predicate. But in (50b), the first nominative DP moves out of the possessive DP. So the predicate and the DP *son*-C can form a constituent with the predicate excluding the possessor DP *Swuni*-C and produce the idiomatic reading. The crucial difference between (50a) and (50b) is that there is no phonological entity blocking the formation of a constituent in (50b). This explains why the idiomatic reading is not possible in the possessive counterpart (50a).

The last argument against the derivational approach comes from adverb insertion (Yeon 2003:53):

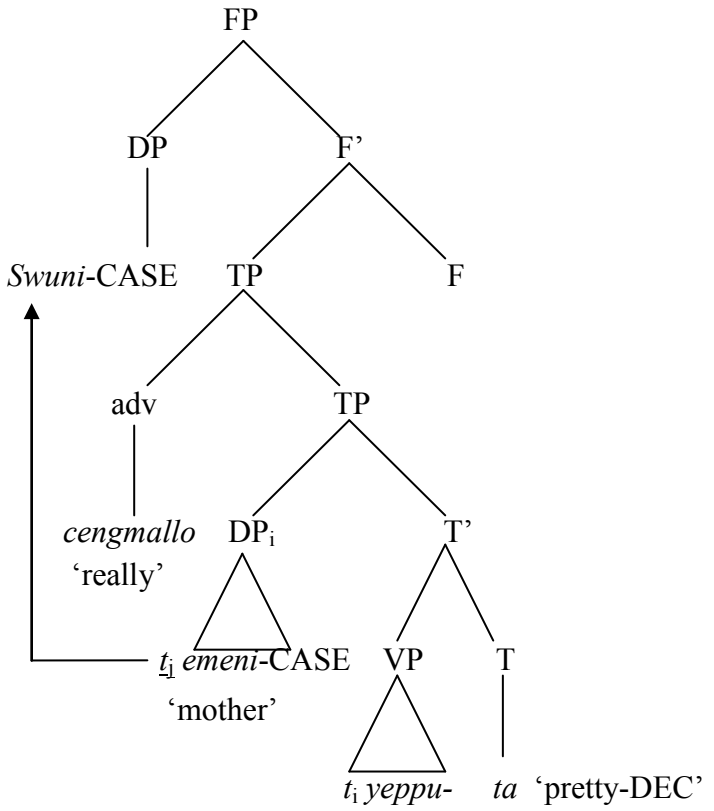
(52) a. *Swuni-uy cengmallo emeni-ka yeppu-ta.
Swuni-G really mother-N beautiful-DEC

b. Swuni-ka cengmallo emeni-ka yeppu-ta.
Swuni-N really mother-N beautiful-DEC
'It is Swuni whose mother is really pretty.'

The possessive construction (52a) does not allow the adverb to intervene between the genitive possessor *Swuni* and the nominative possessum *emeni-ka* 'mother-N'. But its NPC counterpart does allow the insertion of the adverb *cengmallo* 'really' (52b). According to Kuno's (1973) Subjectivization rule, the NPC counterpart should be ungrammatical just like its possessive counterpart, since the Subjectivization rule does not change the syntactic structure of the construction. It simply changes the genitive marker into the nominative marker. So it cannot save the ungrammaticality caused by the intervention of the adverb.

But the difference between the two constructions can be explained under my analysis. The first nominative DP originates inside the possessive DP and the whole DP moves to [Spec, TP] due to EPP. The adverb is adjoined to the TP and the possessor DP undergoes PR over the adverb to [Spec, FocP] as is shown below.

(53)



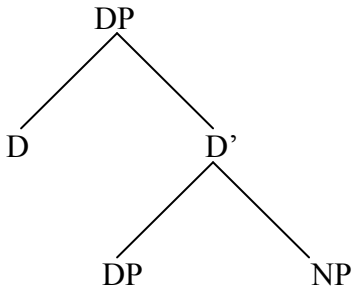
But in (52a), there is no place for the adverb to intervene within the possessive DP.

4.3.3 Genitive case inside DPs

In this section, I will consider how the genitive case inside DPs might fit into my theory. There may arise several questions such as: Is DP a phase? Is genitive case assigned to DP in the domain of D, in a parallel fashion as other structural Case? How does it interact with movement in the possessor raising construction? Theoretically, there may be two positions. The first hypothesis is to assume that the genitive case is structural and D assigns genitive Case inside a DP. The other hypothesis is to assume that the genitive case is inherent and DP is not a phase. Let us consider those two options one by one.

First, let's suppose that the genitive case is structural. If the genitive case is structural, it may be assigned by the head of DP D. Then two issues may arise. First the Case assigning head D must be a phase head, since I assume that only phase heads can assign structural Case. This argument may be plausible considering that the motivation for positing DP originates from the similarity between DP and IP (Abney 1987). Secondly for a nominal to be assigned structural Case inside a DP, the head D must c-command the possessor. However, according to the standard structure that I assume in this dissertation, the head D cannot c-command the possessor DP. This problem may be solved by supplementing the standard structure with the following structure.

(54)



Once the posessor DP is assigned genitive Case, the DP may raise out of the DP via PR or remain inside the DP. If it raises out of the DP, it may be assigned another structural Case outside of the DP.

On the other hand, let us suppose that genitive case is inherent. Inherent Case is assigned in relation to theta marking. Then the genitive Case of the possessor DP must be assigned by the other possessed DP. But this approach may not be supported considering the standard assumption that inherent Case is assigned before structural Case and it cannot be altered by later assignment of structural Case.

So it seems that the first option that genitive case is structural rather than inherent is more plausible than the second option.

4.3.4 Summary

In this section, I have argued that the NPC predicates are intransitive verbs—either unaccusative or unergative. Unaccusative verbs do not have an external argument. So they do not project a light verb and accusative Case is not available at all. However unergative verbs do project a light verb because they have an external argument. But there is no argument that can be assigned accusative Case in the domain of the light verb. Either way, accusative Case is not available for the NPCs.

With respect to the NPC, I have also argued that the first nominative DP is generated as a possessor of the second nominative DP and moves to a higher position via PR. Although Yeon (2003) proposes several arguments against Kuno's (1973) Subjectivization rule, I have shown that my theory is not subject to those criticisms.

4.4 Structural Case assignment in NOC

In NOC, the theme argument is assigned nominative case, not accusative case. Consider the following examples:

(55) a. Sensayng-nim-i haksayng-i/*ul philyoha-ta.
teacher-H-N student-N/A need-DEC
'Teachers need students.'

b. Nae-ka Minho-ka/*lul coh-ta.
I-N Minho-N/A like-DEC
'I like Minho.'

The NOC predicates are two-place predicates. In this section, I will consider why the second argument is not assigned accusative when it servers a theme θ-role. Also the second argument must be assigned accusative case even according to BG, since the subject is assigned an Experiencer theta role.

In this section, I argue that what matters in structural Case assignment is the presence/absence of an external argument, not the theta role assigned to the subject. Subject is a notion based on the grammatical relation of the arguments. But external argument is a different notion. Williams (1981) defines the external argument of a predicate as the argument that is realized outside the maximal projection of the predicate. So there are no sentences without a subject, but there are sentences without an external argument. In this dissertation, I argue that NOC predicates do not have an external argument. Also I argue that the presence of an external argument is related to the presence of a light verb. So I argue that if an NOC predicate does not have an external argument, the light verb is not projected and accusative Case is not available.

4.4.1 External argument in Grimshaw (1990)

In this section, I consider syntactic properties of external argument discussed in Grimshaw (1990) and propose that there is no external argument in Korean NOCs. The presence or absence of an external argument is very important in my theory, since I assume that the projection of a light verb depends on the presence of an external argument. If there is no external argument, the light verb is not projected, which leads to the absence of accusative Case.

With respect to the definition of external argument, Grimshaw (1990) defines it as an argument that is maximally prominent in the following two dimensions, that is to say the Thematic Dimension and the Aspectual (or Causal) Dimension:

(56) a. Thematic Dimension: (Agent (Experiencer (Goal/Source/Location (Theme))))

b. Aspectual (or Causal) Dimension: (Cause (other (…)))

Each of the two hierarchies imposes its own set of prominence relations on the arguments and an external argument must be the most prominent in both dimensions. For example, consider the following example with a verb *break* (Grimshaw 1990:24).

(57) a. The girl broke the window.

b. break (x (y))

Agent Patient → Thematic Dimension

Cause ..... → Aspectual (or Causal) Dimension

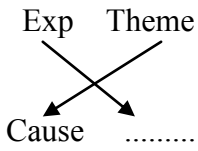
The subject *the girl* is the most prominent in both the thematic and aspectual dimensions. It has the agent theta role which is the most prominent in the Thematic Dimension. It is also the most prominent in the Aspectual (or Causal) Dimension, since it has the Cause role that is the most prominent in the Aspectual Dimension. Since the subject *the girl* is the most prominent in both dimensions, it qualifies as an external argument.

With respect to psychological verbs, Grimshaw (1990) distinguishes between

psychological state verbs (*fear* class verbs) and psychological causative verbs (*frighten* class verbs). For the *frighten* class verbs, Grimshaw argues that they have no external argument in English. Consider the following example (Grimshaw 1990:25).

(58) a. The building frightened the tourists.

b. frighten (x (y))



In (58), the Experiencer *the tourists* is not the most prominent argument in the aspectual dimension, i.e., it does not have the Cause role, although it is the most prominent argument in the thematic dimension.[19] On the other hand, although the theme argument *the building* is the most prominent in the aspectual dimension (causer), it is not the most prominent argument in the thematic dimension. Since no argument holds maximal prominence in both dimensions, there is no external argument in (58a).

Now let us turn to Korean NOC examples:

(59) a. Chelswu-ka paym-i mwusep-ta.
Chelswu-N snake-N fear-DEC
'Chelswu fears snakes.'

b. Chelswu-ka ton-i philyoha-ta.
Chelswu-N money-N need-DEC
'Chelswu need money.'

[19] It should be noted that *frighten* class verbs may have agentive counterparts. In this case, they will have an external argument.

It seems that NOC predicates are more like psychological state verbs such as English *fear* class verbs rather than psychological causatives such as English *frighten* class verbs.

According to Grimshaw (1990), English psychological causatives like *frighten* class verbs do not have an external argument, while psychological state verbs like *fear* class verbs have an external argument in English. However, Grimshaw (1990:29) notes that the case of psychological state verbs like *fear* is more complex. For example, verbs in the *fear* class in English and Italian behave as if they have an external argument, undergoing passivization and so forth. But in other grammatical systems (Old English and Icelandic for example), verbs with the same apparent meaning can get quirky case marked arguments and fail to undergo operations like passivization and nominalization, which suggests that they do not have an external argument. In this dissertation, I argue that Korean NOC predicates are like Old English and Icelandic *fear* class verbs in that they do not have an external argument.

With respect to external argument, Grimshaw (1990) notes that there are several characteristic properties. First she argues that quirky argument realization can occur only when the thematically most prominent argument is not also the most prominent in the other dimension. This predicts that external arguments are never quirky case-marked, since all external arguments are maximally prominent in both dimensions. She also argues that nominalization and passivization are not possible if there is no external argument, since these processes suppress the external argument of a base verb. It leads to the conclusion that only verbs with external arguments will undergo these processes.

In support of the claim that there is no external argument in Korean NOCs, I will first show that the first nominative argument in Korean NOC can be quirky case marked. This

suggests that it is not an external argument. Also I will show that Korean NOC predicates do not allow nominalization nor passivization, which also suggests that there is no external argument in Korean NOC.

First, let us consider the following NOC examples with respect to quirky case marking.

(60) a. Chelswu-ka/eykey paym-i mwusep-ta.
Chelswu-N/D snake-N fear-DEC
'Chelswu fears snakes.'

b. Chelswu-ka/eykey ton-i philyoha-ta.
Chelswu-N/D money-N need-DEC
'Chelswu need money.'

The above examples show that the experiencer arguments can be dative case marked. According to Grimshaw (1990), quirky argument realization can occur only when the thematically most prominent argument is not also the most prominent in the other dimension. Therefore external arguments can never quirkily case-marked, since all external arguments are maximally prominent in both dimensions. Thus (60a) and (60b) show that the first nominative arguments are not external arguments, although they are syntactic subjects (see Ura 2000).

Secondly, Grimshaw (1990) argues that passivization and nominalization are impossible if there is no external argument. However, it must be noted that when Grimshaw (1990) argues that passivization and nominalization are impossible, it does not mean that any kinds of passivization and nominalization are impossible. It means that only verbal passivization and complex event nominalization are impossible. In fact, English *frighten* class verbs do allow adjectival passives and result nominalizations.

With this basic background information in mind, let us consider passivization first. With respect to passivization, it has already been noted that Korean exhibits two types of passive structures, that is to say the lexically restricted morphological *i*-passive and more productive *ci*-passive. First consider the *i*-passivization of the NOC in (60).

(61) a. *Paym-i Chelswu(ey)-uyhay mwuse(p)we-*i*-ta.
snake-N by Chelswu fear-PSV-DEC
'(intended) Snake is feared by Chelswu.'

b. *Ton-i Chelswu(ey)-uyhay philyoha(ye)- *i*-ta.
money-N Chelswu-by need-PSV-DEC
'(intended) Money is needed (by Chelswu).'

As is shown in (61), the morphological *i*-passivization is not possible with NOC predicates. Moreover, Korean NOC predicates do not allow even an adjectival passive reading, unlike English *frighten* class verbs.[20]

On the other hand, the *ci*-passivization seems to be possible as is shown below.

(62) a. Paym-i mwuse(p)we-ci-n-ta.
snake-N fear-CI-PRES-DEC
'Snakes become fearful .'

b. Ton-i philyoha(ye)-ci-n-ta.
money-N need-CI-PRES-DEC
'Money becomes needed.'

[20] According to Grimshaw (1990), the suppression of an external argument only affects the formation of a verbal passive. So *frighten*-class verbs in English can form adjectival passives as is shown in (i) (Grimshaw 1990:113).

(i) Mary was frightened by the situation.

But even the adjectival passivization is not possible with Korean NOC predicates.

However, I have already pointed out that *ci* is an unaccusative auxiliary verb in Chapter 3 (3.3.3.2). So the above *ci*-constructions cannot be verbal passives which suppress an external argument. In fact there is a piece of evidence that the above examples are not verbal passives. The addition of a (agentive) *by*-phrase makes the above sentences ungrammatical.

(63) a. Paym-i (*Chelswu-eyuyhay) mwuse(p)we-ci-n-ta.
snake-N Chelswu-by fear-CI-PRES-DEC
'(intended) Snakes become fearful by Chelswu.'

b. Ton-i (*Chelswu-eyuyhay) philyoha(ye)-ci-n-ta.
money-N Chelswu-by need-CI-PRES-DEC
'(intended) Money becomes needed by Chelswu.'

According to Grimshaw (1990), verbal passives suppress the external argument and the *by*-phrases are optional.[21] The examples in (63) show that *by*-phrases are not compatible with the *ci*-construction, which suggests that they cannot be verbal passives.[22]

Lastly, Grimshaw (1990) argues that (complex event) nominalization is another

[21] The adjectival passives derived from active verbs with no corresponding verbal passives have obligatory, not optional *by*-phrases (Grimshaw 1990:124). On the other hand, for the adjectival passives derived from verbal passives, the *by*-phrase is not obligatory. Grimshaw (1990:126) argues that this type of adjectival passives allows *by*-phrases only as an argument-adjunct, so they are grammatical without *by* phrases.

[22] The reason why (63) becomes ungrammatical with the *by*-phase is not clear. I assume that addition of an agentive *by*-phrase is not compatible with the unaccusative auxiliary verb *ci*. In fact unaccusative verbs are inherently not compatible with agents. So the addition of a nominative/dative subject which is not an agent is good:

(i) a. Chelswu-eykey/ka Paym-i mwuse(p)we-ci-n-ta.
Chelswu-D/N snake-N fear-CI-PRES-DEC
'To Chelswu, Snakes become fearful.'
b. Chelswu-eykey/ka Ton-i philyoha(ye)-ci-n-ta.
money-D/N money-N need-CI-PRES-DEC
'To Chelswu, money becomes needed.'

process that includes the suppression of an external argument. According to Grimshaw (1990), complex event nominals and corresponding simple event and result nominals have related lexical meanings, but only complex event nominals have an event structure and a syntactic argument structure like verbs. So if complex event nominalization suppresses the external argument of a base verb, only verbs with an external argument will undergo this process. In Grimshaw (1990), she discusses several properties that are characteristic of complex event nominals. One of the properties is that there are certain modifiers that occur only with the event interpretation of particular nouns such as *constant* and *frequent*.[23] Let us consider the property with respect to Korean NOC predicates.

To begin with, there are two kinds of nominalizers *-um* and *-ki* in Korean.[24] But the *-um* nominalizer cannot form a complex event nominal. For example, the *-um* nominalizer cannot occur with a modifier like *cacwu* 'frequent'. Consider the following example.

(64) a. Umsik-ul cacwu mek-**ki**-ka himtul-ta.
food-A frequent eat-NML-N difficult-DEC
'Frequent eating of food is difficult.'

b. *Umsik-ul cacwu mek-**um**-i himtul-ta.
food-A frequent eat-NML-N difficult-DEC

(65) a. aph-ase cacwu ket-**ki**-ka himtul-ta.
sick-because frequent walk-NML-N difficult-SH-DEC
'Being sick, frequent walking is difficult.'

b. *aph-ase cacwu kel-**um**-i himtul-ta.

[23] For other properties of complex event nominals, Grimshaw (1990) proposes that when a possessive subject occurs, the noun must have an argument structure. Also she adds that a subject-like *by*-phrase will have the same effect.

[24] There is another nominalizer *-kes* in Korean. But it usually nominalizes a clause (Kim and Sells 2007). So the usage of *kes* will not be discussed in this dissertation.

sick-because frequent walk-Nml-N difficult-DEC

The modifier *cacwu* 'frequent' is one of the modifiers that forces event reading noted in Grimshaw (1990). As is shown in (64b) and (65b), the *-um* nominalizer is not compatible with the modifier *cacwu* 'frequent'. The *-um* nominalizer can only form a result nominal. So I will only consider the *-ki* nominalizer in this section.

The following examples show that Korean NOC predicates do not allow *-ki* nominalization.[25]

(66) a. *Chelswu-uy Paym-i mwusep-**ki**-ka pwunmyengha-ta
Chelswu-G snake-N fear-NML-N clear-DEC
'(intended) Chelswu's fear of snakes is clear.'

b. *Chelswu-uy ton-i philyoha-**ki**-ka pwunmyengha-ta.
Chelswu-G money-N need-NML-N clear-DEC
'(intended) Chelswu's need for money is clear.

The impossibility of the *-ki* nominalization in (66) suggests that there is no external argument in Korean NOC predicates.

So far, I have considered three syntactic tests with respect to the presence/absence of external arguments in Korean NOC predicates. All three tests show that Korean NOC predicates do not have an external argument. Since there is no external argument in Korean NOC, both nominative arguments must be internal arguments.

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[25] Of course the *-um* nominalizer can occur with NOC predicates, since it produces result nominals.

(i) Chelswu-uy/ka Paym-i mwusep-um-i pwunmyengha-ta
Chelswu-G/N snake-N fear-NML-N clear-DEC
'Chelswu's fear of snakes is clear.'

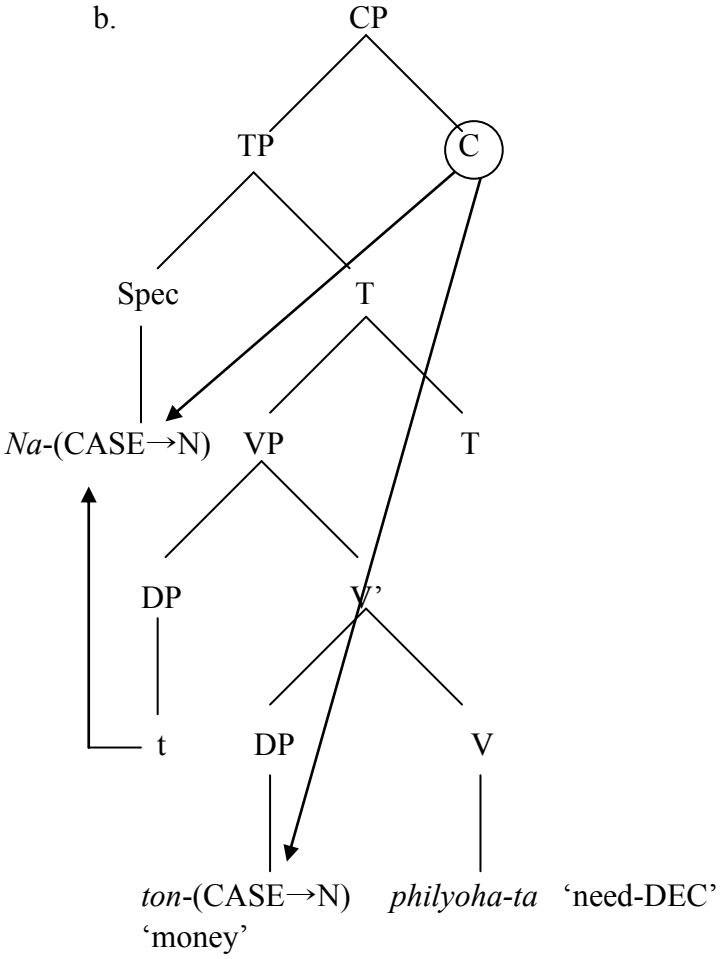
4.4.2 The analysis of NOC

One of the major differences between NOC and NPC is that NOC predicates are two-place predicates, while NPC predicates are just one-place predicates. Both DPs in NOC are assigned a theta role by the predicate as in normal transitive constructions. However I have shown that there are no external arguments in NOC, which suggests that both arguments in NOC are internal arguments. If both arguments are internal arguments, there is no need to project a light verb, since I assume that a light verb is projected only when it is necessary and the presence of an external argument is a necessary condition for the projection of a light verb.

So I propose that the structure of NOC is the following.

(67) a. Nay-ka ton-i philyoha-ta.
I-N money-N need-DEC
'I need money.'

b.



Both arguments of the NOC predicate are generated inside the VP. Since there is no external argument, there is no need to project a light verb. The higher experiencer argument *na*-CASE 'I-CASE' raises to [Spec, TP] due to EPP, while the theme argument *ton*-CASE 'money-CASE' remains inside the VP. Although the theme argument remains inside the VP, it is not assigned accusative Case, since there is no light verb *v* that assigns accusative Case. At the completion of the strong CP phase, both arguments are assigned nominative Case by the C.

Now there arises a question regarding English psychological causative verbs, that is to say *frighten*-type verbs, which do not have external arguments. According to the analysis, the *frighten*-type verbs cannot project a light verb, since they do not have external arguments. Hence accusative Case should not be available for them, which is not correct. With respect to this problem, I argue that the accusative Case assigned in the English psychological causative verb construction is in fact not structural, but inherent Case. Under a general assumption that inherent Case assignment is related to a θ-role assignment, psychological causative verbs assign inherent accusative Case to an experiencer argument. Also Grimshaw (1990) notes that psychological causatives behave syntactically differently from the other agentive causatives in that they do not undergo certain operations like nominalization and passivization. Considering these properties, I argue that the accusative Case assigned to the experiencer arguments of the psychological causative verbs is inherent rather than structural. With respect to the psychological state verbs in English, they have external arguments unlike the Korean psychological state verbs, hence they project a light verb and accusative Case can be assigned to the internal arguments.

4.5 Typologial Issues

As is shown in previous sections, there are two kinds of DNCs in Korean, that is to say the NPC and the NOC. The NOC predicates are mostly psychological state verbs. However, English psychological state verbs do not form DNCs unlike Korean Korean psychological state verbs:

(68) Man fears God(Accusative).

This results from the fact that English psychological state verbs do have an external argument, while Korean psychological state verbs do not have an external argument. The first nominative DP of an English psychological state verb satisfies the criteria that Grimshaw (1990) proposed for an external argument. It allows passivization, nominalization and do not allow quirky case marking on the argument. Hence the first nominative DP of English psychological state verbs must be an external argument. If there is an external argument, there must be a light verb and every argument in its domain is supposed to be assigned accusative Case.

On the other hand, the NPC is derived by an operation called Possessor Raising. But English does not seem to allow PR, If PR is not available, then NPC cannot be derived in English according to my theory. By the way there is a derivation similar to PR even in English. Consider the following example.

(69) a. Jim cut Mary's arm.

b. Jim cut Mary on the arm.

c. *Jim cut Mary the arm.

In the above example, the possessor Mary in (69a) can appear without the genitive marker in (69b). But in this case the addition of the preposition *on* is mandatory for the possessum (69c). So the English example contrasts with the following Korean NPC with PR, which does not require an additional preposition.

(70) a. Chelswu-ka Yenghi-uy phal-ul callassta.

b. Chelswu-ka Yenghi-lul phal-ul callassta.

Now let us consider why (69c) is ungrammatical in English, while the corresponding Korean is grammatical. In my theory, structural Case can be assigned multiply to every argument in the domain of a Case assigner. Then the reason why (69c) is ungrammatical is not because one of the arguments is without Case, but because the verb *cut* cannot assign theta-roles to both arguments. That is to say, (68c) is ungrammatical because of the violation of Theta Criterion. In contrast, I argue that Korean example (69b) does not violate the Theta Criterion. It is well known that PR is only possible with a certain semantic class of nouns, specifically relational nouns. Relational nouns include body-parts, kinship terms and so on (Stockwell, Schachter and Partee 1972, Dechaine 1993, Barker 1995). PR is allowed only when the possessed DP is a relational noun. So I assume that the relational noun can assign a theta role to its possessor DP in Korean, while it is not allowed in English.

4.6 Summary

In this dissertation, I have proposed to classify DNCs into two types depending on the grammatical relation of the arguments. I adopted four subjecthood tests to determine the subjecthood of each argument in DNCs. Through the four subjecthood tests, I have shown that only the second nominative DP satisfies the subjecthood tests in NPC, while only the first nominative DP satisfies the subjecthood tests in NOC.

I also have shown that NPC predicates are in fact one-place predicates, while NOC

predicates are two-place predicates. With respect to the NPC, I propose that the first nominative is derived from the possessor position of the second nominative DP. Although Yeon (2003) presented a few arguments against Kuno's (1973) derivational approach, I have shown that my analysis is not subject to his criticisms. I also have shown that NOC predicates do not have an external argument based on the tests proposed in Grimshaw (1990). If we assume that a light verb is projected to provide a position for an external argument, the light verb does not have to be projected when there is no external argument. Since there is no external argument in NOC, the light verb is not projected and accusative Case is not available in NOC.

Chapter 5 Structural Case assignment in Korean ECM constructions

In this chapter, I will present an analysis of the distribution of structural Case in Korean ECM constructions. It has been noted that Korean ECM constructions display some non-canonical properties. For example, the embedded clause in the ECM construction is considered to be a CP rather than an IP in Korean. Also there is a semantic restriction that the embedded predicate must denote a generic or inherent property of the embedded subject. In this chapter, I will aim to present an analysis of the non-canonical properties. Through the analyses of the non-canonical properties of Korean ECM construction, I will show that these non-canonical properties receive natural explanations under my theory.

5.1 Non-canonical properties of Korean ECM constructions

The ECM construction is typically characterized by the accusative case assigned to the embedded subject by the matrix verb. Consider a typical Korean ECM construction:

(1) a. Tom-un Swuni-ka chencay-la-ko mitnun-ta.
Tom-T Swuni-N genius-DEC-C believe-DEC
'Tom believes that Swuni is a genius.'

b. Tom-un Swuni-lul chencay-la-ko mitnun-ta.
Tom-T Swuni-A genius-DEC-C believe-DEC
'Tom believes Swuni to be a genius.'

In (1a), the embedded subject *Swuni-ka* is assigned nominative case within the embedded CP. But the same argument *Swuni* is assigned accusative case in (1b). The accusative case must be assigned by the matrix verb *mitnun-ta* 'believe', since the embedded predicate

chencay-la 'be a genius' is not able to assign accusative Case. In this construction, the embedded subject is exceptionally assigned accusative Case by the matrix transitive verb.[1]

With respect to Korean ECM constructions, there are several pieces of evidence that the ECM construction contains a finite embedded CP rather than an infinitival IP. First, there is an overt complementizer *ko* in Korean ECM construction as shown in (1b). In (1a) there is an overt complementizer *ko* and the subject of the embedded clause is marked with nominative case. On the other hand, the overt complementizer *ko* is also present in the ECM construction (1b), which suggests that the embedded clause is a CP rather than an IP.

Secondly, the embedded predicate of Korean ECM constructions can be marked with a tense affix as is shown below:

(2) Tom-un Swuni-lul chencay-**yess**-ta-ko mit-nun-ta.
Tom-T Swuni-A genius-**PST**-DEC-C believe-PRES-DEC
'Tom believes Swuni to have been a genius.'

The embedded predicate in the ECM construction (2) is marked with [+past] tense. This also suggests that the embedded clause in the Korean ECM construction is a finite clause. Given the fact that ECM construction normally contains an infinitival IP, this property

[1] Korean ECM construction contrasts with the following non-ECM construction:

(i) a. Apeci-ka Chelswu-eykey senmwul-ul yaksokhasiess-ta.
father-N Chelswu-D a present-A promised-DEC
'(my) Father promised Chelswu a present.'
b. Apeci-ka Chelswu-eykey tangshin-kkeyse/*ul hakkyo-ey kakeyssta-ko yaksokhasiess-ta.
father-N Chelswu-D he (H)-N(H)/A school-to will-go-DEC-C promised(H)-DEC
'(my) Father promised Chelswu that he will go to school.'

(ia) shows that *yaksokha-ta* 'promise-DEC' can assign accusative Case to its object. In (ib), it can be seen that the verb also can take a CP complement. But unlike the ECM construction, the embedded subject cannot be assigned accusative Case.

poses a serious problem to previous theories on the ECM construction.

Lastly the embedded predicate in Korean ECM construction can show subject honorific agreement. Consider the following examples.

(3) a. Tom-un sensayng-nim-i chencay-**si**-la-ko mit-nun-ta.
Tom-T teacher-H-N genius-**SH**-DEC-C believe-PRES-DEC
'Tom believes the teacher to be a genius.'

b. Tom-un sensayng-nim-ul chencay-**si**-la-ko mit-nun-ta.
Tom-Tom teacher-H-A genius-**SH**-DEC-C believe-PRES-DEC
'Tom believes the teacher to be a genius.'

c. Sensayng-nim-un ku ai-lul chencay-(***si**)-la-ko mit-nun-ta.
teacher-H-T the boy-A genius-**SH**-DEC-C believe-PRES-DEC
'Teacher believes the boy to be a genius.'

The embedded subject *sensayngnim-i* 'teacher-N' in (3a) can trigger the subject honorific marker *-si-* on the embedded predicate. Similarly the ECMed subject in (3b) can also trigger the subject honorific marker. However, (3c) shows that the matrix deferential subject cannot trigger the honorific marker on the embedded predicate. Given the hypothesis that subject honorification is induced by Spec-head agreement mediated by ϕ-features (Toribio, 1990, Ura 1999), the above data suggests that the ECMed subject agrees with the embedded predicate with respect to ϕ-features.[2] This also supports the

[2] If subject honorification is a sort of ϕ-feature agreement, it is expected that subject honorification is not available in infinitives. In Korean, there are constructions called Auxiliary Verb Constructions, which take an infinitival complement (Lee&Yeo 2000:22):

(i) Chelswu-ka pica-lul mek-ko siph-ess-ta
Chelswu-N pizza-A eat-KO want-PST-DEC
'Chelswu wanted to eat pizza.'

claim that the embedded clause is a finite CP.

Another non-canonical property that I want to consider is a semantic restriction that Korean ECM constructions display. Korean ECM constructions require that the embedded predicate should denote a generic or permanent property of the ECMed subject (see Lee, K.-H (1988), Lee, J.-S 1992 and Wechsler and Lee (1995) among many others). Wechsler and Lee (1995) note that embedded predicates in the ECM construction cannot denote a specific event; they must denote a generic or permanent property of the ECMed subject. Consider the following examples (Wechsler and Lee, 1995).

(4) a. John-i Mary-ka/*lul Tom-ul po-ass-ta-ko mitnun-ta.
John-N Mary-N/A Tom-A see-PST-DEC-C believe-DEC
'John believes that Mary saw Tom.'

b. John-i Mary-ka/lul yeppu-ess-ta-ko mitnun-ta.
John-N Mary-N/A pretty-PST-DEC-C believe-DEC
'John believes that Mary was pretty.'

In (4a) the embedded predicate denotes a specific event, so the embedded subject cannot be

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The infinitival complements does not show subject honorification as expected:

(ii) a. ??Sensayngnim-i haksayngtul-ul kaluchi-**si**-ko siph-ess-ta
Teacher-H-N students-A teach-SH-KO want-PST-DEC
'The teacher wanted to teach students.'
b Sensayngnim-i haksayngtul-ul kaluchi-ko siph-u**si**-ess-ta
Teachers-H-N students-A teach-KO want-SH-PST-DEC

Some more examples of AVC are the following and they all show the same property with respect to the subject honorification.

(iii) a. Sensayngnim-i pica-lul mek-(*si)-ko iss-ess-ta
Teacher-N pizza-A mek-(SH)-KO be-PST-DEC.
'The teacher was eating pizza.'
b. Sensayngnim-i pica-lul mek-(*usi)-e po-ass-ta
Teacher-N pizza-A eat-SH-E try-PST-DEC
'The teacher tried to eat pizza.'

ECMed. On the other hand, the embedded subject in (4b) can be ECMed, since the embedded predicate denotes a generic or permanent property of the ECMed subject.

They argue that this is not a constraint on the choice of a lexical item heading the embedded predicate, but rather on the predicate's interpretation. This is shown in the following example (Wechsler and Lee, 1995).

(5) a. Na-nun Mary-ka/??-lul swul-ul masi-koiss-ta-ko mit-nun-ta.
I-T Mary-N/A wine-A drink-Prog-DEC-C believe-PRES-DEC
'I believe that Mary is drinking wine.'

b. Na-nun Mary-ka/lul swul-ul cal masi-n-ta-ko mit-nun-ta.
I-T Mary-N/A wine-A well drink-PRES-DEC-C believe-PRES-DEC
'I believe that Mary drinks wine a lot.'

In (5a) the embedded subject cannot be ECMed, since the embedded predicate denotes a specific wine-drinking event. On the other hand, the embedded subject in (5b) can be ECMed, although the embedded predicate is the same. It is because it does not denote a specific wine-drinking event, but rather it denotes a generalization over an event. Thus even a stative predicate like *philyohata* 'need' becomes rather bad if it is explicitly indicated that the property obtains only temporarily or accidentally. This is illustrated in (6) (Wechsler and Lee, 1995):

(6) a. Tom-un [nay-ka/*lul cha-ka sey sikan-i philyoha-ta-ko] sayngkakha-n-ta.
Tom-T I-N/*A car-N 3 hour-N need-DEC-C think-PRES-DEC
'Tom thinks that I need a car for three hours.'

b. Tom-un [aitul-i/lul manhun salang-i philyoha-ta-ko] sayngkakha-n-ta.
Tom-T children-N/A much love-N need-DEC-C think-PRES-DEC
'Tom thinks children need lots of love.'

The embedded clause in (6a) indicates that the property of the predicate obtains only temporarily. So the embedded subject cannot be ECMed. In contrast, the property of the embedded predicate in (6b) is inherent for the children. So the embedded subject can be ECMed. Generally speaking, the embedded predicate must denote a relatively permanent or inherent property of the embedded subject in the ECM construction.

A similar proposal was made by Hong (1990). He proposed that the ECMed DP must be a discourse Theme (Topic) and the embedded proposition must be sufficient to characterize the ECMed DP. He presented the following example to illustrate his proposal:[3]

(7) a. Na-nun LA-lul hankwuk salam-i manhi san-ta-ko mitkoiss-ta.
I-TOP LA-A Korean people-N many live-DEC-C believe-Prog-DEC
'I believe many Korean people to live in LA.'
b. *Na-nun LA-lul nay tongsayng-i san-ta-ko mitkoiss-ta.
I-TOP LA-A my brother-N live-DEC-C believe-DEC
'I believe that my brother lives in LA.'

[3] In fact, the embedded ECM construction is derived from the following DNC.

(i) LA-ka hankwuk salam-i manhi san-ta.
LA-N Korean people-N many live-DEC
'It is LA, in which many Korean people live.'

The above construction must be an NPC according to the criteria proposed in Chapter 4. The predicate is an one place predicate and only the second nominative DP is the subject. However it displays a few extraordinary properties which are different from authentic NPCs in that the first nominative DP does not hold a close semantic relationship with the second nominative DP. In fact, the first nominative case marker can be substituted with a locative marker (or postposition) *-ey* 'at'. Although it displays a few different properties from authentic NPCs, the distribution of nominative case can be explained in the same way.

In (7b), the property of having one's brother as an inhabitant is too accidental and too trivial to characterize the city LA. But in (7a), the property of many Korean people living in the city is sufficient to characterize the ECMed DP *LA*. Hong (1990) argues that individual level predicates (e.g., *be a student*, *be pretty*, *be a genius and so on*; see Carson 1977) are preferred to stage level ones (e.g., *be surprised*, *be tired*, *be open and so on*) as a predicate of the ECMed subjects. This is because the former group of predicates referring to a permanent feature is considered to provide a better characterization of the ECMed DPs compared to the latter group referring to a temporarily acquired feature.

To summarize, there are two important properties in Korean ECM constructions. First Korean ECM constructions are finite CPs rather than nonfinite IPs. This property poses a serious problem to many previous theories of the ECM construction. Secondly, Korean ECM constructions display a semantic restriction requiring the embedded predicate to denote a generic or permanent property of the ECMed subject.

In the following sections, I will discuss these two non-canonical properties in more detail and show that these properties receive natural explanation under my theory of the distribution of structural Case.

5.2 Semantic restriction in Korean ECM construction

In this section, I consider the semantic restriction that Korean ECM constructions display and propose an analysis of it. My analysis is partially based on the analyses of Object Shift (OS) proposed by Holmberg (1999) and Chomsky (2001). Before I present my analysis of the semantic restriction, I consider some proposals on OS made by Holmberg (1999) and

Chomsky (2001).

5.2.1 Object Shift in Holmberg (1999) and Chomsky (2001)

Object Shift (OS) is a process in which DP objects move outside of VP (see Holmberg, 1986; Bobaljik, 1995; and Diesing, 1996 among many others). Let us consider the following Swedish example from Holmberg (1999).

(8) a. Jag kysste henne inte [$_{VP}$ t_v t_o]
I kissed her not
b. *Jag har henne inte [$_{VP}$ kysst t_o]
I have her not kissed
c. *... att jag henne inte [$_{VP}$ kysste t_o]
that I her not kissed

In (8a), both the object *henne* 'her' and the verb *kysste* 'kissed' move out of the VP. But the examples (8b&c) in which only the objects are moved are ungrammatical. The crucial difference is that the verb remains in (8b) and (8c), either because the auxiliary verb *har* 'have' blocks the movement (8b) or because the movement is not allowed in embedded clauses (8c). From the above data, it seems that an object can move out of the VP only when the verb itself moves out of the VP.

Holmberg (1986) proposed a unified explanation of the OS phenomenon, known as Holmberg's Generalization (HG). The HG states that OS is possible only if the verb moves out of the VP. With respect to the motivation of OS, Holmberg (1986) argued that Case is the triggering feature of OS. But in Holmberg (1999), he admits that the original HG cannot explain the fact that OS affects only a subcategory of nominal categories, namely

definite, light, non-focused nominals, and only weak pronouns, with some cross-linguistic variation regarding the range of nominal types affected. Instead Holmberg (1999) suggests that OS is a phonological operation driven by a semantic interpretation of the shifted object.[4] For the implementation of the proposal, Holmberg (1999) argues that the crucial feature driving OS is a [±Focus] feature: OS affects only nominals with a [-Foc] feature.

According to Holmberg (1999), the derivation proceeds as follows. First he assumes that every argument has a feature [+Foc] or [-Foc], either inherently or assigned to it at some point in the derivation. Along with the [±Focus] feature, Holmberg (1999:25) proposes the following licensing condition for a [-Foc] feature in Scandinavian:

(9) [-Foc] must be governed by [+Foc].

In terms of information structure, VP corresponds to [+Foc]. If an argument is [-Foc], it is comfortable inside a [+Foc] domain, that is to say a VP domain. If there is no [+Foc] category to license the [-Foc] argument, the argument must undergo OS to be licensed by a [+Foc] category. For example, suppose a verb may have raised to T, leaving a trace in the VP. Since the trace is [-Foc], it cannot license a [-Foc] object. So the object must move into a position where it can be governed by a [+Foc] category.

However, Chomsky (2001:32) points out that there are some conceptual problems with the implementation of Holmberg's (1999) idea. For instance, it requires

[4] Chomsky (2001:31) interprets Holmberg's formulation of HG as follows:

(i) a. OS is a phonological operation that satisfies condition (b) and is driven by the semantic interpretation of the shifted object. (new/old information, specificity-definiteness, focus or topic, etc.; call the interpretative complex Int).

b. OS cannot apply across a phonologically visible category (except adjuncts) asymmetrically c-commanding the object position.

counter-cyclic operations. The verb must move out of the VP before OS takes place and the object must move below the verb. It also violates the semantic expectations for phonological rules. Holmberg argues that OS is a phonological operation driven by the semantic interpretation of the shifted object. But it contradicts the following principle (10) by Chomsky (2001, (13)):

(10) Surface semantic effects are restricted to narrow syntax.

According to the above principle, a semantic feature like [±Focus] cannot drive a phonological operation, since it is only restricted to narrow syntax.

Instead of Holmberg's (1999) idea, Chomsky (2001) proposes the following principles concerning OS:

(11) a. *v** is assigned an EPP-feature only if that has an effect on outcome.
b. The EPP position of *v** is assigned Int.[5]
c. At the phonological border of *v**P, XP is assigned *Int'.
(* Int' is the complement of Int)

The first two principles (11a&b) are invariant principles and the last principle (11c) is the parameter that distinguishes OS and non-OS languages. The (11c) makes an XP assigned Int' at the phonological border of a *v**P in OS languages. Chomsky (2001) proposes that it is not the semantic property of an XP that drives OS. Instead he proposes that the resulting configuration caused by an optional choice of an EPP feature may have some internal

[5] According to Chomsky (2001:31), new/old information, specificity-definiteness, focus or topic, etc. are called the interpretive complex *Int*.

inconsistencies. If an object is at the phonological border of a *v**P but resists Int', it must undergo OS to avoid a deviant outcome. On the other hand if an object which does not resist Int' is at the phonological border of *v**P being assigned Int', exercising OS would have the same deviant outcome.

5.2.2 The analysis of the semantic restriction

In this section, I propose an analysis of the semantic restriction that Korean ECM constructions display. I adopt some of the basic ideas of Holmberg (1999) and Chomsky (2001) and propose that the semantic restriction of Korean ECM construction must be understood as a property of the resulting configuration. Instead of a [±Foc] feature or Int proposed respectively by Holmberg and Chomsky, I introduce a [±Prom] feature, proposed by Choi (1996).[6]

For the explanation of the semantic restriction on Korean ECM construction, I propose the following principles (12), extending the Chomsky's (2001) proposal (11):

[6] Choi (1996) proposes two features [±New] and [±Prom] as information partitioning features. By using the two features, she classified four information types as follows.

(i)

	Topic	Contrastive Focus	Tail	Completive Focus
Prom	+	+	-	-
New	-	+	-	+

According to Vallduví (1992, 1993), information structure consists of three primitives, i.e. FOCUS, LINK, and TAIL. First a sentence is partitioned into two parts, i.e. FOCUS and GROUND. GROUND is the part that anchors the sentence to the previous discourse, whereas FOCUS is the informative part that makes some contribution to the discourse. Then he further divides GROUND into LINK and TAIL. In more traditional terms, we can interpret LINK as topic or theme, which is roughly speaking what the sentence is about, and TAIL as the rest of the ground or the given information which is somewhat inconspicuous in the sentence. That is to say, the TAIL is the part of the sentence which is neither FOCUS nor LINK, i.e. inconspicuous old information.

(12) a. C (as well as *v**) can be assigned an EPP-feature if that has an effect on the outcome.
b. The EPP position of C is assigned a [+Prom] feature.
c. The EPP position of T is assigned a [-Prom] feature.

The first proposal (12a) is based on Chomsky's proposal (11a). I extend the proposal (11a) to propose that C as well as *v** can be assigned an EPP-feature when it has an effect on the outcome. Given the fact that both C and *v** are the heads of strong phases, it is conceptually more consistent to assume that both heads can be assigned an EPP feature. I also extend the Chomsky's second proposal (11b) and argue that the EPP position of C is assigned a [+Prom] feature. By being assigned a [+Prom] feature, the EPP position of C becomes a position to which a Prominence/Topic interpretation is assigned. When an argument is assigned a prominence feature in [Spec, CP], either inherently or structurally, it will become a topic and must be characterized by a predicate denoting inherent properties of the topic. If the predicate fails to denote such inherent properties of the topic, the sentence becomes deviant and crashes.

The last proposal (12c) is derived from the OS parameter (11c). The principle (12c) is the parameter to explain the semantic restriction of Korean ECM construction. Languages that have semantic restrictions like Korean ECM constructions are subject to (12c). But other languages that do not have such semantic restrictions are not subject to (12c). The phonological border condition mentioned in (11c) does not matter in OV languages like Korean. That is because both subject and object precede the verb in OV languages. In fact the "phonological border" of a phrase is a position not c-commanded by any phonological material within the phrase. However, Chomsky (2001:fn 51) notes that the c-command

requirement may mean "c-commanding from the left" depending on the proper treatment of such matters as rightward adjunction and questions raised by Kayne (1994) about linear ordering. So in OV languages, embedded subjects in [Spec, TP] are always at the phonological border, since nothing precedes them or c-commands them from the left within the TP. So the "phonological border" condition does not matter in OV languages like Korean. So I just propose that the EPP position of T is assigned a [-Prom] feature.

It may seem questionable whether it is appropriate to extend proposals on OS to the analysis of the semantic restriction in Korean ECM constructions when there are clear differences between the two operations. For example, the argument that is moved in Korean ECM construction is the embedded subject, while it is an object in OS. Also according to the Chomsky's (2001) analysis, an object is assigned INT' at the phonological border of *v**P, which is a theta position in OS languages. But in this theory, an ECMed subject is assigned a [-Prom] feature in [Spec, TP], which is not a theta position. But, in spite of those differences, I propose that some of the basic ideas proposed by Holmberg (1999) and Chomsky (2001) regarding the analysis of OS can be applied to the analysis of the semantic restriction that Korean ECM constructions show.

Now let us apply the proposal to the analysis of semantic restriction of Korean ECM construction. The proposal (12a) states that a complementizer C can be assigned an EPP feature only if that has an effect on the outcome. Suppose that an embedded subject moves to [Spec, CP] of the embedded clause due to the optional EPP feature and is assigned accusative case in the ECM construction. According to (12b), the embedded subject is assigned a [+Prom] feature, hence becoming a topic. Topic must be predicated by an appropriate predicate. The predicate of a topic must characterize the topic by denoting

inherent or permanent properties of it. If the predicate does not characterize the topic appropriately, the ECM construction will yield a deviant configuration and crash. Consider some examples from Wechsler & Lee (1995).

(13) a. John-i Mary-ka Tom-ul po-ass-ta-ko mit-nun-ta.
John-N Mary-N Tom-A see-PST-DEC-C believe-PRES-DEC
'John believes that Mary saw Tom.'

b. *John-i Mary-lul Tom-ul po-ass-ta-ko mit-nun-ta.
John-N Mary-A Tom-A see-PST-DEC-C believe-PRES-DEC
'John believes that Mary saw Tom.'

(14) a. John-i Mary-ka yeppu-ess-ta-ko mit-nun-ta.
John-N Mary-N pretty-PST-DEC-C believe-PRES-DEC
'John believes that Mary was pretty.'

b. John-i Mary-lul yeppu-ess-ta-ko mit-nun-ta.
John-N Mary-A pretty-PST-DEC-C believe-PRES-DEC
'John believes that Mary was pretty.'

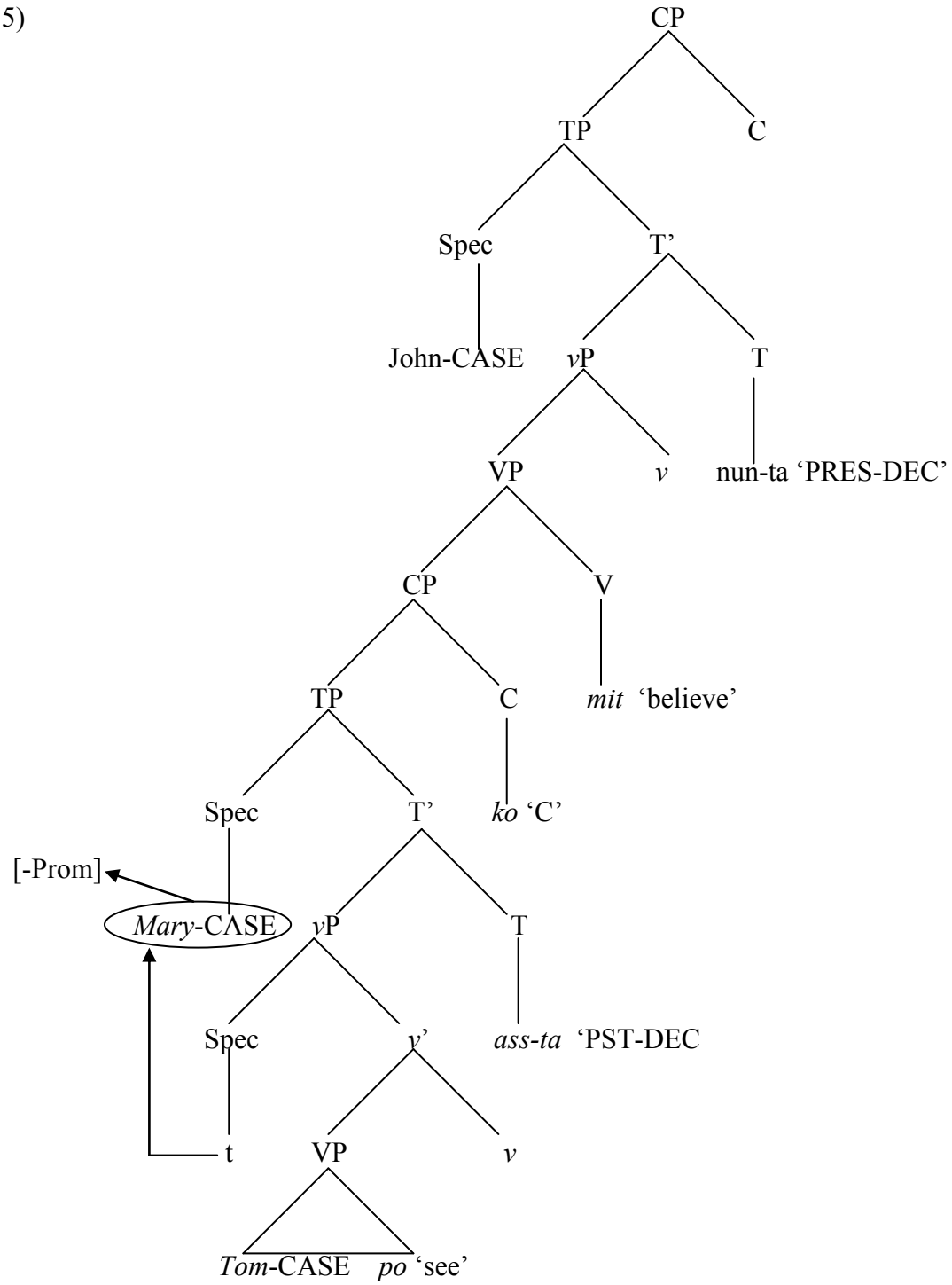
In (13), the embedded subject *Mary* cannot be ECMed (13b). But in (14b) the embedded subject *Mary* can be ECMed. This difference can be attributed to the fact that the embedded predicate *poassta* 'saw' in (13) denotes a specific event, while the embedded predicate *yeppu-ta* 'be pretty' in (14) denotes a permanent and inherent property of the embedded subject. In (13b), the embedded predicate cannot appropriately characterize the embedded subject *Mary* in [Spec, CP] with a [+Prom] feature.

According to (12c), the embedded nominative subject *Mary* in (13a) must be assigned [-Prom], since it is in [Spec, TP] being assigned nominative Case. I have already noted that

an argument with [+Prom], being a topic, must be predicated by a specific type of predicate denoting inherent or permanent property of the topic. But an argument with a [-Prom] feature is a little different. Since the feature [-Prom] refers to a state in which prominence is absent, it does not require any specific type of predication. That is to say, in (13a) and (14a), the embedded subjects with a [-Prom] feature in [Spec, TP] are compatible with any type of predication. That is a crucial difference between the arguments with a [-Prom] feature and the arguments with a [+Prom] feature.

Now let us turn to the structure of (13a). The embedded subject is assigned nominative case, hence it must be in [Spec, TP]. Then it must be assigned a [-Prom] feature according to (12c). As is noted above, an argument with a [-Prom] feature does not require any specific type of predication. So the sentence is grammatical regardless of the predication. The structure is shown below:

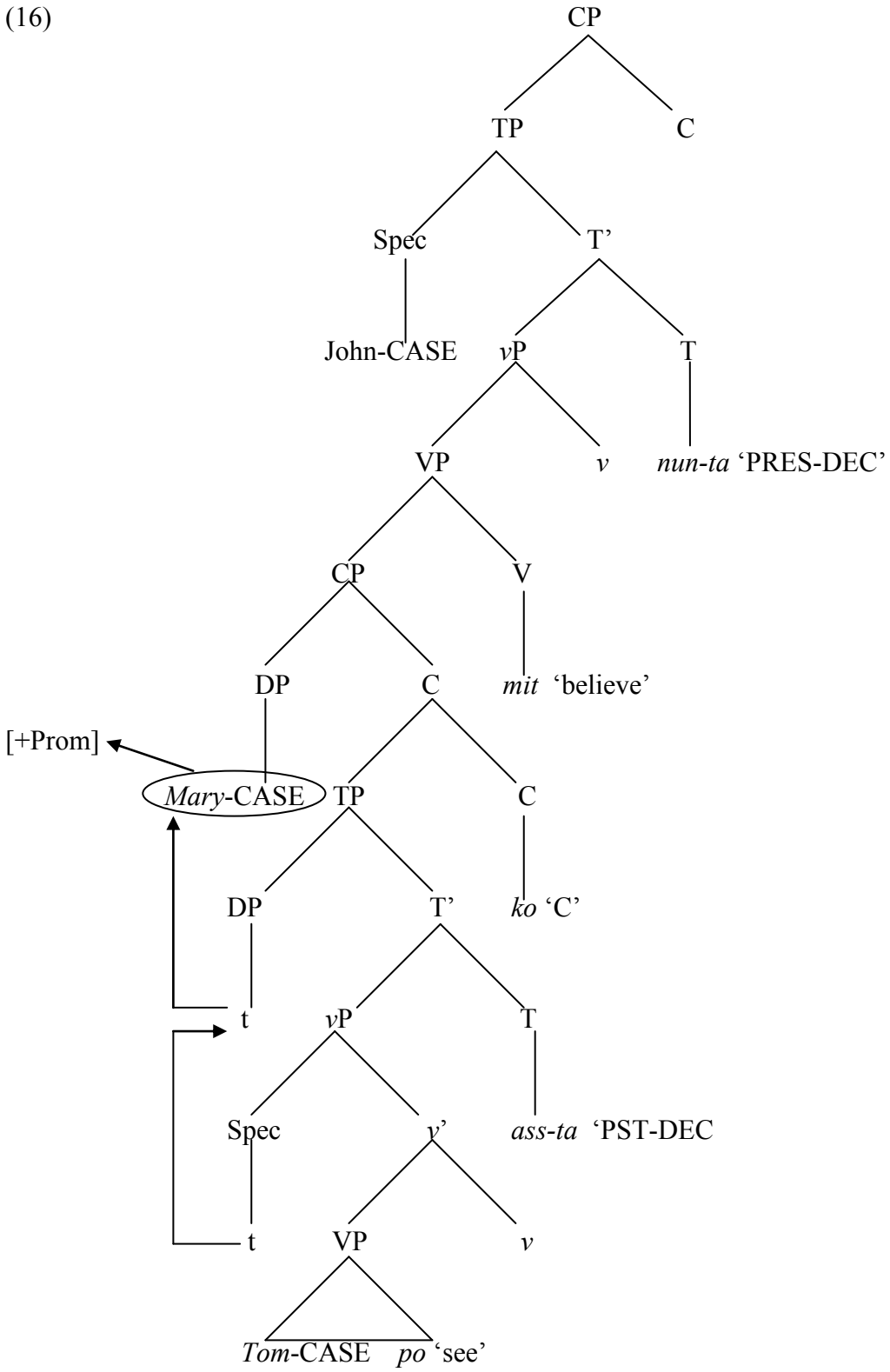
(15)



But in (13b), the embedded subject is assigned accusative case. An argument can be assigned accusative case only when it is in the domain of the light verb. The [Spec, CP] of

an embedded clause is one of such positions. At [Spec, CP], the embedded subject is assigned a [+Prom] feature according to (12c). Then the argument must be predicated by a predicate that can characterize it. But the predicate *poass-ta* ‘saw-DEC’ is not enough to characterize the ECMed subject, so the derivation crashes. The structure is shown in (16).

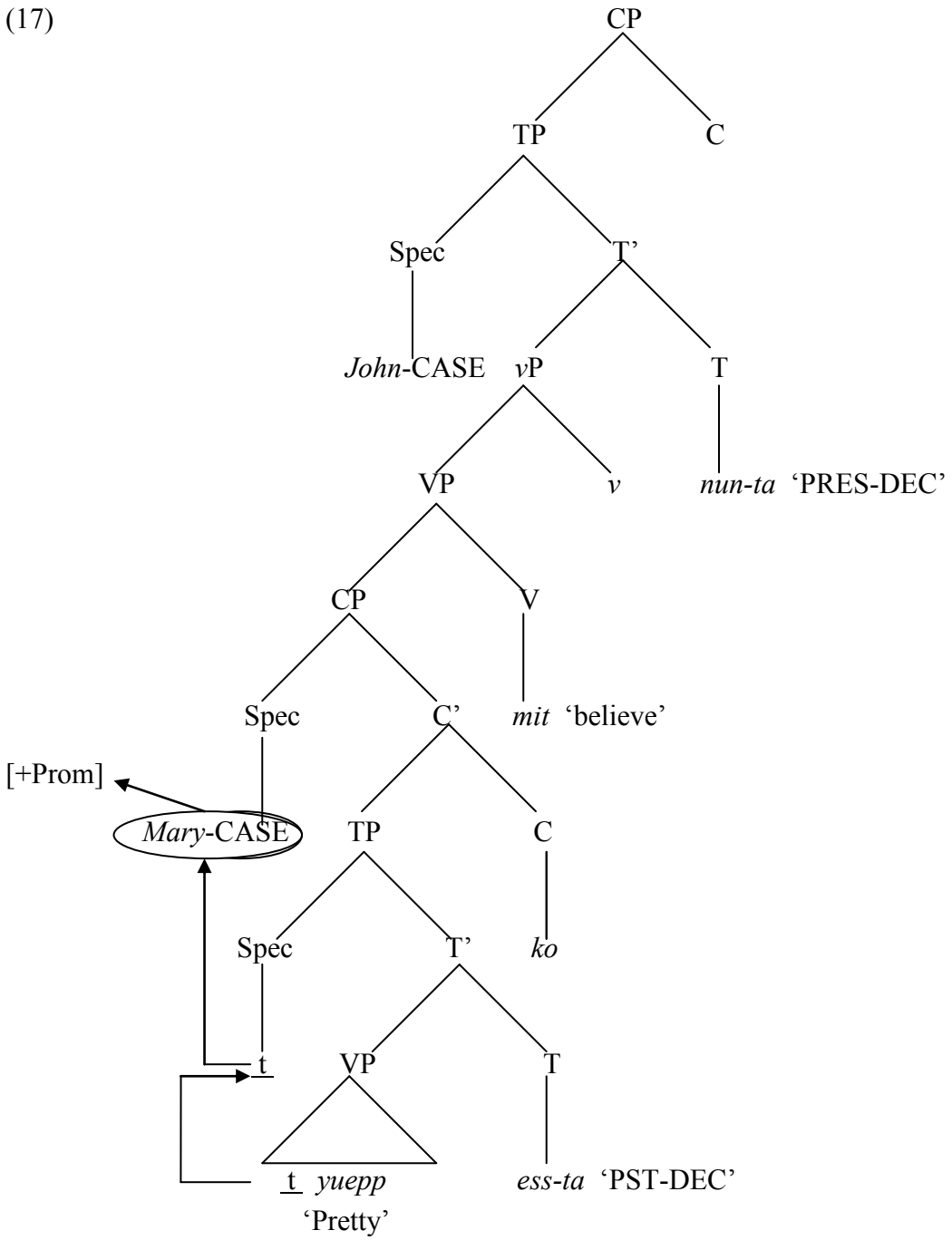
(16)



However, the predicate *yepputa* 'be pretty' in (14b) is appropriate to predicate the ECMed

subject. So the derivation converges unlike in (13b). The structure is shown below.

(17)



To summarize, adopting Chomsky's (2001) basic ideas, I propose to understand the

semantic property of Korean ECM constructions as a property of the resulting configuration. For Korean ECM constructions, I argue that [Spec, CP] is a position where a [+Prom] feature is assigned. Once an argument is assigned a [+Prom] feature, it must be predicated by a predicate that can characterize the topic appropriately. If the predicate fails to characterize the topic appropriately, the derivation will yield a deviant interpretation and crash. On the other hand, if the embedded subject remains in [Spec, TP], it is assigned a [-Prom] feature. But, the arguments with a [-Prom] feature are not subject to such semantic requirement as the arguments with a [+Prom] feature are subject to. They may be predicated by any predicates regardless of the predicate's semantic properties.

5.2.3 The structural position of the ECMed argument

In this section, I argue that the ECMed subjects are in [Spec, CP] of the embedded clause, while the embedded nominative subjects remain in [Spec, TP]. The proposal (12b) states that a [+Prom] feature is assigned to the EPP position of a CP. According to my theory, phase heads (C and *v*) assign structural Case to the arguments in the c-command domain of the phase heads. [Spec, CP] is not c-commanded by the head of the CP. So my theory predicts that the ECMed subject in [Spec, CP] cannot be assigned nominative Case by the embedded C. Instead it is assigned (accusative) Case by a higher Case assigner, that is to say the matrix *v*.

First of all, let us begin with a construction in which the embedded subjects are marked with nominative case (Hong (1990:216)):

(18) a. Chris-ka [Mary-ka **ecey** o-ass-ta-ko] malhay-ess-ta.
Chris-N Mary-N yesterday come-PST-DEC-C say-PST-DEC
'*Yesterday, Chris said that Mary came.'
'Chris said that Mary came yesterday.'

b. Chris-ka [Mary-ka [**nolay-lul pwulu-myense**] ttena-ss-ta-ko] malhay-ess-ta.
Chris-N Mary-N song-A sing-while leave-PST-DEC-C say-PST-DEC
'*Singing a song, Chris said that Mary had left.'
'Chris said that Mary had left singing a song.'

An adverb that is a sub-constituent of an embedded clause cannot be construed with the matrix predicate. In (18a&b), the adverbs *ecey* 'yesterday' and *nolay-lul pwulu-myense* 'singing a song' cannot be construed with the matrix predicates, which shows that they are inside the embedded clauses. The embedded subjects must also be within the embedded clauses too, since they are assigned nominative case. Under my theory, nominative case is assigned by C. So the embedded nominative case-marked subjects must be in a position that can be c-commanded by the embedded C.

Next, let us consider ECM constructions in which the embedded subject is assigned accusative case. In the following ECM constructions, the adverbs can have either a matrix or embedded interpretation (from Song 1994)):[7]

(19) a. John-i Mary-lul **erisekkeyto** cwukess-ta-ko malhayess-ta.
John-N Mary-A foolishly died-DEC-C said-DEC
'Foolishly, John said that Mary died.'

[7] In Song (1994:153), only the matrix reading of the adverbials is mentioned. But the embedded reading is also possible.

'John said that Mary foolishly died.'

b. John-i Mary-lul **ecey** cwukess-ta-ko malhayss-ta.
John-N Mary-A yesterday died-DEC-C said-DEC
'Yesterday John said that Mary died.'
'John said that Mary died yesterday.'

With respect to the above constructions, I propose that they have two different internal structures. In the first structure, I argue that the ECMed subject is in [Spec, CP] and the adverb is inside the embedded CP, being interpreted with the embedded predicate as is shown below:

(20) John-i [$_{CP}$ Mary-lul **erisekkeyto** cwukess-ta-ko] malhayess-ta.
John-N Mary-A foolishly died-DEC-C said-DEC
'John said that Mary foolishly died.'

Since the ECMed subject is in [Spec, CP], the adverb *erisekkeyto* 'foolishly' must be inside the embedded clause. However, since the ECMed subject is outside the c-command domain of the embedded C, it cannot be assigned nominative Case. In the [Spec, CP] of the embedded clause, the ECMed subject can be assigned accusative case by the matrix light verb *v* without moving into a higher position.

With respect to the matrix reading of the adverb, it must be outside the embedded clause to have the matrix reading. If the adverb is outside the embedded clause, the ECMed subject which precedes the adverb must be outside the embedded clause too. However, considering that the embedded subject is assigned accusative case, it must be in the domain of the matrix light verb *v*. However, [Spec, *v*P] is not a possible position to which

accusative Case can be assigned, since it is above the c-command domain of the light verb. Thus the only position to which accusative Case can be assigned is [Spec, CP] of the embedded clause. So I argue that the ECMed subject is assigned accusative Case in [Spec, CP] of the embedded subject and scrambles over the adverb to the surface position. The structure is shown below.

(21) John-i Mary-lul$_i$ **erisekkeyto** [$_{CP}$ t_i cwukess-ta-ko] malhayess-ta.
John-N Mary-A foolishly died-DEC-C said-DEC
'Foolishly, John said that Mary died.'

In (21), the ECMed subject is in a scrambled position and the adverb is outside the embedded CP, hence the adverb can have a matrix reading. However, if the embedded subject does not undergo scrambling, it would only have an embedded reading. This can be seen in the following examples:

(22) a. John-i **erisekkeyto** [$_{CP}$ Mary-lul cwuk-ess-ta-ko] malhayess-ta.
John-N foolishly Mary-A die-PST-DEC-C said-DEC
'Foolishly, John said that Mary died.'
*'John said that Mary foolishly died.'

b. John-i **ecey** [$_{CP}$ Mary-lul cwukess-ta-ko] malhayss-ta.
John-N yesterday Mary-A died-DEC-C said-DEC
'Yesterday, John said that Mary died.'
*'John said that Mary died yesterday.'

In the above examples, the adverbs can only have a matrix reading. It means that the

adverbs are outside the embedded clause regardless of the scrambling.[8] Since Korean allows long scrambling across an embedded CP, the embedded subject in Korean ECM construction may scramble over the adverb, even over the subject of the matrix clause, as is shown below:

(23) a. Mary$_i$-lul John-i erisekkeyto [$_{CP}$ t_i cwuk-ess-ta-ko] malhayess-ta.
Mary-A John-N foolishly die-PST-DEC-C said-DEC
'Foolishly, John said that Mary died.'
'John said that Mary foolishly died.' [with a different bracketing]

b. Mary$_i$-lul John-i **ecey** [$_{CP}$ t_i cwukess-ta-ko] malhayss-ta.
Mary-A John-N yesterday died-DEC-C said-DEC
'Yesterday, John said that Mary died.'
'John said that Mary died yesterday.' [with a different bracketing]

What can be seen from the above data is that the ECMed subject must be in [Spec, CP] of the embedded clause, since it is the only place that can be assigned accusative case, given the assumption that the optional EPP feature can be assigned only to phase heads.

To summarize, I argue that the ECMed subject is in [Spec, CP], being assigned [+Prom], while the non-ECMed nominative subject remains in [Spec, TP] being assigned [-Prom]. If the nominative embedded subjects in (18) are inside the embedded clauses, the adverbs following the subjects must be inside the embedded clauses too. That explains why

[8] It is possible that the adverbs are adjoined to the embedded CP. Then the adverbs might have an embedded reading. But this is not plausible given the following data:

(i) Poirot believes **sincerely** [$_{CP}$ that English is important]. (Haegeman 1994:178)

The position of the adverb *sincerely* is similar to that of the adverbs in (20). It might be adjoined to the embedded CP. But regardless of the structure, the adverb *sincerely* cannot be construed with the embedded predicate. Given the above data, I assume that the same mechanism applies to Korean ECM construction. Adverbs immediately preceding an embedded CP have a matrix reading.

the adverbs cannot be construed with the matrix verbs. On the other hand, in the ECM construction (19), the adverbs may be construed with either the matrix or embedded predicates. I have argued that the two interpretations have different structures. In one structure, the embedded subject is inside the embedded clause, that is to say [Spec, CP]. Then the adverb must be below it and be construed with the embedded predicate. In the other structure, I have argued that the ECMed subject scrambles through the [Spec, CP] of the embedded clause over the adverb.[9] Given the fact that it is assigned accusative case, it must be in the c-command domain of the matrix light verb *v*. But if the ECMed subject is in [Spec, CP], the adverb following the ECMEd subject cannot be construed with the matrix verb. So I argue that the ECMed subject scrambles into a position over the embedded CP. Since scrambling does not affect the assignment of structural Case, the ECMed subject can scramble after it is assigned accusative case in [Spec, CP], without affecting the structural case.

5.2.4 ECM movement versus Scrambling

In this section, I consider some differences between the ECM movement and scrambling in

[9] In fact I assume that the ECMed subject can only scramble into the matrix clause by way of the [Spec, CP] position, so that the scrambled subject must be assigned accusative Case by the matrix light verb. This assumption will predict that the scrambled subject will incur the semantic restriction that is characteristic of Korean ECM construction. This is confirmed as predicted:

(i) a. John-i Mary-ka/*lul Tom-ul po-ass-ta-ko mitnun-ta.
John-N Mary-N/A Tom-A see-PST-DEC-C believe-DEC
'John believes that Mary saw Tom.'
a'. Mary-ka/*lul John-i Tom-ul po-ass-ta-ko mitnun-ta.
Mary-N/A John-N Tom-A see-PST-DEC-C believe-DEC
b. John-i Mary-ka/lul yeppu-ess-ta-ko mitnun-ta.
John-N Mary-N/A pretty-PST-DEC-C believe-DEC
'John believes that Mary was pretty.'
b'. Mary-ka/lul John-i yeppu-ess-ta-ko mitnun-ta.
Mary-N/A John-N pretty-PST-DEC-C believe-DEC

Korean. Scrambling is a process that allows non-canonical word order patterns in some free word order languages such as German, Hindi, Japanese, Turkish and Korean. In such languages, arguments can appear in various surface orders, without changing the core meaning of the sentence.[10] For example, Korean is an SOV language, in which a predicate comes at the end of the sentence as in (24).

(24) Chelswu-ka chayk-ul ilknun-ta.
Chelswu-N book-A read-DEC
'Chelswu reads a book.'

From the basic SOV word order, Korean sentences may diverge from the basic word order and scrambled sentences like (25) are fully grammatical.

(25) Chayk-ul Chelswu-ka ilknun-ta.
book-A Chelswu-N read-DEC
'Chelswu reads a book.'

Traditionally the flexibility of word order in Korean has been attributed to its rich system of overt Case-markers. Since the grammatical function of a noun phrase is marked by the case-markers, the linear ordering of the subject and the direct object can change, leaving the underlying interpretation and grammaticality of the sentence unaffected.

However, Lee, Eunsuk (2007) points out that there are some restrictions on scrambling. First he notes that scrambling is not permitted when an argument moves to the right of its predicate. Consider the following example.

[10] See Lee and Cho (2003) for the argument that scrambling is related to contrastive focus.

(26) a. Minho-ka chayk-ul ilknun-ta
Minho-N book-A read-DEC
'Minho reads a book.'

b. *Minho-ka ilknun-ta chayk-ul.
Minho-N read-DEC book-A

(27) a. Chelswu-ka Yeonghi-ka pap-ul mekessta-ko malhyass-ta.
Chelswu-N Yeonghi-N meal-A ate-C said-DEC
'Chelswu said that Yeonghi ate a meal.'

b. *Chelswu-ka Yeonghi-ka mekessta-ko pap-ul malhyass-ta.
Chelswu-N Yeonghi-N ate-C meal-A said-DEC

c. *Chelswu-ka mekessta-ko Yeonghi-ka pap-ul malhyass-ta.
Chelswu-N ate-C Yeonghi-N meal-A said-DEC

In (26), the rightward scrambling of the object over the predicate is not permitted. Also in (27b & c), the rightward scrambling of the object or/and subject over the embedded predicate *mekess-ta* 'ate-DEC' is not permitted either. Rightward scrambling of an argument over its predicate is not possible even in a small clause:

(28) a. Salamtul-i ku-lul pwuca-lo sayngkakhayss-ta.
People-N he-A rich.man-as thought-DEC
'People thought of him as a rich man.'

b. *Salamtul-i pwuca-lo ku-lul sayngkakhayss-ta.
People-N rich.man-as he-A thought-DEC
'(intended) People thought of him as a rich man.'

Secondly, Lee, Eunsuk (2007) notes that Korean does not allow scrambling of a noun phrase over another noun phrase when they are assigned the same morphological case. That is, there is no leftward scrambling over the same case-marked argument.

(29) a. John-i Mary-**lul** son-**ul** cap-ass-ta.
John-N Mary-A hand-A catch-PST-DEC
'John caught Mary by the hand.'

b. *John-i son-**ul** Mary-**lul** cap-ass-ta.
John-N hand-A Mary-A catch-PST-DEC
'(intended) John caught Mary by the hand.'

c. * Son-**ul** John-i Mary-**lul** cap-ass-ta.
Mary-A John-N hand-A catch-PST-DEC
'(intended) John caught Mary by the hand.'

In (29a), the two accusative case marked arguments hold a body-part relation. In this construction, the second accusative argument cannot scramble over the first accusative DP (29b&c).[11]

There are basically two approaches to scrambling. First, it has been the standard assumption to view scrambling as being transformationally derived from the original

[11] However, the ungrammaticality of (29b&c) may have nothing to do with case. It may be attributed the inalienable possession relationship between the two DPs: the possessor needs to c-command the body part in final structure. This restriction is independently known in French (Kayne 1975) and many other languages. Moreover this restriction does not apply to normal double object constructions in which the two accusative arguments do not hold such body-part relation. So the second accusative argument in (i) can scramble over the same case marked argument without causing significant change in meaning:

(i) a. Chelswu-ka John-ul chayk-ul cwu-ess-ta.
Chelswu-N John-A book-A give-PST-DEC
'Chelswu gave John a book.'
b. Chelswu-ka chayk-ul John-ul cwu-ess-ta.
Chelswu-N book-A John-A give-PST-DEC
c. Chayk-ul Chelswu-ka John-ul cwu-ess-ta.
book-A Chelswu-N John-A give-PST-DEC

sentence by an overt movement operation (Saito (1985, 2004, 2005), Fukui (1993), Kuroda (1988), Miyagawa (1997), Sabel (2001), Kitahara (2002) and Ko (2007) among many others). For example, consider the following Japanese example (Bošković and Takahashi (1998:349)).

(30) a. John-ga [Mary-ga sono hon-o katta to] omotteiru.
John-N Mary-N that book-A bought that thinks
'John thinks that Mary bought that book.'

b. Sono hon-o John-ga [Mary-ga *t* katta to] omotteiru.
that book-A John-N Mary-N bought that thinks

According to Saito (1985), (30b) is derived from (30a) by adjoining the embedded object to the matrix clause. He argues that scrambling is an optional movement with no driving force. But this kind of optional movement analysis raises a problem in the Minimalist framework, since every movement is considered to be driven by uninterpretable features in the Minimalist framework.

In response to this problem, base-generation approaches were proposed. For example, Bošković and Takahashi (1998) argue that scrambled phrases are directly base-generated in their surface positions and undergo LF movement (lowering) to the positions where they receive theta-roles. However, this theory is based on a few radical assumptions. First it assumes that lowering is a possible option at LF. Secondly, it assumes that theta-roles are a formal feature driving scrambling, following Lasnik (1995) and Kim, J-S. (1997). Let us consider how the theory works through the example from Bošković and Takahashi (1998:350).

(31) Numeration → (a) { → (c) (LF); → (b) (PF)}

a. [$_{IP}$ Sono hon-o [$_{IP}$ John-ga [$_{CP}$ [$_{IP}$ Mary-ga [$_{VP}$ [$_{V}$ katta]]] to] omotteiru]]
that book-A John-N Mary-N bought that thinks
'As for the book, John thinks that Mary bought it.'

b. sono hon-o John-ga Mary-ga katta to omotteiru → [PF]

c. [$_{IP}$ John-ga [$_{CP}$ [$_{IP}$ Mary-ga [$_{VP}$ sono hon-o [$_{V}$ katta]]] to] omotteiru] → [LF]

The embedded object *sono hon-o* in (31a) is directly introduced into the matrix IP-adjoined position by Merge and remains there in the PF side of the derivation (31b). But in the LF side of the derivation, the scrambled argument *sono hono* 'that book' lowers to the VP-complement position to be theta-marked by the verb (31c). But there might be a problem with respect to the economy of derivation. They argue that the derivation in which the scrambled argument is generated at [Spec, IP] and lowers to its theta position is equally economical as the original non-scrambled derivation under the concept of local economy (Bošković and Takahashi (1998:352))

But considering the cyclic nature of derivation, syntax builds a syntactic object from the Numeration cyclically. Then the theory must stipulate that the derivation may proceed without satisfying the theta-position required by the predicate unfilled. Also the theory faces an empirical problem when it comes to a restriction that scrambling displays in Korean. As is noted above, scrambled arguments cannot appear after their predicates. Also an argument cannot move across another argument with the same case marker when the two arguments hold a close semantic relationship like body-part. But under the base-generation theory, it cannot block the generation of a scrambled argument in those

restricted positions. That is because inserting a scrambled argument in one of those restricted positions would be no less economical as inserting them in the unscrambled position in the base-generation theory.[12]

With these approaches to scrambling in mind, I want to consider some differences between the ECM movement and scrambling. First scrambling does not affect the assignment of structural Case. As is shown in (24) and (25), repeated below as (32), the accusative case on the object does not change after scrambling.

(32) a. Chelswu-ka chayk-ul ilknun-ta.
Chelswu-N book-A read-DEC
'Chelswu reads a book.'

b. Chayk-ul Chelswu-ka ilknun-ta.
book-A Chelswu-N read-DEC
'Chelswu reads a book.'

This is because structural Case is assigned before scrambling. So the structural case is retained even after the scrambling. But in the ECM movement, the case of the embedded subject varies depending on the structural position of the argument. It is assigned nominative case in the subject position [Spec, TP] and is assigned accusative case after the ECM movement as is shown below.

(33) a. Tom-un [$_{TP}$ Swuni-ka chencay-la]-ko mit-nun-ta.
Tom-T Swuni-N genius-DEC-C believe-PRES-DEC

[12] It might be possible to block the bad examples generated by the base-generation theory through some constraints on movement. However, blocking LF lowering is more difficult than blocking overt raising operation in that it may not be subject to common constraints on movement such as c-command or Proper Binding Condition.

'Tom believes that Swuni is a genius.'

b. Tom-un [$_{CP}$ Swuni-lul$_i$ [$_{TP}$ t_i chencay-la]-ko] mit-nun-ta.
Tom-T Swuni-A genius-DEC-C believe-PRES-DEC
'Tom believes Swuni to be a genius.'

In (33), depending on the execution of the ECM movement, the case of the argument varies. So it can be said that structural Case is assigned after the ECM movement.

Secondly, there are some semantic differences between the two operations. Lee and Cho (2003) argue that scrambling is related to specificity (see Mahajan 1990, Webelhuth 1992 and Diesing 1997). On the other hand, I have shown that the ECM movement is accompanied with a semantic import. That is to say, once an argument moves into [Spec, CP], it is assigned a [+Prom] feature and becomes a topic. The movement into [Spec, CP] also makes it possible for an argument to be assigned accusative Case by the matrix *v* by being placed in the edge position. Otherwise it would be impossible for the embedded subject to be assigned accusative Case by the matrix *v* due to the presence of C.

Lastly, the ECM movement targets only the closest argument, that is to say the embedded subject because the EPP feature assigned to C raises the closest argument. But scrambling does not have such restraint. Scrambling of a subject as well as an object is possible as is shown below (Ko 2007:52, adapted from Sohn 1995):

(34) John$_i$-i [$_{CP}$ na-nun [$_{CP}$ t_i Mary-lul mannassta-ko] sayngkakhan-ta].
John-N I-T Mary-A met-C think-DEC
"John$_1$, I think that t_1 met Mary.'

With those differences between scrambling and the ECM movement in mind, I will

propose an analysis of the distribution of structural Case in Korean ECM construction.

5.3 The analysis

5.3.1 The analysis of Korean ECM construction

With respect to the distribution of structural Case in Korean ECM construction, one of the issues surrounding Korean ECM construction is how to explain the accusative Case assigned to the embedded subject across the CP boundary. It has been the standard assumption that CP is a barrier to outside Case assignment. But in this dissertation, I show that my theory naturally allows the assignment of structural Case from the matrix verb to the Spec of the embedded CP.

With respect to Korean ECM constructions, I argue that an ECMed DP is in [Spec, CP] of the embedded clause due to the optional EPP-feature of the embedded C. Once it moves into [Spec, CP], it is assigned a [+Prom] feature and acquires a topical status.[13] The position [Spec, CP] is not c-commanded by the embedded complementizer C, so the ECMed DP cannot be assigned nominative case. Instead it is assigned structural accusative Case by a higher Case assigner, that is to say the light verb *v* in the matrix clause.

Let us look at a typical ECM construction (1) again, repeated below as (35):

(35) a. Tom-un [$_{CP}$ Swuni-ka chencay-la-ko] mit-nun-ta.
Tom-T Swuni-N genius-DEC-C believe-PRES-DEC
'Tom believes that Swuni is a genius.'

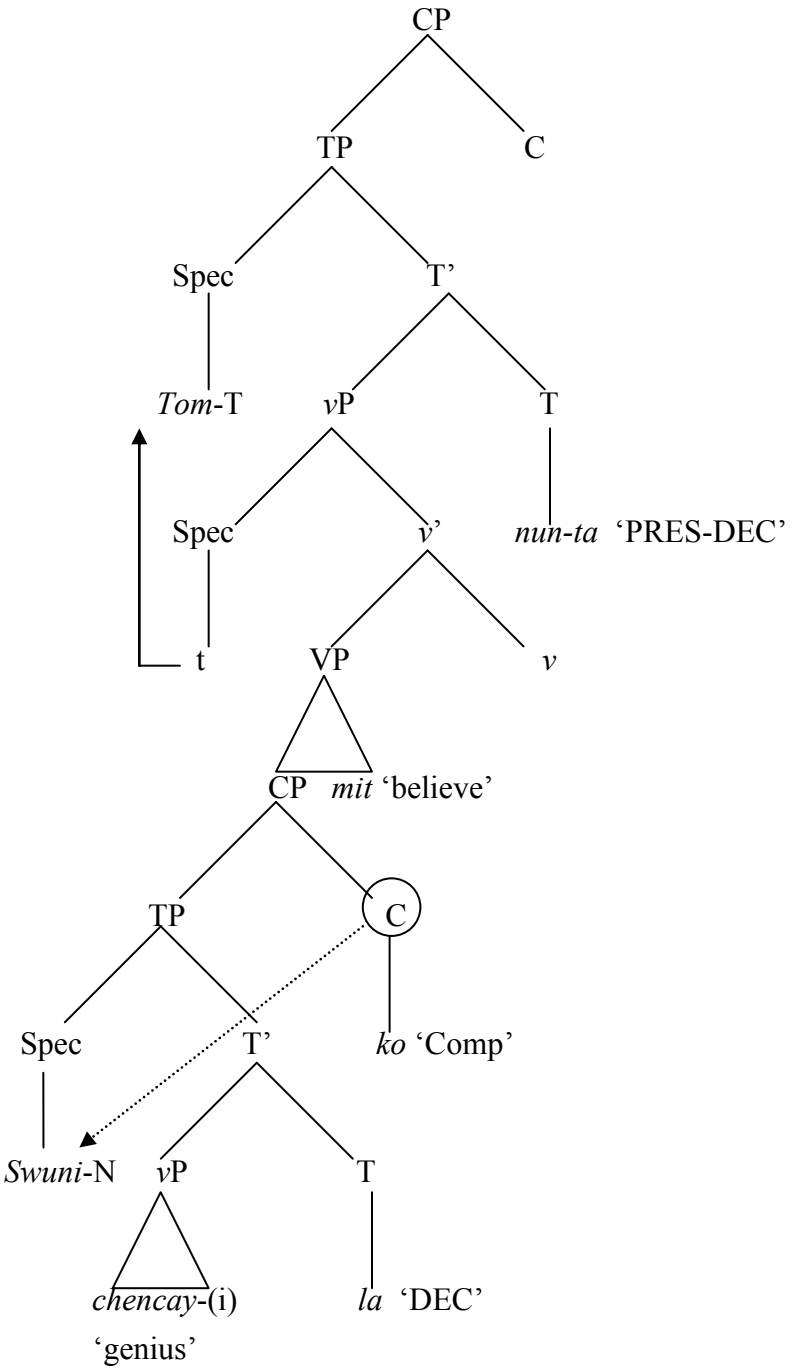
b. Tom-un Swuni-lul chencay-la-ko mit-nun-ta.

[13] It is worth pointing out the difference between a nominative argument in [Spec, CP] and an argument with a topic marker *-nun* in Korean. Following Choi (1996), I assume that the argument with a topic marker *-nun* in [Spec, CP] has a [+Old] feature as well as a [+Prom] feature, while the argument with nominative case in [Spec, CP] has a [+Prom] but [-old] feature.

Tom-T Swuni-A genius-DEC-C believe-PRES-DEC
'Tom believes Swuni to be a genius.'

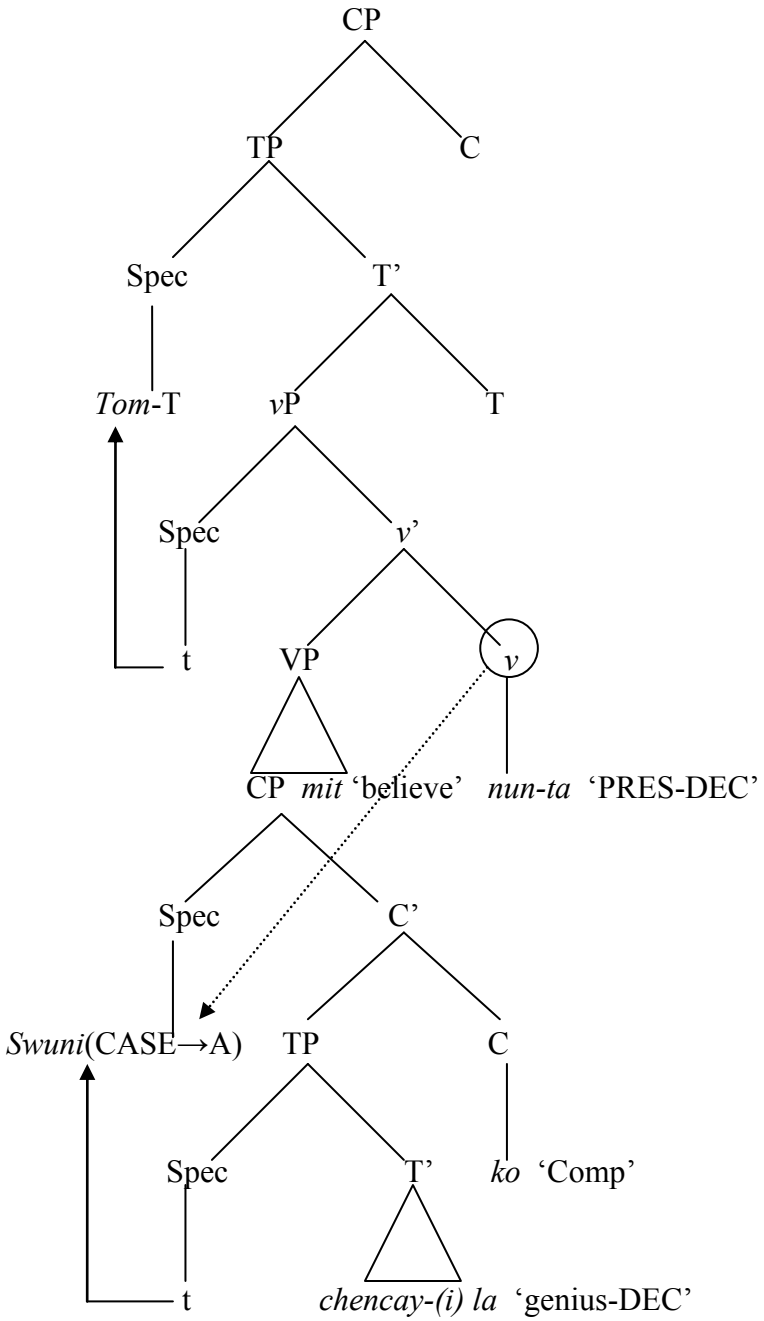
(35a) is a common transitive construction with an embedded CP. The embedded subject is in [Spec, TP] and is assigned nominative Case by the embedded C as is shown below:

(36)



However, the embedded subject moves to [Spec, CP] in the ECM construction and is assigned accusative Case by the matrix *v* as is shown below:

(37)



Since the ECMed subject in [Spec, CP] is not c-commanded by the embedded C, it cannot be assigned nominative Case by the embedded C. Instead it is assigned accusative Case by the matrix light verb *v*. Since the ECMed subject is at the edge of the embedded CP, I argue that the matrix *v* can assign accusative Case to the embedded subject in [Spec, CP].

5.3.2 ECM verbs and their *ci*-constructions

With respect to claim that the accusative case on the ECMed subject came from the matrix light verb *v*, there is a piece of supporting evidence. Let us consider an ECM verb and its *ci*-construction.

(38) a. Tom-un [$_{CP}$ Swuni-lul chencay-la-ko] mitnun-ta.
Tom-T Swuni-A genius-DEC-C believe-DEC
'Tom believes that Swuni is a genius.'

c. Tom-ey uyhay Swuni-ka/*lul chencay-la-ko mite-ci-n-ta.
Tom-by Swuni-N/A genius-DEC-C believe-CI-PRS-DEC
'Swuni is believed to a genius by Tom.'

In Chapter 3, I have already argued that *ci* is an unaccusative auxiliary verb, which it does not project a light verb that can assign accusative Case. The example (38b) shows that the unaccusative auxiliary verb *ci* in fact causes the loss of accusative case of the embedded subject. Hence it shows that the accusative case in (38a) must be assigned from a higher position, that is to say a light verb *v* in my theory.

5.3.3 ECM construction containing the DNC

In this section, I consider the DNCs embedded under ECM verbs. In my theory, only one argument can move to the embedded [Spec, CP] and be assigned a [+Prom] feature in the ECM construction. In this movement, only the highest DP, that is to say the closest argument to the embedded C, can move to [Spec, CP] of the embedded clause. In that position, the embedded subject can be assigned accusative Case by the matrix light verb *v*,

while the lower DP is assigned nominative Case by the embedded C.

In this section, I first consider the NPC, which is one of the two types of DNCs. The structure of the NOC is not different from that of the NPC. Consider the following examples.

(39) a. Swuni-ka emeni-ka yeppu-ta.
Swuni-N mother-N beautiful-DEC
'It is Swuni, whose mother is beautiful.'

b. Na-nun Swuni-ka emeni-ka yeppu-ta-ko mitnun-ta.
I-T Swuni-N mother-N beautiful-DEC-C believe-DEC
'I believe that it is Swuni, whose mother is beautiful.'

c. Na-nun Swuni-lul emeni-ka yeppu-ta-ko mitnun-ta.
I-T Swuni-A mother-N beautiful-DEC-C believe-DEC
'I believe that as for Swuni, her mother is beautiful.'

d. *Na-nun Swuni-lul emeni-lul yeppu-ta-ko mitnun-ta.
I-T Swuni-A mother-A beautiful-DEC-C believe-DEC

e. *Na-nun Swuni-ka emeni-lul yeppu-ta-ko mitnun-ta.
I-T Swuni-N mother-A beautiful-DEC-C believe-DEC

(39a) is a typical example of NPC. In (39b), the NPC is embedded under the ECM verb *mit-ta* 'believe'. (39c) shows that the first argument of the embedded clause can be assigned accusative case. This is rather surprising given that the NPC predicate is an intransitive verb that cannot assign accusative Case. However, (39d) shows that it is not possible for both arguments to be assigned accusative case. This is expected under my analysis. In the analysis, only one argument can move to [Spec, CP] and be assigned accusative Case. The other argument remains within the domain of the embedded C and is

assigned nominative case by the embedded C. [14]

It is also noteworthy that (38e) is not acceptable. That is because only the highest argument in the embedded clause can move into [Spec, CP] of the embedded clause, being assigned accusative Case by the matrix *v*. But in (38e), the lower argument is assigned accusative case, while the higher argument is assigned nominative case. This would be possible if the lower argument moved to [Spec, CP] of the embedded clause being assigned accusative Case by the matrix *v*, while the higher nominative argument is above the c-command domain of the matrix *v*, possibly at [Spec, *v*P] due to an optional EPP feature of the light verb *v*. [15] But this would violate the following principle on the assignment of an optional EPP feature proposed by Chomsky (2001:34).

(40) Optional operations can apply only if they have an effect on outcome.

According to (40), the matrix *v* may be assigned an EPP feature if it permits a successive cyclic A'-movement or some semantic effect on the outcome. But in (39e), the movement of the embedded subject to [Spec, *v*P] does not induce a successive cyclic A'-movement or does not have a semantic import on the outcome, violating the principle (40). Hence (39e) is ungrammatical. Since (39e) is ungrammatical, the following example in which the

[14] With respect to the derivation of (39d), one may think that both of the embedded DPs may get structural accusative case assigned by the matrix light verb if the whole possessed DP raises to [Spec, CP] and then only the possessor DP undergoes PR, adjoining to the CP. However, since I assume that a [+Prom] feature is assigned to an argument in [Spec, CP] giving it a topical status. If both of the arguments are assigned a [+Prom] feature, then there would be two topics, which is not allowed in my theory.

[15] Chomsky (2000:109) proposes the following principle with respect to the assignment of the optional EPP feature:

(i) The head H of phase Ph may be assigned an EPP feature.

Unlike the EPP feature of T which is universal, Chomsky argues that the EPP feature of C and *v* which are phase heads varies parametrically among languages and if available is optional.

accusative marked *emeni-lul* ‘mother-A’ scrambles over the embedded subject *Swuni-ka* is also ungrammatical.

5.4 Typoligical Issues

In this section, I will consider why the ECM verbs in languages like English do not allow their subjects to be ECMed across the embedded CP. In fact Englis ECM verbs do allow fininite complement clauses as well as infinitival ECM constructions:

(41) a. John believes [$_{IP}$ Mary to be smart].

b. John believes [$_{CP}$ that Mary is smart].

However, the embedded subject in (41) cannot be ECMed as is shown below.

(42) *John believes Mary that *t* is smart.

This contrasts with the following Korean ECM construction, in which the embedded subject can be ECMed in the finite embedded clause.

(43) a. Na-nun Swuni-ka yengliha-ta-ko mitnun-ta.
I-T Swuni-N smart-DEC-C believe-DEC
‘I believe that Swuni is smart.’

b. Na-nun Swuni$_i$-lul t_i yengliha-ta-ko mitnun-ta.
I-T Swuni-A smart-DEC-C believe-DEC
‘I believe Swuni to be smart.’

Now let us consider why (42) is ungrammatical, while the corresponding Korean example (43b) is grammatical. A notable difference between the English example (42) and the Korean example (43b) is that the overt complementizer is not crossed in Korean. The contrast reminds us of the ECP. The example (42) may be ruled out by the ECP or *that*-trace filter. But in the Korean example (43b), the ECP may not be violated if we assume that antecedent government is not blocked if a moved element does not cross an overt complementizer. This assumption is at least compatible with Japanese data, which also allows an embedded subject to be ECMed across a finite clause:

(44) John-ga [kanozyo-o syooziki da to] omotte-iru
John-N she-A honest-PRS is C believe-PRS
'John believes her to be honest.'

Japanese is also a head final language like Korean and the overt complementizer is not crossed by the embedded subject just as in Korean ECM construction.

5.5 Summary

In this Chapter, I have considered some unusual properties of Korean ECM constructions. To explain the semantic restriction that Korean ECM constructions display, I have extended Chomsky's (2001) proposals on Object Shift to the analysis of Korean ECM constructions. In the analysis of the semantic restriction, I have proposed that [Spec, CP] is a position where [+Prom] is assigned. Once a DP moves into [Spec, CP], it is assigned a [+Prom] feature and acquires a topical status. Then the predicate must describe some

inherent or permanent properties of the topic. If the predicate fails to characterize the topic in this way, the derivation becomes deviant and crashes.

I have also demonstrated that the distribution of structural Case in Korean ECM construction can be explained by the structural positions that the arguments occupy. In the non-ECMed construction, the subject of the embedded clause is in [Spec, TP] and is assigned nominative case by the embedded C. But in the ECM construction, the argument moves to [Spec, CP] of the embedded clause and is assigned accusative Case by the higher light verb *v*.

Lastly I have considered the case of the DNCs embedded within ECM verbs. Even in this case, only the highest argument in the embedded clause can undergo the ECM movement to [Spec, CP] of the embedded clause and be assigned accusative case. That is because only one argument can move into the [Spec, CP] of the embedded clause to be assigned a [+Prom] feature.

Chapter 6 Previous Theories on Structural Case Assignment

In this chapter, I consider previous theories on the assignment of structural Case and apply them to Korean passive constructions, DNCs and ECM constructions to see how they can handle the distribution of structural Case in these constructions. While I consider the previous theories on structural Case assignment, I will briefly show how my theory does better than the previous theories with respect to the above Korean constructions.

6.1 Case theories in GB era

6.1.1 Case assignment under Government

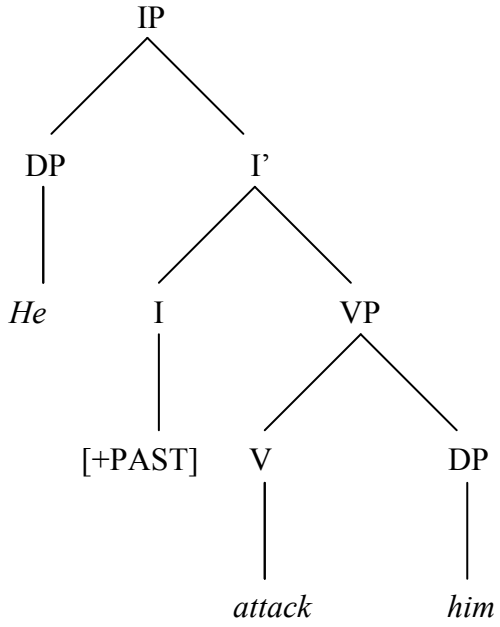
A representative Case theory in the GB era is the government-based Case theory. In this theory, structural Case is assigned to DPs under government. For example, structural accusative Case is assigned to an argument by a transitive verb or a preposition and nominative Case is assigned to an argument by finite Infl under government.[1] Let us see how the theory works through an example:

[1] The definition of Government (Chomsky 1986: 8) is the following.

Government
A governs B if and only if
(i) A is a governor; and
(ii) A m-commands B; and
(iii) no barrier intervenes between A and B.
Maximal projections are barriers to government.
Governors are heads.

(1) a. He attacked him.

b.



In (1a), the subject *He* is governed by the finite Infl, hence nominative Case is assigned to it by the finte Infl. On the other hand, the object *him* is governed by the transitive verb *attack* and assigned accusative case by the verb.

Now let us apply the Government-based Case theory to Korean double accusative constructions and their passive constructions.

(2) a. Nay-ka Chelswu-lul chayk-ul cwu-ess-ta.
I-Nom Chelswu-Acc book-Acc give-Pst-Dec
'I gave Chelswu a book.'

b. Chelswu-ka chayk-i cwue-**ci**-ess-ta.
Chelswu-Nom book-Nom give-**CI**-Pst-Dec
'Chelswu was given a book.'

(3) a. Chelswu-ka ku namu-**lul** kaci-lul cal-ass-ta.
Chelswu-Nom the tree-Acc branch-Acc cut-Pst-Dec
'Chelswu cut the tree of its branch.'

b. Ku namu-ka kaci-lul cal-li-ess-ta.
the tree-Nom branch-Acc cut-Psv-Pst-Dec
'The tree was cut of its branch.'

c. Ku namu-ka kaci-ka cal-li-ess-ta.
the tree-Nom branch-Nom cut-Psv-Pst-Dec
'The tree was cut of its branch.'

The examples in (2) are the so-called double object construction and its passive construction. The example in (3a) is a PRC and (3b&c) are its passive constructions. What is at issue here is how to explain the nominative case on the theme argument *chayk* 'book' in (2b) and the case alternation shown in (3b) and (3c). A standard assumption regarding the passivization in GB era is that it absorbs structural accusative Case (e.g., Jaeggli 1986 and Roberts 1987). This assumption may explain the loss of accusative case in the *ci*-passivization (2b). But it cannot explain the case alternation shown in (3b&c).

There are at least two possible approaches to this problem under the GB framework. First, the accusative case on the theme argument in (3b) may be inherent rather than structural. But this proposal must explain why the inherent accusative case is lost in (3c). The second solution is to assume that passivization can take away only one accusative Case. This assumption may explain why the accusative case remains in (3b), but it must explain why both accusative cases are lost in the *ci*-construction (2b) and *i*-passive construction (3c).

Now let us apply the GB-based Case theory to the DNCs. As is discussed in Chapter 4,

there are two kinds of DNCs in Korean: the NPC (4) and the NOC (5).

(4) Swuni-ka emeni-ka yeppu-ta.
Swuni-Non mother-Nom beautiful-Dec
'It is Swuni whose mother is beautiful.'

(5) Nay-ka Minho-ka coh-ta.
I-Nom Minho-Nom like-Dec
'I like Minho.'

In the Government-based Case theory, accusative Case is assigned by a transitive verb. Since NPC predicates are one place predicates (see Chapter 4), they must be intransitive verbs. Therefore accusative Case is not available in the NPC. However, it needs some stipulation to explain multiple assignments of structural Case. Since structural nominative Case is assigned when an argument is governed by Infl, it requires both nominative DPs to be governed by Infl. Also multiple assignments of structural Case should be possible in the Government-based Case theory to explain the multiple nominative cases. What is problematic is the NOC example (5). In (5) the verb *coh-ta* 'like-DEC' is a two-place predicate and the second argument serves an object-like role. So it is expected that accusative case is available in (5). But there is no accusative case available in (5). In the Government-based Case theory, the derivation begins by merging the verb *coh* 'like' and the theme argument *Minho*. After that, the subject *Na* 'I' is merged with the VP. In this construction, the second argument is assigned nominative case instead of accusative case, though it is governed by the verb *coh* 'like'.

Lastly let us consider the ECM construction.

(6) a. Tom-un Swuni-ka chencay-la-ko mitnun-ta.
Tom-T Swuni-N genius-DEC-C believe-DEC
'Tom believes that Swuni is a genius.'

b. Tom-un Swuni-lul chencay-la-ko mitnun-ta.
Tom-T Swuni-A genius-DEC-C believe-DEC
'Tom believes Swuni to be a genius.'

With respect to the Korean ECM construction, it has already been noted in Chapter 5 that the embedded clause is a CP rather than an IP. The ECMed subject *Swuni-lul* 'Swuni-Acc' in (6b) is inside a CP projection. According to the Government-based Case theory, accusative Case is assigned when a DP is governed by a transitive verb. But the ECMed subject cannot be governed by the matrix verb, since the CP is a barrier to the Government. Even if we assume that the embedded subject moves to [Spec, CP] of the embedded clause, still government would not be possible due to the embedded CP. Then additional mechanism is needed to explain the accusative Case on the ECMed subject in this theory.

6.1.2 Burzio's Generalization

Burzio (1986) proposed the following principle on the assignment of structural accusative Case.

(7) Burzio's Generalization (BG, Burzio 1986:185)
$\theta_s \leftrightarrow$ Accusative Case

The BG (7) states that all and only the verbs that can assign θ-role to the subject **can** assign

(accusative) Case to an object and vice versa.[2] In other words if a verb cannot assign a θ-role to the subject, it cannot assign accusative Case either. If an argument is not assigned abstract Case, it is not licensed due to the Case Filter under the GB framework. Thus BG intends to capture the relation between the accusative Case assignment and the θ-role assignment.

In terms of the conceptual perspective, BG has been criticized for damaging the modular organization of the grammar (see McFadden 2004, Reuland (2000) for more discussions). For example, Haider (2000:33) points out that a sub-rule of one module (i.e. θ-marking of subject) cannot directly interfere with a sub-rule of another system (i.e. case assignment by V^0). Assigning structural Case to the object and assigning a θ-role to the subject are different modules of grammar and connecting the two different grammatical modules without a reasonable explanation is a problem.

In addition to the conceptual problem, let us consider empirical application of BG to various Korean constructions. First, let us consider the passive constructions (2) and (3), repeated below as (8) and (9).

(8) a. Nay-ka John-ul chayk-ul cwu-ess-ta.
I-Nom John-Acc book-Acc give-Pst-Dec
'I gave John a book.'

b. John-i chayk-i cwue-**ci**-ess-ta.
John-Nom book-Nom give-**CI**-Pst-Dec
'John was given a book.'

[2] It should be noted that it is not obligatory for the verbs that can assign θ-role to the subject assign accusative Case to an object. BG states that the verbs that can assign θ-role to the subject CAN assign accusative Case to an object. Thus unergative verbs do have an external argument, but they are allowed not to assign accusative Case under BG.

(9) a. John-i Mary-**lul** son-ul cap-ass-ta.
John-Nom Mary-Acc hand-Acc catch-Pst-Dec
'John caught Mary by the hand.'

b. Mary-ka son-ul cap-hi-ess-ta.
Mary-Nom hand-Acc catch-Psv-Dec
'Mary was caught by the hand.'

c. Mary-ka son-i cap-hi-ess-ta.
Mary-Nom hand-Nom catch-Psv-Dec
'Mary was caught by the hand.'

According to BG, accusative is not available in the passive construction, since subject θ-role is not assigned in the passive construction. So it seems that the loss of accusative case in the passive construction (8b) can be explained. But BG is faced with a problem when it comes to (9b). In (9b), the theme argument *son* 'hand' is assigned accusative case, though subject θ-role is not assigned.

The same problem occurs with respect to the passive construction of the English double object construction :

(10) a. Someone gave Mary a book.
b . Mary was given a book (Acc.).
c. *A book was given Mary.

With respect to the double object construction (10a), Burzio (1986:187), along the lines of Marantz (1981), suggests that the goal argument *Mary* is assigned structural Case by the verb directly, while the theme argument *book* is assigned Case by the structural

configuration. So in (10b), he argues that the remaining argument is assigned accusative Case not by the verb, but by the structure. Moreover, Burzio (1986) argues that the reason why (10c) is ungrammatical is because the remaining goal argument cannot be assigned Case, since a subject θ-role is not assigned. After all, Burzio (1986) distinguishes between lexical accusative case which is assigned by the verb and structural accusative case which is assigned by the structure and BG is only about the lexical accusative case.

However, even if we accept Burzio's distinction between the lexical accusative case and the structural accusative case, BG cannot explain the case alternation shown in the passive construction of the PRC. The *i*-passive construction of the PRC allows either accusative (9b) or nominative case (9c) to be assigned to the theme argument. To explain the case alternation in BG, it would be necessary to introduce an additional mechanism that ensures the verb *cap* 'catch' can assign either structural or lexical accusative Case optionally.

A similar problem is found in English double object construction. Generally theme arguments are assigned accusative Case directly by transitive verbs. But Burzio (1986) argues that the theme argument in the double object construction is assigned accusative Case by the structure. This causes a problem when we consider the following dative shift construction:

(11) Someone gave a book to Mary.

In (11), the subject θ-role is assigned to the subject *someone*, hence the theme object *a book* must be assigned (lexical) accusative Case according to BG. But in the double object

construction (10a), Burzio argues that the theme object *a book* is assigned accusative case by structure, not directly by the verb. Some explanations seem to be necessary for this inconsistency.

With respect to the DNCs, BG does not have much to say about. In fact BG does not force the assignment of accusative case even when subject θ-role is assigned. BG states that all and only the verbs that can assign θ-role to the subject can assign (accusative) Case to an object and vice versa. It is about the relation between the assignment of subject θ-role and the assignment of accusative Case.

With respect to the ECM construction, the matrix verb assigns a subject θ-role to the subject position, so accusative Case can be assigned. However, still there remains a problem of how to assign accusative Case across the embedded CP.

6.1.3 Generalized Case Marking and Case Assignment Rule

Kang, Y-S. (1986:77) proposed the following hypothesis, which he called Generalized Case Marking (GCM).

(12) a. An NP-argument which is a sister of [-stative] V^0 is assigned Accusative Case in the course of derivation from D-structure to S-structure.
b. Nominative Case is assigned to all non-Case-marked NPs.

Lee, Y-S. (1993:78) also proposed a similar proposal which he called Case Assignment Rule (CAR):

(13) Case Assignment Rule (CAR)

a. Assign genitive case if an argument is governed by an X^0 category with feature [+N, -V].

b. Assign accusative case if an argument whose θ-index is not #1 is governed by an X^0 category with feature [-stative, F1].[3]

c. Assign nominative case if an argument is assigned neither genitive nor accusative case, and is governed by an X^0 category with feature [F1].

* [F0] is the feature that lexical categories have and [F1] is the feature that functional categories have.

(13b) says that all the arguments of a [-stative] predicate, except the one which carries the highest θ-role, is assigned accusative case.[4] (13c) says that the argument of a [-stative] predicate which carries the highest θ-role, and all the arguments of a [+stative] predicate (i.e., adjective), are assigned nominative case. To summarize, accusative Case is assigned by [-stative] verbs and nominative Case is assigned to all non-Case-marked NPs. In this theory, whether a verb is [-stative] or not plays a crucial role in determining the assignment of accusative case.[5]

Now let us apply the theory to Korean passive constructions. Kang (1986) argues that passive verbs are [+stative], based on the following proposal (Kang 1986:115).

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[3] X^0 category with feature [-stative, F1] is a complex head which is formed by combining a raised [-stative] verb with a functional category.

[4] The θ-index is represented by the linear order of the θ-role in a θ-grid, i.e., the lefthand θ-role is higher than the one to its right. The discharge of the θ-roles takes place from right to left in (i), hence θ_1 is the highest θ-role in the θ-grid.

(i) θ-grid = $< \theta_1, \theta_2, \ldots\ldots \theta_n >$

[5] Dowty (1979:55) lists five criteria for distinguishing [-stative] verbs from [+stative] verbs: (i) only non-stative verbs can occur in the progressive. (ii) only non-stative verbs can occur as complements of *force* and *persuade*. (iii) only non-stative verbs can occur as imperatives. (iv) only non-statives can co-occur with the adverbs *deliberately*, *carefully*, (v) only non-stative verbs can appear in pseudo-cleft constructions. However, unfortunately those criteria cannot be applied to Korean except for the first criteria (i).

(14) *Ci*-passive verbs and *toy*-passive verbs cannot assign Accusative Case to their sister NPs, since they are [+stative].[6]

The above proposal can explain the following ungrammaticality of the *ci*-construction (Kang 1986:116).

(15) *Mary-ka John-eyuyhayse chayk-**ul** cwue-ci-ess-ta.
Mary-Nom John-by book-Acc give-Psv-Pst-Dec
'Mary was given a book by John.'

The example (15) is ungrammatical, since the *ci*-passive verb is assumed to be [+stative] according to (14). Hence no accusative Case is available.

But what is crucial is how to determine whether a verb is [+stative] or not. The proposal (14) says that *ci*-passive and *toy*-passive cannot assign accusative case, since they are [+stative]. Kang (1986) argues that *ci*-passive construction is [+stative], since accusative case is not available. Considering the above arguments, it can be seen that the argument is circular in reasoning.

Instead, I argue that *ci*-construction is not [+stative], but [-stative]. In fact, the active verb *cwu* 'give' is definitely a [-stative] verb. Then it is questionable whether passivization can turn [-stative] verbs into [+stative] verbs. There are some tests that can tell whether a verb is [+stative] or not in Korean (Lee, Y-S. 1993: 103). First, only [-stative] predicates

[6] The *toy*-passive is used when the main predicate is noun (usually of Sino-Korean origin) (O'Grady 1991:48):

(i) John-i chwupang(-i) toy-ess-ta.
John-N extradition-N become
'John was extradited.'

can occur with a progressive forming morpheme *-ko issta* 'be -ing' in Korean:

(16) a. Chelswu-ka ikos-ul hyanghay o-ko iss-ta.
Chelswu-Nom this place-Acc toward come-Prog-Dec
'Chelswu is coming toward this place.'

b. *Chelswu-ka yongkamha-ko iss-ta.
Chelswu-Nom brave-Prog-Dec
'Chelswu is being brave.'

In (16a), the verb *o-ta* 'come-Dec' is compatible with the progressive forming auxiliary *-ko issta*, but in (16b) the verb *yongkamha-ta* 'brave-Dec' is not compatible with it, since it is [+stative].

Now let us consider passive constructions with the morpheme *i* and *ci.*

(17) a. Mary-ka phal-i ccal-**li**-ko iss-ta.
Mary-Nom arm-Nom cut-Psv-Prog-Dec
'Mary is being cut her arms.'

b. Mary-ka ton-i cwue-**ci**-ko iss-ta.
Mary-Nom money-Nom give-CI-Prog-Dec
'Mary is being given money.'

The above examples show that the predicates with the passive morpheme *i* and *ci* are compatible with the progressive forming morpheme *ko iss-ta*, meaning that they are [-stative] contrary to Kang's (1986) argument.

Secondly, [-stative] predicates are compatible with the present perfect tense which is formed with a present perfect tense marking *-e o-ta*, while [+stative] predicates are not

compatible with it (Lee, Y-S. 1993). Consider the following examples.

(18) a. Hankwukmintul-un ssal-ul cwusik-ulo mek-**e o**-ass-ta.
Koreans-Top rice-Acc main meal-Inst eat-Pres.Perf-Pst-Dec
'Koreans have eaten rice as main meal.'

b. *Kim-i yongkamha-**ye o**-ass-ta
Kim-Nom brave Pres.Perf-Pst-Dec
'Kim has been brave.'

The [+stative] verb *yongkamhata* 'be brave' is not compatible with the present perfect tense marking *-eo-ta* in (18b). But it can combine with the [-stative] verb *mekta* 'eat' in (18a). This stativity test also shows that Korean passive predicates are [-stative]:

(19) a. Mary-ka ton-i cwue-ci-**eo**-ass-ta.
Mary-Nom money-Nom give-CI-Pres.Perf-Pst-Dec
'Mary has been given money.'

b. Ku namu-ka kaci-tul-i cal-li-**eo**-ass-ta.
the tree-Nom branch-Pl-Nom cut-Psv-Pres.Perf-Pst-Dec
'The tree have been cut of its branches.'

The above examples show that the present perfect tense marking is compatible with the passive morphemes, which shows that the predicates in (19) are [-stative]. This also suggests that passivization does not change the stativity of the predicate.

Also Kang's (1986) argument that passive constructions are [+stative] is faced with another problem with respect to the *i*-passive construction of the PRC. As is shown in the above section, the morphological *i*-passive construction of the PRC allows accusative case

as well as nominative Case as is shown in (20).

(20) a. John-i Mary-**lul** son-ul putcap-ass-ta.
John-Nom Mary-Acc hand-Acc catch-Pst-Dec
'John caught Mary by the hand.'

b. Mary-ka son-ul cap-hi-ess-ta.
Mary-Nom hand-Acc catch-Psv-Dec
'Mary was caught by the hand.'

c. Mary-ka son-i cap-hi-ess-ta.
Mary-Nom hand-Nom catch-Psv-Dec
'Mary was caught by the hand.'

To explain the case alternation shown in (20b&c), Kang (1986:108) stipulates that the same passive verb *putcap-hi-ta* 'be caught' is ambiguous between [-stative] and [+stative]. But I have already shown that passivization does not change the stativity of a verb.

With respect to the DNCs, both NPC and NOC predicates are not compatible with the progressive forming morpheme *-ko issta* 'be -ing' (21a) and the present perfect tense marking *-e o-ta* (22b), suggesting that they are not [-stative]:

(21) a. *Nay-ka Minho-ka coh-ko iss-ta.
I-Nom Minho-Nom like-Prog-Dec

b. *Nay-ka Minho-ka coh-a o-ass-ta.
I-Nom Minho-Nom like-Pres.Perf.-Pst-Dec

(22) a. *Swuni-ka emeni-ka yeppu-ko iss-ta.
Swuni-Nom mother-Nom beautiful-Prog-Dec

b. *Swuni-ka emeni-ka yepp-e o-ass-ta.
Swuni-Nom mother-Nom beautiful-Pres.Perf-Dec

Since they are not [-stative], accusative Case cannot be assigned.

Lastly, to explain the accusative case assigned to the embedded subject in the Korean ECM construction, the embedded subject must move to a position that is a sister of the matrix verb. Although my theory does not depend on the movement of an embedded subject to a matrix position, the accusative case assigned to the embedded subject can be explained in this way in the GCM theory.

6.1.4 Marantz (1991)

Marantz's (1991) theory on the assignment of structural Case is based on the following disjunctive hierarchy.

(23) Case realization disjunctive hierarchy
(i) lexically governed case
(ii) dependent case (accusative and ergative)
(iii) unmarked case (environment-sensitive)
(iv) default case

Going down the list from (i) to (iv), if an NP finds some case feature that it is eligible for, it takes the case and leaves the list. Lexically governed case takes the highest priority. If an NP is assigned a lexically governed case, it takes the case and leaves the hierarchy.

Genitive and nominative cases are the examples of unmarked case. For example, genitive case is the unmarked case for NPs inside NPs, while nominative case is the unmarked case inside IPs. The default case in the last level is realized when even unmarked case is not applicable.

What is crucial in Marantz's (1991) theory is the mechanism of assigning dependent Case. He proposes the following theory of assigning dependent Case.

(24) Dependent case (ERG/ACC) is assigned by V+I to a position governed by V+I when a distinct position governed by V+I is:

a. not "marked" (not part of a chain governed by a lexical case determiner)

b. distinct from the chain being assigned dependent case
Dependent case assigned up to subject: ergative
Dependent case assigned down to object: accusative

Condition (24a) prevents accusative case on an object if the subject is assigned a quirky case by a verb. (24b) simply clarifies that one link in a chain cannot count as distinct from another link for the assignment of dependent case.

Now let us apply Marantz's (1991) theory to Korean constructions. First let us consider the passive constructions of the DNC and the PRC.

(25) a. Nay-ka John-ul chayk-ul cwu-ess-ta.
I-Nom John-Acc book-Acc give-Pst-Dec
'I gave John a book.'

b. John-i chayk-i cwue-**ci**-ess-ta.
John-Nom book-Nom give-**CI**-Pst-Dec

'John was given a book.'

(26) a. John-i Mary-**lul** son-ul cap-ass-ta.
John-Nom Mary-Acc hand-Acc catch-Pst-Dec
'John caught Mary by the hand.'

b. Mary-ka son-ul cap-hi-ess-ta.
Mary-Nom hand-Acc catch-Psv-Pst-Dec
'Mary was caught by the hand.'

c. Mary-ka son-i cap-hi-ess-ta.
Mary-Nom hand-Nom catch-Psv-Pst-Dec
'Mary was caught by the hand.'

In (25b), both *John* and *chayk* 'book' are governed by V+I. Since the subject *John* is not assigned a lexical case and the two arguments are in a distinct chain, accusative must be assigned down to the object. But the theme argument *chayk* 'book' is not assigned accusative case. The same reasoning suggests that the second argument in (26c) must be assigned accusative case. But this prediction is not borne out as is shown in (25b) and (26c).

Next, consider the DNCs with respect to Marantz's (1991) theory.

(27) a. Swuni-ka emeni-ka yeppu-ta.
Swuni-N mother-N beautiful-DEC
'It is Swuni whose mother is beautiful.'

b. Nay-ka Minho-ka coh-ta.
I-N Minho-N like-DEC
'I like Minho.'

With respect to the NPC in (27a), the predicate is one-place predicate. So depending on the analysis of the structure of the possessive DP, there is a possibility that the two nominative DPs may not be considered to be in a distinct chain. However for the NOC (27b), the subject is not assigned lexical case and both arguments are in a distinct chain, so accusative case must be assigned down to the object. But this prediction is not correct as is shown above.

Lastly, what is crucial in the discussion of Korean ECM construction is whether the embedded subject moves to a position in which it can be governed by V+I or not. Once the embedded subject can be governed by V+I, it can be assigned dependent (accusative) case, it can satisfy the conditions in (24).

6.1.5 McFadden (2004)

Developing Marantz (1991), McFadden (2004) argues that morphological case is determined without reference to syntactic Case at Morphological component after Spell Out. This hypothesis states that morphological case is not intimately connected to the syntax, but it is largely determined by the structure that the syntax passes on to the morphological component.

As for the determination of morphological case, McFadden distinguishes between structural and non-structural Case. Non-structural Case is the one that marks DPs functioning as indirect object or objects of prepositions. For the determination of structural Case, he proposes the following hypothesis (McFadden 2004:192).

(28) A DP is assigned dependent accusative case if it is c-commanded by a locally filled Spec-*v*P.

According to McFadden (2004:192), the hypothesis (28) provides a way to ensure that two DPs in a local environment, that is to say the DP in [Spec, *v*P] and the DP that is assigned dependent accusative case, will generally be distinguished by the case system.

First, let us consider German data that shows how the theory works (McFadden 2004:193).

(29) Es gibt einen Fuβballgott.
it gives a football-god(A)
'There is a god of football.'

The above example is hard to explain by BG, since the subject is an expletive that is not assigned a θ-role. But in McFadden's theory, the assignment of subject θ-role doesn't matter. The expletive *es* 'it' is merged in [Spec, *v*P] and raised to the subject position. Then the NP *einen Fuβballgott* is assigned accusative case according to (28).

Now let us consider McFadden's theory with respect to the passive constructions of the double object construction and the PRC.

(30) a. Nay-ka John-ul chayk-ul cwu-ess-ta.
I-Nom John-Acc book-Acc give-Pst-Dec
'I gave John a book.'
b. John-i chayk-i cwue-**ci**-ess-ta.
John-N book-N give-**CI**-PST-DEC
'John was given a book.'

(31) a. John-i Mary-**lul** son-ul cap-ass-ta.
John-N Mary-A hand-A catch-PST-DEC
'John caught Mary by the hand.'

b. Mary-ka son-ul cap-hi-ess-ta.
Mary-N hand-A catch-PSV-DEC
'Mary was caught by the hand.'

c. Mary-ka son-i cap-hi-ess-ta.
Mary-N hand-N catch-PSV-DEC
'Mary was caught by the hand.'

What is crucial in McFadden's theory is whether the subject in the passive construction occupies [Spec, *v*P] or not. Considering that McFadden (2004:315) argues that objects are perfectly licensed in situ in the passive construction in spite of the passive morphology, it seems that he assumes that the light verb projection is present even in the passive construction. Then the reason why accusative case is not available in (30b) and (31c) is because [Spec, *v*P] is not filled in the passive construction. But even this account would need additional assumptions to explain the case alternation shown in (31b) and (31c).

Next, let us consider the DNCs.

(32) a. Swuni-ka emeni-ka yeppu-ta.
Swuni-Nom mother-Nom beautiful-Dec
'It is Swuni whose mother is beautiful.'

b. Nay-ka Minho-ka coh-ta.
I-Nom Minho-Nom like-Dec
'I like Minho.'

What is crucial in the analysis of the DNC is whether [Spec, *v*P] is being filled or not. With respect to the NPC example (32a), it is possible that the light verb is not projected at all, since the NPC predicate is intransitive. If there is no locally-filled spec-*v*P, no accusative case is available. On the other hand, the NOC example (32b) is different. Since the NOC predicate is a two place predicate, the light verb projection might be present as in normal transitive constructions. However one can postulate a parameter that Korean psych verbs do not project a light verb projection. If Korean psych verbs do not project a light verb projection, the condition for the assignment of dependent case cannot be satisfied, hence no accusative case would be possible.

Lastly, let us consider the Korean ECM construction.

(33) Tom-i Swuni-lul chencay-la-ko mitnun-ta.
Tom-Nom Swuni-Acc genius-Dec-C believe-Dec
'Tom believes that Swuni is a genius.'

What is crucial in the analysis of Korean ECM construction is whether the embedded subject is c-commanded by the LOCALLY-filled spec-*v*P or not in a local domain. To meet the condition, the embedded subject must move into the matrix clause at some point of the derivation.

6.2 Checking theory

6.2.1 Chomsky (1993, 1995)

Chomsky (1993, 1995) proposed checking theory by eliminating Case-assignment under Government. In this theory, the property of [±Interpretable] plays a crucial role.

[-Interpretable] features must be eliminated for convergence at LF. Categorial features and the ϕ-features of nominals are [+Interpretable] features. On the other hand, the Case features of nominals, T and V are [-Interpretable], therefore must be eliminated for LF convergence (Chomsky 1995:278). Generally the categorial and ϕ-features of DP remain accessible after checking, since they are interpretable features. However, the Case features of nominals must be checked and eliminated. So a single DP can enter into multiple satisfaction of the EPP and multiple agreement, but not multiple Case relations.

However, for languages which permit multiple nominative/accusative cases like Korean, he proposed that [-Interpretable] feature may not be necessarily erased when checked and deleted, as a parameterized property (Chomsky 1995:286). If this parameter is exercised, the Case assigning feature of T and V may assign multiple nominative or accusative cases to multiple arguments.

In fact, this approach can successfully explain the distribution of structural nominative cases in DNCs. Also it can explain the distribution of multiple accusative constructions in Korean. However, it is faced with a problem with respect to the passive construction of the PRC and the ECM construction in Korean. First consider the passive construction of the PRC.

(34) a. John-i Mary-**lul** son-ul cap-ass-ta.
John-Nom Mary-Acc hand-Acc catch-Pst-Dec
'John caught Mary by the hand.'

b. Mary-ka son-ul cap-hi-ess-ta.
Mary-Nom hand-A catch-Psv-Pst-Dec
'Mary was caught by the hand.'

c. Mary-ka son-i cap-hi-ess-ta.
Mary-Nom hand-Nom catch-Psv-Pst-Dec
'Mary was caught by the hand.'

What is problematic is the case alternation shown in (34b) and (34c). According to Chomsky (1995), the Case feature of T must exercise the [+multiple] parameter in (34c) in order to check the double nominative cases and there must be no functional category to check accusative Case in the passive construction. But the example (34b) is not consistent with the analysis. In (34b), there is an argument with accusative case which must be checked off by a [-Interpretable] (accusative) Case feature of a functional category. But it contradicts the above conclusion that there must be no functional category to check accusative Case in the passive construction.

6.2.2 Ura (1999)

Based on the checking theory of Chomsky (1995), Ura (1999) proposed an account of Japanese and Korean Dative Subject construction (DSC). The DSC may occur when the predicate in the clause is a so-called psych-predicate, or when some kind of stative suffix such as the potential suffix -(*rar*)*e* (or, (*r*)*e*) is attached to it (in Japanese):

(35) Japanese (Sugioka, 1985, p. 156)

a. Taroo-ni hebi-ga kowa-i
Taroo-Dat snake-Nom fearful-Pres
'Taroo is fearful of snakes.'

b. Taroo-ni eigo-ga dekir-u.
Taroo-Dat English-Nom understand-Pres

'Taroo understands English.'

(36) Korean (Lee, 1992, p. 240)

a. Chelswu-eykey ton-i philyoha-ta.
Chelswu-Dat money-Nom need-Dec
'Chelswu needs money.'

b. Chelswu-eykey umak-i coh-ta.
Chelswu-Dat music-Nom fond-Dec
'Chelswu is fond of music.'

In the above DSCs, the theme arguments are marked with nominative case, not accusative case. This poses a problem to the checking theory, since the theme arguments are considered to be objects as can be seen in the translation, being in [Spec, AgrO] (see Tada 1992, Koizumi 1994 and Zushi 1995). According to the checking theory, if a DP is in [Spec, AgrO], the Case feature of the DP must be in checking relation with the Case feature of the AgrO, resulting in accusative Case on the theme argument.

To deal with the assignment of structural Case in DSC under the checking theory, Ura (1999) proposed the following hypothesis.

(37) Proposals on Dative Subject Construction (Ura 1999:232)

(i) The EPP-feature of T in Japanese and Korean is strong.
(ii) The Experiencer argument of a psych-verb that can occur in a DSC is generated at the Spec of a kind of light verb, which takes a VP with Theme in its complement position.
(iii) The light verb in the two-layered VP shell of the psych-verb that can occur in the Japanese and Korean DSC may assign a dative Case to Exp as an

inherent Case, and they are allowed not to have any accusative Case-feature as their lexical idiosyncrasy.

(iv) In Japanese and Korean, T's ϕ-feature checking may be executed independently of T's nominative Case-feature checking.

(v) T's ϕ-feature is strong, but its nominative Case-feature is weak in Japanese and Korean.

(vi) T's nominative Case-feature may enter into multiple feature-checking relations in Japanese and Korean.

What is crucial in the above hypothesis is why accusative Case is not available in the DSC. According to the above proposal (iii), the light verb in the two-layered VP shell of the psych-verb may assign inherent dative Case to the subject, and they are allowed not to have accusative Case due to its lexical idiosyncrasy. That is to say, the unavailability of accusative Case and assignment of dative case to Exp are attributed to the lexical idiosyncrasy of the psych verb. He also argues that the theme argument with nominative Case in DSC must have its Case feature checked off by the T at LF.

Now let us consider Ura's proposal on DSC with respect to the PRC and its passive constructions in Korean.

(38) a. John-i Mary-**lul** son-ul cap-ass-ta.
John-Nom Mary-Acc hand-Acc catch-Pst-Dec
'John caught Mary by the hand.'

b. Mary-ka son-ul cap-hi-ess-ta.
Mary-Nom hand-Acc catch-Psv-Pst-DEC

c. Mary-ka son-i cap-hi-ess-ta.
Mary-Nom hand-Nom catch-Psv-Pst-DEC

According to Ura's proposals, the light verb in the passive construction (38b) must have an accusative Case feature and it must be in a checking relation with the possessed DP, resulting in the accusative case on the DP. However, the same light verb in (38c) must not have an accusative Case feature, since the possessed DP is assigned nominative case. Then Ura would have to make another stipulation that the passive predicate in (38c) are allowed not to have accusative Case as in the psych-verb construction. However, as is shown in Chapter 3, the accusative-nominative alternation occurs only when the two nominative DPs hold a close semantic relationship with each other. That is to say, what matters in the above structure is the relation between the two DPs, not the predicate. So it is misleading to argue that the lexical idiosyncrasy of the passive predicate is responsible for the case alternation.

6.3 The Current Minimalist Theory

6.3.1 Overview of the Theory

In the current Minimalist theory (Chomsky 2000, 2001), uninterpretable features are the driving force for Agree. Nouns have uninterpretable structural Case features and functional categories like T and *v* have uninterpretable ϕ-features and (optionally) an EPP feature. Those uninterpretable features must be deleted via Agree for legibility. Agree relation is established when the ϕ-features of a probe and goal match. The uninterpretable structural Case feature of a goal makes the goal active and the structural Case feature of a probe is deleted as an ancillary process of Agree between the probe and goal. In this theory, the manifestation of a structural Case feature depends on the interpretable features of a probe. Finite T (tense) manifests nominative case on its goal, *v* (transitivity) manifests accusative

case, and control T manifests null case respectively.

6.3.2 Multiple Agree : Hiraiwa 2001

Under the Chomsky's (2000, 2001) Minimalist framework, Hiraiwa (2001) proposed the following Multiple Agree theory to explain multiple nominative/accusative constructions. Let us consider the definition of Multiple Agree below.

(39) MULTIPLE AGREE/MOVE

MULTIPLE AGREE (multiple feature checking) with a single probe is a single simultaneous syntactic operation; AGREE applies to all the matched goals at the same derivational point derivationally simultaneously. MULTIPLE MOVE (movement of multiple goals into multiple specifiers of the same probe H) is also a single simultaneous syntactic operation that applies to all the AGREEd goals.

The following schema (40) illustrates how the MULTIPLE AGREE theory works.

(40) MULTIPLE AGREE as a single simultaneous operation

$\alpha > \beta > \gamma$

(AGREE (α, β, γ), where α is a probe and both β and γ are matching goals for α.)

According to the MULTIPLE AGREE theory in (39) and (40), the probe α starts to search down for a closest matching goal within its c-command domain and locates and matches with the closer goal β at the point of the derivation where the probe P is merged. However,

this does not result in an immediate Agree under the Multiple Agree theory. Rather the probe α, being [+multiple], continues to probe for a next closest goal, resulting in matching with γ. This continues until the probe locates all the matching goals within an 'accessible' domain. Now at this point of the derivation, Agree applies to all the matched goals derivationally simultaneously, establishing AGREE (α, β, γ). Thus under MULTIPLE AGREE theory, a superficial 'covert multiple feature-checking' is not multiple instances of the syntactic operation Agree; rather it is reduced to a single syntactic operation.

Now let us consider how the Multiple Agree theory works through Japanese examples (Hiraiwa 2001):

(41) ECM and Possessor-Raising Construction (or NPC)

a. John-ga [$_{CP}$ [$_{TP}$ Mary-ga me-ga waru-i] to] omoikondei-ta.
John-Nom Mary-Nom eyes-Nom bad-Pres C believe-Pst
'John thinks that Mary has a bad eyesight.'

b. John-ga [$_{CP}$ [$_{TP}$ Mary-wo me-ga waru-i] to] omoikondei-ta.
John-Nom Mary-Acc eyes-Nom bad-Pres C believe-Pst

c. *John-ga [$_{CP}$ [$_{TP}$ Mary-**ga** me-**wo** waru-i] to] omoikondei-ta.
John-Nom Mary-Nom eyes-Acc bad-Pres C believe-Pst

(42) ECM and Nominative Object Construction

a. Mary-ga eigo-ga/*wo yoku dekiru.
Mary-Nom English-Nom/*Acc well do-can-Pres
'Mary can speak English well.'

b. John-ga [$_{CP}$ [$_{TP}$ Mary-ga eigo-ga yoku dekiru] to] omoikondei-ta.
John-Nom Mary-Nom English-Nom well do-can-Pres C believe-Pst
'John believed that Mary can speak English well.'

c. John-ga [$_{CP}$ [$_{TP}$ Mary-wo eigo-ga yoku dekiru] to] omoikondei-ta.
John-Nom Mary-Acc English-Nom well do-can-Pres C believe-Pst

d. *John-ga [$_{CP}$ [$_{TP}$ Mary-**ga** eigo -**wo** yoku dekiru] to] omoikondei-ta.
John-Nom Mary-Nom English-Acc well do-can-Pres C believe-Pst

Of particular importance here is the grammaticality contrast between (41b) versus (41c) and (42c) versus (42d). In (41c) and (42d), the higher DP is marked with nominative case, while the lower DP is marked with accusative case. But at the point of the derivation where the matrix probe *v* is merged and starts to probe for a closest matching goal, the intervening goal's ϕ-feature (DP1 in (43)) is already inactive due to the Agree with the embedded T. This is shown schematically in (43).

(43) [$_{vP}$ *v*[ϕ] [$_{VP}$ V [$_{CP}$ C [$_{TP}$ DP1[ϕ] [$_{TP}$ DP2[ϕ] [$_{T'}$ T[ϕ] ...]]]]]]

*AGREE (*v*, DP2)

Thus the closest inactive goal blocks the probe *v* to enter into an Agree relation with the lower goal, triggering the Defective Intervention Constraint. In other words, the probes for the two goals DP1 and DP2 are derivationally distinct and hence Agree (*v*, DP2) is blocked. So the licit (41b) and (41c) are cases where the closer goal in the outer TP specifier is ECMed, checking accusative Case, whereas the illicit (41c) and (42d) are cases where the lower goal in the inner TP specifier is ECMed. Thus in (41c) and (42d), it is impossible for the probe in *v* to set up Agree with the lower goal beyond the higher inactive goal, hence making the sentence ungrammatical.

Hiraiwa (2001) argues that if a probe for multiple goals is derivationally unique (=

one), then multiple ECM should be grammatical in the ECM construction in Japanese as is shown in (44).

(44) #John-ga [$_{CP}$ [$_{TP}$ Mary-wo me-wo waru-i] to] omoikondei-ta.[7]
John-NOM Mary-ACC eyes-ACC bad-PRES C believe-PST
'John believed Mary's eye to be bad.'

The example (44) is grammatical, since nothing blocks the Multiple Agree between the unique probe and the goals.

In fact, the Multiple Agree theory is focused on how to rule out examples like (41c) and (42d): the examples are ungrammatical because the probe cannot assign accusative Case to the lower goal skipping the higher inactive goal. But it is also important to explain the grammatical sentences like (41b) and (42c).

Now let us consider the ECM construction (41a) and (42a) with respect to Hiraiwa's Multiple Agree theory. The embedded T in (41a) and (42b) must be [+multiple], since both embedded DPs get nominative case. Also the matrix *v* of the ECM construction in (44) must be [+multiple] too, since the two embedded DPs get accusative case. Then there arises a problem with respect to the examples (41b) and (42c). In (41b) and (42c), the first embedded DP is accusative case-marked, while the second embedded DP is nominative case-marked. It seems that the first DP of the embedded clause is assigned accusative Case by the matrix *v*, and the second DP is assigned nominative Case by the embedded T. But this explanation comes into conflict with the fact that the embedded T is [+multiple], which

[7] Hiraiwa (2001:9) argues that this example is not perfect due to Double-O Constraint, which roughly put, prohibits multiple occurrences of accusative marker within a sentence, but far much better than "*".

allows the probe T to seek multiple goals. Since the T with a [+multiple] feature will seek multiple goals in the embedded clause, the T would set up Multiple Agree with both embedded DPs and assign nominative Case to them before they move to higher positions.

6.4 Summary

In this chapter, I have considered various theories concerning the assignment of structural Case in various syntactic frameworks. First I have considered 5 theories in the GB framework. One of the problems in the Government-based Case theory is that it cannot explain the case alternation shown in the *i*-passive construction of the PRC. I have pointed out that the theory would need additional stipulations to explain the case alternation shown in the Korean example. Another problem that I have pointed out with respect to the DNCs is that the Government-based Case theory fails to explain why accusative Case is not available in the NOC in which the second argument is governed by a two-place psych verb. The last problem with respect to the ECM construction in the Government-based Case theory is that it is hard to explain the accusative case assigned to the embedded subject, since there is a CP between the accusative Case assigner and the embedded subject. Since CP is a barrier to the Government, the matrix verb cannot govern the embedded subject in the embedded CP.

Secondly, I have considered some issues concerning BG. Basically accusative case is not available in the passive construction according to BG, since subject θ-role is not assigned in the passive construction. But many languages allow accusative case in the passive construction. For example, the theme argument in the passive construction of the double object construction in English is assigned accusative case. With respect to the

accusative case in the passive construction of the double object construction in English, Burzio argues that the accusative case is assigned by the structure rather than by the passive verb and BG is only about the lexical accusative case assigned by the verb. But I have pointed out that even this stipulation cannot adequately explain the case alternation shown in the *i*-passive construction of the PRC, since it would require the theme argument to be assigned either lexical or structural accusative case optionally in the same construction.

Thirdly, I have considered the GCM and CAR theory proposed by Kang (1986) and Lee (1993). These theories crucially depend on the distinction of [±stativity] of the verb. They argue that accusative case is assigned by [-stative] verbs and passive verbs are [+stative]. But I have shown that passivization does not change the stativity of the verb.

Fourthly, with respect to Marantz's (1991) and McFadden's (2004) theory, I have pointed out that their theories are not enough to explain the distribution of structural Case in Korean passive constructions and DNCs. For example, I have pointed out that the second nominative argument in the NOC meets the conditions for the assignment of dependent accusative case proposed by Marantz (1991). But the second argument fails to be assigned accusative case. Also with respect to the case alternation shown in the *i*-passive construction of Korean PRC, both Marantz (1991) and McFadden's (2004) theories would need non-trivial stipulations to explain the property.

Within the early Minimalist framework (Chomsky 1995), I have considered Ura's (1999) theory based on Chomsky's (1995) checking theory. Ura (1999) attributes the absence of accusative case in DSC to the lexical idiosyncrasy of the psych verbs. Through the discussion of the *i*-passive construction of Korean PRC, I have shown that even the postulation of lexical idiosyncrasy is not enough to explain the case alternation shown in

the *i*-passive construction of the PRC.

Lastly I have considered Hiraiwa's (2001) Multiple Agree theory that is based on the current Minimalist theory. The Multiple Agree theory intends to provide an explanation of multiple nominative/accusative constructions in languages like Korean and Japanese. However through the discussion of Japanese ECM construction, I have shown that the theory comes into conflict with itself in explaining the distribution of structural Case.

Through the discussion of various theories, I have briefly shown that they are faced with non-trivial problems for which my theory provides consistent accounts throughout this dissertation.

Chapter 7 Further issues and conclusion

7.1 Case marked adjuncts in Korean

In Korean, it has been known that adverbials can have structural case if they are durative adverbials or multiplicatives (or Duration/Frequency adverbials in some literatures):

(1) a. Na-nun ecey tennis-lul han sikan-ul chi-ess-ta
I-T yesterday tennis-A one hour-A play-Past-Decl
'Yesterday I played tennis for an hour'

b. Na-nun ecey Chelswu-lul twupen-ul po-ass-ta
I-T yesterday Chelswu-A two times-A see-Past-Decl
'Yesterday I saw Chelswu two times'

However, other kinds of adverbials do not allow case marking.

(2) Locative, manner adverbials: no case-marking

a. John-un Mary-lul Seoul-ese-(*lul) manna-ess-ta
John-TOP Mary-A Seoul-in-ACC meet-Past-Decl
'John met Mary in Seoul'

b. John-un Mary-lul elyepkey-(*lul) manna-ess-ta
John-T Mary-A hardly-(ACC) meet-Past-Decl
'John met Mary hardly.'

(3) Resultatives: no case-marking

a. Na-nun theyibul-ul kkaykkuthakey-(*lul) tak-ass-ta.
I-Top table-Acc cleanly wipe-Past-Decl

'I wiped the table clean'

b. Na-nun ppang-ul cokak-ulo-(*lul) calu-ess-ta.
I-Top bread-Acc piece-with-Acc cut-Past-Decl
'I cut the bread into slices'

For the case marking on adverbials, Maling, Jun and Kim (2001; MJK hereafter) proposes the following principles.

(4) On a Duration/Frequency (D/F) adverbial:

a. Accusative is the only possible case if the verb has an external argument.

b. Accusative and Nominative are both possible if the verb has no external argument (underlyingly).

c. Nominative is the only possible case for 'simplex' psychological predicates or adjectival predicates such as *silh-ta* 'dislike' or *kwiyep-ta* 'be cute' (in contrast to the periphrastic *silh-e ha-ta* 'dislike', etc.).

The following examples are typical examples that clearly show how the above proposal works in Korean.

(5) a. John-i han sikan -*i/ul talli-ess-ta
John-N one hour for-*N/A run-PAST-DECL
'John ran for an hour.'

b. Pi-ka han sikan-i/ul o-ass-ta
rain-N one hour-N/A come-PST-DEC
'It rained for one hour.'

c. I pang-un nac-i/*ul etwup-ta
this room-T day time-N/*A dark-DEC

'This room is dark during the day time.'

With respect to the proposal (4), (4a) and (4c), which are examplified by (5a) and (5c) respectively, seem to conform to the theory proposed in this dissertation. In my theory, if there is an external argument, a light verb is projected and accusative Case becomes available. Also I have already shown that Korean psychological state verbs do not have an external argument, hence accusative Case cannot be available. However, (4b) is not consistent with my theory, since my theory argues that accusative Case is only available when there is an external argument. If there is no external argument, there would be no light verb *v*, hence accusative case would not be available.

However Kim and Sells (2010) proposes a different approach to case markings on adverbials. They propose two main factors which influence adverbial case marking: the first is whether the subject is animate or inanimate, and the second is whether the verb is interpreted as an activity or as a pure stative.

For the animacy property, they argue that an adverbial is accusative in almost every example with an animate subject; only pure stative predicates allow a nominative modifier with an animate subject. With inanimate subjects, they argue that the property of the predicate as being an activity or a state comes more into focus. With regard to the notions of 'activity' and 'state' in the eventuality type, they suggest a slightly more refined distinction, appealing to the stage-/individual-level partition of predicate types (see Carlson 1977, Dowty 1979).

To illustrate the effects of animacy, Kim and Sells (2010) propose the following example.

(6) a. Haksayng-tul-i twu pen-*?i/ul o-ass-ta
student-PL-N two times-*?N/A come-PST-DEC
'Students came (here and left) twice.'

b. Yecin-i twu pen-i/*ul o-ass-ta
aftershock-N two times-N/*A come-PST-DEC
'Aftershocks came twice.'

c. Pesu-ka achim-ey twu pen-i/?ul o-ass-ta
bus-N morning-LOC two times-N/?A come-PAST-DECL
'Buses came twice in the morning.'

When the inanimate subject has more of an individuated character as in (6c), it is possible to have an accusative adverbial, though nominative is preferred. The above examples clearly show that different cases may appear on adverbs even when the predicate is the same. These examples strongly argue against the MJK's proposal (4) which depends on the distinction between external and internal argument in explaining the structural Case on adjuncts.

If Kim and Sells's (2010) observation that case marking on adverbs are affected by animacy/inanimacy and stativity of the predicate is on the right track, I argue that the case on adverbs in Korean should not be considered as structural case, since I assume that structural Case is assigned depending on the structure of arguments.

7.2 Case stacking in Korean

An unusual property in Korean is that multiple cases may appear on a DP, giving rise to what has been called Case Stacking (see Gerdts & Youn 1988; Youn 1990; Yoon 1996,

2004; Schütze 1996, 2001). Case Stacking can easily be observed in a construction where nominative case alternates dative case (Yoon 2004):

(7) a. Cheli-ka ton-i manh-ta
Cheli-N money-N many-DEC
b. Cheli-eykey ton-i manh-ta
Cheli-D money-N many-DEC
c. Cheli-eykey-ka ton-i manh-ta
Cheli-D-N money-N many-DEC
'It is Cheli who has a lot of money.'

What is at issue here is whether the two stacked cases in (7c) are genuine case markers or not. For example Schütze (1996) argues that the stacked nominative case in the case stacking construction is a focus particle rather than a case marker. Similar examples with accusative case-stacking can also be found in Korean (Yoon 2004):

(8) a. Cheli-ka Yenghi-eykey-man-ul ton-ul ponay-ss-ta
Cheli-N Yenghi-D-ONLY-A money-A send-PST-DECL
'It was only to Yenghi that Cheli sent money.'

According to my theory, structural nominative Case is assigned by a phase head C. On the other hand, inherent Case is assigned through theta-marking. However, it is normal that only one type of Case appears on an argument. If inherent case is assigned to an argument, structural Case cannot be assigned to the DP, since the abstract Case of the argument is already assigned a Case value. Under the assumption that there is only one abstract Case

feature on a DP, only one Case value can be assigned to the DP. However, this assumption would not be able to explain the above case-stacking examples. So it would be necessary to assume that there are two different kinds of abstract Case features, one for inherent Case and the other for structural Case. Then the case stacking phenomenon can be accounted for in my theory. This assumption will also account for why case-stacking takes place between structural Case and inherent Case, but not between structural Cases or inherent cases. We can further stipulate that at least one of the abstract Case features must be assigned a value.

7.3 Summary and conclusion

How is structural Case assigned in languages? I have tried to answer the question by considering passives, DNCs and ECM constructions in Korean. For structural Case assignment, I have proposed a novel hypothesis SCAH (Structural Case Assignment Hypothesis, which I intend to be a universal principle. Although my primary concern in this dissertation is to provide the analyses of the above three constructions, I leave open the possibility of universal application of the SCAH.

SCAH features a few arguments. First it proposes that structural Case is assigned by phase heads. This argument differs from most previous arguments. For example, it is argued that nominative Case assignment has something to do with finite Infl/T in most theories (e.g., most theories based on the GB framework, Chomsky's (1995) Checking Theory and the Minimalist Theory). In other theories, it is argued that nominative Case is assigned by default (e.g., Marantz (1991) and McFadden (2004)). With respect to the assignment of accusative Case, it was a standard assumption in the GB era that accusative Case is assigned by a transitive verb. In other theories the assignment of accusative Case

depends on the presence of another argument, e.g., BG and Marantz (1991) and McFadden (2004). But SCAH states that structural Case, including both nominative and accusative Case, is assigned uniformly by phase heads. For example nominative Case is assigned by a complementizer C and accusative Case is assigned by a light verb *v*. Chomsky (2000) also argues that accusative Case is manifested by a light verb *v* as an ancillary operation of Agree. However, SCAH differs from the Minimalist assumption in that nominative Case is also assigned by a phase head C, while it is argued that nominative Case is assigned by T in the Minimalist theory.

Secondly, SCAH states that structural Case can be assigned to multiple arguments in the domain of a Case assigner. In fact, most languages have only one nominative marked subject and at most two accusative marked objects. So there is not much need for a theory that allows multiple assignments of structural Case in these languages. But there are some languages that allow multiple nominative/accusative constructions. Even in languages that do now allow multiple nominative cases, double accusative constructions are allowed generally. So it is necessary to allow multiple assignments of structural Case even in those languages. According to SCAH, since every argument belongs to a phase, every argument will be in the domain of a phase head, being assigned structural Case. Therefore no sentences will become ungrammatical due to the lack of structural Case. However, it should not allow unlimited number of nominative marked subjects or accusative marked objects in the domain of a Case assigner. The traditional θ-criterion will block more than necessary arguments in the domain of a Case assigner.

Thirdly, SCAH proposes that the assignment of structural Case takes place at the completion of each strong phase. In fact Chomsky (2001) also proposes that Spell-Out

takes place at the strong phase level and the phase is transmitted to the phonological component. However, associating the assignment of structural Case with the occurrence of Spell-Out is not discussed in Chomsky (2001). What is important in this argument is the distinction between strong phase and weak phase. SCAH proposes that Spell-Out takes place only at the completion of each strong phase, not weak phase, and structural Case is assigned by the phase head. However this proposal does not forbid the weak phase head's assigning accusative Case. The weak phase head retains the ability to assign accusative Case.

Through the discussions of Korean passives, DNCs and ECM construction, I have shown that SCAH has empirical advantages in explaining the distribution of structural Case in Korean over the previous theories. Also I have argued that SCAH has conceptual advantages over previous theories as well. There have been many theories trying to explain the distribution of structural Case in various ways. For example, some argue that nominative case is assigned by default, while others argue that accusative case is assigned depending on the presence of another argument or other property. Throughout the dissertation, I have shown that those approaches are faced with problems in explaining the distribution of structural Case in Korean both in empirical and conceptual perspectives. But I have shown that SCAH can explain those problems successfully.

In this dissertation, I have also considered several types of Double Nominative Constructions. First of all, I have considered the passive constructions of the Double Object Construction and Possessor Raising Construction in the object position. Korean DOC allows only the *ci*-passive construction, while the PRC allows both *i*-passive and *ci*-passive constructions. With respect to the two ways of passivization, I have argued that

ci is an unaccusative auxiliary verb, which does not have the light verb projection. Hence accusative Case is not available in the *ci*-passive construction. But *i*-passive morpheme does not get rid of the the light verb projection which assigns accusative Case. So the remaining argument may be assigned either accusative Case or nominative Case depending on the order between PR and A-movement.

Also I have considered the NPC and the NOC. I have shown that NPC predicates are in fact intransitive verbs, hence accusative is not available inherently. On the other hand, NOC predicates are two place predicates. But since they do not have an external argument, they do not project a light verb projection, hence accusative Case is not available.

Throughout the dissertation, I have tried to explain the distribution of structural Case in various Korean structures. By introducing SCAH, I aim to cover the distribution of structural Case in other languages as well. Although the data used in this dissertation is mainly from Korean and English, I expect SCAH to be applicable for other languages as well with some parameters.

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