

ABSTRACT

Title of Dissertation: “EXCEPTIONAL” CASE-MARKING AND
RESULTATIVE CONSTRUCTIONS

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Case is generally understood to be semantically empty. That is the reason that a Case feature is assumed to be an LF-uninterpretable feature in Minimalism. It is perplexing that an LF-uninterpretable Case feature should be present in the computational system.

I present evidence that (structural) Case is not always completely semantically inert. The stacked Case in Korean behaves like a focus marker. This focus-like Case is checked by a syncretic head: T or *v* with a matching focus feature.

Moreover, I suggest that Case should not be a reflex of ϕ -feature agreement. Rather, Korean Raising supports the separation of Case valuation from ϕ -feature agreement, instead of the unification of the two.

Finally, we provide an account of why the English Resultative Construction differs from the Korean one in terms of movement. The former shows the selectional restriction of resultative predicates, while the latter does not. The presence of the selectional restriction in English forces the small clause to merge as a complement of the matrix verb. Conversely, the absence of the selectional restriction in Korean enables the small clause to behave like an adjunct. Thus, the small clause can have various adjunction sites in the verbal domain. Unlike the limited availability of the Object Resultative in English, in Korean the Subject, Object, and Goal Resultative are all possible in compliance with minimality.

“EXCEPTIONAL” CASE-MARKING AND RESULTATIVE CONSTRUCTIONS

by

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CHAPTER 1

Introduction

Case is generally understood to be semantically empty. This leads us to assume that a Case feature is an LF-uninterpretable feature in Minimalism.¹ We have been disconcerted by the presence of an LF-uninterpretable Case feature in the computational system. In an effort to justify the existence of the LF-uninterpretable Case feature in the optimal system of language, Chomsky (1995) ties the LF-uninterpretable Case feature with movement. In an *attract*-based system, T's D-feature (EPP) is the driving force to move an NP. On the other hand, in a *movement*-based system, a NP's uninterpretable Case feature motivates the NP to move to the Spec of TP. Importantly, Case feature checking is allowed to take place in the Spec-head configuration. In other words, feature checking requires movement. Without movement, there is no feature checking.

In the GB theory, Case is a central notion. It even claims its own module. Case is believed to be a main force for A movement. Various kinds of structures: passive, raising, clitic agreement, and expletive-associate agreement, are all understood to be motivated by a uniform cause, namely Case.

This close tie between Case features and movement no longer exists since Chomsky (2000, 2001). In the *AGREE*-based system, the Case feature is not an independent feature, but part of the ϕ -feature collection. Case is taken as a mere by-

¹ The Case feature of NP/DPs are taken to be LF-uninterpretable. It is interpretable in the other side of the interface of PF. For instance, the English pronoun; *I, me, we, us, he, him, she, her, they, them*, etc is phonologically manifested differently according to its structural Case. Yet it is still believed that *I* and *me* have the same LF interpretation, despite phonological differences.

product of ϕ -feature agreement.² Crucially, AGREE can be established in the absence of movement. As opposed to the *attract* and *movement*-based system, AGREE does not require movement. Instead, EPP becomes responsible for movement. In the *AGREE*-based system, both ϕ -feature and Case feature valuation is assumed to take place prior to movement if any obtains at all.

Now, it appears that we end up going back to where we started. Again we have to explain why an LF-interpretable Case feature should exist in the computational system.

In this thesis, I present evidence that structural Case in Korean is not absolutely semantically inert. It can have a focus flavor in some contexts, for example, stacked Case and Case attached to an adverb/adverbial and a verb. This sort of Case feature may not be an embarrassment for the good design of language (Chomsky 2001).

In chapter 2, I explore Case stacking in Korean. A single nominal element has two Case markers: inherent Case and structural Case in that order. First, I try to identify a stacked Case. I, drawing on Yang (2000) and Schütze (1996, 2001), show that the stacked Case is ambiguous between a Case and a focus marker. In line with Yang (2000), a stacked Case is valued/assigned by a Case assigning-head T or *v*. When it engages T, a stacked Case will be valued as nominative. When it engages *v*, a stacked Case will be valued as accusative. The valuation of Stacked Case shows similarities to how regular Case is valued. Stacked Case behaves like a focus marker (Schütze 1996, 2001). First, stacked Case does not conform to honorification agreement. Second, a stacked Case receives a prosodic prominence. Third, a stacked Case has semantic effects of focus. This

² This AGREE mechanism is drawn from “George-Kornfilt Hypothesis”. George and Kornfilt (1981) note that in Turkish, once infinitival complement is agreed, it is no longer open to agreement of Case assignment to the matrix verb.

stacked Case can be related to identification focus (Kiss 1998). I propose that the focus-like Case is checked by a syncretic head T or v with a matching focus feature respectively.

In chapter 3, I investigate the raising construction (a.k.a. ECMs). In the first part, I argue that Korean Raising is not exactly the same as the English Raising for two reasons. First, an embedded subject can be marked with nominative Case. The embedded subject shows Case alternation between nominative and accusative Case. Second, an embedded clause is a finite clause. The embedded clause contains a tense marker and an overt complementizer. I argue that when the embedded subject is marked with accusative Case, it has a focus reading. The second part is devoted to how the embedded subject can move out of the embedded finite clause in a successive cyclic fashion. The main idea is that the v in the matrix clause is a syncretic head with a focus feature. Therefore, raising of the embedded subject out of the finite clause via Spec of CP does not have a problem with the ban on improper movement. Note that movement to Spec of v P here engages both ϕ -features and a focus feature. I also claim that a current view of Case may not be on the right track (Chomsky 2001): Case is considered to be a reflex of ϕ -feature agreement. To the contrary, I argue that Case valuation and ϕ -feature valuation should be taken as separate operations.

In chapter 4, I discuss the Resultative Construction in a derivational approach. We compare the Resultative Construction between English and Korean in pursuit of finding out the underlying cause for differences between the two languages. I argue that they differ in terms of selectional restrictions. English shows selectional restrictions with resultative predicates, while Korean does not. The existence of selectional restrictions may allow English to have only the Object Resultative to the exclusion of the Subject

resultative and the Goal Resultative. This is because a resultative subject of the small clause is not permitted to move to either a subject or a goal position of a matrix verb over an object without a violation of minimality. Note that the existence of the selectional restriction in English forces the small clause to merge as a complement of the matrix verb. On the contrary, the absence of selectional restrictions in Korean enables the small clause to have various adjunction sites in the matrix verbal domain. The difference in height of the adjunction sites for the small clause may be the reason that unlike English, a resultative subject in Korean is allowed to sideward move to the subject, object, and goal position of the matrix verb in compliance with minimality. So the Subject, Object, and Goal Resultative are possible. In order to provide a *movement*-based account of the Resultative Construction, I treat a theta role as a feature (Hornstein 2001) and adopt sideward movement (Hornstein 2001, Nunes 2004).

CHAPTER 2

Case Stacking

There is an unsettled dispute regarding how to deal with the fact that one nominal can be overtly marked with two Cases in some languages. Doubly Case marked nominals are considered problematic because they does not conform to the Chain Condition (Chomsky 1986):

(1) The Chain Condition

In a maximal chain $C = \{\alpha_1, \dots, \alpha_n\}$, α_n occupies its unique theta position and α_1 is Unique Case-marked position

The Chain condition comprises the Theta Uniqueness Condition and the Case Uniqueness Condition.¹ Roughly put, a chain must have at most one theta role and one Case. If we assume the Case Uniqueness Condition, then case stacking is predicted to be illicit.

The previous studies examining a Case stacking phenomenon may be divided into two groups. One group argues that a stacked Case is the same kind of structural Case primarily counting on the surface analogue. Accordingly, they argue that a special treatment of Case stacking is not needed, and therefore, a stacked Case is taken as regular Case. D-H Yang (2000) champions this side of the pendulum. On the other hand, the other group is in favor of a focus marker rather than a Case marker Schütze (1996,

¹ Brody (1993) and Hornstein (1998, 1999, 2001) challenge the validity of the Theta Uniqueness Condition.

2001).² He agrees with Yang (2000) that there is a superficial parallelism in that stacked Case looks exactly like single Case aside from the prosodic prominence on it. Nonetheless, he argues that stacked Case should not be regarded as Case marker. Further he supports his claim by providing a range of evidence. He addresses empirical evidence from each component of the grammar including syntax, phonology and semantics.

Arguably, both sides are not unreasonable, in any sense. Then, where should we stand with respect to Case stacking? In other words, what kind of position should we take in order to capture all the properties observed from the relevant data? The one answer may be that we will straddle both sides, resisting committing to one side or the other.

Here we attempt to account for these ambivalent traits of a stacked Case on the grounds of the recent minimalist framework (Chomsky 2000, 2001). In a nutshell, an element with a Foc feature establishes an Agree relation with a typical Case-assigning head such as T or *v* containing a Foc feature. It is of importance that a constituent containing a Foc feature Agrees with either T or *v* containing a matching Foc feature.

This chapter is organized as follows. First in section 2 we examine the basic data containing a nominal with Case stacking. From what we have seen thus far, it appears that a stacked Case can vary in either nominative or accusative Case. Next, section 3 discusses evidence in favor of a Case marker in the sense of D-H Yang (2000). Then we move to section 4 where we discuss empirical evidence in support of a focus marker in line with Schütze (1996, 2001). It guides us to draw a conclusion that we take both sides,

² There have been many linguists suggesting the following in the pre-theoretical level: A nominal doubly marked with Cases may be construed as a focus reading rather than a neutral reading. They speak about this mainly grounded on their own intuition of the meaning. They, however, do not substantiate their suggestion via presenting theoretical arguments of why a doubly Case marked nominal should correspond to a focus interpretation prior to Schütze (1996, 2000) as far as I know. Thus Schütze indeed deserves to get a credit for this. He put all the evidence together pushing the line that a stacked Case should be taken as a focus marker.

but not one of them. In section 5, we explain the co-existing properties of a stacked Case in terms of the minimalist program. Finally we wrap up with the conclusion in section 6.

2.1 Basic Data

It has been reported that a single nominal is able to have more than one Case in Korean by Gerds and Youn (1989), J-H Yoon (1996), Schütz (1996, 2001), Cho (2000), D-H Yang (2001) among others and Japanese by Kuroda (1987). We illustrate the constructions that exhibit Case stacking in particular in Korean. First, we discuss an example where the outer Case is nominative, as in (2) through (4). Next, we consider data in which accusative is the outer Case, as in (5). It is important to note in all instances the inner Case is rendered to be inherent Case rather than structural Case.

(2) Psych verbs

a. John-eykey paym-i mwuseta

John-dat snake-nom fearful

‘To John a snake is fearful’

b. John-eykey-ka paym-i mwuseta

John-dat-nom snake-nom fearful

‘It is John who fears a snake’

(3) Locative verbs

a. I kongcang-eyse pwul-i na-ass-ta

This factory-loc fire-nom break out-past

‘In this factory a fire broke out’

b. I kongcang-eyse-ka pwul-i na-ass-ta

This factory-loc-nom fire-nom break out-past

‘It was this factory where a fire broke out’ (Yoon 1996)

(4) Existential-Possessive verbs

a. John-eykey ton-i manhta/issta

John-dat money-nom much/is

‘To John there is a lot of money’

b. John-eykey-ka ton-i manhta/issta

John-dat-Nom money-nom much/is

‘It is John who has a lot of money’

The verbs in (2) through (4) are unaccusative verbs. These verbs do not seem to have a light verb, *v* responsible for the transitivity. The examples with psych verbs in (2) show that the experiencer argument *John* in (2)a has dative Case *-eykey* and the same argument *John* in (2)b gets nominative Case *-ka* on top of the dative Case *-eykey*. In a similar fashion, the instances with locative verbs in (3) and those with existential-possessive verbs in (4) demonstrate that the one nominal can be marked with the dative Case *-eykey* or the locative *-eyse* respectively and they can stack structural case, that is, nominative Case here.

Now we see that the outer Case is not restricted to nominative Case. It also can be accusative Case *-ul*. We consider the following paradigm in which a nominal has the

accusative Case *-ul* in addition to the dative Case *-eykey*. Here is one important thing that we should note. The verbs in (5) are transitive verbs. More precisely, They are ditransitive verbs, as opposed to the unaccusative verbs in (2) to (4).

(5) (Di)transitive Verbs

- a. John-i Sue-eykey ccoch-ul cwu-es-ta
 John-nom Sue-dat flower-acc give-past
 ‘John gave Sue flowers’
- b. John-i Sue-eykey-lul ccoch-ul cwu-es-ta
 John-nom Sue-dat-acc flower-acc give-past
 ‘It was Sue who John gave flowers’

As in (5), the indirect object *Sue* in (5)a bears the dative Case *-eykey* while the same nominal with the dative Case *-eykey* is doubled up with the accusative Case *-lul*.

As we mentioned, the main objective of this chapter is to investigate the above data in order to pursue the reasonable question as to how a single nominal ends up with multiple Case.

To summarize, we have seen the data illustrating that one nominal can have more than one Case on it. By and large, the inner Case is the inherent Case, either dative or locative, whereas the outer Case is structural, either nominative or accusative. The outer structural Case may come out as nominative Case when the verb is assumed to lack the light verb *v* like unaccusative verbs. On the other hand, it surfaces as accusative Case when the verb is headed by *v* like transitive verbs.

Before further proceeding, it is worthwhile to note that the occurrence of the outer Case on a nominal does not seem to comply with the notion of the convergence purpose. As we have seen in (2)a through (5)a, all examples without the outer Case are perfectly acceptable, satisfying all the convergence conditions at the interface. In other words, an extra structural Case does not appear to play such a savior-like role, rescuing the derivation from crashing at the interface. If this is the case, does it make no contribution whatsoever to the interface? Note that the primary assumption of the minimalist program is the following as proposed in Chomsky (2000):

(6) Language is an optimal solution to legibility conditions

If an extra structural Case does not comply with (6), we unfortunately have to concede that Korean is stigmatized with an exemplary design flaw.

Therefore we would better find a role for the extra Case to provide justification for its presence. This kind of reasoning suggests that a stacked Case in (2)b through (5)b plays a certain role rather than idles in vain. Presumably its given role may be a little bit different from that of a regular structural Case. Accordingly, we need to define what may be the given role for a stacked Case.

In the following section, we discuss a previous analysis where a stacked Case is argued to be identified with a Case marker (D-H Yang 2001).

2.2 In Support of a Case Marker

2.2.1 Morphological/Phonological Parallels with regular Case

D-H Yang (1999, 2000) maintains that stacked Case is structural Case by raising one simple important question. What is the difference between a stacked Case and a regular structural Case in terms of morpho-phonology? As you have seen above, there may not be a substantial difference, particularly in this regard.³ The two of them show striking parallels with respect to their morphology and phonology. Similar to regular nominative Case, a stacked Case is manifested as *-i* when it comes after a consonant. Yet it is realized as *-ka* after a vowel. On the other hand, it is realized as *-ul* after a consonant on a par with a regular accusative Case, while it surfaces as *-lul* after a vowel. Therefore apparently a stacked Case does behave like a regular structural Case not only morphologically but also phonologically.

Yang's (1999, 2000) insight seems correct to a certain degree. Thus, building on Yang, we assume that stacked Case is assigned by the same Case assigning head such as T and *v*. Accordingly, both a single Case and a stacked Case are assigned by the same head. It follows that all unspecified Case features of a DP are valued by a close Case-associated head, either T or *v*.

To the contrary, there is an unavoidable downside. He may not be paying deserving attention to the semantic/discourse effects caused by a stacked Case. The semantic/discourse effect under consideration is not trivial. Even though stacked Case patterns with regular structural Case in terms of morpho-phonological manifestation, it does not fit well with regular structural Case when it comes to its semantics. In general, it is assumed that structural Case does not make a semantic contribution and hence it is

³ A stacked Case displays prosodic effect like a prosodic prominence. (see section 2.3.1.2)

regarded as an LF-uninterpretable feature (Chomsky 1995).⁴ This uninterpretable feature forces us to delete it before the derivation gets to the interface level, especially the LF component. If not, the whole derivation crashes rather than converges. As opposed to structural Case, stacked Case creates a semantic/discourse effect to an element on it. We return to this in section 2.3.1.3 in detail.

Yang may not take the semantic/discourse phenomena seriously and disclaims Schütz's (1996, 2000) proposal in favor of a focus marker.⁵

⁴ Cagri (2003) argues that in Turkish nominative Case is morphologically realized only when a DP is specific. Otherwise, a subject comes out without nominative Case. In this case, nominative Case is closed tied with specificity.

⁵ We briefly sketch out how D-H Yang (2000) deals with a stacked structural Case below:

- (1) a. Sue-eykey-KA ton-i philyohata
 Sue-dat-nom money-nom necessary
 'It is Sue to whom needs money'
- b. Sue-eykey ton-i philyohata
 Sue-dat money-nom necessary
 'Sue needs money'
- (2) a. John-i Sue-eykey-LUL chayk-ul cwu-ess-ta
 John-nom Sue-dat-acc book-acc give-past
 'It was Sue who John gave a book'
- b. John-i Sue-eykey chayk-ul cwu-ess-ta
 John-nom Sue-dat book-acc give-past
 'John gave Sue a book'

Yang (2000) presumes that (1)b is derived from (1)a. On the assumption that the general Case Drop Principle at the PF component, (1)b results from dropping the second nominative Case. By analogy, (2)b is considered to be derived from (2)a. If Yang's analysis is on the right track, among other things the readings of all the examples in (1) and (2) is predicted to be more or less the same. A Case marker is assumed to be eliminated in the PF side that is reckoned to be blind to the LF side. When we, however, compare the meaning of (1) with that of (2), we can notice a considerable difference in the meaning. It is not negligible at all. We will go at length in 4.1.3.

Lapointe's (1998) study reveals that Case dropping of structural Case like nominative or accusative Case should be treated with care. There should be some restrictions on Case dropping. It shows sensitivity to the discourse functions of the sentence. In general the acceptability degree of Case dropping deteriorates from exclamations, imperatives to interrogatives and last to declaratives. He also finds out an interesting fact that nominative dropping is harder than accusative dropping within a declarative sentence. It turns out that Case dropping is not a simple and free operation as Yang assumes in his proposal like whenever we choose to drop Case, we can go ahead. Thus Yang's analysis might not be that illuminating since it centers on the general Case Drop Principle at PF. Plus it does not care about the arguable semantic contributions depending on the presence or the absence of Case.

2.2.2 T or ν in charge of assigning a stacked Case

Now we will look toward another important argument in favor of stacked Case as regular structural Case. On the basis of the syntactic operation AGREE in Chomsky (2000, 2001), the structural Case of a nominal is not specified when it enters the derivation. Through the operation AGREE, a structural Case is valued as either nominative or accusative depending on which functional head takes part in AGREE with DP. When AGREE is established with T, DP gets assigned nominative Case. The DP, on the other hand, winds up with accusative Case when Agree is established by ν . This kind of variation in coding a structural Case, is closely related to the notion of locality. Valuation of structural Case is correlated with two things: Which Case assigning head is available? More importantly, which one is closer to a relevant DP with a structural Case within the workspace, if any. In other words, it surfaces with nominative Case when T is present and at the same time closer than other potential Case assigning heads in the workspace whereas it surfaces with accusative Case when ν is available and nearby.

To recap, primarily in accordance with a Case-assigning head's availability and closeness, a structural Case is specified differently. Let us come back to the basic paradigm provided in section 2. The stacked Case on top of the dative Case shows a similar pattern to a single structural Case in terms of the specification of its unvalued Case feature. As we mentioned before, all the examples in (2) through (4) have unaccusative verbs of the sort crucially lacking ν in each of the examples. It follows that stacked Case should be uniformly valued as nominative Case. It is impossible that the stacked Case is realized as accusative, since the accusative assigning functional head ν is

not present.⁶ On the contrary, in (5) the stacked Case should be realized as accusative. It is attributed to an availability of v in the verbal domain.

Thus far we have discussed that stacked Case is specified as the same mechanism as the structural Case. Stacked Case and single structural Case are subject to similar mechanics for the purpose of its valuation. Let me reiterate that both singular Case and stacked Case are assigned by the same functional head either T or v . In this regard Yang's proposal may not be unreasonable. Therefore, here we adopt Yang's points.

2.3 In Support of a Focus Marker

Schütze (1996, 2001) argues in favor of a focus marker account. He is fully aware of the fact that a stacked Case patterns with a regular structural Case with regard to morphology and phonology. At the same time, he fervently holds onto Chomsky's Chain Condition that one chain/DP must have a single Case and a single theta role. In other words, a chain/DP is absolutely prevented from having more than one Case.⁷ He refuses to claim that a chain/DP may have multiple Case.^{8 9}

⁶ Jairo Nunes (p.c.) suggests that, instead of assuming the absence of a light verb v , there may be v but its ϕ -features are defective/incomplete. So it cannot engage Case valuation/assignment.

⁷ Howard Lasnik (p.c.) points that accurately speaking, the Case Uniqueness Condition does not prevent a chain/DP from getting more than one Case. If a chain/DP can have multiple Cases in the unique Case position, then it complies with the Case Uniqueness Condition.

⁸ Belletti and Rizzi (1988) argues under the unaccusative analysis, a postverbal (VP-internal) subject can be optionally assigned partitive Case and then raise to Spec of IP being assigned nominative Case. So it is possible for a postverbal subject to have both partitive and nominative Case. It does not comply with the Case Uniqueness Condition. However when we assume, as Belletti (1988) points out, that the Case Uniqueness Condition only concerns structural Case, partitive Case may not cause a violation of the Case Uniqueness Condition in the case that a postverbal subject has two Cases, partitive and nominative Case.

⁹ Presumably, the Case uniqueness condition does not hold cross-linguistically. It might be true of many languages. Not a few languages demonstrate that a single chain/DP has more than one Case including Korean (Gerdt and Youn 1989, Yoon 1991, Yoon 1996), Japanese (Kuroda 1987), Cuzco Quechua (Lefebvre and Muysken 1982, 1988, 1989), Bejar and Massam (200x), among others (See for further examples Blake 1994).

Here we will scrutinize how a stacked Case behaves differently from a single structural Case. We, building on Schütze's observations, extend and elaborate them in depth.

2.3.1 Non-Canonical Behaviors as a Case Marker

Here, we discuss how stacked Case does not fit well into a regular Case from three different perspectives. First, from the syntactic standpoint, unlike a (regular) nominative Case a stacked nominative Case is not usually subject to honorific agreement between a subject and its predicate. More strikingly it exhibits unexpected distributions in the sentence. For example, they can attach to adverbs/adverbials and also attached to the first verb between two verbs. Second, from a phonological perspective, stacked structural Case usually carries a pitch accent, unlike regular structural Case. Lastly, stacked structural Case contributes a unique semantic/discourse value to an element on it. We address these matters at length in section 2.3.1.3.

2.3.1.1 Syntactic Account

Let us start off with a syntactic argument. It is commonly assumed that a DP marked with nominative Case is taken to be a subject with some limited exceptions.¹⁰ A nominative marked subject takes part in agreeing with a verb with respect to honorification agreement.¹¹ Honorific agreement is manifested on both a subject and a verb each on a

¹⁰ There are so-called dative subject constructions. The subject is marked with dative Case instead of nominative Case. Ura (1999) convincingly argued that a dative subject exhibit the same subjecthood as a nominative subject.

¹¹ Fukui (1995) argues against the view of the subject-honorification is regular agreement phenomena in Japanese. Since subject honorification does not reflect a ϕ -feature of a subject the same way English does.

par with structural Case. This prediction, however, is not borne out in (7) where a subject has two Cases: an inner inherent Case and an outer structural Case.

2.3.1.1.1 No Honorification Agreement

Let us look at the instances in (7):

- (7) a. Apeci-kkeyse cip-ey ka-si-ess-ta
 Father-nom.hon house-to go-hon-past
 ‘Father went to the house’
- b. ?*Apeci-eyekey-kkeyse saca-ka mwusep-ta¹²
 Father-dat-nom.hon lion-nom fearful
 ‘It is the father who fears a lion’
- c. Apeci-eykey-ka saca-ka mwusewu-si-ta
 Father-dat-nom lion-nom fearful-hon
 ‘It is the father who fears a lion’

(7)a illustrates that honorific agreement is established between the subject *apeci* ‘father’ and its predicate *ka-* ‘go’.¹³ Honorific agreement is manifested in two different honorific markers, one on the subject and the other on the predicate. First, an honorific morpheme -

Note that recently Boeckx and Niinuma (2004) argued that even object honorification in Japanese should be integrated into agreement.

¹² There seems to be no stable grammatical judgment with a dative subject with respect to honorific agreement in the literature. Some say that a dative subject is able to trigger honorific agreement just like a nominative subject while others disagree.

¹³ We regard honorification in Korean as a case of agreement (Kim 2000, H-J Yoon 1990).

si goes with the predicate *ka-* ‘fearful’. This honorific morpheme *-si* is thought to be licensed by an appropriate subject like *apeci* ‘father’ here. Second, a subject denoting an honored person, bears an honorific nominative Case *-kkeyse* instead of a casual nominative Case *-ka/i*. Yet when the honorific nominative *-kkeyse* stacks on the dative *-eykey* in (7)b, the sentence is degraded and awkward. Even though the subject *apeci* ‘father’ can license the honorific nominative Case *-kkeyse*, it would rather have the (regular) nominative Case *-ka/i* when it co-occurs with another Case the dative Case *-eykey* here as shown in (7)c. This suggests that a Case stacked on an inherent Case may differ from a regular Case.

2.3.1.1.2 Atypical Distribution

Now we take into account the non-canonical distributions of structural Case. We take a close look at the data sets where structural Case appears on non-nominal elements. Interestingly the language allows structural Case such as nominative *-ka/i* or accusative *-lul/ul* to be attached to not only an adverb/adverbial but also to a verb. These kinds of distribution are beyond our expectation of where structural Case may usually appear.

To begin with, we discuss cases in which structural Case appears on a verb. And we will move onto other peculiar cases where structural Case occurs on adverbs.

A structural Case can occur between the two verbs. Sells (1995) notices this distributional behavior that a structural Case can be attached to a verb in (8) to (10).

- (8) a. Kulim-i kulyeci-ci-ka anh-ass-ta
 Picture-nom draw-pass-nom not-past

‘A picture could not be drawn’

(but maybe I could do something else with a picture)

b. Kulim-i kulyeci-ci anh-ass-ta

Picture-nom draw-pass not-past

‘A picture could not be drawn’

(9) a. John-i ilki-ul ssuci-lul anh-ass-ta

John-nom journal-acc write-acc not-past

‘John did not write a journal’

(but maybe he might have done something else with a journal other than writing)

b. John-i ilki-ul ssuci anh-ass-ta

John-nom journal-acc write not-past

‘John did not write a journal’

(10) a. John-i sakwa-lul meke-lul po-ass-ta

John-nom apple-acc eat-acc try-past

‘John tried to eat apples’

(but maybe he did not try to do something else with apples)

b. John-i sakwa-lul meke po-ass-ta

John-nom apple-acc eat try-past

‘John tried to eat apples’

In the instances in (8) and (9), a second verb *ani ha-/anh-* is a so-called negative verb. In (10), on the other hand, the first verb is a main verb *mek-* ‘eat’ and a second verb is the auxiliary verb *po-* ‘try’. The nominative Case *-ka* or accusative Case *-lul* intervenes between the two verbs in (8) and (9) respectively. The accusative Case *-lul* is between the main and the auxiliary verb in (10).

We need to digress a little regarding the auxiliary verb. Generally the auxiliary verbs are characterized by their own properties. Here, we note one particular property that is directly pertinent to the state of affairs in this chapter: no element is allowed to intervene between the main and the auxiliary verb. Thus this recalcitrant intervention effect between the two verbs leads some linguists to suggest that a main verb incorporates into a following auxiliary verb and hence they are united into a single verb (Baker 1988). As a consequence, they are not separable. Notwithstanding the intervention effect, there are a few exceptional particles that sidestep these intervention restrictions. They are a limited set of particles such as *-nun/un* ‘topic/focus’, *-to* ‘also/focus’ and the like.¹⁴ In essence these particles are all focus-related. This distributional affinity of the focus (topic)-relevant particles with a structural Case may provide another piece of evidence for the conjecture that some structural Case may be identified with a focus marker.

Furthermore, structural Case can occur after the adverb/adverbial with an intransitive verb as offered in (11):^{15 16}

¹⁴ For the purpose of differentiating postpositions from Case markers, they are classed into the delimiters (Yang 1972). Delimiters delimit the meaning of the co-occurring element. So they are understood to have their own semantic content but have little syntactic function. Among the delimiters are *-to* ‘also’, *-nun/un* ‘topic/focus’, *-man* ‘only’, *-lato* ‘even’ and so on. Note that the delimiters occur cross-categorically without any restriction to a specific category. They are characterized with a wide range of distributions. That is, they can occur with a noun, a verb, an adverb, and a complementizer.

¹⁵ They are VP-modifying adverbs/adverbials such as manner, place, and time adverbs as follows: *ppali* ‘fast’, *cip-e* ‘to the house’ and *han sikan-tongan* ‘for one hour’. It might follow that they end up with

- (11) a. Kicha-ka ppalli-LUL/*KA ka-n-ta
 Train-nom fast-acc/nom go-pres
 ‘The train goes very fast’
- b. Kicha-ka ppalli ka-n-ta
 Train-Nom fast go-pres
 ‘The train goes fast’
- (12) a. John-i cip-e-LUL/*KA o-ass-ta
 John-nom house-to-acc/nom come-past
 ‘John came to the house, but not some other place’
- b. John-i cip-e o-ass-ta
 John-nom house-to come-past
 ‘John came to the house’

coming with accusative Case rather than nominative Case as a focus (emphatic) marker since they are assumed to be generated within the VP layer.

¹⁶ The below data show that a nominative Case *-ka/i* can be attached to an adverbial phase.

- (1) a. L.A.-ka motun sosik-i ceyil mence nao-n-ta
 L-A-nom every news-nom first come out-pres
 ‘The most recent news comes from L.A.’
- b. Seoul-i tayhakkyo-ka manh-ta
 Seoul-nom university-nom many
 ‘There are many university in Seoul’
- c. Ipen kyewul-i kwankwangkayk-i ceyil cek-ta
 this winter-nom tourists-nom least
 ‘In this winter, we have the least number of tourists’ (K-S Hong 1990)

Each nominative Case in the above examples can be replaced by a source postposition *-eyse*, a locative postposition *-ey* and a temporal postposition *-ey* respectively. When they are substituted by an adequate postposition listed above, it can occur in any preverbal position within the sentence. To the contrary, they must come in the beginning of the sentence when they are marked with nominative Case. Plus, they seem to represent a theme-predication relationship (K-S Hong 1990). Hong argues that a theme can be either a topic or a focus depending on whether its predicate carries old or new information.

- (13) a. John-i han sikan-tongan-UL/*I ca-ass-ta
 John-nom one hour-for-acc/nom sleep-past
 ‘John slept FOR ONE HOUR’
- b. John-i han sikan-tongan ca-ass-ta
 John-nom one hour-for sleep-past
 ‘John slept for one hour’

Consider the verbs of the examples in (11) to (13). We can immediately see that they are all arguably intransitive verbs such as *ka-* ‘go’, *o-* ‘come’, and *ca-* ‘sleep’. We assume that verbs in (11) to (13) are unergative verbs (Perlmutter 1978, Pullum 1988). According to Burzio (1981), Hale and Keyser (1993), and Chomsky (1995), unergative verbs are taken to be transitive verbs containing a hidden object in the verbal domain.¹⁷ The relevant point is that the above listed verbs are assumed to occur with *v* in the verbal domain. The presence of *v* permits an adverbial, and adverb phrase, and a PP to be assigned apparent accusative Case on them if it is required. As shown in (11) to (13), the adverbs and adverbials are not allowed to have nominative Case. A question arises. Why it should be the case? The answer may be linked to minimality. At the relevant stage of

¹⁷ For example, the intransitive verbs *ka-* ‘go’ and *ca-* ‘sleep’ can be viewed as a class of denominal verbs derived by incorporation in the sense Baker 1988 as shown in (1) and (2):

- (1) a. John-i han sikan-tongan ka-ass-ta
 John-nom one hour-for go-past
 b. John-i kaki-lul han sikan-tongan ka-ass-ta
 John-nom going-acc one hour-for go-past
 ‘John went for one hour’
- (2) a. John-i han sikan-tongan ca-ass-ta
 John-nom one hour-for sleep-past
 b. John-i cam-ul han sikan-tongan ca-ass-ta
 John-nom sleep-acc one hour-for sleep-past
 ‘John slept for one hour’

the derivation the adverb/adverbial is closer to v than T. As a consequence, if any, the adverb/adverbial should be assigned accusative Case in conformity with the syntactic principle like minimality.

Now, let us draw our attention to the effect of these Cases attached to adverbs/adverbials. They seem to act like a sort of focus marker. Sin (1982) and Suh (1991) note that this kind of accusative Case yields an emphatic effect, as seen in the English translations in (11) to (13).

Next, we take into account the independent studies by Maling (1989) and Kim and Maling (1993) that lends support for the present account. Kim and Maling (1993) look into the Case alternation of certain adverbials denoting duration, frequency, and location in Finnish and Korean. They note that in particular frequency adverbials display an alternation between nominative and accusative Case in accordance with whether it occurs in the active construction or in its passive construction. It is exemplified in (14) (taken from Kim and Maling 1993):

- (14) a. John-i chayk-ul sey pen-ul/*i ilk-ess-ta
 John-nom book-acc three times-acc/nom read-past
 ‘John read this THREE TIMES’
- b. I chayk-i sey pen-i/*ul ilk-hi-ess-ta
 This book-nom three times-nom/acc read-pass-past
 ‘This book was read THREE TIMES’

The difference in Case assignment on frequency adverbials in (14) is suggestive of change in Case assignment for nominal arguments depending on whether it is in active or passive constructions. In particular, it conforms to the principles that constrain syntactic Case assignment of nominal arguments. The adverbial *sey pen* ‘three times’ in (14)a bears accusative Case since it comes with the transitive verb *ilk-* ‘read’ whereas *sey pen* ‘three times’ in (14)b should have nominative Case. It is not surprising since a passive verb is generally assumed to be short of the light *v* in the verbal domain. So accusative Case cannot be assigned. All in all, we can say that even accusative Case on adverb/adverbials is associated with a Case assigning head like *v* here.

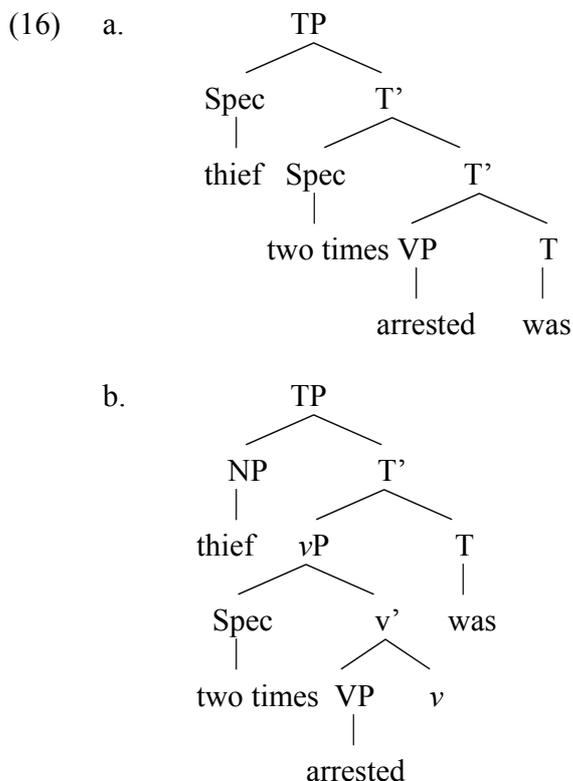
Kim (1990) makes an interesting observation. The Case marker on the frequency adverb can impact the reading. It is illustrated in (15) taken from Kim (1990):

- (15) a. Totwuk-i (kyengchal-eykey) twu pen-i cap-hi-ess-ta
 Thief-nom policeman-dat two time-nom arrest-pass-past
 ‘Two different thieves were arrested twice by a policeman’
- b. Totwuk-i (kyengchal-eykey) twu pen-ul cap-hi-ess-ta
 Thief-nom policeman-dat two time-acc arrest-pass-past
 ‘The same thieves were arrested twice by a policeman’¹⁸

¹⁸ Note that Korean has various kinds of passives. One of them is a so-called adversative passive as given (1):

- (1) John-i Mary-eykey meli-lul kkak-i-ess-ta
 John-nom Mary-by/dat hair-acc cut-pass-past
 ‘John got his hair cut by Mary (against his will)’
 ‘John_i made Mary_j cut his_{i/k}/her_j hair’

(1) is ambiguous: it can be interpreted either as passive or causative. In the passive reading, the denoted process adversely affects the subject (Park 1994). What is interesting here is Case marking of *meli* ‘hair’. Note that it is marked with the accusative Case *-ul* despite the occurrence of a verb with a passive



When the adverbial *twu pen* ‘two times’ has nominative Case in (15)a, the frequency adverbial takes scope over the entire event in (16)a. That is, it may be associated with the subject *totwuk* ‘thief’. It is highly likely that different events may involve different participants. So it can mean that two different thieves were arrested by a policeman. On the other hand, when the frequency adverbial are assigned with accusative Case, as in (15)b, it scopes over the VP not containing the subject in (16)b. So it is likely to mean

morphology *-hi* like *cap-hi* ‘catch-pass’. A question arises as for the property of the passive morphology. Generally we assume that the passive morphology absorbs the accusative Case of the object and dethematizes the subject. That is the reason why a Caseless object should move to a legitimate Case position, namely Spec of TP. In the case of adversative passives, there are some properties that are argued not to be consistent with the standard NP-movement approach, for instance Case considerations here in (1). Hence Huang (1999) suggests that we may need a different approach like the complementation approach (see Huang 1999 and references cited).

that the same thief was arrested by a policeman. It indicates that Case assignment on the adverbial is sensitive to the structural configuration in terms of its height even yielding an effect on the semantics.

Now we focus our attention to the effect of appearance of Case under consideration. They might act like a focus marker of the sort having some emphatic effect upon the elements with which they come, as argued by Sin (1982) and Suh (1991).

Prior to winding up this section, we need to make one more point. It is a widespread observation that a focus marker has quite a broad range of distributions. This is sharply different from Case markers. A focus marker seems to be exempt from distributional restrictions. It can occur with not only DP but also with various kinds of categories. Literally speaking, it is possible that it comes with almost all kinds of categories including a verb, an adverb/adverbial and a complementizer free from any categorical restrictions. It might be rendered to be one form of a focus marker.

To summarize, we have argued that stacked structural Case does not pattern with regular structural Case mainly in two respects. First, they do not conform to honorification agreement. Second, they show a wider range of distributions, compared to that of a regular Case marker. Recall that they can attach to an adverb/adverbial and a verb. These positions are quite unlike those where we can anticipate finding regular structural Case. Consequently we can say that a stacked Case might be associated with focus in some way.

2.3.1.2 Phonological Account

Here we underscore the following perceivable observation. Usually an outer structural Case stacking up on inner Case, gets a pitch accent on it.¹⁹ On the contrary, regular structural Case does not exhibit this kind of prosodic effect.

- (17) a. Sue-eykey-KA ton-i philyoha-ta²⁰
 Sue-dat-nom money-nom necessary
 ‘It is Sue to whom needs money’
- b. John-i Sue-eykey-LUL chayk-ul cwu-ess-ta
 John-nom Sue-dat-acc book-acc give-past
 ‘It was Sue who John gave a book’

As is illustrated in (17), nominative or accusative Case is different from regular structural Case in light of prosodic effects. This prosodic difference corroborates our present

¹⁹ Here is another example in which a pitch accent plays a role. It is reported that a pitch accent comes into play especially in disambiguating two possible readings. Choe (1985) and Han (2000) among others note that Korean *wh*-words are ambiguous. That is, they can allow an indefinite reading and a *wh*-question reading. It is exemplified in (1):

- (1) Nwu(kwu)-ka ttena-ass-ni?
 Who-nom leave-past-Q
 ‘Who left?’
 ‘Did anybody leave?’

In accordance with where pitch accent is assigned within the sentence, it ends up with one or the other reading. That is, when a *wh*-word receives a pitch accent as in (2)a, its reading corresponds to a *wh*-question as an English *wh*-word *who* does. On the other hand, when a pitch accent falls on the verb as in (2)b, an apparent *wh*-word *nwukwu* becomes an indefinite noun *somebody* and it turns the entire sentence into a yes-no question.

- (2) a. NWU(KWU)-KA ttena-ass-ni?
 Who-nom leave-past-Q
 ‘Who left?’
- b. Nwu(kwu)-ka TTENA-ASS-NI?
 Who-nom leave-past-Q
 ‘Did anybody/somebody leave?’

²⁰ The capitalized letters indicate that they may have a prosodic prominence on them.

analysis that stacked Case may be structural Case colored by a focus attribute. Lee (1969) notes differences in placement of pitch accent within a nominal phrase. When an NP appears with regular structural Case, a prosodic prominence falls onto the NP. However, when the NP comes with a focus-related delimiter like *un/nun* ‘topic/focus’, a pitch accent goes with a delimiter instead of the NP. Note that stacked structural Case gets pitch accent unlike regular structural Case.

Moreover, Sohn (1990) notes that structural Cases can be deleted primarily in colloquial speech unless emphasis, focus, exclusives, or deference is intended. It follows that a NP without a structural Case is not allowed to have relevant semantic/discourse effects. It seems evident that certain kind of structural Case in Korean closely tie up with semantics or/discourse and then should not delete in a random fashion.

2.3.1.3 Semantic Account

Here we unpack the last argument. We discuss its relevant semantics. Even though the semantic difference of the two instances in (18) is not trivial, often times it seems to be ignored in many studies including Yang (2000). (17) is repeated as in (18). Consider the paradigm again:

- (18) a. Sue-eykey-KA ton-i philyoha-ta
 Sue-dat-nom money-nom necessary
 ‘It is Sue who money is necessary to’
 Lit. It is Sue who needs money
- b. Sue-eykey ton-i philyoha-ta

Sue-dat money-nom necessary

‘Money is necessary to Sue’

Lit. Sue needs money

As the English translations illustrate in (18)a and (18)b, they do not share exactly the same reading: the former has a focus reading whereas the latter does not. Where does the semantic difference come from? We can easily notice that an experiencer *Sue* in (18)a has extra nominative Case *-ka* on top of dative Case *-eykey*, compared with *Sue* in (18)b. If this is the case, the additional nominative Case *-ka* should be the one that is responsible for changing a non-focus reading into a focus reading. If so, as opposed to regular structural Case, this structural Case causes a noticeable change in semantics. Since structural Case is assumed to play no significant role in the semantic component so that a Case feature is taken to be LF-uninterpretable (Chomsky 1995). Accordingly, some structural Case may call for a distinct treatment from others in order to characterize their properties as shown in (18)a.

Let us consider the paradigms in (19). It strengthens the present observation that this structural Case has a semantic influence unlike regular structural Case.

- (19) a. Etten salam-eykey-KA ton-i philtyoha-ta
 Some person-dat-nom money-nom necessary
 ‘Someone needs money.’ (specific reading)
- b. Etten salam-eykey ton-i philtyoha-ta
 Some person-dat money-nom necessary

‘Someone needs money.’ (specific or existential reading)

As presented in (19), a structural Case in (19)a plays a considerable role in disambiguating two possible readings available in (19)b. In the absence of structural Case *-ka*, an indefinite DP *etten salam* ‘some person’ in (19)b is ambiguous between an existential and a specific reading. After adding the nominative Case *-ka* onto the dative Case *-eykey*, the ambiguity vanishes and only the specific reading survives. Again note that (19)a is different from (19)b only with a presence of the extra nominative Case *-ka*. As a consequence, it seems quite feasible to say that the direct cause for disambiguating the ambiguity of (19)a is linked to the additional nominative Case *-ka*.

If we treat this apparent structural Case the same as a regular structural Case, we find it difficult to capture the observed semantic effect in the LF component. Again a structural Case feature is unquestionably assumed to be LF-uninterpretable and hence should be eliminated before proceeding into the LF component. In order for a derivation to successfully converge at the end, all LF-uninterpretable features should be eliminated before reaching the LF interface. In this vein it does not seem illuminating to assume that a structural Case feature survives elimination and thus brings forth a semantic effect at LF. Therefore it might not be irrational that we assume that structural Case at issue may bear an (optional) LF-interpretable feature along with a Case feature. We suspect that an LF-interpretable feature should be a kind of focus feature in line with section 4.1.1 and 4.1.2.

In the following section we discuss the focus property of this Case in more detail. We apply some diagnostics to make sure it should be a focus marker. If it turns out to be

true, we will attempt to decide specifically what kind of focus marker it should be equated with.

To recap, we have said about the following from three different perspectives of the grammar: stacked structural Case demonstrates different behaviors compared with regular structural Case. First, from the syntactic point of view, it is not subject to honorification agreement. Plus, it occurs with almost all kinds of syntactic categories beyond D. It comes cross-categorically with regard to its distribution. Second, from the phonological standpoint, it usually bears a prosodic prominence on it. Third, it makes a semantic/discourse contribution. This is in contrast to structural Case. On the basis of all three arguments, we can deduce that some structural Case, especially stacked Case is doing an extra job. The extra job that we are concerned with here, is related with a focus effect including an emphatic effect.

2.3.2 More about Focus effect

2.3.2.1 Compared with English Cleft Sentence

This goal of this section is to investigate that English translations are adequate for the given data containing double Cases on a nominal. Thus far, we have consistently relied on a cleft sentence when we put relevant Korean instances into English as almost all literatures do. Primarily we examine whether the data in question exhibit the similar properties generally as English cleft sentences display.²¹ The cleft sentence is characterized by an existential presupposition. In addition to the existential presupposition, the cleft sentence is also identified with the implication of exhaustiveness, repeated in (20):

²¹ This discussion is indebted to Martin Hackl (p.c.).

- (20) a. Sue-eykey-KA ton-i philyohata
 Sue-dat-nom money-nom necessary
 ‘It is Sue who needs money’
- b. Sue-eykey ton-i philyohata
 Sue-dat money-nom necessary
 ‘Sue needs money’

First, let us think about an existential presupposition. In order for the suggested English translation to be correct, (20)a should have the presupposition that there is someone who needs money. Eventually someone in issue will narrow down to *Sue*. The implication of the existential presupposition is verified by several independent studies (Kim 1990, Wee 1995, and Song 1997). Most work on focus in Korean are in agreement with this suggestion.²²

Second, we consider whether they express the exhaustiveness of an element with multiple Cases. In order to meet the second requirement, it should be true in the following situation: One of the people in the relevant context needs money. In other words, it denotes that John is present in the domain, John is the one who needs money, and the rest of them are in the domain of not needing. This second property is a little more controversial. According to Song (1997) and Wee (1995), it should implicate the exhaustiveness of focus. As opposed to the former, Schütze (1996) argued that the focused constituent does not imply the exhaustive reading. Here, we take a position to

²² Jackendoff (1972) defines the presupposition of a sentence as the information in the sentence that is assumed by the speaker to be shared by him and the speaker, and the focus as the information in the sentence that is assumed by the speaker not to be shared by him and the hearer.

advocate the former in favor of the exhaustiveness of focus. As a result, the data containing a doubly Case marked element seem to be compatible with the English cleft sentence.

2.3.2.2 Identification Focus

Here, we further discuss what was discussed in 4.2.1. Here we ask the question: If the present argument is on the right track, specifically what kind of focus will it be?

Kiss (1998) argues that focus may be distinguished into two different types: identification focus and information focus. From a syntactic point of view, there is a noticeable contrast between these two types of focus: the former is associated with syntactic movement while the latter is not, on the grounds of Hungarian and English focus constructions. This contrast leads us to deduce that the English cleft construction should correspond to identification focus. This is because the cleft construction at least appears to take part in some kind of syntactic operation.

In applying Kiss's dichotomy of focus, the Korean data may fit better with identification focus than with information focus, since the English cleft sentence seems to be equated with the focus construction at issue in Korean as we discussed in 2.3.2.1. Kiss (1987, 1998) suggests the distributional restriction as a reliable diagnostic for identification focus. *Also*-phrases, and *even*-phrases and the existential quantifiers cannot occur in the identification focus position. Consider the following contrast:

- (21) a. *John-eykey-ka-to ton-i philyoha-ta
 Joh-dat-nom-also money-nom necessary

- ‘*It is also John who needs money’
- b. John-eykey-to ton-i philyoha-ta
 John-dat-also money-nom necessary
 ‘John also needs money’
- c. *John-eykey-ka-lato ton-i philyoha-ta
 John-dat-nom-even money-nom necessary
 ‘*It is even John who needs money’
- d. John-eykey-lato ton-i philyoha-ta
 John-dat-even money-nom necessary
 ‘Even John needs money’
- (22) a. Etten salam-eykey-KA ton-i philyoha-ta
 Some person-dat-nom money-nom necessary
 ‘Someone needs money’ (specific reading)
- b. Etten salam-eykey ton-i philyoha-ta
 Some person-dat money-nom necessary
 ‘Someone needs money’ (specific or existential)

As exemplified in (21) and (22), *-to* ‘also’-phrase, *-lato* ‘even’-phrase and *etten* ‘some’-phrase seem to cause unacceptability. Here a delimiter *-to* ‘also’ or *-lato* ‘even’ is attached to the right end of a nominal. This is for the purpose of generating ‘also’-phrase and ‘even’-phrase in (21)a and (21)c. The unacceptability affirms the observation that a nominal with multiple Cases constitutes identification focus. As Kiss’s (1998)

distributional constraint of identification focus predicts, the appearance of *-to* ‘also’, *-lato* ‘even’ and *etten* ‘some’ is prohibited in identification focus.

Concerning the *etten* ‘some’-phrase, the existential quantifier such as *etten salam* ‘someone’ is placed in identification focus position. Initially, it may be conceived as unwelcome news to the present state of affairs in support of identification focus. It, however, turns out to be not so unwelcome once when we examine its reading. Once a quantifier phrase is used in identification focus position, it loses its intrinsic quantificational property since *etten salam* ‘someone’ can refer only to a specific individual, as in (22)a. *Etten salam* ‘someone’ does not behave like a regular quantifier. Generally, an existential quantifier is associated with an unspecific individual present in the relevant domain rather than a specific one. In order to control the restricted reading, we need to check the possible readings of (22)b that are devoid of a nominative Case. *Etten salam* ‘someone’ in (22)b is ambiguous. It allows at least two readings: one is an existential quantifier reading where *etten salam* ‘someone’ is not committed to referring to a particular individual in the domain and the other is a specific reading where it denotes a particular individual to whom the speaker and the hearer tacitly agree to refer in the domain.

Thus far we have focused on a nominal marked with both inherent Case and nominative Case. Next, let us extend this to a nominal containing an outer accusative Case, as in (23) and (24):

- (23) a. *Sue-ka John-eykey-lul-to chayk-ul cwu-ess-ta
 Sue-nom John-dat-acc-also book-acc give-past

‘*It is also John who Sue gave a book’

b. Sue-ka John-eykey-to chayk-ul cwu-ess-ta

Sue-nom John-dat-also book-acc give-past

‘Sue gave a book also to John’

c. *Sue-ka John-eykey-lul-lato chayk-ul cwu-ess-ta

Sue-nom John-dat-acc-even book-acc give-past

‘*It is even John who Sue gave a book’

d. Sue-ka John-eykey-lato chayk-ul cwu-ess-ta

Sue-nom John-dat-even book-acc give-past

‘Sue gave a book even to John’

(24) a. Sue-ka etten salam-eykey-lul chayk-ul cwu-ess-ta

Sue-nom some person-dat-acc book-acc give-past

‘Sue gave someone a book’ (specific reading)

b. Sue-ka etten salam-eykey chayk-ul cwu-ess-ta

Sue-nom some person-dat book-acc give-past

‘Sue gave someone a book’ (specific or existential reading)

As in (21), nominals with stacked accusative Case in (23) are not permissible in the identification focus position. Moreover, (24)a shows that *etten salam* ‘someone’ with a stacked accusative Case is restricted to a specific reading, unlike (24)b which is ambiguous between an existential and a specific reading.

The examples in (23) and (24) reinforce the distributional restriction on identification focus. The distributional constraint on identification focus holds not only of a nominal with a stacked nominative but also of a nominal with a stacked accusative. It is prohibited from co-occurring with *-to* ‘also’, *-lato* ‘even’ and *etten* ‘some’.

Next, we discuss the some possible explanations to account for this distributional restriction. In Stowell and Beghelli’s (1994) framework, *also-* and *even-* phrase are taken to have a [+distributive] feature. Thus, a [+distributive] feature on the *also-* and *even-* phrases cannot be compatible with the exclusive property of identification focus (Kenesei 1986). The inherent notion of a *some*-phrase is suitable for the notion of exclusiveness. Usually it does not refer to an exclusive entity in the given set.

It is worth noting that it is a well-known fact that in Korean a nominal marked with structural Case cannot have a focus-related marker such as *-to* ‘also’ and *-lato* ‘even’, as in (21)a, (21)c, (23)a, and (23)c. In order for a nominal to have a focus-related marker, a nominal is forced to drop a structural Case marker as in (21)b, (21)d, (23)b, and (23)d. In other words, a nominal is allowed to have either a structural Case or focus-associated marker but not both. It may be explained away, even if not thoroughly, within the present analysis. We maintain that structural Case in particular, stacked up on an inherent Case may behave like an identification focus marker. That is why it cannot occur with a focus-associated marker. It is in compliance with Kiss’s (1998) distributional constraint for identification focus. We take up the issue of mutual exclusiveness between a structural Case and a focus-related marker in section 2.4.3.

2.4 Analysis

In the Minimalist framework (Chomsky 1995), a lexical item is regarded as a bundle of features. Some features are interpretable at the interface while others are not. According to this basic assumption of the minimalist thesis, lexical items may have three kinds of features: formal, semantic, and phonological features. For the sake of concreteness, let us take a nominal such as the name *John*. The formal features include a Case feature and ϕ -features. As for *John*, it bears unspecified structural Case and the following ϕ -features: the 3rd person for person, masculine for gender and single for number. The former is LF-uninterpretable while the latter as LF-interpretable. Following Chomsky (2000, 2001), we assume that unspecified structural Case should be valued by a syntactic operation AGREE. Thus, Case valuation may be understood as a byproduct of AGREE. In the course of the derivation, uninterpretable formal features at the interface should be eliminated before they make their way to either PF or LF. If not, the derivation will eventually fail to converge.

Thus far we have talked about the feature collection of the unmarked *John*. Now, we take the marked *John* in terms of the feature collection. What I mean by the marked *John* is that *John* is subject to a focus reading. The *John* with a focus reading will have an extra feature called Foc in its feature bundle. Conversely, the *John* with an unmarked/neutral reading does not contain a Foc feature within its feature matrix. The presence of an additional Foc feature makes a difference in its semantics. Moreover, a Foc feature is taken to be interpretable at both the LF and PF interfaces, along the same line as ϕ -features of a nominal are immune to deleting even after the application of AGREE is completed. On the LF side, a Foc feature forces a focus reading of the nominal. Simultaneously, on the PF side, the Foc feature forces a high-pitched accent on the

apparent Case marker. The given duties of the Foc feature at the interface may seem to justify its presence as a feature, satisfying virtual conceptual necessity. In the following section we discuss the nature of the Foc feature in depth.

2.4.1 The Nature of the Foc feature

We further examine the nature of a Foc feature. Here, two questions are posed: One, can we think of a Foc feature as a formal feature? Two, where does the matching/corresponding feature Foc reside in the given system?

In the underlying assumption of the Minimalist framework, only formal features are regarded to be active in the computational system. If a Foc feature is solely a semantic feature like affective operators in the sense of Rizzi (1990), it is inert in the course of computation. The pure semantic Foc feature cannot trigger any operation in the narrow syntax. Consequently, we do not expect any overt movement motivated by a Foc focus to take place. Contrary to this prediction, overt focus movement is attested across languages by Horvath (1986, 1996) and Brody (1990) for Hungarian, Motapanyane (1997) for Bulgarian and Bošković (1997, 1998) for Serbo-Croatian among others. The empirical data lead us to say that a Foc feather may be taken to be a formal feature. As a result a focus feature can be activating an operation in the syntax. It is worth noting that generative grammar, viewed focus as a syntactic notion in the early 70s, for example Chomsky (1971).²³ In the line with this, Brody (1990, 1995) adopts the licensing

²³ Chomsky (1971) suggests that some aspects of semantic interpretation are determined by surface structure. The focused constituent is marked by the ‘intonation center’. In his account, (1)a and (1)b represents that *John* is the focus of the sentence and presupposes someone write poetry. In (1)c, the focus changes to *Bill* from *John*.

(1) a. Is it JOHN who writes poetry?

condition on operators in Chomsky (1986) and Rizzi (1991) and hence establishes a sort of focus-criterion where [+Foc] is checked at S-structure or at LF. The relevant point here is that Brody treats a Foc feature as a formal feature so that it is visible in the computational operation. Likewise we understand the Foc feature as a formal feature.

As the next step in the present account we ought to think about which functional head contains a matching Foc feature in order to successfully establish an AGREE relation of a focus constituent for the purpose of convergence. Another way of saying this, we need to designate a certain functional head that is responsible for checking the Foc feature of a relevant element.

First, we briefly outline which head has been regarded as the carrier of a Foc feature in the earlier work. Brody (1990, 1995), Motapanyane (1997, 2000), Horvath (1981, 1986, 1996), and Zubizarreta (1998), among others. All take a position that a focus feature is incorporated onto a Case-associated functional head.²⁴

Motapanyane (1997, 2000) argues that a Foc feature should be associated with T or C. That is to say, a Foc feature can reside on T or C, in according with the parametric setting. To support her claim, she provides the empirical data of Bulgarian preverbal focus. In the language, Spec of TP can host either subjects or focus elements since a focus feature can be on the head T. Thus the preverbal subject can have both readings: a

-
- b. It isn't JOHN who writes poetry
 - c. No, it is BILL who writes poetry

Chomsky (1976) accounts for the English contrast of (2) by applying the rule of Quantifier Raising (QR) to the focus element.

- (2) a. *His_i mother love JOHN_i
- b. His_i mother loves John_i

Unlike (2)b, (2)a is not acceptable since the focused 'John' raises at LF leaving behind a variable. It causes the Weak Crossover effect in the sense of Chomsky's Leftness Condition.

²⁴ Instead of a syncretic category with a functional feature like focus, Kayne (1998), Kiss (1995, 1998), Rizzi (1997), among others suggest that a focus feature should be viewed as its own syntactic head.

focal reading and a neutral reading. She distinguishes between the two readings in the following way. On a focus interpretation the preverbal subject checks nominative on T containing the complex feature [focus/tense]. On the other hand, on a neutral reading the preverbal subject checks nominative on the T bearing the feature [tense]. Essentially, she regards Foc as a formal feature. As a consequence, the dependent property of the Foc feature causes it to conjoin with another feature like [tense] in Bulgarian. As opposed to Bulgarian, in other languages a Foc feature can be hosted by the functional head C. It suggests that a focus element is checked by the complex feature such as [focus/*wh*] of C.

Second, Horvath (1981, 1986) and Brody (1990) argue that a Foc feature dwells in V inasmuch as Hungarian has a designated focus position. The focus position in Hungarian happens to be left adjacent to the verb unlike English. In their account, English falls under Focus-in-situ languages whereas Hungarian fits into designated Focus-position languages by analogy with *wh*-in-situ vs. overt *wh*-movement languages. Note that in the early and middle 1980s, the separation of the functional head *v* and the lexical head V has not emerged yet. It is not straightforward that V used by their analysis directly corresponds to the lexical head V separated from the functional head *v* in the recent minimalist terms. Since according to them V is also the one that assigns accusative Case to an object. My conjecture is that they might intend to propose that a Foc feature inhabits the Case assigning head *v* rather than a lexical verb head V from the spectrum of the minimalist framework.²⁵

Lastly Zubizarreta (1998) argues for a generalized TP analysis in support of Tense as a syncretic category: ... *Within a view of syntactic structure in which heads consist of*

²⁵ Later on Horvath (1996) changes the position of the former account in Horvath (1981, 1986). She newly claims that there is an independent functional head called Foc on the top of VP. It is in charge of a Foc feature.

features that need to be checked against other heads, languages with a generalized TP may be said to allow a certain amount of feature syncretism ... In essence, T is viewed as a syncretic category along the lines of Giorgi and Pianesi (1996). It follows that the feature Tense may combine with discourse-based functional features, such as topic, focus, or emphasis resulting in the syntactic categories T/Topic, T/Focus, T/Emphasis. In Spanish, the Spec of TP can host different types of constituents like topics, focused elements (including *wh*-phrases) and subjects.

We, drawing on Brody (1990), Motapanyane (1997, 2000), Horvath (1981, 1986), and Zubizarreta (1998), assume that a focus feature may combine with other functional feature. A Foc feature may reside in a Case assigning head such as T or *v*. Under the assumption of the availability of a syncretic category, we will attempt to account for the Case stacking facts.

2.4.2 Lasnik's account for Pseudogapping

Here, we make a little detour to note Lasnik's (1995) account of pseudogapping constructions. Lasnik (1995) accounts for pseudogapping constructions via PF-deletion. His account is mainly two-fold. First, the remnant moves into Spec of Agr_O leaving VP. Second, the (lower) VP is deleted since a strong θ -feature on the verb is not checked. In essence, VP deletion in the phonological component is motivated by syntactic requirements.

Here is an example of pseudogapping constructions in (25):

- (25) a. John will select Bill, and Mary will Peter

- b. ... and [_{ArgSP} Mary_i will [_{VP} t_i [_{AgrOP} Peter_k ~~[_{VP} select_k t_k]]]]]~~

As shown in (25)b, the remnant *Peter* moves to Spec of Agr_{OP}. To have the ellipsis licensing configuration, *Peter* should move out of the VP. Afterward the rest of the VP is deleted.

It is material that a movement of the remnant *Peter* is motivated by an EPP feature. It is not motivated by a focus feature despite an arguable fact that the remnant *Peter* is a focus-marked element. Tancredi (1992) argues that VP ellipsis is a strong form of deaccenting concentrating on the similarities between deaccented and deleted phrases. His licensing condition for deaccenting is an instantiation of a focus-related topic in the context of the elided VP. In his account, deletion of the VP is licensed when deaccenting is licensed. Therefore it should be a pragmatic (semantic) condition rather a syntactic condition.²⁶

Again according Lasnik, the object raises to Spec of Agr_{OP} out of the lower VP to check the EPP feature of Agr_O. Then, how can we explain the necessary focus reading of the remnant in pseudogapping constructions? It is tempting to say that in English Agr_O may be a syncretic category combining with a Foc feature. When Agr_O combines with Foc yielding Agr_O/Foc, movement to Spec of Agr_{OP} will be related to focus licensing.

2.4.3 Complementary distribution of structural Case and focus marker

²⁶ Howard Lasnik (p.c.) notes that Lasnik (1995) does not require the VP deletion in pseudogapping constructions for the purpose of getting rid of an unchecked strong θ -feature. What really happens in his analysis is when the unchecked strong θ -feature remains at PF, the derivation simply will not converge.

Earlier on in 2.3.2.2 we noted that a nominal can have either a structural Case or focus-relevant marker but not both of them.²⁷ Sells (1995) and Yoon (1996) define this in the similar fashion as follows: The two suffixes are competing for the same slot in

²⁷ It seems that a focus marker *man* ‘only’ may co-occur with a Case marker *i* on the same nominal as shown below:

- (1) John-man-i cip-ey ka-ass-ta
 John-only-nom house-to go-past
 ‘Only John went to the house’

It might affect the present analysis or it might not. Before jumping to conclusions, we need to be concerned with the following. First, pretheoretically speaking Yang (1972) proposes that there are two different slots of delimiters (See footnote 7). Sells (1995), building into Yang (1972), classifies the nominal suffixes as in (2):

(2)

Postpositions		Conjunctions		Delimiters			
				X-Lim		Z-Lim	
eykey(se)	Dative	Hako	Conjunctive	man	only	i/ka	Nominative
hanthey(se)		(k)wa		kkaci	even, up to	(l)ul	Accusative
ey	Temporal	pota	Comparator	cace	even, also	uy	Genitive
ey, eyes	Locative	(i)na	Disjunctive	cocha	even, as well	(n)un	Topic/Focus
ey, (u)lo	Directive	pwute	from	pakkey	except for	to	also
(u)lo	Instrumental	chelem	like			(i)lato	even,
kkaci	Goal						even if
hako, (k)wa	Comitative						

In principle various nominal particles occur in sequence on a nominal in the preceding fixed order among them. When we address complementary distribution of a structural Case marker and a focus-related marker above, we are restricted to the nominal particles belonging to the same slot of Z-Lim in the above tableau. Consider the following instances:

- (3) John-cocha-to cip-ey ka-ass-ta
 John-even-also house-to go-past
 ‘Even John also went to the house’

John has two focus-related delimiter markers on it. The one is *cocha* ‘even’ and the other is *to* ‘also’. Unlike the structural Case markers, *cocha* ‘even’ and *to* ‘also’ are arguably focus-relevant particles. Unless they conflict with each other with respect to their meaning, a nominal can have plural focus-associated particles plugging them into a separate morphemic slot. (4) shows that *John* cannot bear two focus-relevant delimiters due to the semantic incompatibility.

- (4) *John-man-to cip-ey ka-ass-ta
 John-only-also house-to go-past

Let us come back to the instance in (1). Now we can see that it does not give a negative impact on our analysis a bit, as opposed to the first approximation. Since *man* ‘only’ and nominative *i* are not membership of the same slot. Plus they are not antagonistic with each other regarding their semantics. They are allowed to come along with a noun as in (1).

morphology. Only one element is permitted in the slot. Structural Case's presence is tantamount to the absence of a focus delimiter. This is also true in the converse direction.

We investigate the complementary distribution of a focus marker and a Case marker in the framework of the Distributed Morphology (Halle and Marantz 1993, Halle 1997). Under the Distributed Morphology, there is a level morphology moderating between the syntactic and phonological module of the grammar. Vocabulary insertion takes place later on after the syntactic computation is capped off. Morphology works on the terminal elements of the syntactic component. It is important to point out that there is no guarantee that every single terminal node of the syntax will map into its counterpart phonological element. There is no such a thing as a one-to-one relation between two terminal nodes in the syntactic component and the phonological component. Loosely speaking, some syntactic terminal nodes may not be encoded in the phonological form. How could that take place in the course of the derivation? It is formally stated as the Subset Principle in Halle (1997).²⁸ Vocabulary items are in competition for a single morphemic slot. The Subset Principle demands that the most specified item should preempt the less specified one²⁹. Likewise Uriagereka (2002) proposes the Subcase Principle for capturing a similar effect.

²⁸ The Subset Principle is defined as follows in Halle (1997).

The Morphological exponent of a Vocabulary item is inserted into a morpheme in the terminal string if the item matches all or a subset of the grammatical feature specified in the terminal morpheme. Insertion does not take place if the Vocabulary item contains features not present in the morpheme. Where several Vocabulary items meet the conditions for insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen.

This principle can be traced back to Kiparsky's (1973) Elsewhere Condition where the more specified entry takes precedence over entries that are less specified.

²⁹ This argument is prompted by Juan Uriagereka (p.c.)

Equipped with this background, let us come back to the instances in (26) and (27). What matters here is why a nominal cannot have both a focus marker and a Case marker at the same time. Employing the Subset Principle for the complementary distribution, it looks like that a focus marker and a Case maker compete for the same morphemic slot. If we comply with the Subset Principle, which one do we expect the Subset Principle to select one out of the two candidates (i.e., a focus marker and a Case marker)? The answer to the question should be to come out as a focus marker. In that a focus marker is considered to be more specified, compared to a Case marker with respect to the substantive/semantic feature. As opposed to a focus feature, a Case feature is regarded to have (almost) no semantic import in the interface especially, in the LF component. It follows that a Case feature is taken to be inert at LF. This suggests that we can predict an unacceptability of (26)b and (27)b where a Case maker takes precedence over a focus marker contrary to the fact.

- (26) a. *Sue-ka-to sakaw-lul mek-ess-ta
 Sue-nom-also apple-acc eat-past
 ‘Sue also ate an apple’
- b. *Sue-ka sakwa-lul mek-ess-ta
 Sue-nom apple-acc eat-past
 ‘Sue also ate an apple’
- c. Sue-to sakwa-lul mek-ess-ta
 Sue-also apple-acc eat-past
 ‘SUE also ate an apple’

- (27) a. *Sue-ka sakwa-lul-to mek-ess-ta
 Sue-nom apple-acc-also eat-past
 ‘Sue ate an apple also’
- b. *Sue-ka sakwa-lul mek-ess-ta
 Sue-nom apple-acc eat-past
 ‘Sue ate an apple also’
- c. Sue-ka sakwa-to mek-ess-ta
 Sue-nom apple-also eat-past
 ‘Sue ate an apple also’

Here is another way to account for mutual exclusiveness of a Case marker with a focus marker. We adopt the insight of Case in the last eighties and the early nineties attributable to Lamontagne and Travis (1987), Ahn (1990), Bittner and Hale (1993), Bittner (1994), Yoon (1995), among others. In this approach, Case is taken as hosting a functional category called Kase. Importantly, Case is not viewed as a part of a ϕ -feature of a DP in the sense of Chomsky (2000, 2001). In addition, Kase is assumed to the highest position of an NP domain. This suggests that Kase closes off a nominal head in the course of derivation. The motivation of assuming Kase as having categorical status is based on a parallelism between Kase (Case) and Comp (Complementizer) (see Lamontagne and Travis 1987, Bittner 1994).

It is widely agreed that a Case marker has phrasal scope since a Case marker has scope over the entire phrase (see Ahn 1990, Sells 1995, and Yoon 1992, 1994, 1995). Thus a Case marker is treated as a phrasal affix as offered in (28):

- (28) a. John-i [_{NP} khi-ka khu-ko nwun-i yeppun yeca]-lul cohaha-n-ta
 John-nom height-nom tall-and eye-nom pretty woman-acc like-pres
 ‘John likes the woman who is tall and whose eyes are pretty’

In (28) the Case marker *-lul* is attached to the head *yeca* ‘woman’ and takes scope over the DP *khi-ka khu-ko nwun-i yeppun yeca* ‘the woman who is tall and whose eyes are pretty.’ This kind of a phrasal affix-like behavior of a Case can be found in the English possessive marker ‘s (a.k.a. genitive Case).

- (29) a. John likes [_{DP} the tall man in the black suit]’s shoes
 b. *John likes [_{DP} the tall man’s in the black suit] shoes

As shown in (29), even in English Case does not percolate all the way down to N all the time. The possessive marker ‘s attaches to the right edge of the entire DP and not directly to the head noun *man*. In the Kase account, the possessive ‘s correspond to Kase and Kase takes the whole DP as a complement.

The difficulty for the Kase account comes from subcategorization or selection. Note that we add an extra functional head Kase above DP/NP. How can we maintain the subcategorization or selection requirements of the verb in the Kase account? We do not

want to say that in the case of transitive verbs, verbs would select for KPs instead of DP/NPs. If so, we lose the strict locality restrictions on lexical requirements of subcategorization and selection for DP/NPs. One way to get around this problem is that we assume, drawing on Pollock (1989), functional heads are ‘transparent’ to subcategorization and selection. Presumably when a verb selects a complement DP/NP, they can see through Kase as long as its value is not specified. At the relevant point, Kase may not be considered to be a full-fledged head due to the absence of its value. When it is valued via AGREE, then Kase become a full head in the syntactic process. Therefore, a locality condition on selection may be preserved since KP is not an intervening projection at the stage of selection. By analogy of syncretic functional heads like T/Focus and *v*/Focus in section 5.1, a Foc feature is taken to be a dependent feature and is assumed to conjoin to Kase. It sounds symmetrical in that a Foc feature may combine with a Case assigning head and Kase in the nominal domain. Under this account, it is natural that a single nominal is not allowed to have both a Case and a focus marker simultaneously as seen in (26) and (27).

2.4.4 Psych Predicates

When nominative Case is added to an inherent dative Case, the predicates are mostly psych verb, locative, and existential predicates. We assume that locative and existential predicate lack the light verb *v* indicating transitivity. Next, we investigate the internal structure of psych predicates in more detail.

One might pose a question. Why is nominative Case the only stackable Case with psych-predicates? Why can it not be accusative? Note that we assume that a nominal

starts off with an unvalued Case feature. An unvalued Case feature will be valued in the course of derivation.

Following Belletti and Rizzi (1988), we assume that psych predicates have an experiencer argument and a theme argument under the VP in the absence of the light *v*. The reason that we do not postulate a two-layered VP shell in the case of psych predicates is the following. For example, we take a transitive verb *mwusewehata* ‘fear’ which takes the two arguments: one argument is an experiencer in the higher position while the other is a theme in the lower position as illustrated in (30)a.

- (30) a. John-i paym-ul mwuseweha-n-ta
 John-nom snake-acc fear-pres
 ‘John fears snake’
- b. John-eykey paym-i mwusep-ta
 John-dat snake-nom fearful³⁰
 ‘The snake is fearful to John’

Lee (1978) notes a close association between the adjective *muwsepta* ‘fearful’ and the transitive verb *mwusewuehata* ‘fear’. He attempts to capture the close relation between the adjective and the transitive verb via passivization. The psych adjective is assumed to be derived from a process of passivization in the sense of Chomsky (1965). Put another

³⁰ When the adjective occurs in the context of present tense, the present tense marker ‘-nun/n’ is suppressed. On the other hand, when it occurs in the past tense, the past tense marker ‘-ess/ass’ is required to occur as shown in (1).

- (1) John-eykey paym-i mwuse-ess-ta
 John-dat snake-nom fearful-past
 ‘The snake is fearful to John’

way, the transitive verb *mwusewehata* ‘fear’ turns into the adjective *mwusepta* via deleting ‘-(e) ha-’ which is considered to be the transitivity/causativity marker. It has been largely agreed that adding ‘-(e) ha-’ to the adjective makes it the corresponding transitive verb.³¹ Lee applies the morphological operation in the reverse direction, from transitive verb to adjective through deleting the transitivity morphology ‘-(e) ha-’. On the other hand, Kim (1990) argues that transitive psych verb are derived from the psych adjective by the morphological process of adding ‘-(e) ha-’ to the adjective. This kind of morphological operation in question is schematized below as in (31):

(31) Morphological operation: from transitive verb to psych-adjective

Input: *muwseweha-ta* (transitive verb)
 ~~*muwse(p)e-ha-ta*~~ (deletion of a transitivity marker)
 Output: *muwsep-ta* (psych-adjective)

Moreover (32)a and (32)b illustrate that how the operation of passivization works respectively in English vis-a-via Korean in Chomsky’s (1957) mechanism as follows:

(32) a. English Passivization

DS	NP	Aux	V	NP	(Active)
	1	2	3	4	
SS	4	2+be	3+en	by+1	(Passive)

³¹ Here are some psych-adjectives for example, *coh-* ‘likeable’, *silh-* ‘hateful’. We can make them transitive verbs such as *cohaha-* ‘like’ and *silheha-* ‘hate’ by attaching ‘-(e) ha-’ to the adjective root respectively.

b. Korean Passivization

DS	NP	NP	V	Aux	(Active)
	1	2	3	4	
SS	2	1+Post	3+Pass	4 ³²	(Passive)

To recap, we have discussed why a stacked Case should be coded as nominative Case with psych predicates. Basically, it is because psych predicates may be derived from transitive verbs through passivization. As a result, psych predicates do not have the light *v* head. All the nominals with psych predicates like *mwusep-* ‘fearful’ are predicted to be marked with nominative. This prediction is born out in (33):

- (33) a. John-i saca-ka mwusep-ta
 John-nom tiger-nom fearful
 ‘John fears a tiger’
- b. *John-i saca-lul mwusep-ta
 John-nom tiger-acc fearful
 ‘John fears a tiger’

5.4 Implementation of an idea

5.4.1 Proposals

³² Note that in Korean there are a couple of postpositions that can be used for a nominal to signal the agenthood in the passive structure. The most common nominal suffix is the dative *-eykey*. There are other postpositions such as *-hantey* and *-ey uyhayse* other than *-eykey*. In the above illustration ‘Post’ stands for the postposition and ‘Pass’ the passive morphology.

In order to implement the present analysis within the minimalist framework of Chomsky (2000, 2001), we propose the following: first, Case is hosted in its own Kase head. Kase closes off the nominal domain syntactically. Kase may optionally bear a Foc feature. Second, the Case assigning head like T and ν may optionally have an uninterpretable Foc feature in contrast to the interpretable Foc feature of Kase. This is parallel to the way *wh*-features work in the system. Third, psych predicates are the passivized version of transitive verbs. Passivization deprives the transitive verb of the light ν . Fourth, experiencer and theme arguments are generated under VP following Belletti and Rizzi (1988).

5.4.2 Stacked Case

Let us reexamine the example in (34) step by step.

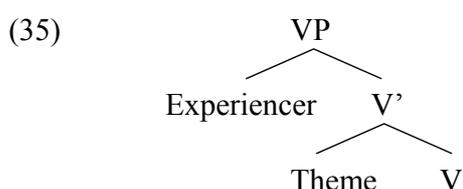
- (34) John-eykey-ka paym-ka mwusep-ta
 John-dat-nom snake-nom fearful
 ‘It is John who fears a snake’

Here we presume dative Case as an inherent Case marker (Cho 2000). Dative is assigned by the psych predicate.³³ This means that dative Case is associated with theta role assignment in the lexicon. Unlike structural Case, it not necessary for a nominal to take part in AGREE in order to have its Case feature valued since it is already specified. This explains why inherent Case appears before structural Case on the nominal.

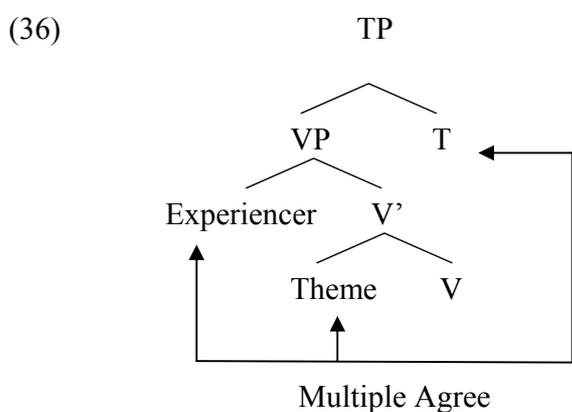
³³ The inherent Case condition is given below as proposed by Chomsky (1986):

If A is an inherent Case assigner, than A assigns Case to an NP if and only if A theta-marks the NP.

Again following Belletii and Rizzi (1988), an experiencer argument is base-generated higher than a theme argument. Moreover, the Thematic Hierarchy (Grimshaw 1990, Speas 1990) confirms experience is higher than theme. In line with Baker (1997), the given argument structure maps into syntax. So the derivation starts off with the VP. It may look like the following:

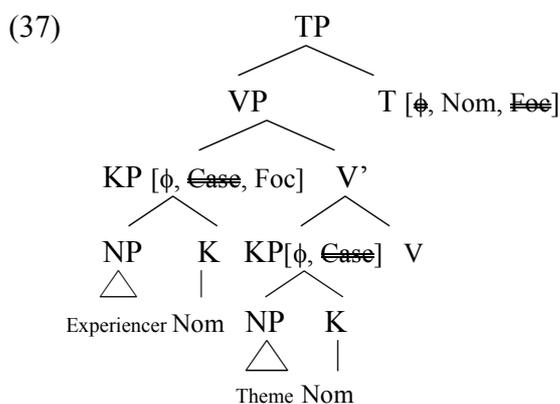


Then T is introduced into a derivation and merged with the previously established VP as follows:



T searches for a goal with its c-commanding domain in order to value an unspecified Case. At this stage, the probe T will find two KPs as goals. We need to tackle technical details in order for the T to continue searching, even after find a closer KP, for the next KP. Following Hiraiwas's (2000) Multiple Agree system, the T is regarded as having a

[+multiple] feature. Also a ϕ -features of N is copied onto the next higher head Kase as a result of the N(-D)-K AGREE. It will look like (37):



The derivation proceeds like the following. Even after the T finds the closest goal experiencer, the [+multiple] feature allows the T to keep probing for the next goal until it exhausts all the goals. In essence, the probe establishes AGREE with multiple goals simultaneously. It values the unvalued ϕ -feature of T and the unvalued Case features of both goals. It is important to point out Multiple Agree of one probe with multiple goals takes place simultaneously at the same stage of the derivation. Thus, we can bypass the potential minimality problem between experiencer and theme from the probe T. It does not cause a violation of the Defective Intervention Constraint.

2.6 Conclusion

This chapter was concerned with a structural Case stacked on an inherent Case. We have shown that this stacked can be identified with both a Case and a focus marker. In line with Yang (2000), first we brought our attention to morpho-phonological parallels with a regular structural Case apart from a presence of a prosodic prominence. Second, we

showed the stacked Case is valued/assigned differently depending on which functional head either T or ν is engaged in a Case valuation/assignment the way a regular structural Case feature is specified. But at the same time, a stacked Case is not exactly a regular structural Case. We, drawing on Schütze (1996, 2001), demonstrated a stacked Case behaves like a focus marker in the following regard. First, from a syntactic perspective it is not subject to honorific agreement. Secondly, from a phonological perspective it should have a pitch accent unlike a regular structural Case. Thirdly, from a semantic perspective it makes a semantic/discourse contribution. Later on it was specifically identified with identification focus (Kiss 1998).

We proposed that Case assigning functional heads T and ν may be syncretic categories (Zubizarreta 1998, Motapanyane 1997, 2000). T may combine with a focus feature. Likewise a focus feature can be added to a feature matrix in a nominal. When a nominal has an extra focus feature on top of formal (ϕ), semantic, phonological features. It should be checked by a syncretic category with a matching focus feature in the sense of Brody (1990, 1995)'s focus licensing condition.

Moreover, we discussed the unconventional distribution of a structural Case. For example, a structural Case can be attached to an adverb/adverbial or a verb. This atypical appearance of a structural Case suggests that a structural Case can be used as a focus marker. Importantly, we noted that this structural Case has an influence on semantics.

CHAPTER 3

Raising Constructions

Various languages (Malagasy, Moroccan Arabic, Kikuyu, Persian, various dialect of Quechua, and Japanese) demonstrate that long-distance agreement is possible in the computational system. The Korean ECM constructions provide additional empirical evidence that long-distance agreement is available in natural language. The embedded subject in the Korean ECM constructions can bear either nominative or accusative Case. In the case of an embedded subject with accusative Case, the embedded nominal is engaged in long-distance agreement with the functional head v of the matrix clause. Moreover, it raises into the matrix clause out of a CP in the narrow syntax. We argue that the embedded subject should raise out of the embedded clause and into the matrix clause. To establish this long-distance agreement between the embedded nominal and the matrix v , inevitably we encounter some technical difficulties. In particular, the Earliness Condition (Pesetsky 1989, Collins 1999, 2001) and a ban on Improper Movement are problematic for this analysis. We discuss how these difficulties can be dealt with in the minimalist program.

3.1 Characteristics of Korean Raising Constructions

This chapter examines Raising Constructions, in particular Raising-to-Object structures (a.k.a. ECM). Even though we call this construction ECM, they are not quite the same as ECM in English since Korean ECM does not fit into the typical kind of English ECMs.

First, the subject of the embedded clause displays a Case alternation between nominative and accusative Case. Importantly, the embedded subject can be marked with nominative Case. Second, the embedded clause is arguably identified as a tensed (finite) clause rather than an infinitive (non-finite) clause. We discuss these characteristics in more detail in the following section.

3.1.1 Alternation between Nominative and Accusative Case

In Korean the subject *John* in the embedded finite clause can be marked with either nominative or accusative Case, as illustrated in (1):

- (1) a. John-i Sue-ka ttokttokha-tako mit-nun-ta
 John-nom Sue-nom smart-comp believe-pres
- b. John-i Sue-lul ttokttokha-tako mit-nun-ta
 John-nom Sue-acc smart-comp believe-pres
- ‘John believes Mary to be smart’

Unlike in Korean, the subject of the embedded tensed clause in English cannot exhibit a Case alternation as shown in (2) and (3). Only nominative Case is available. We address the issue of accusative Case unavailability for English in section 3.2.

3.1.2 Finite Tense of Embedded Clause

The examples in (2) and (3) indicate that there is a straightforward contrast in structural Case realization, depending on whether the embedded clause is finite or non-finite. When

an embedded clause is finite as shown in (2), the subject can be marked with nominative Case, but not accusative Case. It conforms to the general idea that an argument is frozen in place when it checks structural Case (Chomsky 1995). Conversely, a subject must be marked with accusative Case, when the embedded clause is non-finite (infinitival), as in (3):

- (2) a. John believes (that) she is smart
 b. *John believes her is smart

- (3) a. John believes her to be smart
 b. *John believes she to be smart

As opposed to English, the contrast in (3) is not maintained in Korean. The finiteness of the embedded clause does not always guarantee that an embedded subject is marked with nominative Case. For example, (4) shows that the subject *Mary* in the embedded clause can have either nominative or accusative Case irrespective of the presence of the past tense marker *-ess* here on the embedded verb.

- (4) a. John-i Mary-ka cengcikha-ess-tako sayngkakha-n-ta
 John-nom Mary-nom honest-past-comp think-pres
 b. John-i Mary-lul cengcikha-ess-tako sayngkakha-n-ta
 John-nom Mary-acc honest-past-comp think-pres
 ‘John believes that Mary was honest’

Moreover, the embedded verbs of ECMs can have not only tense morphology but also honorific morphology. The embedded verb *apu-* ‘sick’ in (5) has the honorific marker *-si*, which is treated as an instance of subject-verb agreement (J-Y Yoon 1990; H-M Sohn 1994).¹ The embedded subject *halmeni* ‘grandmother’ here is eligible to license the honorific morpheme *-si* on the verb.

- (5) a. Mary-ka halmeni-kkeyse apu-si-tako sayngkakha-ess-ta
 Mary-nom grandmother-hon.nom sick-hon-comp think-past
- b. Mary-ka halmeni-lul apu-si-tako sayngkakha-ess-ta
 Mary-nom grandmother-acc sick-hon-comp think-past
 ‘Mary thought that her grandmother is sick’

The example in (5)b clearly illustrates that even though the embedded subject *halmeni* ‘grandmother’ is marked with accusative Case *-lul*, the embedded verb can license honorific morphology *-si*. This is similar to (5)a with the embedded subject marked with the honorific nominative case *-kkeyse*. (5)b suggests that *halmeni-lul* ‘grandmother-acc’ may not begin as a direct object. Instead, *halmeni* ‘grandmother’ might begin as an

¹ In addition to honorific agreement, there is number agreement between a subject and its verb. Yet its morphological realization is not obligatory. It is illustrated, as in (1):

- (1) a. Han haksayng-i taliko-(*tul) iss-ta
 One student-nom run-Pl be
 ‘One student is running’
- b. Haksayng-tul-i taliko-(tul) iss-ta
 Student-Pl-nom run-Pl be
 ‘Students are running’

A verb is allowed to have the plural morpheme *-tul* only when it has a plural subject. Otherwise the existence of the plural morpheme *-tul* on a verb is prevented.

embedded subject merging with the embedded verb *apu-*. Prior to raising, inside the embedded clause, it licenses Spec-head honorific agreement. As a result, the honorific marker *-si* on the embedded verb is licensed. Afterward, it raises into the matrix clause. Then, it is valued as the accusative Case *-lul* by the matrix *v*.

3.2 Classical Arguments for Raising

Here we try and determine where the accusative marked object moves. As we already mentioned in the previous section, the embedded subject can be marked with either nominative or accusative Case. Here we focus on the latter, where the embedded subject bears accusative Case. The fact that the embedded subject is capable of alternating between nominative and accusative Case, can lead us to conjecture that the embedded subject could engage in Case valuation with different functional heads and be placed in different positions. We do not want to assume that the same functional head is responsible for both nominative and accusative Case on the embedded subject. If you do, the Korean Case alternation should be all over the place. As a matter of fact, it is not the case. In an effort to corroborate this conjecture, we employ a widely recognized diagnostics. In particular, it comes from Postal (1974) and Lasnik and Saito (1991).

3.2.1 Postal's (1974)

Postal (1974) proposes three traditional arguments for higher object status on the ground of passivization, reflexivization, and reciprocal marking. All three arguments are designed to show that two relevant nominals are in the same clause under the assumption that a relationship cannot be established between nominals across the clause boundary.

The main concern here is to examine where the accusative embedded subject resides in the structure. Put differently, does it reside in the matrix clause or in the embedded clause? We seek to pinpoint the structural position of the accusative embedded subject. It is worthwhile to note that the accusative nominal has exactly the same thematic role as the nominative nominal of the embedded clause. Now we look into the following examples capitalizing on Postal's tests.

- (6) a. John-i Sue-lul_i [t_i ttokttokha-ess-tako] mit-nun-ta
 John-nom Sue-acc smart-past-comp believe-pres
 'John believes Sue to have been smart'
- b. Sue-ka ttokttokha-ess-tako (John-ey uyhay) mit-e-ci-n-ta
 Sue-nom smart-past-comp John-by believe-passive-pres
 'Sue is believed to have been smart by John'

In (6)b, the accusative embedded subject can be passivized (Y-M Yoon 1991). It seems to be promoted to a subject position on a par with a regular object. This is similar to a regular object. With respect to passivization, the accusative embedded subject exhibits a parallelism with a regular object.²

To our dismay, we cannot play out the rest of Postal's tests: reflexivization and reciprocal marking. Korean is well-known in that both reflexivization and reciprocal

² Howard Lasnik (p.c.) pointed out that since Chomsky (1973), the object-like properties of a small clause subject have not been used as reliable diagnostics for objecthood. Rather they are diagnostics for government.

marking are not subject to the clause boundedness.³ Even though an accusative embedded subject passes the tests: reflexivization and reciprocal marking, it does not suggest any conclusive point regarding its structural status.

Instead, we employ the Principle B effect. A grammatical difference is observed depending on which structural Case it bears when the pronoun has a co-referential reading with the matrix subject. The pronoun marked with accusative is worse than the one with nominative in the relevant reading, as in (7). Kuno (1976) and Tanaka (2002) make a similar point on the basis of Japanese.

- (7) a. ?John-_i [ku-ga_i ttoktokha-tako] mit-nun-ta
 John-nom he-nom smart-comp believe-pres
 ‘John_i believes that he_i is smart’
- b. *John-_i ku-lul_i [t_i ttoktokha-tako] mit-nun-ta
 John-nom he-acc smart-comp believe-pres
 ‘John_i believes him_i to be smart’

A question arises: How can we account for the contrast in (7)? Unless we assume that the pronoun *ku* ‘he’ is placed in different positions, it will be difficult to explain the contrast.

³ It is a well-known fact that Korean allows not only a local reflexive but also a long distance reflexive. Reflexivization does not tell us much in deciding the height of the accusative nominal since it is not limited to the clause boundary and it can readily raise the clause boundary, as shown in (1):

- (1) a. John-_i [caki-ga_i ttoktokha-tako] mit-nun-ta
 John-nom self-nom smart-comp believe-pres
 ‘*John_i believes that himself_i is smart’
- b. John-_i caki-lul_i [t_i ttoktokha-tako] mit-nun-ta
 John-nom self-acc smart-comp believe-pres
 ‘John_i believes himself_i to be smart’

(1)a suggests that the reflexive can have its antecedent which is not in the same clause containing the reflexive. Rather it can have its antecedent in the matrix clause.

Accordingly we assume that they are in different positions: the nominative pronoun *he-ka* ‘he-nominative’ stays inside the embedded clause while the accusative pronoun *he-lul* ‘he-accusative’ raises to the matrix clause. Now we may immediately account for why (7)b is worse than (7)a since only the former violates the Principle B but the latter does not.

Based on the availability of passivization and the Principle B effect, it is fair to say that the accusative embedded subject and the nominative embedded subject do not share the same structural position. Unlike a nominative subject, an accusative subject of the embedded clause may raise out of the clause and hence stands high enough to cause the Principle B effect.

3.2.2 Lasnik and Saito’s (1991)

In line with Postal (1974), Lasnik and Saito (1991) bolster a raising account by presenting a couple of new paradigms. These examples indicate that the accusative subject of an embedded clause is high enough to behave like a regular object. We will check the height of the accusative nominal by adopting Lasnik and Saito’s arguments.

- (8) a. ??John-un Mary-wa Bill-ij mwucoylako [selo-uy; cayphan-eyse]
 John-top Mary-and Bill-nom innocent-comp each other-gen trial-at
 cungmyungha-ess-ta
 prove-past
 ‘*John proved that Mary and Bill_j are innocent at each other_j’s trials’
- b. John-un Mary-wa Bill-ul_j mwucoylako [selo-uy; cayphan-eyse]

John-top Mary-and Biil-acc innocent-comp each other-gen trial-at
 cungkyungha-ess-ta
 prove-past
 ‘John proved Mary and Bill_i to be innocent at each other_j’s trials’

The difference in the above paradigm is not as clear as the English equivalent.⁴ It seems a bit subtle.

3.3 Three Possible Accounts

In this section we discuss possible explanations to capture the characteristics of ECMs in the minimalism framework. Then, we discuss which one may be taken as the more plausible one among them. Even though we will see cogent pieces of evidence indicating that an accusative embedded subject raises into a higher clause from a lower clause, we do not exclude a base-generation account as a logically possible analyses. We take into account a *pro*-based account, prolepsis, and a long-distance agreement account in the sense of Chomsky (2000, 2001). Prior to exploring a raising account, we discuss a lowering account in brief. Then we gear our attention toward a raising account. Even within a raising account, the analysis can differ considerably in accordance with where the landing site of an accusative nominal is. We will try to decide how far it should move. More specifically, is it necessary to move out of a lower clause and further into a higher

⁴ According to Lasnik and Saito, the contrast in (1) is quite stable.

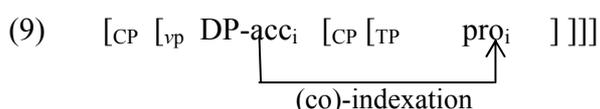
- (1) a. ?The DA proved[the defendents_i to be guilty]during each other’s_i trials
 b. ?*The DA proved [that the defendents_i were guilty] during each other’s_i trials

clause? Or, can it move to the periphery of a lower clause without moving further into the higher clause?

3.3.1 Non-raising Account

3.3.1.1 *pro*-based Account with an Accusative DP in the Matrix Clause

We assume that an embedded subject with accusative Case is base-generated in a matrix clause. In addition, we also assume that the null subject, namely *pro* is placed in an embedded clause.⁵ It ensures that *pro* gets to receive a theta role from an embedded predicate. According to the standard definition of *pro*, *pro* is not resistant to the Case-related position. This is opposed to PRO. Somehow, the accusative nominal of the matrix clause and *pro* of the embedded clause become co-referential with each other on the assumption that there is no locality restriction on co-indexing. It is schematically illustrated in (9):



At first glance a non-raising analysis sounds tempting for the following two reasons: First, the ban on the improper movement is not an issue in the first place. As we mentioned above, the embedded subject position is filled by the null pronoun, *pro* and the *pro* does not engage any kind of movement. Rather, it stays where it starts off. This results in doing away with the concern that an embedded subject should move across the clause boundary from an embedded clause into a matrix clause. Second, it gives a sufficient

⁵ Even though Korean does not have a rich overt agreement system following Perlmutter (1971) and Chomsky (1981), it is taken to be *pro*-drop language alongside with Japanese and Chinese. Korean allows a null subject and a null object as well. (see Huang 1984, 1989, Rizzi 1986)

leeway to account for the Case alternation between nominative and accusative. The null subject *pro* occurs in the embedded subject position and the lexical nominal is generated in the matrix clause. It follows that the nominal should be valued with accusative Case by the matrix *v*. That is, the lexical nominal has no way of being valued with nominative in the embedded clause. At first glance the *pro*-based account appears to be intriguing. Before jumping to conclusions, we examine the plausibility of a *pro*-based account.

In order to find out the occurrence of *pro* in the embedded clause, we replace *pro* with its lexical counterpart (Chomsky 1982). Is the replacement of a null pronoun with an overt pronoun possible without affecting acceptability on the relevant reading? We consider the following example in (10):

- (10) a. John-i Sue-lul_i [_{CP} *pro*_i ttokttokha-tako] sayngkakha-n-ta
 John-nom Sue-acc smart-comp think-pres
- b. ??John-i Sue-lul_i [_{CP} kunye-ka_i ttokttokha-tako] sayngkakha-n-ta
 John-nom Sue-acc she-nom smart-comp think-pres
 ‘John believes Sue to be smart’

In (10)b, *pro* is overtly filled by the pronoun *kunye* ‘she’.⁶ This replacement of *pro* with the overt pronoun deteriorates its acceptability considerably. Thus, the failure of the replacement of *pro* with a lexical pronoun discredits the *pro*-base analysis.

3.3.1.2 Prolepsis Account

⁶ Hoji (1985), based on Japanese, independently argues that if it is a base-generated empty pronoun, it should be replaced by an overt or lexical pronoun.

Many languages have been documented as establishing a long distance relation between a nominal in the object position of a matrix clause and the null nominal in a finite embedded clause. The long distance relation can be accounted for via raising: raising to object may feed A movement in the matrix clause in Massam (1985). Rather, it is argued that the long distance relation should be analyzed as Prolepsis instead of raising, especially in Indonesian (Chung 1976, Kana 1986), Javanese (Davies 1990), Balinese (Wechsler and Arka 1998).

First, look at the English example with the proleptic object *Mary* in (11):

(11) We think of $Mary_i$ that she_i visited Bill

The proleptic object may be understood as the topic of the following clausal complement. Put another way, it is not a dependent of the complement clause but it generated as a matrix constituent. It is co-referential with an overt or null pronoun in the embedded clause. It corresponds to a topic-comment interpretation. The important point here is that the proleptic object is not involved in movement from a lower clause across the clause boundary to a higher clause. It is illustrated below:

(12) $[_{CP} [_{vp} DP-acc_i [_{CP} [_{TP} pro_i]]]]$

Now we compare Korean ECMs with Prolepsis in both Madurese (Davies 2000) and English (Frantz 1978) to determine whether Korean ECMs pattern with Prolepsis in the attested languages.

We argue that ECMs differ from Prolepsis. Accordingly, we do not treat Korean ECMs as Prolepsis. Here we have five arguments against the prolepsis analysis in place.

A first argument against such an analysis comes from a restriction on the grammatical relation, namely a subject in ECMs. As opposed to ECMs where a raised nominal should be a subject of an embedded clause, Prolepsis allows a proleptic object to have any grammatical relation including a subject, the possessor of the object of the embedded clause (as in (13)a), and the possessor of the subject of the embedded clause (as in (13)b). Thus proleptic objects span the gamut of grammatical relation from a subject to various sorts of non-subject. The following examples are from Davies (2000):

(13) Madurese

- a. Siti ngera Hasan jhaq doktər jhuwa mreksa anaq-əng.
 Siti thinks Hasan comp doctor that examine child-def
 ‘Siti thinks about that the doctor examined Hasan’s child’
 ‘Lit: Siti thinks about Hasan that the doctor examined his child’
- b. Marlana a-bala-ahgi Hasan jhaq korse-na dari kaju
 Marlana say Hasan comp chair-def from wood
 ‘Marlena said that Hasan’s chair is made of wood’
 ‘Lit: Marlana said about Hasan that his chair is made of wood’
 (Davies 2000)

(14) Korean

- a. *John-i Mary-lul uysa-ka yumyengha-tako sayngkakha-n-ta

John-nom Mary-acc doctor-nom famous-comp think-pres

‘John thinks about Mary_i that her_i doctor is famous’

- b. John-i Mary-lul yumyengha-tako sayngkakha-n-ta

John-nom Mary-acc famous-comp think-pres

‘John thinks Mary to be famous’

In (14)a, the accusative marked *May-lul* cannot be the possessor of the subject of the embedded clause. (14)b shows that an accusative nominal should be a subject in the embedded clause. Thus Korean ECM does not pattern with Madurese Prolepsis.

At this point, one might ask about an availability of possessor raising in Korean (Y-S Kang 1986, H-S Choe 1986, M-Y Kang 1987, J-S Lee 1992, among many others). Korean allows certain possessors to raise only when an inalienable relation holds including part-whole, kinship, and body part. As shown in (15)a, *John* and *atul* ‘son’ accords with an inalienable relation and then the possessor *John* can raise into the matrix clause. So *John* can be marked with the accusative Case *-ul*. Unlike (15)a, *John* and *uyca* ‘chair’ in (15)a does not hold an inalienable relation so that the possessor *John* cannot raise. Thus, it cannot be marked with accusative Case. A second argument against the Prolepsis analysis comes from a restriction on possessor raising facts for Korean ECMs.

(15) Korean

- a. Bill-i John-ul atul-i chakha-tako sayngkakha-n-ta

Bill-nom John-acc son-nom good-comp think-pres

‘Bill believes John’s son to be good’

- b. *Bill-i John-ul uyca-ka kyenkoha-tako sayngkakha-n-ta
 Bill-nom John-acc chair-nom durable-comp think-pres
 ‘Bill believes John’s chair to be durable’

In stark contrast with Korean ECMs, Madurese does not impose this kind of restriction on possessor raising. Proleptic elements in Madurese can freely be coreferential with all types of possessors. It is not limited to an inalienable possessor. Likewise proleptic objects in English are not subject to a restriction on possessor raising, as illustrated in (16). *Mary* in (16) is not an inalienable possessor to its possessum *chair*:

- (16) We said of *Mary*_i that her_i chair is durable

The third argument against the Prolepsis analysis comes from the fact that Korean ECMs are subject to Island effects, while Prolepsis is not. Look at the examples in (17). In (17)a, *Bill* is coreferential with the first conjunct *he* inside the coordinate structure in the embedded clause. It is not plausible that we tie in *Bill* and *he* by some kind of a copy-raising operation on the coreferential interpretation (Postdam and Runner 2001, Fujii 2004) since it leads to a violation of the Coordinate Structure Constraint: extraction out of a coordinate structure is prohibited.⁷ In the Korean example in (17)b, the allegedly proleptic object *Bill* cannot be co-referential with only the first conjunct *he*. How do we

⁷ Ross (1967) proposese the Coordinate Structure Constraint as offered in (1):

- (1) The Coordinate Structure Constraint
 In a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct.

explain the unacceptability of (17)b? It can easily be explained on a raising analysis since movement out of coordinate structures is blocked.

- (17) a. We said of Bill_i that he_i and you would work together
 b. *Wuli-nun Bill-ul_i ku-wa_i ne-ka (hamkkey) cengcikha-tako mit-ess-ta
 We-top Bill-acc he-and you-nom (together) honest-comp believe-past
 ‘We believed of Bill_i that he_i and you are honest’

Moreover, as seen in (10)b, an occurrence of a resumptive pronoun makes the sentence sound quite bizarre in (18):

- (18) Korean
 ??Mary-ka John-ul_i ku-ka_i cengcikha-tako mit-nun-ta
 Mary-nom John-acc he-nom honest-comp believe-pre
 ‘Mary believes John to be honest’

The fourth argument against the Prolepsis analysis concerns the impossibility of an occurrence of resumptive pronouns in Korean ECMs. All the below Madurese examples in (19) show that resumptive pronouns can freely appear. In essence, proleptic objects can cooccur with resumptive pronouns.

- (19) Madurese
 a. Subject Resumptive Pronoun

Hasan gnera Siti; jhaq abaqəg; məle montor

Hasan think Siti comp she buy car

‘Hans thinks about Siti that she bought a new car’

b. Object Resumptive Pronoun

Siti; ngera Hasan jhaq doktər jhuwa mreksa abaqəng;

Siti think Hasan comp doctor that examine he

‘Siti thinks about Hasan that the doctor examined him’

c. Possessor Resumptive Pronoun

Siti ngera Hasan_i jhaq doktər jhuwa mreksa anaq-əng abqəng;

Siti think Hasan comp doctor that examine child-def he

‘Siti thinks about Hasan that that the doctor examined Hasan’s child’

(Davies 2000)

Last, the fifth argument against the Prolepsis analysis is discussed. It is attributed to the semantic condition on ECMs. The important property of ECMs is that the semantic condition should be met: the embedded clause should characterize a raised nominal like topic (J-M Yoon 1989, K-S Hong 1990, J-H Yoon to appear).⁸ As a rule of thumb, embedded predicates tend to be individual-level predicates rather than stage-level predicates.⁹ Yet a stage-level predicate uncommonly can be allowable in ECMs insofar as

⁸ The same kind of semantic condition is also noted for ECMs in Japanese (Kuno 1975).

⁹ K-H Lee (1988) makes the following generalization for ECMs:

(1) ECM take place when the embedded verb is [+stative], but it does not when [-stative].

The above descriptive generalization seems to be too restrictive to account for the examples like (20) in the text. It needs to be relaxed a little bit. Some [-stative] embedded verbs are compatible with ECMs to the extent that it is not directly related to a particular event meaning.

it meets the semantic condition. The contrast in (20) clearly shows that a stage-level predicate *o-* ‘come’ in (20)b is acceptable since it has a habitual reading of the sort, while it is not in (20)a since it has a specific event reading. It is taken from J-H Yoon (to appear):

(20) Korean

a. *?John-i Mary-lul cikum tuleon-tako sayngkakha-n-ta

John-nom Mary-acc now enter-comp think-pres

‘John thinks Mary is entering right now’

b. John-i Mary-lul nul yelsi-ey on-tako sayngkakha-n-ta

John-nom Mary-acc always 10-at come-comp think-pres

‘John thinks that Mary always comes at 10’

Prolepsis does not pattern with ECMs with respect to the semantic condition: The embedded clause should denote an individual property of a raised nominal. Put differently, ECM denotes a state or a generic event of the sort but not a specific event.¹⁰ Prolepsis, however, does not comply with this sort of semantic restriction. It can denote both a state or a generic event and a specific event as presented in the Madurese Prolepsis

¹⁰ Howard Lasnik and Jairo Nunes (p.c.) raised a question about the generalization of ECMs. ECM may denote a state or a generic event but not a specific event.

- (1) a. *I believe the doctor to examine John
 b. I believe the doctor to have examined John

There is a clear contrast in (1). Unlike (1)a, when the embedded tense in (1)b is past perfective, the acceptability improves considerably even though it means a specific event. I leave this contrast for a future research.

in (13) and (19). Here a relevant English example is given in (11), as repeated in (21).

(21) has the stage-level predicate *visit* and concerns a specific event:

(21) We think of Mary_i that she_i visited Bill

To sum up, we have discussed five arguments against the Prolepsis analysis for Korean ECM. First, ECMs require that a raised nominal should be a subject but Prolepsis does not have to. Second, ECMs exclusively allow an alienable possessor to raise but Prolepsis does not. Third, ECMs are subject to the Island condition including the Coordinate structure, whereas Prolepsis is not. Fourth, the occurrence of resumptive pronouns is not possible in ECMs while it is possible in Prolepsis. Fifth, ECMs conform to the semantic condition: the embedded clause should denote an individual property of a raised nominal, but prolepsis does not.

As a result we reach the conclusion that Korean ECMs are different from Prolepsis. Korean ECMs could not be Prolepsis. The two differ with many respects.

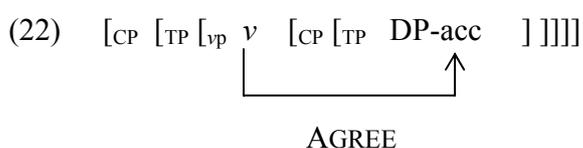
3.3.1.3 Long-distance agreement: An Accusative DP in the Embedded Clause

We, building on Chomsky (2000, 2001), examine another prospect of the base generation account. The AGREE of Chomsky (2000, 2001) is assumed to establish a structural relation subsuming ϕ -feature valuation and/or Case-feature valuation between a probe α and a goal β without movement.¹¹¹² It follows that the Spec-head relation is dismissed as

¹¹ Long-distance agreement is very much like the ECM account under the GB theory.

¹² The examples for AGREE are found in existential constructions as in (1):

a crucial syntactic notion. With this in mind, an embedded subject is base-generated in a theta-position of the embedded clause instead of the matrix clause in 3.1.1. The subject of an embedded clause may be engaged in long-distance AGREE with the matrix v without raising.¹³ As a result, the embedded subject is valued as accusative Case. Yet it stays in an embedded clause. It may be illustrated as in (22):



The following contrast in (7) is left unaccounted for on this kind of non-raising analysis, repeated as in (23):

- (23) a. ?John- i_i ku-ga i ttoktokha-tako mit-nun-ta
 John-nom he-nom smart-comp believe-pres
 ‘John $_i$ believes that he $_i$ is smart’
- b. *John- i_i ku-lul i ttoktokha-tako mit-nun-ta
 John-nom he-acc smart-comp believe-pres
 ‘John $_i$ believes him $_i$ to be smart’

-
- (1) a. *There seems to be two students in the classroom
 b. There seem to be two students in the classroom

The nominal *two students* in (1)b is not in a Spec-head configuration with T for agreement. However, it is in long-distance AGREE with T in the sense of Chomsky (2000). It suggests that the agreeing nominal *two students* does not have to raise to the Spec of TP. Movement takes place for satisfying the EPP feature. Thus, it has nothing to do with Case checking/assignment and ϕ -feature agreement.

¹³ Here the function head v can assign/value accusative Case on a nominal. In Chomsky (2000, 2001), the v here may be equated with v^* .

On this account, regardless of whether the embedded subject *ku* ‘he’ gets nominative or accusative Case, it is assumed to stay in the embedded clause since the accusative subject *ku-lul* ‘he-acc’ in (23) is not involved in movement. Therefore, it is naturally expected that (23)a and (23)b demonstrate the same kind of acceptability with respect to the Principle B effect. However, the fact is that (23)b is not as good as (23)a. This sort of grammatical difference is not anticipated on this base-generation account in conjunction with AGREE.

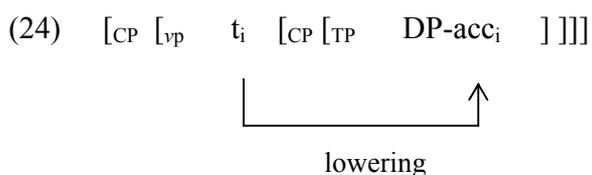
Before we move on to a raising analysis, we address the issue of the domain of AGREE. Bobaljik and Wurmbrand (2003) explicitly argue that when the distance between agreeing elements spans more than one agreement domain, movement is forced. Korean ECM in (22) cannot be considered as an instance of long-distance AGREE. It is impossible to establish an AGREE relation between the matrix *v* and a subject inside the embedded clause. According to Bobaljik and Wurmbrand, in the case of a clausal complement, the lower clause constitutes one agreement domain, and the higher clause another. Recall that here we cannot conveniently truncate the embedded finite clause into something of a (defective) TP/IP because the embedded clause is a finite clausal complement containing a lexical complementizer and overt tense morphology as in (4). Put differently it is not conceivable to conveniently ‘restructure’ a CP into a defective TP/IP in order to make sure that the embedded clause lacks a Case source like T. As we will see in 3.3.3, the accusative embedded subject should raise into the matrix clause so that its accusative case is licensed by the matrix *v* in the embedded clause.

3.3.2 Lowering Account

3.3.2.1 An Accusative Nominal from the Matrix clause to the Embedded clause

As another kind of base generation analysis, we can assume that an embedded subject starts as a matrix constituent and lowers to the embedded clause for a thematic reason.

This is schematically illustrated in (24):



This possibility turns out to be infelicitous on the empirical basis of Case stacking phenomena in Korean. The following instances come from J-M Yoon (1990).

- (25) a. John-un [Sue-eykey ton-i philyoha-tako] sayngkakha-n-ta
 John-top Sue-dat money-nom need-comp think-pres
- b. John-un Sue-eykey-lul [ton-i philyoha-tako] sayngkakha-n-ta
 John-top Sue-dat-acc money-nom need-comp think-pres
 ‘John thinks Sue needs money’

The nominal argument *Sue* in (25)b has two Cases: The inner Case is the dative Case – *eykey* and the outer Case is accusative Case. The former is inherent Case and the latter is structural Case. How can the nominal receive inherent dative Case *-eykey* from the embedded predicate *philyoha-* ‘need’ after being valued as accusative Case on a lowering analysis? Technically speaking, it may not be insurmountable that an argument lowers to

a theta position in the embedded clause in order to get an inherent Case from the embedded predicate (see Bošković and Takahashi 1998 for lowering to a theta position). It is important to note that inherent Case is taken as being closely tied to a theta role. An argument cannot receive inherent Case until it gets a theta role. Recently theta roles are viewed as features.¹⁴ Under this view, an argument is allowed to move from a non-theta or a theta position to a theta position as an instance of feature-driven movement. On the contrary, the real challenge here is how to obtain the correct order: dative-accusative – *eykey-lul* between the two Case markers. The reverse order: accusative-dative *-lul-eykey* is not permissible. To obtain the right order: dative-accusative – *eykey-lul*, the dative Case is forced to break into a nominal with accusative Case. This is because accusative Case is valued in the matrix clause before lowering to the embedded clause. Here, crucially, we turn to Baker’s (1988) Mirror Principle.¹⁵ Mirror Principle requires that accusative Case should be followed by dative Case on a lowering account contrary to the fact since accusative Case valuation comes first before receiving dative Case in syntax.

What we draw out of this is that we cannot yield the right Case sequence of dative-accusative without abandoning the Mirror Principle. Moreover, a lowering account is not favored if it can be accounted for via a raising account. The lowering operation is not viable according to Chomsky’s (1995) Extension Condition. Moreover, it also causes a violation of the PIC (Phase Impenetrability Condition) (Chomsky 2001). Only raising operations are taken to be compatible with the Extension Condition. Now we consider the

¹⁴ See Hornstein (1999, 2000, 2002), Bošković (1994), Lasnik (1995), and Bošković and Takahashi (1998) for extensive discussions.

¹⁵ Baker’s (1988) Mirror Principle states that morphological derivations should directly reflect syntactic derivations and vice versa. Korean is believed to be an agglutinative language with the order of morphemes reflecting that of syntactic derivations.

possibility that an accusative subject stays in an embedded clause during the entire course of derivation without raising into the matrix clause.

3.3.3 Raising Account

Postal's (1974) proposal for raising analysis creates a long-standing debate whether the pronoun *her* in (26) stays in an embedded clause or it raises into a matrix clause. Kuno (1976), based on Japanese, is in line with the insight of Postal (1974) where the embedded subject should raise into the matrix clause.

(26) John believes her_i [t_i to be kind]

In the Principles and Parameters framework, Chomsky (1973, 1981) directly faces up to Postal's proposal and contends that *her* remains in the embedded clause. Chomsky crucially invents a well-known pruning strategy of CP-deletion in order to change a CP into an IP. This is because an IP is not understood as a barrier to government and hence obtains a phenomenon of Exceptional Case Marking in concert with the Projection Principle and the Theta-Criterion. Lasnik and Saito (1991), building on Chomsky (1981), turns the tables again in favor of Postal. They support a raising account of a subject into a matrix clause (see Lasnik and Saito 1991 for comprehensive motivations). Here we cannot extend a rule of CP deletion to Korean because the embedded clause has an overt complementizer and a finite tense marker in the embedded clause. It was discussed in section 1. In the same light, we cannot assume that ECM verbs take an IP complement

instead of a CP complement as a lexical property. The raising account can be in shorthand abbreviated in (27):

$$(27) \quad [_{CP} [_{vp} DP\text{-acc } v [_{CP} [_{TP} t_i]]]]]$$

raising

Here we stand up for a raising account. The raising account that we subscribe to will get clearer as it proceeds on.

3.3.3.1 Kuno's (1976) Classical Arguments for Raising

Kuno (1976) uses a host of tests in order to demonstrate that the accusative embedded subject raises into the matrix clause: adverb placement, scrambling difference, quantifier scope difference, and binding effects.

3.3.3.1.1 Adverb Placement

Here the examples in (28) have the matrix clause adverb *ecey* 'yesterday'. Depending on the Case marker on the embedded subject either nominative or accusative Case, adverb placement differs substantially. The matrix adverb *ecey* 'yesterday' cannot come after the nominative embedded subject *Sue-ka* 'Sue-nom' in (28)a, while it can occur after the accusative embedded subject *Sue-lul* 'Sue-acc' in (28)b.

- (28) a. (Ecey) John-i (ecey) Sue-ka (*ecey) eyppu-ess-tako sayngkakha-ess-ta
 (Yesterday) John-nom (yesterday) Sue-nom (yesterday) pretty-past-comp think-past
- b. (Ecey) John-i (ecey) Sue-lul (ecey) eyppu-ess-tako sayngkakha-ess-ta

(Yesterday) John-nom (yesterday) Sue-acc (yesterday) pretty-past-comp think-past
 ‘Yesterday, John thought that Sue was pretty’

It is noted that the adverb placement is subject to the Clausemate Condition: the adverb should inhabit the same clause that it modifies (K-S Hong 1990; Tanaka 2001). (28)a is ruled out since the matrix adverb *ecey* ‘yesterday’ followed by the nominative embedded subject *Sue-ka* ‘Sue-nom’. It violates the Clausemate Condition. On the contrary, (28)b is ruled in because the matrix adverb *ecey* ‘yesterday’ followed by the accusative embedded subject *Sue-lul* ‘Sue-acc’. It does not violate the Clausemate Condition.

3.3.3.1.2 Scrambling Difference

The contrast in (29) and (30) shows a difference in the possibility of scrambling the embedded subject depending on the Case marker: nominative or accusative Case.

The nominative embedded subject *Sue-ga* ‘Sue-nom’ is not allowed to scramble to the left periphery of the matrix clause in (29)b.

- (29) a. John-_i Sue-ga ttoktokha-tako mit-nun-ta
 John-nom Sue-nom smart-comp believe-pres
 Scrambling of the Nominative Embedded Subject
- b. *Sue-ka_j John-i t_j ttoktokha-tako mit-nun-ta
 Sue-nom John-nom smart-comp believe
 ‘John believes that Sue is smart’

As opposed to (29)b, the accusative embedded subject *Sue-lul* ‘Sue-acc’ is allowed to scramble to the left periphery of the matrix clause.

- (30) a. John-i Sue-lul ttokttokha-tako mit-nun-ta
 John-nom Sue-acc smart-comp believe-pres
 Scrambling of the Accusative Embedded Subject
- b. Sue-lul_j John-i t_j ttokttokha-tako mit-nun-ta
 Sue-acc John-nom smart-comp believe-pres
 ‘John believes that Sue is smart’

3.3.3.1.3 Quantifier Scope Difference

The examples in (31) are involved in the quantifier scope contrast depending on the Case on the embedded subject. The same fact is verified in English (Postal 1974; Lasnik and Saito 1991).

- (31) a. Hyengsa-un myechmyech haksayng-i kanchep-i-lako mit-ess-ta
 Detective-top a few student-nom spy-be-comp believe-past
 ‘The detective believed that a few students were spies’
 ‘The detective believed that there were a few students who were spies’
- b. Hyengsa-un myechmyech haksayng-ul kanchep-i-lako mit-ess-ta
 Detective-top a few student-acc spy-be-comp believe-past
 ‘The detective believed a few students to be spies’
 ‘There are a few students such that the detective believed them to be spies’

The nominative embedded subject *myechmyech haksayng* in (31) is ‘a few students’ is the quantified expression. There is a contrast in the scope of *myechmyech haksayng* ‘a few students’. In (31)b *myechmyech haksayng* ‘a few students’ has a wide scope reading, but not in (31)a. The quantifier scope differences may be attributed to the raising of the accusative embedded subject.

3.3.3.1.4 Binding Effects

As we discussed in section 2.1, (7) is repeated in (32). According to which Case the embedded subject receives, there is a difference in Principle B.

- (32) a. ?John-_i [ku-ga_i ttoktokha-tako] mit-nun-ta
 John-nom he-nom smart-comp believe-pres
 ‘John_i believes that he_i is smart’
- b. *John-_i ku-lul_i [t_i ttoktokha-tako] mit-nun-ta
 John-nom he-acc smart-comp believe-pres
 ‘*John_i believes him_i to be smart’

(32)b is worse than (32)a. This is because the former gives rise to a violation of the Binding Condition B and the latter does not. If this is the case, the matrix subject *John* and the accusative pronoun *ku-lul* ‘he-acc’ in (32)b should belong to the same clause,

namely the matrix clause.¹⁶ Yet the nominative embedded subject *ku-ka* ‘he-nom’ stays inside the embedded clause. It does not violate the Principle B.

3.3.4 More Arguments for Raising

In this section we focus on substantiating a raising account via presenting more arguments; Case mismatch between the DP and its numeral quantifier, agreement between the DP and its numeral quantifier, subject honorification on the embedded verb, and NPI licensing.

3.3.4.1 Case mismatch between the DP and its numeral quantifier

Sportiche (1988) proposes that a phenomenon of quantifier floating should be analyzed as the quantifier stranding by the DP having moved out. In Sportiche’s proposal, stranded quantifier can occur along the path of DP movement. Déprez (1989), drawing on Sportiche’s proposal, assumes that a floated quantifier marks the trace of a moved DP. Consider the below example in (33):

- (33) John-i haksayng-ul sey myeng-i cengcikha-ess-tako sayngkakha-n-ta
 John-nom student-acc three CL-nom honest-past-comp think-pres
 ‘John thinks three students were honest’

As in (33), *haksayng* ‘student’ is base-generated in the embedded subject position and moves into the matrix clause leaving behind its quantifier *sey meyng* ‘three classifier’.¹⁷

¹⁶ Here Clause-mate Condition is used in the sense of Lasnik (2002). As opposed to an infinitive clause, a relation cannot be established between elements across the finite clause boundary.

As a consequence, *haksayng* ‘student’ receives the accusative Case *-ul* in the matrix clause, whereas the stranded quantifier *sey meyng* receives the nominative Case *-i* in the embedded clause. This Case mismatch between the accusative nominal and its nominative stranded quantifier is of importance to our present analysis. It provides an argument in favor of a raising account.¹⁸ The Case mismatch can be easily accounted for.

¹⁷ Sportiche (1988) notes that there are some restrictions on positions where a stranded quantifier cannot occur including the original position of an object. It is illustrated below in (1):

(1) *The burglars could have been arrested all

¹⁸ Consider the examples in (1) and (2) containing floating numeral quantifiers:

- (1) a. Haksayng-i sey myeng-i mwul-ul masi-ess-ta
Student-nom three CL-nom water-acc drink-past
b. *Haksayng-i sey myeng-ul mwul-ul masi-ess-ta
Student-nom three CL-acc water-acc drink-past
c. Haksayng-i sey myeng mwul-ul masi-ess-ta
Student-nom three CL water-acc drink-past
‘Three students drank water’
- (2) a. Sensyangnim-i haksayng-ul sey myeng-ul chingchanha-ess-ta
Teacher-nom student-acc three CL-acc praise-past
b. *Sensyangnim-i haksayng-ul sey myeng-i chingchanha-ess-ta
Teacher-nom student-acc three CL-nom praise-past
c. Sengsayngnim-i haksayng-ul sey myeng chingchanha-ess-ta
Teacher-nom student-acc three CL praise-past
‘The teacher praised three students’

As shown in (1)c and (2)c, floating quantifiers can occur without morphological Case. However, once it bears an overt Case marker, the numeral quantifier should have the same morphological Case as its associated nominal (Y-S Choi 1988). (1)b and (2)b are not acceptable because they do not meet the Case match requirement between the associated nominal and its quantifier. It is worth noting that based on Japanese, Terada (1990) suggests that an associated nominal and its floating quantifier form a constituent, namely QP. This is suggested to account for Case match between the associated nominal and its quantifier. Interestingly it does not hold of ECMs. The example in (33) in the text is repeated, as in (3)c:

- (3) a. John-i haksayng-ul sey myeng-ul cengcikha-ess-tako sayngkakha-n-ta
John-nom student-acc three CL-acc honest-past-comp think-pres
b. John-i haksayng-i sey myeng-i cengcikha-ess-tako sayngkakha-n-ta
John-nom student-nom three CL-nom honest-past-comp think-pres
c. John-i haksayng-ul sey myeng-i cengcikha-ess-tako sayngkakha-n-ta
John-nom student-acc three CL-nom honest-past-comp think-pres
d. ??John-i haksayng-i sey myeng-ul cengcikha-ess-tako sayngkakha-n-ta
John-nom student-nom three CL-acc honest-past-comp think-pres
‘John thinks that three students were honest’

In (3)a and (3)b, a nominal and its quantifier show the Case match; accusative or nominative respectively. Yet (3)c does not display the Case match. In (3)c, the nominal has accusative Case whereas its quantifier has nominative Case. Still it is understood to be grammatical.

Haksyang ‘student’ is valued as accusative Case by the matrix *v* after raising while the stranded quantifier *sey meyng* ‘three classifier’ is valued as nominative Case by the embedded T. Without reference to movement, this kind of Case mismatch in (33) remains perplexing.¹⁹

3.3.4.2 Agreement between the DP and its numeral quantifier

On the raising account, crucially the nominal and its quantifier start together as one constituent. We can easily rule out the example in (34)b, because the classifier *kay* does not match with its associate *haksayng* ‘student’. The classifier *kay* requires being used for counting an object such as *kong* ‘ball’ in (34)b, but not for humans like *haksayng* ‘student’ in (34)a. (34)a illustrates that a mismatch with a classifier causes ill-formedness. There is an agreement relation between the classifier and its associate (Terada 1990, Kitahara 1993, and K-H Gill 2001). The associate nominal should match with a right classifier when necessary. Otherwise it will result in its unacceptability.

(34) a. *John-i haksayng-ul sey kay-ka cengcikha-ess-tako sayngkakha-n-ta

Let us think about how Case checking is fulfilled in (3) on the raising account. In (3)a, the associated nominal and its quantifier raise altogether. So Both of them are valued as accusative Case in the matrix clause. In (3)b, they all stay in the embedded clause. They end up with nominative Case in an embedded clause. As for (3)c, after raising the associated nominal is valued as accusative Case in a matrix clause. Its remaining quantifier in the embedded clause is valued as nominative Case.

¹⁹ Howard Lasnik (p.c.) raised the possibility of the presence of *pro* in the matrix clause.

(1) a. John-i pro sey myeng-i cengcikha-ess-tako sayngkakha-n-ta
 John-nom three CL-nom honest-past-comp think-pres
 b. ??John-i kutul-lul sey myeng-i cengcikha-ess-tako sayngkakha-n-ta
 John-nom they-acc three CL-nom honest-past-comp think-pres
 ‘John believes three of them were honest’

As Lasnik pointed out, if (1)a has *pro* in the matrix clause and its numeral quantifier *sey myeng* ‘three classifier’ in the embedded clause. The *pro* in the matrix clause should be replaced by the lexical pronoun *kutul* ‘they’. Hoji (1985) proposes the replacement of *pro* with the lexical pronoun as a diagnostic for a base-generated *pro*. (1)b shows that it does not succeed in Hoji’s diagnostic for the presence of *pro*.

John-nom student-acc three CL-nom honest-past-comp think-pres

‘John thinks three students were honest’

- b. John-i kong-ul sey kay-ka ppalkah-ess-tako sayngkakha-n-ta

John-nom ball-acc three CL-nom red-past-comp think-pres

‘John think three balls were red’

The present raising account takes advantage of handling the agreement relation between the classifier and its associate. This is because they reside in the embedded clause. Thus, they are local enough in terms of the agreement relation. In (34)a, we can decide that the agreement would not be licensed between the associate *haksayng* ‘student’ and its numeral quantifier *kay*. However, on the base-generation account, the associate *haksayng* ‘student’ belongs with the matrix clause, while its numeral classifier *kay* belongs with the embedded clause. They are too far away from each other to license the agreement relation. They are separated by a clause boundary. The agreeing elements should reside in one agreement domain, namely a finite clause following Bobaljik and Wurmbrand (2003). We pick up this thread again in section 3.4.1.1.

3.3.4.3 Honorification on the Embedded Verb with the Accusative Nominal

Similar to the agreement between the nominal and its numeral quantifier, we find another evidence in support of the raising analysis. Consider the following example in (35)a where the possessor *emeni-lul* ‘mother-acc’ and its possessum *elkwul-i* ‘face-nom’ does not exhibit the Case match:

- (35) a. Sue-ka emeni-lul elkwul-i kowu-si-tako sayngkakha-n-ta

Sue-nom mother-acc face-nom pretty-H-comp think-pres

‘Sue thinks her mother’s face is pretty’

- b. *Sue-ka tongsayng-ul elkwul-i kowu-si-tako sayngkakha-n-ta

Sue-nom sister-acc face-nom pretty-H-comp think-pres

‘Sue thinks her sister’s face is pretty’

It is a well-documented fact that in Korean, a possessor is to have the same overt Case marker with its possessum (see Maling and Kim 1992; Y-J Kim 1989; J-H Yoon 1989; S-E Cho 2001). It is presented in (36):

- (36) a. John-i elkwul-i/*ul tachi-ess-ta

John-nom face-nom/*acc hurt-past

‘John’s face got hurt’

- b. Bill-i John-ul elkwul-ul/*i ttayli-ess-ta

Bill-nom John-acc face-acc/*nom hit-past

‘Bill hit John’s face’

In (36)a and (36)b, the possessor *John* and its possessum *elkwul* ‘face’ should display the Case match: nominative and accusative Case respectively. Returning to (35) with the honorific morpheme *–si* on the embedded predicate, the honorific morpheme *–si* is licensed by the accusative nominal *emni-lul* ‘mother-acc’. It is important to recall that an honorific morpheme is taken to be an instance of the subject-verb agreement (J-H Yoon 1990; J-S Kim 1997) as we discussed in section 1. How is the honorific morpheme *–si* on

the embedded predicate *kop-* ‘pretty’ licensed by the accusative nominal *enemi* ‘mother’ in (35)a? The answer can be found on the present raising analysis. The possessor *enemi* ‘mother’ starts in the subject position of the embedded clause along with its possessum *elkwul* ‘face’. Before raising into the matrix clause, the possessor *enemi* ‘mother’ can establish the agreement relation with the embedded predicate *kop-* ‘pretty’. Note that they reside in the local domain; hence the license of the subject-honorification. In the same manner, we can account for the unacceptability of (35)b. Even though on the surface *tongsayng* ‘younger sister’ is marked with accusative Case *-lul*, it can be assumed that it resides in the embedded clause on the early stage of the derivation. Importantly, during the course of the derivation the accusative subject is adjacent to the embedded predicate so that it can reject licensing the subject-honorification. This causes the example in (35)b to be unacceptable.

What happens in (35)a is that after licensing honorification, the possessor *enemi* ‘mother’ raises onto the matrix clause leaving its possessum *elkwul* ‘face’ behind in the embedded clause. Therefore, the possessor and its Possessum are valued its Case feature by the different functional head: the matrix *v* and the embedded T each. The possessor receives accusative Case, while its possessum receives nominative Case.

What we can draw from the above paradigm in (35) is that agreement cannot necessarily mean Case valuation in Korean if honorification is assumed to be a kind of ϕ -feature agreement.

3.3.4.4 NPI Licensing

In Korean, there is a Negative Polarity Item (NPI) *-pakkey*. It roughly means the semantics of ‘only’ when it is used with the negative element. Kuno and Y-J Kim (2001) motivate the necessity of the Clausemate Condition on *-pakkey*: a sentence that contains *-pakkey* must have a clausemate negative element at SS. The NPI *-pakkey* ‘except’ must be licensed by a clausemate negative element, as shown in (37):

- (37) a. *Sue-pakkey chincelha-ess-ta²⁰
 Sue-only kind-past
 ‘Only Sue was kind’
- b. Sue-pakkey chincelhaci anh-ass-ta
 Sue-only kind neg-do-past
 ‘Only Sue was kind; No one but Sue was kind’
- c. Sue-pakkey an chincelha-ess-ta
 Sue-only neg kind-past
 ‘Only Sue was kind; No one but Sue was kind’
- d. *John-pakkey Sue-ka satang-ul mek-ci ahn-nun-tako mit-nun-ta
 John-only Sue-nom candy-acc eat neg-pres-comp believe-past
 ‘Only John believes that Sue eats candies’

²⁰ When we replace *-pakkey* with *-man*, (37)a becomes acceptable, as in (1):

- (1) Sue-man chincelha-ess-ta
 Sue-only kind-past
 ‘Only Sue was kind’

Even though roughly the two morphemes, *-man* and *-pakkey* are assumed to denote a similar semantics of ‘only’, they demonstrate the different syntactic behavior. To the exclusion of *-man*, *-pakkey* is taken as NPIs since it should satisfy the Clausemate Condition.

The NPI *-pakkey* in (37)a is not licensed, because it does not have a negative element as a clausemate. The NPI *-pakkey* in (37)b and (37)c is licensed because the Clausemate Condition is met.²¹ (37)b is an instance of a long-form negation, while (37)c is a short-form negation. (37)d is not acceptable. The NPI *-pakkey* is in the matrix clause, while the negative element is in the embedded clause. So it does not satisfy the Clausemate Condition on *-pakkey*.

All the examples in (38) have the matrix clause adverbial *motwu* ‘all’. The accusative embedded subject *Mary-lul* is allowed to come before *motwu* ‘all’ in (38)c, but not the nominative embedded subject *Mary-ka* in (38)b. Note that here the adverbial *motwu* ‘all’ indicates the edge of the matrix clause.

- (38) a. Kutul-un motwu Mary-ka chakha-tako mit-ess-ta
 They-top all Mary-nom good-comp believe-past
- b. *Kutul-un Mary-ka motwu chakha-tako mit-ess-ta
 They-top Mary-nom all good-comp believe-past
- c. Kutul-un Mary-lul motwu chakha-tako mit-ess-ta
 They-top Mary-acc all good-comp believe-past
 ‘They all believe that Mary is good’

Now we substitute *Mary-pakkey* ‘Mary-except’ for the nominative embedded subject *Mary-ka* in (38)a and the accusative embedded subject *Mary-lul* in (38)c separately, as in (39):

²¹ It is reported that Japanese has a similar construction such as *sika-nai* construction.

- (39) a. Kutul-un motwu Mary-pakkey chakha-ci ahn-tako mit-ess-ta
 They-top all Mary-except good not-comp believe-past
- b. *Kutul-un Mary-pakkey motwu chakha-ci ahn-tako mit-ess-ta
 They-top Mary-except all good not-comp believe-past
 ‘They all believe that only Mary is good’

Here is a clear contrast in (39): (39)a is acceptable, while (39)b is not. (39)a satisfies the Clausemate Condition, because *Mary-pakkey* and the negative element *ahn* belong to the embedded clause. On the other hand, (39)b violates the Clausemate Condition. This is because *Mary-pakkey* raises into the matrix clause. Thus, it no longer resides in the embedded clause with the negative element *ahn*. Note that when a nominal has the NPI *-pakkey*, it cannot have an overt structural Case.²² The examples in (39) present an argument consistent with the raising analysis. Despite the absence of the overt accusative Case marker on *Mary-pakkey* in (39)b, when we return to (38)c, we find out that *Mary-pakkey* followed by *motwu* ‘all’ in (39)b, should be understood as the accusative embedded subject.

Thus far, we discussed additional arguments pointing to the one direction that the accusative embedded subject starts in the embedded clause and raises to the matrix clause. Thus it displays a membership change from the embedded clause to the

²² *Sue* with the NPI *-pakkey* cannot take either nominative or accusative Case, as shown in (1). Structural Case cannot be morphologically realized when the nominal has the NPI *-pakkey*. Generallyk the structural Case marker and the focus-related marker including *-to* ‘also’, *-cocha* ‘even’ and the like, are mutually exclusive.

- (1) a. *John-i Sue-pakkey-ka chincelhaci anh-tako mit-ess-ta
 John-nom Sue-only-nom kind not-comp believe-past
- b. *John-i Sue-pakkey-lul chincelhaci anh-tako mit-ess-ta
 John-nom Sue-only-acc kind not-comp believe-past
 ‘John believed that only Sue is kind’

matrix clause during the course of the derivation. On the one hand, as for the two facts of the agreement between the nominal and its numeral quantifier, and the subject honorification on the embedded verb, the accusative embedded subject should reside in the embedded clause. On the other hand, as for the Clausemate Condition for the NPI licensing, the accusative subject should reside in the matrix clause.

All in all, the raising account can capture the relevant properties of ECMs. Finally, we discuss where raising takes place. Chomsky (1995) proposes that under the Move-F hypothesis, feature movement exists and formal features move, leaving properties relevant to the scope behind. Lasnik (1995) develops and extends Chomsky's proposal to the anaphor binding, Negative Polarity Licensing, and bound pronoun licensing.²³ On this ground that the covert movement does not create a new binding and licensing configuration, we assume that the raising of the nominal expression in ECMs transpires overtly.²⁴

3.4 Landing Site of Raising

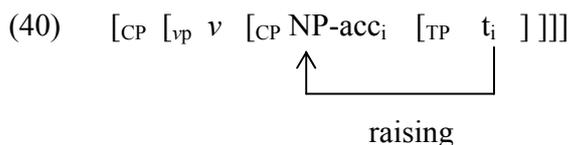
3.4.1 Raising to the Spec of CP in the Embedded Clause

Now we examine the previous raising analysis by J-S Lee (1991, 1994). We carefully examine the landing site of the Spec of CP in J-S Lee's proposal. J-S Lee poses a fair question about where an accusative embedded subject lands when it raises. Does it move out of the embedded clause and raise into the matrix clause? J-S Lee, adopting Massam (1984, 1985) where the extra (higher) Spec of CP is created and it is considered to be

²³ See Branigan (1999), Yatsushiro (1999), and Watanabe (2000) suggesting that binding effects may be captured by covert movement but not scope.

²⁴ Unlike covert movement, overt movement is involved in pied-piping. The entire category will be moved along with the formal feature (Chomsky 1995).

ambiguous between an A and an A' position, proposes that the accusative embedded subject moves into the Spec of CP.²⁵ In other words, it does not quite leave out of the embedded clause. It can be schematized below:



J-S Lee presents two arguments for his proposal that the accusative embedded subject should raise to the Spec of CP. First, it is linked to the fact that idiomatic expressions are not compatible with focus constructions, as in (41):

- (41) a. John-i cakun kochwu-ka mayp-tako sayngkakha-n-ta
 John-nom little pepper-nom spicy-comp think-pres
 ‘John thinks that the small pepper is spicy’ (literal reading)
 ‘John thinks that the small person is strong’ (idiomatic reading)
- b. John-i cakun kochwu-lul mayp-tako sayngkakha-n-ta
 John-nom little pepper-acc spicy-comp think-pres
 ‘John thinks that small pepper is spicy’ (literal reading)

When the idiom chunk *cakun kochwu* ‘little pepper’ is marked with nominative Case, it is ambiguous between the literal and idiomatic reading in (41)a. On the contrary, the idiom

²⁵ Massam (1985) creates two Spec positions in the CP. The higher Spec of CP is for the landing site of the embedded subject in ECMs and the lower Spec of CP is for *wh*-movement. The higher Spec of CP can be governed by the matrix verb and hence can be assigned Case since she assumes that the higher Spec is not governed by the complementizer.

chunk *cakun kochwu* 'little pepper' is marked with accusative Case, it loses the idiomatic reading in (41)b. Only the literal reading is available. J-S Lee ties a loss of the idiomatic reading with the nature of the accusative Case in ECMs. Following J-Y Yoon (1987), J-M Yoon (1989), J-S Lee explicitly argues that the accusative Case in ECMs is a focus marker not a Case marker. That is the reason why (41)b lacks the idiomatic reading unlike (41)a. By nature the idiom chunk is not referential. It is not compatible with a focus interpretation: exhaustive interpretation (see chapter 2 for relevant discussions).

As a further step, he proposes that *cakun kochwu* 'little pepper' in (41)b should raise to the Spec of CP in the matrix clause. This is because the Spec of CP is understood as a focus licensing position. For that matter, Schütze (1995, 2001) and S-M Hong (2002) argue that the Spec of CP is not necessarily considered to be a possible focus licensing position in Korean. The Case-checking/assigning functional heads such as T and *v* are optionally permitted to have a focus feature.²⁶ As a result, a focus reading could be available at the Spec of TP and the Spec of *v*P besides the Spec of CP.

His second argument comes from the Projection Principle (Chomsky 1981) and the Theta Criterion (Chomsky 1986) in support of raising to the Spec of CP analysis for ECMs²⁷. Prior to the influential work such as first, the split Infl analysis: Infl split into T and Agr_S (Pollock 1989) and second, the Split VP analysis: VP into *v*P/Agr_OP and VP (Larson 1988), it is assumed that the accusative Case assignment for an object is done by the lexical verb. On the pre-minimalism assumption J-S Lee adopts, the raising of the embedded subject to the object position causes a problem with the Projection Principle

²⁶ Presumably in the case of ECMs, to account for the loss of a literal reading, we are forced to say that *v* in the matrix verb should have a focus feature.

²⁷ Chomsky (1981) states the Projection Principle like the following: representations at each syntactic level (i.e., DS, SS, and LF) are projected from the lexicon, in that they observe the subcategorization properties of lexical items.

and the Theta Criterion. First, the object position is not subcategorized by the matrix verb at DS and later it is subcategorized at SS in the case of ECMs. It creates a violation of the Projection Principle. Second, the raising of the embedded subject to the object position in the matrix clause means the movement to another theta position. It violates the Theta Criterion.

Next we think through J-S Lee's reasoning for raising to the Spec to CP in minimalism. The accusative Case of the object is assumed to be assigned/checked by the functional head: Agr_O by analogy of nominative Case assignment/checking by Agr_S in a Spec-head relation. The lexical verb is not responsible for accusative Case assignment like J-S Lee assumes. This new view of accusative Case assignment/checking makes the raising analysis of the ECM more tenable. The accusative embedded subject in the ECM is assumed to raise into an athematic (non-thematic) Case assignment/checking position the same way that a regular direct object raises out of the VP into the Spec of Agr_OP (see Lasnik and Saito 1991 for extensive details).

On the minimalism assumption, the raising account of the ECM is not at odds with both the Projection Principle and the Theta Criterion. As Lasnik and Saito explicitly propose, we assume that the embedded subject raises into an athematic (non-thematic) Case assignment/checking position in the matrix clause.²⁸

3.4.1.1 Problems with Raising into Spec of CP in the Embedded Clause

²⁸ There is a non-thematic position not only in the ECM but also in the so-called copy raising construction (see Potsdam and Runner 2001, Fujii 2004). The latter is presented in (1):

- (1) Sue seems as if/like she is kind

In (1) the matrix subject *Sue* is not semantically selected by the matrix verb *seem*.

J-S Lee (1991, 1994) has difficulty in accounting for the Principle B in (7), repeated as in (42) and the Clausemate Condition for NPI licensing in (39), repeated as in (43):

- (42) a. ?John-*i*_i ku-*ga*_i ttokttokha-tako mit-nun-ta
 John-nom he-nom smart-comp believe-pres
 ‘John_i believes that he_i is smart’
- b. *John-*i*_i ku-*lul*_i ttokttokha-tako mit-nun-ta
 John-nom he-acc smart-comp believe-pres
 ‘John_i believes him_i to be smart’

According to J-S Lee, the accusative pronoun *ku-lul* ‘he-acc’ in (42) resides in the embedded clause since it raises into the Spec of CP in the embedded clause. If this is the case, the accusative pronoun *ku-lul* ‘he-acc’ in (42) is not located in the matrix clause with the subject *John-i* ‘John-nom’. It wrongly predicts that it will satisfy the Principle B, counter to the fact. The unacceptability of (42)b, however, suggests that the pronoun *ku-lul* ‘he-acc’ should raise into the matrix clause, and hence it is high enough to yield the Principle B effect.²⁹

- (43) a. Kutul-un motwu Mary-pakkey chakha-ci ahn-tako mit-ess-ta
 They-top all Mary-except good not-comp believe-past
- b. *Kutul-un Mary-pakkey motwu chakha-ci ahn-tako mit-ess-ta
 They-top Mary-except all good not-comp believe-past
 ‘They all believe that only Mary is good’

²⁹ See footnote 16.

Along a similar vein, even after raising, *Mary-pakkey* ‘Mary-except’ in (43) resides in the embedded clause. It has the negative element *ahn* in the same clause. (43)b is predicted to be as good as (43)a in accordance with the Clausemate Condition. Yet it is not born out in (43)b. This indicates that after raising *Mary-pakkey* ‘Mary-except’ in (43)b, it no longer stays in the embedded clause.

At first glance, the raising to the Spec of CP seems appealing. This is because unlike the raising to the Spec of *v*P, it appears to steer clear of a potential violation of the ban on improper movement and the locality constraint of successive cyclic movement.

Let us address this account in terms of Chomsky’s (2000, 2001) new operation of AGREE. When the embedded subject raises to the Spec of CP, namely the phase edge, it is visible to the matrix *v*.³⁰ Thus the probe *v* in the matrix clause can check/assign the Case feature of the goal DP at the edge of the embedded clause. Even though the theory permits establishing this kind of long-distance agreement including Case checking across the clause boundary (not to mention, we put aside a general assumption that a long-distance A movement is not possible), it cannot be related to the effect of Principle B and the Clausemate Condition for NPI licensing as mentioned above. Accordingly, the accusative embedded subject is forced to move out of the lower clause and raise into the higher clause.

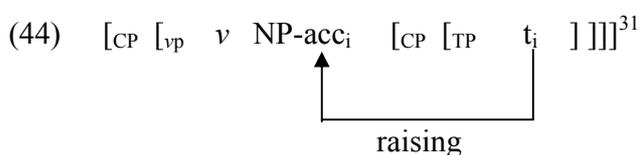
In the following section, we discuss that the embedded subject in the ECM raises into the matrix clause leaving out of the embedded clause.

³⁰ Chomsky (2001) proposes the Phase Impenetrability Condition:

- (1) Phrase Impenetrability Condition
The domain of a phase is only accessible to syntactic operations until the head of the next phase is introduced.

3.4.2 Raising to Spec of vP in the Matrix Clause

In the previous section we examined the raising analysis of J-S Lee (1991, 1994) where the embedded subject raises to the Spec of CP in the embedded clause. It turns out that we cannot adequately deal with the Principle B effect and various kinds of the Clausemate Condition. Therefore, we assume that the embedded subject raises across the embedded clause into the matrix clause. It is represented in (44):



Let us first consider how we can explain the paradigm in (4), repeated as in (45):

- (45) a. John-i Mary-ka cengcikha-ess-tako sayngkakha-n-ta
 John-nom Mary-nom honest-past-comp think-pres
- b. John-i Mary-lul cengcikha-ess-tako sayngkakha-n-ta
 John-nom Mary-acc honest-past-comp think-pres
- ‘John believes that Mary was honest’

In English, the raising of the accusative embedded subject is well motivated for the Case reason. This raising is understood as obligatory. As in (46), the nominative embedded subject cannot be Case licensed inside the infinitival embedded clause:

³¹ We discuss how an embedded subject can move to a matrix clause in a successive cyclic fashion without violating the PIC (Chomsky 2001) in section 3.4.2.4.

- (46) a. John believes him to be honest
 b. *John believes he to be honest

In contrast to English, The Korean ECM can be deemed as optional instead of obligatory. The examples in (45) show that the embedded subject can be marked with either nominative or accusative Case. When we consider that the embedded clause is finite, it is surprising that the embedded subject can be marked with accusative Case in (45)b. Note that in (45)a, the embedded subject is marked with nominative Case.

3.4.2.1 Default Case Approach

Lasnik (2002) adopts a view of nominative Case as a default Case in his allusion of Korean/Japanese ECMs (see also Y-S Kang 1986; M-Y 1988; Y-J Kim 1990; Y-J Kim 2002). Under a default Case approach, nominative Case is assigned whenever there is no Case available to an NP in order to meet the Case Filter.³² Therefore, T cannot be assumed to be a Case assigning head.

Let us return to the example in (45)a. The embedded subject *Mary* does not raise into the matrix clause. It stays in the embedded clause. *Mary* is not assigned any Case in the embedded clause. As a last resort, it is assigned nominative Case by virtue of a default Case strategy. So, it satisfies the Case Filter.

Although the default Case account seems to handle the example in (45)a, it faces a problem with accounting for Case stacking.

³² Chomsky (1995, 2000, 2001) acknowledges the implausibility of the Case Filter. It is to be subsumed into the legibility condition: feature interpretability at the interfaces and feature valuation

- (47) John-eykey-ka saca-ka mwusepta
 John-dat-nom lion-nom scary
 ‘Lions are scary to John; John is afraid of Lions’

As can be seen in (47), the experiencer *John* has dative Case *-eykey*. If nominative Case is default Case, how can the dative marked *John-eykey* stack nominative Case *-ka* above dative Case *-eykey*?

- (48) Kongcang-eyse-ka pwul-i na-ass-ta
 Factory-at-nom fire-nom break out-past
 ‘The fire broke out at the factory’

Moreover, as in (48), the nominative Case *-ka* is stacked on the PP *kongcang-eyse* ‘factory-at’. Again if nominative Case is default Case, it should not be available to the PP which is not even an NP. As we discussed in chapter 2 in detail, the stacked Case is analyzed as structural Case with a focus flavor. If as a default Case strategy, nominative Case is assigned to only an NP lacking Case, Case stacking should not be existent in Korean.

3.4.2.2 Optionality of Case Assignment/Valuation

Under minimalism (Chomsky 1995, 2000, 2001), uninterpretable/unvalued features of an NP is a driving force for agreement operation by which the uninterpretable/unvalued

features are deleted/valued. Otherwise, a derivation containing uninterpretable/unvalued features will crash at the interface, because the probe T contains unvalued ϕ -features. The derivation is not allowed to proceed on until T values its unvalued ϕ -features in (49): In other words, unvalued feature should get valued before another unvalued features are introduced in the derivation (Bošković and Lasnik 1999). It seems to go along with the strict cyclicity of current derivational theories. For example, it is required by the Earliness Condition (Pesetsky 1989, Ura 1996, Collins 1999, 2001): If it is possible for an operation to apply, then it must apply.³³

(49) [TP T [VP subject V ...]]

Consider the examples in (50):

- (50) a. *_{TP} John_i seems [_{CP} that [_{TP} t_i is honest]]]
 b. *_{TP} seems [_{CP} that [_{TP} John_i is honest]]]

As in (50)a, it is the evident instantiation of the Earliness Condition. This condition requires that a checking relation should be established without any delay when possible. Chomsky (1995) and Lasnik (1995) suggest that the example in (50)a is not acceptable

³³ The Earliness Condition goes against Chomsky's (1993) Procrastinate. The Principle of Procrastinate states as follows:

- (1) Covert movement is less costly than overt movement

According to Procrastinate, overt movement is possible unless the derivation will otherwise crash. Recently, Chomsky (2000) claims that there is no covert movement and introduces a new operation AGREE establishing an agreement relation between two elements without movement.

for the following reason. The NP *John* has a Case feature and so does finite T. Some point in the derivation is represented like (50)b. At this point, the Case feature of both the NP and the embedded T establishes a checking relation, and hence is deleted. As a result, it leaves *John* without Case feature. The Case feature of the matrix T cannot be checked, even though *John* moves to the Spec of TP due to the EPP feature of T irrespective Case checking. A Case feature is frozen in place when it is checked (Chomsky 1995, 280). Put this in terms of Chomsky's (2000, 2001) theory of AGREE, the Case feature of *John* is not active when it is valued by the operation AGREE with the embedded T. It is not able to establish another agreement relation with the matrix T. Consequently, the matrix T's ϕ -feature remains unvalued. It causes to crash.

Now consider the examples in (51). They demonstrate an availability of Hyperraising:

- (51) a. Halapeci-kkeyse cengcikha-si-ess-ta
 Grandfather-hon.nom honest-hon-past
 'My grandfather was honest'
- b. Halapeci-kkeyse cengcikha-si-ess-tako mite-ci-si-n-ta
 Grandfather-hon.nom honest-hon-past-comp believe-pass-hon-pres
 'It is believed that my grandfather was honest'
- c. Halapeci-kkeyse cengcikha-si-ess-tako mite-ci-si-n-kes kathu-si-ess-ta
 Grandfather-hon.nom honest-hon-past-comp believe-pass-hon-nm seem-hon-past
 'It seemed that it is believed that my grandfather was honest'

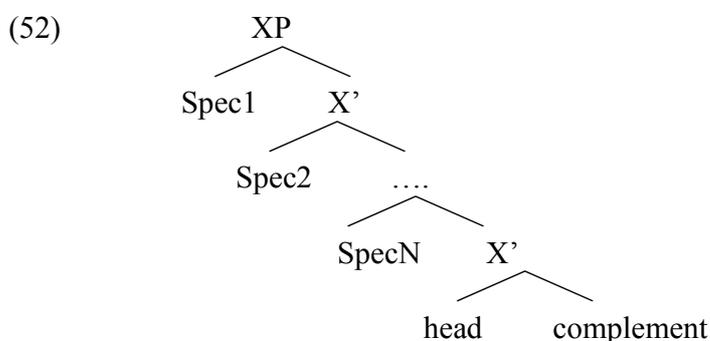
As opposed to the English example in (50), Korean allows Hyperraising: raising of a subject out of a finite clause, as presented in (51)b and (51)c.³⁴ The subject *halapeci* ‘grandfather’ in (51)a is in agreement with the matrix T. The matrix predicate *cengcikha-* ‘honest’ has the honorific marker *-si*. In (51)b, the subject *halapeci* ‘grandfather’ is in agreement with both the lower and higher T. Both the lower predicate *cengcikha-* ‘honest’ and the higher one *miteci-* ‘believe-passive’ bear the honorific marker *-si* each. Furthermore, in (51)c, the subject *halapeci* ‘grandfather’ is in agreement with all three Ts: the lower, intermediate, and higher T. Again, all three predicates have the honorific morpheme *-si* as an instance of subject-verb agreement separately. Note that all the Ts in (50)c are finite rather than infinitive. Here we have a state of affairs that a single goal DP enters into an agreement relation with multiple probe Ts. Importantly, we have to allow the goal to keep active until it gets through with agreement with the last probe, presumably the highest one.

Ura (1994) demonstrates that many languages behave differently from English with respect to Hyperraising. Hyperraising is attested in various languages including Romanian, Japanese, Mandarin Chinese, Moroccan Arabic, Persian, and Korean just to name a few.

A question arises as to how we can capture the typological difference regarding a possibility of Hyperraising. It may be related to a parametric difference in terms of the effect of the feature after feature checking (Chomsky 1995, 286). By and large, there may

³⁴ Traditionally Chomsky (1973) proposed the Tensed S Condition and the Specified Subject Condition. Consequently, long-distance A movement is completely precluded by these two conditions. The impossibility of long-distance A movement is substantially challenged by Ura (1994) on the empirical grounds. See Fujii (2004) for the theory of Cyclic Chain Reduction. And see also Ferreira (2000) and Rodrigues (2004) where A-movement out of a finite clause is argued to be possible, based on Brazilian Portuguese.

exist two different types of languages. In the former, the Case feature of the head (Case checking head such as T) should be deleted after Case feature checking. In the latter, the Case feature of the head can optionally be deleted after Case checking.³⁵ This account of optionality in deleting the Case feature is proposed for multiple Case checking in various languages including Japanese, as schematically illustrated in (52).³⁶ Here we have the context where a single probe engages a relation with multiple goals:



This parametric property may naturally extend to Hyperraising. Hyperraising cannot be possible in the first type of language like English. On the other hand, it can be available in the latter type of language like Korean. The Case feature of the DP is not necessarily deleted after Case checking. So, the Case feature is allowed to re-enter into another Case checking relation. This may be a main reason behind an availability of Hyperraising in some languages.

³⁵ In the Principles and Parameters theory, the heads: T and v are assumed to have the property of assigning structural Case. After the advent of the minimalist program (Chomsky 1995), the functional heads: T and v are taken to check a Case feature in lieu of assigning Case. In the AGREE-based system (Chomsky 2000, 2001), the unvalued Case feature of the probes T and v is assumed to receive a specific value from a goal.

³⁶ Chomsky (1995) notes that the theory of the bare phrase structure does not impose any restriction on multiple specifiers. There exist multiple *wh*-questions in languages including Bulgarian (Rudin 1988; Bošković 1997; Richards 1997; Pesetsky 2000; among others). It means that C is allowed to have more than one specifier with respect to the parameters of *wh*-movement.

Here we, departing from Ura (1994, 1995), appeal to the notion of a parameter for Case valuation so that we can differentiate Hyperraising languages from Non-Hyperraising languages. We propose parametric difference in the form of (53) for the optionality of Case valuation under Chomsky (2000, 2001).³⁷

(53) Parameter of Case valuation

Case valuation can optionally take place through AGREE^{38 39}

According to the parameter of Case valuation, languages seem to vary as to whether AGREE implies Case valuation: Hyperraising languages show that AGREE does not imply Case valuation while Non-hyperraising languages do. The latter allows the unvalued Case feature of the goal DP to remain unvalued, when the unvalued ϕ -feature in the probe T_1 is valued by the goal's ϕ -feature via AGREE. Its remaining unvalued Case feature enables the goal to establish another AGREE with the next higher probe T_2 . The goal DP's ϕ -feature can value the unvalued ϕ -feature in the probe T_2 via second AGREE. Nevertheless, the Case feature of the goal stays unvalued. At last, third AGREE involves both ϕ -feature valuation and Case feature valuation between the probe T_3 and the goal.

³⁷ Yang (2002) suggests a similar idea independently.

³⁸ Generally, the notion of optionality is taken to be a touchy issue in minimalism. We will not seek some specific justification of optionality in the given framework.

³⁹ It is worth noting that Chomsky (2000, 2001) proposes that AGREE deletes Case only when ϕ -feature is complete. Consider the example in (1). It is taken from Chomsky (2001):

- (1) There seem to have been caught several fish

The past participle *caught* is assumed to be ϕ -incomplete so that it cannot value and delete the Case feature of the DP *several fish* via AGREE. The DP enters into another AGREE with the matrix T and hence its Case is deleted due to T's ϕ -completeness. As shown in (1), AGREE does not always mean Case valuation. In various places, a correlation between Case valuation/deletion and probe's ϕ -completeness is questioned (Carstens 2001).

In (55), the goal DP is assumed to raise to the Spec of the probe T_1 , the probe T_2 , and the probe T_3 respectively before ϕ -feature and/or Case feature valuation. Take a close look at each stage of derivation. In (55)a, the ϕ -feature valuation of the probe T_1 takes place by the goal DP, but the Case valuation of the goal DP does not. Similar to (55)a, only ϕ -feature valuation occurs in the probe T_2 with the goal DP's Case feature unvalued in (55)b. So the goal DP still remains active. At the last stage in (55)c both ϕ -feature and Case valuation is carried out between the probe T_3 and the goal DP. At last, the goal DP is Case valued as nominative.

For the derivation to proceed in this fashion, there is one issue we need address. Under the mechanism of AGREE in Chomsky (2000, 2001), a Case feature is not taken as an independent syntactic object. Instead, it is understood as part of a ϕ -feature matrix. It follows that the goal's Case feature may be assigned only when a ϕ -feature set of the probe is valued. In essence, Case feature valuation is assumed to piggyback on ϕ -feature valuation. By contrast, for example, Bhatt (2001) and Lopez (2002) look at the operations of Case feature valuation and ϕ -feature valuation differently. They propose that these two operations should be treated as a distinct operation, instead of a single operation. Hiraiwa (2002) decomposes AGREE under his theory of Multiple AGREE. In the present analysis, Case valuation may not be always accompanied by ϕ -feature valuation in such language as Korean as stated in the parameter of Case valuation in (53).

The agreement of multiple probes with a single goal in (55) is at variance with the uniqueness of licensing (see Hoekstra 1991 for the Uniqueness of Licensing Principle).⁴²

⁴² Hoekstra (1991) proposes a bi-uniqueness requirement on licensing relations:

(1) The Uniqueness of Licensing Principle

Yet Chomsky (1995), following Ura (1994, 1995) and Koizumi (1994), accepts a possibility of multiple specifiers insofar as a head is engaged in multiple checking relations. Under the theory of Attract, Ura (1996, 2000) develops a theory of multiple feature checking. Adopting a new syntactic mechanism of AGREE, Hiraiwa (2000, 2001) and Nomura (2002) proposes a theory of Multiple Agree.⁴³ The uniqueness of licensing has lost ground on the conceptual and empirical basis recently. The multiple specifier hypothesis is well incorporated in the minimalist framework.⁴⁴ The minimalist framework allows a syntactic relation to be established between a single probe and multiple goals. If this is the case, it does not seem implausible that a single goal involves a syntactic operation, that is, AGREE with multiple probes.

3.4.2.3 Caseless Nominal

It is possible in Korean that nominals can come without an overt Case marker on them shown in (56):

Licensing relations are one-to-one relations

Prior to Hoekstra's proposal, Chomsky (1986) sets forth the Chain Condition as follows:

- (2) The Chain Condition
In a maximal chain $C = \{\alpha_1, \dots, \alpha_n\}$, α_n occupies its unique theta position and α_1 its unique Case-marked position.

The Chain Condition encompasses the Theta Uniqueness Condition and the Case Uniqueness Condition. Within minimalism, it is far from clear whether we need to maintain a bi-uniqueness condition which is a residue in the Principles and Parameters framework.

⁴³ Hiraiwa (2000, 2001) proposes Multiple Agree as a single simultaneous operation:

- (1) Multiple AGREE
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

⁴⁴ Even the principled property of X-bar theory does not preclude multiple specifiers (Chomsky 1986). Multiple specifiers are possible. It can be excluded by a stipulation but not in principle.

- (56) a. John-ka hakkyo-ey ka-ass-ta
 John-nom school-to go-past
- b. John hakkyo-ey ka-ass-ta
 John school-to go-past
 ‘John went to school’

Even though the nominal *John* in (56)b occurs with no Case marker, *John* is still understood as the subject of the verb *ga-* ‘go’. One nominal without Case in (56)b does not seem to have an effect on the grammaticality. Now we have the instance in (57)b where multiple nominals including the subject *John*, the indirect object *Mary* and the direct object *chayk* ‘book’ all appear without any overt Case marker. They are placed in the unmarked word order.

- (57) a. John-i Mary-eykey chak-ul cwu-ess-ta
 John-nom Mary-dat book-acc give-past
- b. John Mary chak cwu-ess-ta
 John Mary book give-past
 ‘John gave Mary the book’

The example in (57)b is understood exactly like (57)a at least with respect to the grammatical relation where all the three nominals are overtly Case marked: the Caseless

John as a subject, the Caseless *Mary* as an indirect object, and Caseless *chayk* ‘book’ as a direct object.⁴⁵

The example in (58) has the verb *elwumanci-* ‘stroke’ with both the honorific marker *-si* and the past tense morphology *-ess*.

- (58) a. Halemi-kkeyse sonca-lul elwumanci-si-ess-ta
 Grandmother-nom.hon grandson-acc stroke-hon-past
- b. Halemi sonca-lul elwumanci-si-ess-ta
 Grandmother grandson-acc stroke-hon-past
- ‘Grandmother stroked her grandson’

As in (58), the subject *halmeni* ‘grandmother’ licenses an honorific marker *-si* as an instance of subject-verb agreement, though the subject *halmeni* ‘grandmother’ does not have an overt Case marker. What happens to the uninterpretable/unvalued Case feature of *halmeni*? The answer might be that on the feature-checking theory, the uninterpretable Case feature is simply erased. So, it can avoid a crash. On the AGREE theory, the unvalued Case feature is eliminated without experiencing the valuation of the unvalued Case feature. It results in convergence. It is compatible with the parameter of Case valuation in (53). An occurrence of the subject-verb agreement does not necessarily imply Case valuation in Korean. The subject *halmeni* ‘grandmother’ in (58) happens not to be involved in Case valuation. Thus, its Case feature remains unvalued even via AGREE. One possible way to elude a crash is that the unvalued Case feature may be

⁴⁵ Some Korean native speakers find the example in (57)b in the text a bit awkward. Nevertheless, they are not taken as unacceptable.

The nominal *halmeni* ‘grandmother’ is marked with either nominative or genitive Case, as in (59). The DP in (59)a may have the internal structure like (60):⁴⁹

- (60) [DP Halmeni-uy_i [CP [TP t_i ssu-si-te-n]] kewul-i] ccaye-ci-ess-ta
 Grandmother-gen use-hon-asp-adn mirror-nom break-pass-past
 ‘The mirror that the grandmother uses was broken’

The example in (60) is reminiscent of the ECM in (61):

- (61) [CP John-i halmeni-lul_i [CP [TP t_i cengcikha-si-ess-tako]] sayngkakha-n-ta]
 John-nom grandmother-acc honest-hon-past-comp think-pres
 ‘John believes that his grandmother was honest’

Similar to (61), the Case feature of *halmeni* ‘grandmother’ remains unvalued, even after AGREE with the embedded T. The honorific marker *-si* is licensed, but the unvalued Case feature is still active. So, the unvalued Case feature can establish second AGREE with D after raising into the DP domain. As a result, *halmeni* is valued as a genitive Case *-uy*, as presented in (60). Note that the ECM account is proposed based on Japanese nominative-genitive alternation by Miyagawa 1993, Ura 1993, Ochi 1999, among others.⁵⁰

3.4.2.5 Successive Cyclicity

⁴⁹ Rodrigues (2004) extensively argues that A movement is possible out of Case domains.

⁵⁰ Hiraiwa (2000) put forward a different way of looking at nominative-genitive alternation in Japanese: genitive Case is checked by the ϕ -feature of the C-T-V amalgamate via AGREE. (see Hiraiwa 2000 for details). He should be reconciled with the notion for the successive cyclicity: an unvalued feature must be valued before further unvalued feature are introduced in the derivation (see Ura 1996; Collins 2000).

When we pursue the raising analysis of the embedded subject into the matrix, we should deal with an apparent conflict with the realm of successive cyclicity and a ban on improper movement. Raising takes place across the clause boundary. One easy quick fix for a ban on an improper movement employs a pruning strategy of deleting a CP. We simply get rid of a problematic source, namely CP. Again, this kind of way out is not useful, because there is an overt complementizer in the ECM.

The existence of CP on the way of raising into a matrix clause seems a recalcitrant hurdle in implementing long-distance A movement. Since Chomsky (1973), it has been widely accepted that a distant *wh*-movement is a collection of relatively local movement. Languages like Irish, Chamorro, Palauan, Hausa, Passamaquoddy, Coptic provide an morphosyntactic argument for the view that a long movement is composed of local movements. In fact, there is more evidence in support of this view.⁵¹ Yet we do not unfold them here for in the interest of the space limitation. As most frequently cited evidence, *wh*-agreement effects are observed on every Spec of CP on its path to the highest Spec of CP (McCloskey 1979, 1990, 2002; Chung 1998; Bruening 2001) as illustrated in (62). It comes from McCloskey (1979):

- (62) a. Cén t-úrseal a^L mheas mé a^L dúirit sé a^L thuig sé
 Which novel C thought I C said he C understand he
 ‘Which novel did I think he said he understood?’

⁵¹ We briefly sketch out more arguments for successive cyclic *wh*-movement other than languages showing *wh*-agreement in the Spec of CP (in the text): successive inversion fact in Spanish, French and Belfast English (Kayne and Pollock 1999; Pesetsky and Torrego 2001; Henry 1995); *wh*-copy in German and child English (Crain and Lillo-Martin 1999); partial *wh*-movement in German and Hungarian (Horvath 1997; McDaniels 1988); quantifier floating in West Ulster English (McClosky 2001); intermediate reconstruction (Danny 1999); among others.

- b. XP_i $[_{CP} a^L$ $[_{CP} a^L$ $[_{CP} a^L$ t_i]]]

Wh-phrases raise from the closest Spec of CP to the next Spec of CP to the end. It proves that successive-cyclic movement should be applied via CP. Note it is about an A-bar movement. *Wh*-movement must take place in successive steps rather than one-fell swoop.

Now, we are concerned with long-distance A-movement. As we discussed in section 3.4.2, the embedded subject raises to the Spec of ν P in the matrix clause. Here we are in a dilemma. We have to juggle two conflicting conditions: a locality condition and a ban on improper movement in order to establish a long-distance A-movement. If we comply with a locality condition like successive cyclicity, we will violate a ban on an improper movement, as in (63)a. The embedded subject moves through the Spec of CP en route to the Spec of ν P in the matrix clause. We end up with forming an A-A'-A sequence. It is regarded as a big no-no. It gives rise to a violation of a ban on improper movement. On the other hand, if we neglect successive cyclicity, we can get around a ban on improper movement, as in (63)b. We move directly to the Spec of matrix ν P skipping the Spec of CP. Then, we create an A-A sequence so that we can avoid a ban on improper movement.

- (63) a. $[_{\nu P} XP_i \nu$ $[_{CP} t_i C$ $[_{TP} t_i T$ t_i]]]
-
- b. $[_{\nu P} XP_i \nu$ $[_{CP} C$ $[_{TP} t_i T$ t_i]]]
-

Before attempting to resolve a tension between a locality condition and a ban on improper movement, this is a first thing we need to tackle. We need to examine so-called improper movement: A movement is allowed to be followed by A-bar movement but not vice versa. A-bar movement is prohibited from feeding A-movement. Do we have a clear distinction between A and A-bar movement in minimalism? Is the A and A-bar distinction a primary theoretical distinction?

To the best of my knowledge, we just have a rule of thumb for drawing a line between A and A-bar movement. But, it appears that we are not equipped with a formal theory to differentiate between the two unequivocally.

The A in A-movement stands for ‘argument’ (Chomsky 1981). A-movement is movement to a Case position. Examples of A movement are the movement of a subject to Spec of TP in conjunction with the VP-internal subject hypothesis (Koopman and Sportiche 1988) as in (64)a, the movement of an object to Spec of *v*P from a complement position as in (64)b, the movement of an object to Spec of TP in passive constructions as in (64)c, a subject-to-subject raising as in (64)d and a subject-to-object raising (a.k.a. ECMs) as in (64)e. A-movement is also known as NP movement since it applies to NPs. It would better be called DP movement after adopting the DP hypothesis of Abney (1987). In essence, A-movement is motivated by a Case reason. Put it in terms of AGREE (Chomsky 2000, 2001), we may say that movement is A-movement if it involves ϕ -feature.

- (64) a. John_i likes t_i apples
 b. John like apples_j t_j

- c. John_i was arrested t_i
- d. John_i seems t_i to t_i be t_i happy
- e. John thinks Bill_k t_k to t_k be t_k tall

The bar in A-bar originates from the meaning of complementarity. Therefore, A-bar movement is movement that is not A movement. The typical example of A-bar movement is *wh*-movement, as in (65)a and (65)b.⁵² And the movement of a focused or a topicalized element is subsumed under A-bar movement, as in (65)c. Accordingly, A-bar movement is movement if it involves P-features (force, topic, focus, etc) following Chomsky (2000, 2001).

- (65) a. What_i did John buy t_i?
- b. I don't know what_i John bought t_i
- c. The house_j, John had built t_j

As opposed to A movement, A-bar movement is not assumed to be Case-driven. In addition, it can apply not only DP but also other categories like PP, as presented in (66):

- (66) a. With whom did you eat?
- b. In this parking lot, I parked my car

⁵² There are more examples of A-bar movement: headless relatives as in (1)a, pseudoclefts as in (1)b, and relative clause as in (1)c.

- (1) a. Whatever you say about John, I believe that he is a gentleman
- b. What Mary is is proud of herself
- c. John has never eaten the cookies which Mary gave

It is argued that the trace of A movement is an anaphor while the trace of A-bar movement is a variable in the sense of a relation of an operator and its variable in logic. An operator is assumed to bind a variable in a logical formula.

Rizzi (1995, 1997) assumes that a clause consists of three kinds of structural layers. First, the lexical layer is headed by a verb. All theta assignment is assumed to take place here. Second, the inflectional layer is the layer related to licensing of argumental features such as Case and agreement. Third, the complementizer layer is responsible for hosting various operator-like elements including *wh*-phrases, focused, and topicalized elements and so on (see also Grohmann 2000). Coarsely speaking, the inflection layer coincides with A movement and the complementizer layer with A-bar movement. But this rough tie does not seem sustainable between the inflection layer and A movement on the one hand, and the complementizer layer and A-bar movement on the other hand.

After Chomsky's (1995) proposal that a transitive *v* enters into accusative Case checking for an object, the three-layer distinction gets blurred. The inflectional layer cannot be taken exclusively as a Case relevant layer. The accusative Case checking is done in the lexical layer.

Zubizarreta (1998) argues that on the ground of Spanish preverbal focused or emphatic element, T may combine with discourse-based functional feature such as topic, focus, and emphasis yielding syncretic categories like T/topic, T/focus, T/emphasis (see chapter 2). There is no guarantee that the operator-like elements should belong to the outer layer of the clause above the inflectional layer. They also can be located in the middle, namely, inflectional layer.

Again, all of these make a consistent point in the same direction that discourse-related features including focus and topic cannot be associated with only the CP domain, especially beyond most Romance languages. More cross-linguistic evidence has mounted in favor of this observation. Hebrew (Belletti and Shlonsky 1995), Hungarian (Kiss 1998), Kirundi (Ndayiragije 1998), Georgian (Bush 2000) and Malayalam (Jayaseelan 2001) show that a focus position should be located in the vicinity of the VP, importantly, not the CP domain. Even in English Johnson (2003), López and Winkler (2003), Winkler (2003), and Lasnik (1995, 1999) propose that in the pseudogapping construction, the remnant object should move to the left edge of the VP.⁵³ The remnant *magazine* here is reported to have a contrastive focus reading. It is illustrated in (67). (67)b is the derivation of a second conjunct in (67)a involving VP deletion:

- (67) a. John rolled up a magazine and Mary did a magazine
 b. ... and [Mary did [_{AgrOP} [a magazine]_i [_{VP} ~~roll up~~ _{t_i}]]]

Lasnik assumes that raising to AgrO is triggered by either an EPP or a Case feature. It was not explicitly argued that an object raises out of the VP to a focus position for the sake of checking a focus feature like focus movement.⁵⁴

Chomsky (2000, 2001) suggests that P-features should be assigned to only the phase head like C and *v*. Then, it completely excludes a possibility that a non-phase TP

⁵³ Lasnik (1995, 1999) claims that a remnant object moves out of the VP and raises into the Spec of Agr_OP. Subsequently, VP goes through deletion. Raising to Agr_OP can be triggered for by EPP (see chapter 2).

⁵⁴ Holmberg (1999) revisits Holmberg's generalization (1986) where Object Shift is dependent on verb movement in Scandinavian. Holmberg (1999) abandons the original assumption that Object Shift is motivated by a Case feature (Holmberg and Platzack 1995; Vikner 1994) and proposes that the crucial feature is not Case but [\pm focus]. Object shift is possible only when nominal objects are [-focus].

can have P-features. Recall that Spanish preverbal focus (Zubizarreta 1998) and scrambling as IP-adjunction (Saito and Fukui 1998) demonstrate that TP is related to P-features. Therefore, we argue that assignment of P-feature to T is possible.

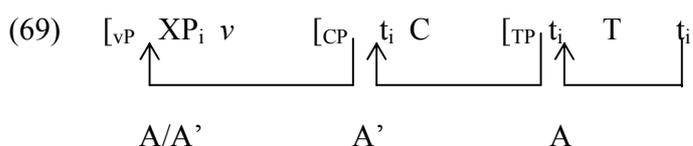
Let us return to the first question: what is A movement? According to Chomsky (2000, 2001), A movement is movement engaging ϕ -features, and A-bar movement is movement involving P-features. This may be the right way to distinguish A and A-bar movement relying on relevant features.

When we consider the syncretic T and ν combining a discourse-related feature, we find out that the complementary distribution between A movement and A-bar movement falls apart. T and ν are believed to have both ϕ -features and P-features simultaneously.

Reconsider the examples showing that the accusative marked embedded subject should have a focus reading (J-S Lee 1991, 1994), as repeated in (68).

- (68) a. John-i cakun kochwu-ka mayp-tako sayngkakha-n-ta
 John-nom little pepper-nom spicy-comp think-pres
 ‘John thinks that the small pepper is spicy’ (literal reading)
 ‘John thinks that the small person is strong’ (idiomatic reading)
- b. John-i cakun kochwu-lul mayp-tako sayngkakha-n-ta
 John-nom little pepper-acc spicy-comp think-pres
 ‘John thinks that small pepper is spicy’ (literal reading)

When the embedded subject *cakun kochwu-ka* in (68)a is marked with nominative Case, it is ambiguous between a literal and idiomatic reading. But when the embedded subject *cakun kochwu-lul* in (68)b is marked with accusative Case, only a literal reading is available. The loss of an idiomatic reading in (68)b suggests that the ν in the matrix clause should be a syncretic head carrying a focus feature in addition to all the features that a regular ν has. Therefore, in (68)b, movement to the Spec of ν P in the matrix clause engages not only ϕ -features but also a focus feature. This raising to the Spec of ν P is ambivalent with respect to A or A-bar movement, as in (69).



Therefore, we can say that the embedded subject moves out of the embedded clause to the Spec of ν P in the matrix clause through the Spec of CP in a successive cyclic manner.⁵⁵ This raising does not have a problem with a ban on improper movement since the final landing site, that is, the Spec of ν P is not exactly an A position. Again it is equivocal between an A and A-bar position.

3.5 Conclusion

⁵⁵ Alternatively, Howard Lasnik (p.c.) suggested that it may be possible that the embedded subject raises directly to the Spec of ν P in the matrix clause like A to A movement without landing any intermediate A-bar positions. This one-fell swoop raising will face a problem with the PIC (Chomsky 2001) under the AGREE-based system, because according to the PIC the probe ν in the matrix clause cannot see the embedded subject unless it is placed in the edge of the embedded clause. Importantly, this one-fell swoop raising is assumed to take place without going through any A-bar positions on the way.

This chapter discusses the movement of the embedded subject to the matrix clause (ECMs). In order to validate a raising account, we explored other possible accounts. First, we considered a non-raising account, for instance a *pro*-based account, prolepsis, and a long-distance agreement analysis. We showed that a *pro*-based account cannot be on the right track. This is because *pro* cannot be replaced by a lexical pronoun (Hoji 1985). Next, the accusative nominal could not be a proleptic object since the accusative nominal does not pattern with a proleptic object. As opposed to a proleptic object, first, the accusative nominal is limitedly allowed to be a subject in the embedded clause. Second, it is subject to an inalienable relation restriction to possessor raising. Third, it shows the Island Condition effects including the Coordinate Structure Constraint. Fourth, it is not compatible with a resumptive pronoun. Lastly, it follows the semantic condition: the embedded clause should denote an individual property of the accusative nominal. As a final analysis in the non-raising account, we argued that long-distance agreement (Chomsky 2000, 2001) cannot account for the Principle B effects and the Clausemate Condition on the NPI.

As a second possible account, we entertained a lowering analysis. It did not hold its validity in the face of Chomsky's (1995) Extension Condition and Mirror Principle.

At last, we took into account a raising approach. A raising account can be further distinguished into two kinds according to the final landing site. One is raising to the Spec of CP in the embedded clause. This raising has problems with both the Principle B effects and the Clausemate Condition. Thus, it is not viable. The other is raising to the Spec of ν P in the matrix clause. We showed a change in membership from the embedded clause to the matrix clause during the course of derivation. An agreement between the nominal

and its numeral quantifier and the subject honorification on the embedded verb indicates that the accusative embedded subject should reside in the embedded clause. On the contrary, the Principle B effects and the Clausemate Condition for the NPI licensing suggest that the accusative embedded subject should belong to the matrix clause. Therefore, we drew the conclusion that the raising to the Spec of vP is on the right track to capture all the relevant properties listed above. The embedded subject is base-generated in the embedded clause and raises to the Spec of vP via the Spec of CP following successive cyclicity. Yet this movement does not cause a violation of a ban on improper movement. Note that the v in the matrix clause is assumed to a syncretic head with a focus feature. So, movement to the Spec of vP is not exactly A movement. It is involved with both ϕ -features and a focus feature.

There is one more thing worth pointing out here. We discussed some cases like honorification agreement and hyperraising in Korean in which (ϕ -feature) agreement does not necessarily mean Case valuation/assignment. It suggests that it may be too strong to argue that Case valuation/assignment is a mere reflex of ϕ -feature agreement (Chomsky 2000, 2001). It needs to be relaxed to some degree. On the empirical ground, it may not be implausible to view Case valuation/assignment and ϕ -feature agreement as a separate operation.

CHAPTER 4

Resultative Constructions

This chapter discusses the Resultative Construction (RC) in English and Korean. As a starting point, let us see what the RC looks like. It is provided in (1).

- (1) a. John hammered the metal flat
 b. They laughed themselves silly

Hoekstra (1988) makes this generalization concerning the resultative construction: ... *the resultative small clause denotes a state of affairs which is presented as a consequence of the activity or process denoted by the verb ...*

In this chapter we will explore the following issues:

- (I) Does the DOR hold in English? And does the DOR hold in Korean?
 Direct Object Restriction (DOR): a resultative phrase may be predicated only of a direct object, but not of a subject or of an indirect object. (Levin and Rapport Hovav 1995)
- (II) Why does English demonstrate this selectional restriction of a resultative predicate while Korean does not?
- (III) Why does Korean allow Subject Resultatives while English does not?

- (IV) Is the Measuring-Out Constraint on the Direct Internal Argument (Tenny1994) sustainable in Korean?

4.1 Basic Data

4.1.1 English Data

There are two predicates in the RC. The primary predicate is the matrix verb. The secondary predicate can be a wide range of phrases including APs, NPs, and PPs. To prevent any confusion caused by mixing up the terminology, we use matrix verb to designate the primary predicate and resultative predicate or resultative phrase for the secondary predicate.

We begin with the English RC. The English RC comes in the three varieties, as in (2) through (5). The examples in (2) have a transitive verb as the matrix verb. The examples in (3) and (5) have two different kinds of intransitive verbs: unergative verbs in (3) and unaccusative verbs in (5):

- (2) Matrix Verb: transitive verb
- a. John hammered the metal
 - b. John hammered the metal flat

In (2)b the resultative phrase may only be predicated of the object. The resultative predicate *flat* is predicated of the object *the metal* in (2)b. The example in (2)b can only mean that John hammered the metal so that it became flat; it cannot mean that John

hammered the metal and as a result he became flat.¹ The example in (2) a shows that the object *the metal* is selected by the transitive verb *hammer*. Thus deleting the resultative phrase *flat* does not affect the acceptability of the sentence. It is still well-formed.

- (3) Matrix Verb: (unergative) intransitive verb
- a. *The joggers ran their Nikes
 - b. The joggers ran their Nikes threadbare
- (Carrier and Randall, 1992)

The examples in (3) have the unergative intransitive verb *run*.² An unergative verb does not take an internal argument. It follows that having two arguments: an internal and an external argument results in being ill-formed, as shown in (3)a. Put another way, the resultative subject *their Nikes* is not selected by the matrix verb *run*.

- (4) Matrix Verb: (unergative) intransitive verb
- a. *Mary shouted herself
 - b. Mary shouted herself hoarse
 - c. *Mary shouted hoarse

¹ Consider the following example:

- (1) John hammered the metal tired

It is impossible to construe (1) as a subject resultative that John hammered the metal and as a result he became tired. But it is possible to have a subject descriptive that John hammered the metal when he was tired.

² For the sake of exposition we use unergative verb to mean a verb whose sole argument is an external argument. On the other hand, we refer to unaccusatives whose sole argument is a direct internal argument. We put aside the current assumptions of Marantz (1993) and Kratzer (1994) about external argument; External arguments are introduced by the head Voice *v* in the Kratzer-Marantzian framework in place of the traditional assumption that the external argument is a part of the argument structure of the lexical verb.

Now we have another kind of unergative verb: *shout*. It is not allowed to take an internal argument. Thus, (4)a is ill-formed. Surprisingly when the resultative predicate *hoarse* comes along, the presence of the reflexive *herself* becomes mandatory. Without the reflexive *herself* the sentence severely deteriorates, as in (4)c. Simpson (1983) coins a term ‘fake reflexive’ for this kind of reflexive in RCs. Note that (4)c does not express the relevant meaning in which Mary got hoarse as a result of shouting. The reflexive should follow the unergative verb in order to ensure that the sentence turns into the RC in conjunction with a resultative predicate. And Levin and Rappaport Hovav (1995) use a fake reflexive as evidence in favor of the DOR. Later on (Section 4.3.2) we try to explain the necessity of the reflexive in the RC without recourse to a stipulation like the DOR.

- (5) Matrix Verb: (unaccusative) intransitive verb
- a. *The lake froze the fish dead
 - b. The lake froze solid

In (5), the unaccusative verb *freeze* comes with the resultative phrase *solid*. The resultative phrase *solid* in (5)b is predicated of the surface subject *the lake*. However, the surface subject of unaccusative verbs e.g. *the lake*, is generally assumed to be an underlying object of the verb which raises to a subject position for the Case reason. On the basis of this, the RC is widely used as a diagnostic for unaccusativity.

- (6) Inalienable Possession
- a. John_i cooked his_{i/*j} hands dry

- b. He_i cried his_{i/*j} eyes out

The DPs in (6) *his hands* and *his eyes* are in the inalienable possession relation with the subject. Even though we have the pronoun *his*, it cannot refer to someone other than the subject of the sentence. Levin and Rappaport Hovav (1995) propose that a bound pronoun in an inalienable possession relation should be treated like a fake reflexive. So this type of pronoun should be bound by a subject on a par with a reflexive. This raises a question; Why all of a sudden does an inalienable possession relation play such a crucial role in identifying a pronoun in the RC? We attempt to offer an explanation for this in section 4.3.2.

The examples in (2) to (6) may roughly conform to the Direct Object Restriction of Levin and Rappaport Hovav (1995), where they maintain that a resultative phrase may be predicated of an immediately postverbal NP, not of a subject or an oblique complement. Here we purposely refrain from using the term direct object. Instead, we employ immediately postverbal NP. Technically speaking, a postverbal NP cannot be considered as a direct object when co-occurring with the intransitive verb in (3), (4), and (6). This is because the postverbal NP cannot be considered as a semantic argument of an intransitive verb. We return to this in section 4.3.2.

Next we discuss the Korean RC. We are particularly concerned with those characteristics of the Korean RC which are not present in the English RC.

4.1.2 Korean Data

We compare the Korean RC to the English RC. First, we discuss how exactly the Korean RC behaves differently from the English RC in (7) to (11). We pay careful attention to the differences observed in the Korean RC and attempt to explain what may lie behind them. The Korean data are sorted in the same way as the English data in the previous section. The Korean RC comes with a wide range of matrix verbs: transitive, ditransitive, unergative, and unaccusative verbs. The Korean RC adds one more type, namely a ditransitive verb to the inventory of the matrix verb compared with the English RC.

We start our investigation with the RC containing the transitive verb *twutulki-ta* ‘pound’.

(7) Matrix Verb: transitive verb

- a. John-i [mos-ul napcakha-key] twutulki-ess-ta
 John-nom nail-acc flat-key pound-past
- b. John-i [mos-i napcakha-key] twutulki-ess-ta
 John-nom nail-nom flat-key pound-past
 ‘John pounded the nail flat’

Here the resultative subject *mos* ‘nail’ can be marked with either accusative Case *-ul* or nominative Case *-i*.^{3,4} It is worthwhile to note that special cases are documented where

³ The morpheme *-key* on the resultative predicate is generally assumed to be a ‘result’ morpheme (K-W Sohn 1995:23, S-W Kim and Maling 1998:194). On the other hand, Y-J Jang and S-Y Kim (2001) assume this to be the head of the small clause.

⁴ Bowers (1993, 1997, 2001) and S-W Kim and Maling (1997) report that when the matrix verb is a transitive verb, the subject of the resultative predicate can only have accusative Case. The relevant examples are taken from S-W Kim and Maling (1997):

- (1) a. Robin-i [soy-lul ttukep-key] talkwu-ess-ta
 Robin-nom metal-acc hot-key heat-past

the Case alternation is readily available in Korean. These are usually Raising constructions (ECMs) and Control constructions.⁵ See Chapter 3 for more detail on the Raising Construction. We do not take on the Case issue until section 4.3.1.

-
- b. *Robin-i [soy-ka ttukep-key] talkwu-ess-ta
 Robin-nom metal-nom hot-key heat-past
 ‘Robin heated the metal hot’

Most of my Korean informants including myself could readily have both accusative and nominative Case on the resultative predicate subject: *soy-lul* ‘metal-acc’ and *soy-ka* ‘metal-nom’. There is one informant who prefers to have accusative Case to nominative Case in (1). Next, I presented the following examples in which the subject of the resultative predicate constitutes a big DP containing a so-called floating quantifier (here *han cokak* ‘one classifier’) as in (2):

- (2) a. Robin-i [soy-lul han cokak-i ttukep-key] talkwu-ess-ta
 Robin-nom metal-acc one CL-nom hot-key heat-past
 b. Robin-i [soy-lul han cokak-ul ttukep-key] talkwu-ess-ta
 Robin-nom metal-acc one CL-acc hot-key heat-past
 ‘Robin heated a piece of metal hot’

My informant said without any hesitation that the floating quantifier *han cokak* ‘one classifier’ following its associate *soy* ‘metal’ can have nominative Case. This availability of the nominative Case marking within the small clause as in (2)a clearly indicates that there is a Case source for nominative Case inside the resultative clause. Otherwise, how could the floating quantifier bear nominative Case? Weschler and B-K Noh (2001,18) use a similar example in (2) where the possessor has accusative Case while the possessum has nominative Case in the inalienable possession construction in (3):

- (3) a. Mary-nun kumsok-ul napcakh-a-key twutulki-ess-ta
 Mary-top metal-acc flat-key hammer-past
 ‘Mary hammered the metal flat’
 b. Mary-nun kumsok-ul kkuth-i napcakh-a-key twutulki-ess-ta
 Mary-top metal-acc edge-nom flat-key hammer-past
 ‘Mary hammered the metal’s edge flat’

Furthermore, S-W Kim and Maling (1997) point out that the subject of a resultative predicate can have nominative Case when a matrix verb is an intransitive verb. It is instantiated in (4):

- (4) Robin-un [kwutwu-ka talh-key] talli-ess-ta
 Robin-top shoes-nom threadbare-key run-past
 ‘Robin ran so that her shoes became threadbare’

The above instances come from S-W Kim and Maling (1997). Again (3) is making a similar point that there is a Case source for nominative Case inside the small clause. The subject of the resultative predicate does not have to depend on the matrix verb especially for the Case purpose.

⁵ The examples are provided here. The examples in (1) are for the Raising (ECM) sort and the examples in (2) are Control (see Monahan (2003) for more details of Korean Control):

- (1) Raising
 a. John-i Bill-ul cengcikha-tako mit-nun-ta
 John-nom Bill-acc honest-comp believe-pres

S-W Kim and Maling (1997, 1998) present a neat example with the ditransitive verb *chalita* ‘put’. Here the resultative predicate *hwui-* ‘bent’ is predicated of the indirect object (goal argument) *sang* ‘table’ and not the direct object *umsik* ‘food’. The example is presented in (8):

(8) Matrix Verb: ditransitive verb

Mary-ka umsik-ul sang-ey tali-ka hwui-key chali-ess-ta
 Mary-nom food-acc table-on leg-nom bent-key put-past
 ‘Mary put food on the table; so that its legs; became bent’

Now we turn to examples where the matrix verb is an unergative intransitive verb:

(9) Matrix verb: (unergative) intransitive verb

a. John-i [mok-i swi-key] koham cil-ess-ta⁶

b. John-i Bill-i cengcikha-tako mit-nun-ta
 John-nom Bill-nom honest-comp believe-pres
 ‘John believes Bill to be honest’

(2) Control

a. John-i Bill-ul ttena-tolok seltukha-ess-ta
 John-nom Bill-acc leave-comp persuade-past
 b. John-i Bill-i ttena-tolok seltukha-ess-ta
 John-nom Bill-nom leave-comp persuade-past
 ‘John persuaded Bill to leave’

As shown above, the embedded subject *Bill* is marked by either the accusative *-ul* or the nominative *-i* respectively in (1) and (2).

⁶ In Korean some basic adjectives such as *tall*, *short*, *nice*, *rich*, and *hoarse* are manifested as multiple lexical items as follows:

(1) a. John-i khi-ka ku-ta
 John-nom height-nom big
 ‘John is tall’
 b. Mary-ka maumssi-ka kop-ta
 Mary-nom heart-nom pretty

John-nom hoarse-key shout-past

‘John_i shouted himself_i hoarse’

- b. John-i [(caki -ka) mok-i swi-key] koham cil-ess-ta⁷

John-nom self-nom mok-nom swi-key shout-past

‘John_i shouted himself_i hoarse’

As shown in (9)a and (9)b, the unergative verb *kohamcilu-ta* ‘shout’ does not have to come with the so-called fake reflexive *caki* ‘self’. Unlike in English, the occurrence of the fake reflexive is not forced. The absence or presence of the reflexive *caki* does not affect the resultative meaning. Based on this fact presented in (9), S-D Cho (1999) argues that in Korean the verb’s compatibility with the RC may not be a litmus test for the determination of an unaccusative verb. He casts doubt on Levin and Rappaport Hovav’s

-
- c. ‘Mary is nice’
 Bill-ka ton-i mahn-ta
 Bill-nom money-nom many
 ‘Bill is rich’
- d. Sue-ka mok-i swi-ess-ta
 Sue-nom neck-nom hoarse-past
 ‘Sue was hoarse’

⁷ J-B Kim (1993) notes the acceptability of the following instances:

- (1) a. *John-i caki-ka kkamwuelci-key oychi-ess-ta
 John-nom self-nom fainted-key shout-past
- b. John-i susulo-ka kkamwuelci-key oychi-ess-ta
 John-nom self-nom fainted-key shout-past

According to J-B Kim (1993), *susulo* ‘self’ is considered as a genuine local reflexive and the regular reflexive *caki* is a pronoun. It is of importance to note that in the literature the general consensus over the identification of *caki* is as a reflexive. And *caki* can be used as a local anaphor and a long-distance anaphor as well.

When I was presented with the above example including the regular reflexive *caki* ‘self’ in (1)a, it sounded perfect to my ears. Thus I inquired of a handful of (cross-dialectal) Korean informants about its acceptability, and they rarely show any preference for one over the other. Both instances of (1)a and (1)b are acceptable to them rarely showing any preference over one or the other. My own judgment has been confirmed by multiple Korean informants. It is worth noting that S-D Cho (1999) instantiates almost the same example making use of the reflexive *caki* instead of *susulo* ‘self’ in Korean RCs. I do not pursue this discrepancy in the acceptability any further taking my informants’ grammatical judgment and S-D Cho at face value.

(1995) proposal. Korean arguably has more freedom in choosing the verb when forming the RC. Unergative verbs can appear in the RC, similar to unaccusative verbs.

Now we have the unaccusative intransitive verb *nok-ta* ‘melt’ in the RC:⁸

(10) Matrix verb: (unaccusative) intransitive verb

a. Nwun-i [kil-i cilpekha-key] nok-ass-ta
 Snow-nom road-nom slushy-key melt-past

b. *Nwun-i [kil-ul cilpekha-key] nok-ass-ta
 Snow-nom road-acc slushy-key melt-past

‘The snow melted until/so that the road became slushy’

‘*The snow melted the road slushy’

It is important to point out that in Korean, the unaccusative verb *nok-ta* ‘melt’ can appear with the resultative phrase *cilpekha-* ‘slushy’ predicated of the NP *kil* ‘road’. As opposed to English, the resultative subject *kil* ‘road’ is not the underlying object of the matrix verb in Korean as in (5)b. As a matter of fact, the surface subject *nwun* ‘snow’ is the underlying object of the verb *nok-ta* ‘melt’. The conclusion we can draw from this example is that a resultative subject may be an independent argument since it does not take part in the semantic relation of a matrix verb. This seems logically plausible since

⁸ The verb *nok-* ‘melt’ can have only one argument but not two of them in (1)a.

- (1) a. *Tayyang-i nwun-ul nok-ass-ta
 Sun-nom snow-acc melt-past
 b. Tayyang-i nwun-ul nok-i-ess-ta
 Sun-nom snow-acc melt-causative-past
 ‘The sun melted the snow’

For the verb *nok-* ‘melt’ to have two arguments, it needs to have a causative morphology *-i-* in (1)b.

unlike English, the resultative subject *kil* ‘road’ does not have to depend on the matrix clause at least for the sake of Case and a theta role. In other words, the argument *kil* ‘road’ receives a theta role from the resultative predicate *cilpekha-* ‘slushy’ and gets its Case checked inside the small clause (We discuss the Case source in section 4.3.1). Here is one more point we should not overlook. We have the unaccusative verb *nok-ta* ‘melt’ in (5). By definition, this verb does not have the functional head *v* which is generally assumed to be responsible for accusative Case checking. Backing up this standard view, the resultative subject *kil* ‘road’ cannot be marked by the accusative Case *-ul*. Accordingly *kil* ‘road’ can be marked only with nominative Case *-i* to the exclusion of the accusative Case *-ul*. We have a noteworthy observation that the Case alternation of a resultative subject is not possible when the matrix verb is an unaccusative verb lacking *v*. This quite clearly indicates that the availability of accusative Case for the resultative subject is directly related to the nature of the matrix verb while that of the nominative Case is not.

(11) Inalienable Possession

- a. John-i [tali-ka apu-key] kel-ess-ta
 John-nom leg-nom achy-key walk-past
- b. John-i [tali-lul apu-key] kel-ess-ta
 John-nom leg-acc achy-key walk-past
 ‘John_i walked until/so that his legs_i became achy’
- c. John-i Mary-lul [chim-i malu-key] chingchanha-yess-ta
 John-nom Mary-acc saliva-nom dry-key praise-past

‘John_i praised Mary_j until his_i/her_j saliva became dry’⁹

The examples in (11) demonstrate that in Korean the inalienable possession relation of a resultative subject can be established with a matrix subject. In (11)c, the resultative subject *chim* ‘saliva’ identifies the matrix subject as its possessor *John* instead of the object *Mary*. This subject-oriented reading is absolutely out of sync with the DOR. The DOR predicts that the direct object is the possessor of *chim* ‘saliva’ counter to the fact. This is another counterexample to the DOR.

One of the striking facts we found out in the Korean RC in (7) to (11) is that a resultative phrase can be predicated of any of the three arguments of the matrix verb: a subject, an indirect object, or an object. On the other hand, as we have discussed, English is restricted to the direct object only, precisely speaking, the immediate postverbal NP with few limited exceptions.¹⁰ The following section tries to provide an answer to the

⁹ (11)c is taken from S-W Kim and Maling (1997). Jairo Nunes (p.c.) noted that the Subject Resultative in (11) is prevalent presumably due to a pragmatic factor. It is hard to conceive of a situation in which the person who was praised is the one whose saliva became dry rather than the one who gave praise. Here is another example that does not cause an intervening pragmatic concern like (11). When two people are engaged in kissing, either a kisser or a kissee can blush without a preference of one over the other. The example is ambiguous between the Subject and the Object Resultative.

- (1) John-i Mary-lul elkwul-i ppalkeyci-key ppopoha-ess-ta
 John-nom Mary-acc face-nom reddened-key kiss-past
 ‘John_i kissed Mary_j until his_i/her_j face became red’
 ‘John_i kissed Mary_j until he_i/she_j blushed’

¹⁰ The following examples come from Wechsler (1997):

- (1) a. The wise men followed the star out of Bethlehem
 b. The sailors managed to catch a breeze and ride it clear of the rocks
 c. John danced mazurkas across the room
 d. The children played leapfrog across the park

Mateu (2002) argues that even though the directional phrases in (1) are predicated of the subject, we should not abandon the DOR. Mateu takes the directional phrases to be adjunct PPs instead of small clause results in the sense of Hoekstra (1988).

above question. We suspect that it is tightly correlated with the contrast in the selectional restrictions of resultative predicates in English and Korean.

4.2 The Difference in Resultative Construction between English and Korean

4.2.1 Restrictive Selection of a Resultative Phrase in English

It is widely acknowledged that there are many kinds of secondary predicates: resultative, depictive, manner, and path. The resultative phrase seems to exhibit a tight connection with the matrix verb, as in (12):

- (12) a. The maid scrubbed the pot [_{Adjective} shiny/*shined/*shining]
 b. The chef cooked the food [_{Adjective} black/*blackened/*charred]
 c. The joggers ran themselves [_{Adjective} sweaty/exhausted/*sweating]
 d. The kids laughed themselves [_{Adjective} sick/*sickened]

The examples in (12) are roughly paraphrased in (13), which contain subordinate clauses. They seem to have roughly the same interpretations. For example, (12)a expresses the state of the pot as a result of the maid's action of scrubbing it, as paraphrased in (13)a. This easily extends to the other examples in (12) and (13).

- (13) a. The maid scrubbed the pot_i so that it_i became [_{Adjective} shiny/shined/*shining]
 b. The chef cooked the food_i so that it_i became [_{Adjective} black/blackened/charred]
 c. The joggers_i ran so that they_i became [_{Adjective} sweaty/exhausted/*sweating]

- d. The kids_i laughed so that they_i became [_{A_{dejective}} sick/sickened]

Nevertheless we easily notice that the examples in (13) permit a wider range of adjectives, as compared to those in (12). The choice of a resultative predicate for a clausal resultative is much freer.

There have been various attempts to characterize this restrictive selection of a resultative predicate for the RC. Appealing to s-selection is a common way to limit the gamut of permissible resultative predicates (Green 1972, Randall 1982, Simpson 1983, 1986, Rothstein 1983, Carrier and Randall 1992, and Zhang 2001) since c-selection does not play a sufficient role in determining the class of possible XPs. As presented in (12), resultative predicates are all adjectives. Despite this, not all of them are permitted to appear in the RC. Only a few of them are allowable. At first glance it seems plausible that both c-selection and s-selection are needed for a resultative predicate in the formation of the RC. Having two constraints: c-selection and s-selection places a tighter restriction on the choice of the resultative predicate than having one constraint. We agree with this reasoning. Yet a question arises: Is this enough to explain away the obstinate contrast in (12)?

C-selection and s-selection are a merger constraint imposed on the complement of lexical head elements (Grimshaw 1979 and Pesetsky 1982, 1995). The former is a categorical constraint while the latter is a semantic constraint. Carrier and Randall (1992), following Simpson (1983) and Smith (1983), argue that adjectives containing the morphemes *-ing* and *-ed* are systematically barred from occurring in the resultative phrases in the case of the RC since there is an aspectual clash between the meaning of the

resultative and the meanings of *-ed* and *-ing* adjectives. They attribute this property to a semantic constraint, namely s-selection. They, however, did not elaborate on what they mean by a semantic constraint for adjectives containing morphemes *-ing* and *-ed*. Goldberg (1995) already points out that it is not clear what the exact nature of the clash is in the examples in (12).

As a matter of fact, there are well-formed examples of the RC documented in the literature with adjectives containing *-ed* in the position of the resultative phrase as presented in (14):

- (14) a. Mary danced herself [_{Adjective} tired]
 b. The boys ran their sneakers [_{Adjective} ragged]
 c. The joggers ran themselves [_{Adjective} exhausted]

According to Carrier and Randall (1992), the above adjective with *-ed* are expected to bring about the aspectual clash and make the sentences ungrammatical. But this prediction is not born out in (14). Then, how about a semantic constraint? We are not sure how a semantic constraint can come into play to differentiate the allowable adjectives containing *-ed* like *tired*, *ragged*, *exhausted* from the forbidden ones like *shined*, *blackened*, *charred*.

Let us digress briefly to sketch out the theory of s-selection. S-selection allows the lexical heads to select for the “semantic type” or “semantic class” of their complement in the sense of Grimshaw (1979) and Pesetsky (1991). Verbs like *care* and *ask* s-select a Q

(question), whereas verbs like *pretend* and *assume* s-select a P (proposition). This is illustrated in (15) and (16):

(15) a. John cares [where she is going]

b. *John cares [her destination]

(16) a. You pretend that [she is honest]

b. *You pretend her honesty

As we have seen the above examples, s-selection indeed characterizes the semantic type, for example Q (question), P (proposition), or E (exclamation) for a complement of the lexical head. It raises a reasonable question. How can we make an adequate distinction between the acceptable adjectives like *tired*, *ragged*, and *exhausted* and the unacceptable ones like *shined*, *blackened*, and *charred* in terms of the “semantic type”? Whatever semantic type for the former should definitely exclude that for the latter. It seems an almost impossible task to distinguish between the semantic class of the former and the latter.

The following paradigm in (17) further mystifies the proposal of s-selection for resultative predicates.

(17) PP/NP Resultative Phrase

a. She pounded the dough [_{PP} into a pancake]/*[_{NP} a pancake]

- b. She painted the barn *[_{PP} (in)to a weird shade of red]/[_{NP} a weird shade of red]
- c. They ran their sneakers [_{PP} to tatters]/[_{NP} a dingy shade of grey]
(Carrier and Randall 1992)
- d. She danced her feet *[_{PP} to soreness]/[_{AP} sore]

(18) PP/AP Resultative Phrase

- a. John laughed himself [_{PP} to death]/*[_{AP} dead]
- b. Bill laughed himself [_{PP} out of a job]/*[_{AP} jobless]/*[_{AP} unemployed]
- c. Tom laughed himself *[_{PP} out of consciousness]/[_{AP} unconscious]¹¹

The paradigm in (17) indicates that the resultative predicates can be PPs and NPs. In other words, a categorial constraint (c-selection) allows categories like PPs and NPs. Despite the fact that c-selection is met in (17)a and (17)b, evidently all of them are not acceptable. The question is how we can account for the difference in acceptability.

We might turn to a semantic constraint. Immediately we notice that s-selection is of little help in account for the contrast in (17)a and (17)b. It seems an extremely difficult task to generalize the semantic type that can accept a PP *into a pancake* and reject an NP *a pancake* in (17)a and conversely which reject a PP *(in)to a weird shade of red* and accept an NP *a weird shade of red* in (17)b.

Moreover, the examples in (18)a to (18)c have the same matrix verb *laugh*. In (18)a and (18)b the verb *laugh* allows PPs *to death* and *out of job* and rejects APs *dead*, *jobless* and *unemployed* while in (18)c it rejects a PP *out of consciousness* and allows an

¹¹ Scott Fults (p.c.) helped me with the above examples.

AP *unconscious*. Evidently, c-selection does not come into play since there is no coherence of either a PP or an AP. How can we differentiate the PP *to death* from the AP *dead* in (18)a and the PP *out of consciousness* from the AP *unconscious* in (18)c with reference to the semantic class? To the best of my knowledge no one has yet provided a good account for this idiosyncratic contrast.

On the basis of these examples, it can be concluded that neither c-selection nor s-selection can clearly circumscribe a range of permissible resultative phrases. None of the categorial and the semantic constraints are restrictive enough to pick out only permissible ones. Then, we have to employ the most restrictive selection, namely lexical selection in the sense of Pesetsky (1991, 1995).¹² Pesetsky motivates the necessity of lexical selection (l-selection) in addition to s-selection.¹³ There are instances in which neither c-selection nor s-selection can account for why a predicate takes a particular preposition excluding other prepositions. The verbs *depend* and *rely* requires the preposition *on*, *hope* requires *for*, *toy* requires *with*. Among nouns, *love* allows *for* or *of* and *desire* allows *for*. Among adjectives, *proud* and *ashamed* require *of* and *different* requires *from*. The selectional relation between the verb and its allowable preposition, and the noun and its allowable preposition, and the adjective and its allowable preposition is simply arbitrary. We do not have the slightest clue why this should be the case.

L-selection requires a specific lexical item to head a complement. It is assumed to hold when a lexical head merges with a complement. Let us return to the examples in (18).

¹² The idea of lexical selection was suggested by Norbert Hornstein (p.c.).

¹³ Pesetsky (1991, 1995) attempts to reduce c-selection to a combination of s-selection and Case properties.

How is it possible that the matrix verb *laugh* appears with *to death* but not with *dead* and at the same time it occurs with *unconscious* but not with *out of consciousness* in the RC? We found out that we cannot appropriately explain the idiosyncratic selection of a resultative predicate in terms of c-selection and s-selection. Then, we may need to say that the verb *laugh* l-selects *to death* to the exclusion of *dead* and it l-selects *unconscious* to the exclusion of *out of consciousness*. L-selection may be the only means that we can deal with this recalcitrant contrast in the examples in (12), (17), and (18). As a consequence, only very specific resultative predicates are able to appear with a particular matrix verb.

If lexical selection holds between a matrix verb and a resultative predicate, it does not come as a surprise that we cannot adeptly generalize a semantic type that can segregate *dead* from *to death* and *sore* from *to soreness*.

To recap, we cannot make the correct prediction of what kinds of resultative predicates are permissible and by the same token what sorts of resultative predicates are forbidden because of the purely arbitrary nature of l-selection. Dowty (1979, 303) makes exactly the same point in favor of the present suggestion. He notes: ... *research on this problem (Green 1972) has uncovered no general principle which predicts this difference in acceptability, and I take this as a good indication that this construction is a kind of lexicalized compound verb, though one which typically appears as a discontinuous constituent ...*

In line with Chomsky (1955, 1975), Dowty (1979) proposes a Complex Verb analysis. Put differently, the matrix verb and the resultative predicate form a new complex verb. If this is true, a newly formed a complex verb (the matrix verb +

resultative predicate) is expected to behave as a single syntactic unit. But we will see that in both English and Korean the matrix verb and the resultative predicate undergo syntactic operations individually (in 4.4.4). We take this as a telling argument against the Complex Verb analysis. The matrix verb and the resultative predicate still maintain their own individual identities rather than acting as complex verbs. Accordingly we do not adopt the Complex Verb analysis here. Again it is worth mentioning that the present suggestion of l-selection for a resultative predicate may have the same effect as the Complex Verb analysis insofar as the arbitrariness of selection of a resultative predicate is concerned.

On the grounds of the English empirical facts we have made the claim that the l-selection of resultative predicates should be in place. S-selection and c-selection do not account for the idiosyncrasy of selection for a resultative predicate in relation to a matrix verb.

This leads to the following question. If l-selection is required in the English RC, does this also hold of the Korean RC? Do Korean RCs pattern with their English equivalents with respect to l-selection?

We briefly discuss Korean adjectives. It is still debated whether Korean has a distinct adjective category. H-P Choy (1971), C-S Suh (1996), and H-M Sohn (1999) argue that Korean has a distinct lexical and syntactic adjective category. On the other hand, Martin (1992) and Maling and Kim (1998) doubt the existence of the category adjective in Korean and suggest that adjectives should be understood as a type of verb class since they exhibit verb-like morphosyntactic behaviors. This issue is beyond the

scope of the present study. Whether we classify these lexical items as adjectives or verbs, this does not affect the present analysis.

The examples in (19) present the Korean equivalents for *shiny*, *shining*, and *shined* respectively:

- (19) a. Sot-i panccakkeli-n-ta
 Pot-nom shine-pres
 ‘Pot is shiny; Pot shines’
- b. Sot-i cikum panccakkeli-n-ta
 Pot-nom now shine-pres
 ‘Pot is shining (now)’
- c. Sot-i (hanye-ey uykay) panccakkeli-ci-ess-ta
 Pot-nom maid-by shine-pass-past
 ‘Pot was shined (by the maid)’

Korean does not have clear formal morphology marking present progressive. In other words, *shiny* and *shining* cannot be morphologically distinguishable. Thus the occurrence of the time adverbial is of importance to differentiate present and present progressive shown in (19)a and (19)b. The time adverbial *cikum* ‘now’ can differentiate between the present in (19)a and the present progressive in (19)b.

Can the Korean equivalents of the three different adjectives in English be used as resultative predicates in the RC? The answer can be found in (20):

- (20) a. The maid scrubbed the pot [shiny/*shining/*shined]
 b. Hanye-ka sot-ul [panccakkkeli-key/panccakkkeli-ci-key] mwuncile-ss-ta
 Maid-nom pot-acc shiny, shining/shined scrub-past
 ‘The maid scrubbed the pot shiny’

As indicated in the acceptability of (20)b, Korean is not susceptible to the selectional restrictions of English. Unlike English which allows *shiny* but prevents *shining* and *shined*, Korean permits *panccakkkeli-* ‘shiny, shining’ and *panccakkkeli-ci-* ‘shined’ for a resultative predicate. As we discussed before, the English adjectives *shiny* and *shining* correspond to the single lexical item *panccakkkeli-* without a further distinction.

What can we draw from the contrast in (20) between English and Korean with respect to the selectional restrictions of resultative predicates? Korean is not as restrictive as English concerning selectional restriction in the RC. We can arrive at a conclusion that English may require I-selection of a resultative predicate while Korean may not.

Next, we discuss the relaxed selectional restrictions on resultative predicates in Korean RCs. How wide a range of resultative predicates can we get? We use one matrix verb in conjunction with various kinds of adjectives. As with (20), we compare the English and the Korean examples on the assumption that they express roughly the same meaning.

- (21) a. Sue dyed her hair red/*pretty/*damaged
 b. Sue-nun meli-lul ppalkah-key/yeppu-key/sonsangtoy-key mwutuli-ess-ta
 Sue-top hair-acc red-key/pretty-key/damaged-key dye-past

‘Sue dyed her hair red/pretty/damaged’

In (21), the English verb *dye* allows exclusively the color adjective *red* banning other adjectives *pretty* and *damaged*. Logically speaking, in the real world the process of dying hair may have various effects. For example, it may cause hair to become pretty, and it might cause the hair to become damaged. Yet this plausible result of dying hair cannot be expressed in the RC in the case of English. On the contrary, Korean permits various adjectives beyond the color adjective *ppalkah*- ‘red’. Here *yeppu*- ‘pretty’ and *sonsangtoy*- ‘damaged’ are both possible resultative predicates. This suggests that English imposes more restrictions on resultative predicates than Korean. The selectional restrictions on resultative predicates in Korean is quite liberal, when compared with English.

4.2.3 The Difference in the Degree of Selectional Restriction

The contrast in selectional restrictions in RCs between English and Korean presents us with the following task. How can we account for this contrast in the degree of restrictiveness on selection of a resultative predicate in English and Korean?

Selectional restrictions including c-selection, s-selection, and l-selection are imposed through the head-complement relation. Let us assume that selectional restrictions can only be imposed on the complement of a lexical head.

Returning to the issue of the difference in the severity of the selectional restriction between English and Korean, evidently the former demonstrates a highly restrictive selectional restriction of resultative predicates while (relatively speaking) the latter shows

freedom of selectional restriction. The observed freedom in the range of resultative predicates in Korean leads us to say that unlike English there might be no selectional restrictions of resultative predicates. If we suppose that Korean is not subject to selectional restrictions in RCs, then we can take this one step further. Resultative predicates are not a part of a *vP/VP* complement. Ultimately, we may suggest that a resultative predicate in the Korean RCs is hosted by a *VP/vP* adjunct not by a *vP/VP* complement.¹⁴

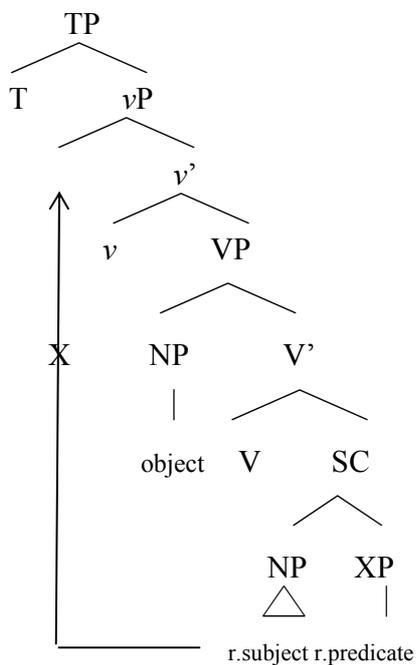
On the present proposal of taking a resultative predicate as a *vP/VP* adjunct in Korean, it does not strike us any longer that the Korean RC does not exhibit as restrictive a selectional restriction properties of a resultative predicate in English. Rather, it naturally follows that a relation of a resultative predicate with a matrix verb is pretty liberal as we have observed.

The English RC and the Korean RC may be schematically presented respectively as in (22) and (23) abstracting away from irrelevant structures here:¹⁵

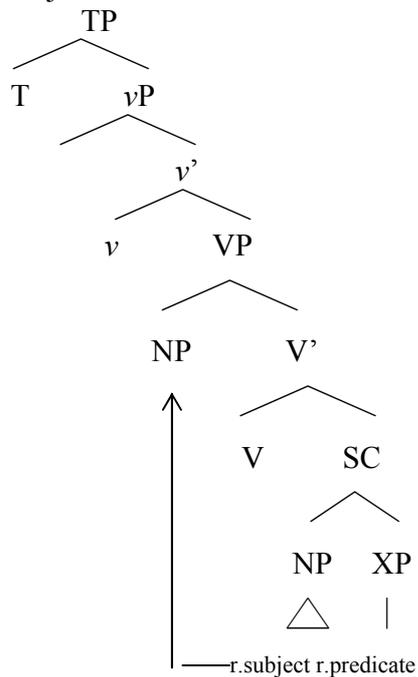
¹⁴ The adjunct treatment was suggested by Norbert Hornstein (p.c.).

¹⁵ When a tree branch is a dotted line, an element under the branch, that is, a subtree is assumed to move out of it before it is attached to a root tree. For example, a resultative subject in 0a sideward moves to a matrix subject prior to being adjoined to a root tree. The point a resultative subject moves in the course of the derivation, the subtree out of which the subject moves is not taken as an adjunct. So we can eschew CED effects in Huang's (1982) sense. Afterwards the subtree will be attached to the root tree (see section 4.6 for more details).

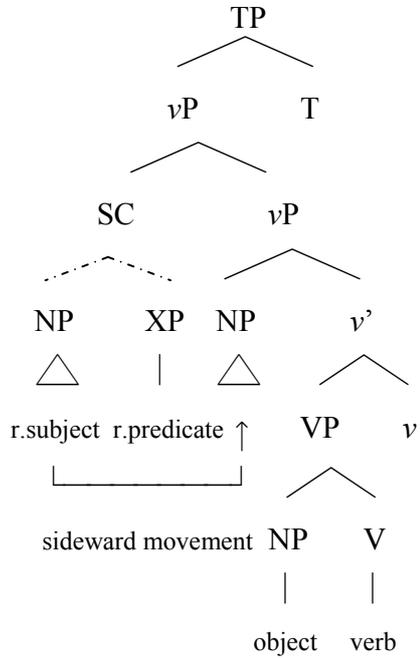
(22) a. *Subject Resultative



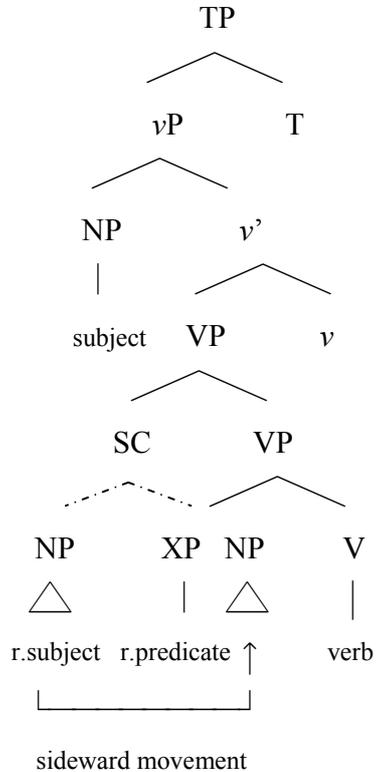
b. Object Resultative



(23) a. Subject Resultative



b. Object Resultative



Empirically motivated by the different selectional restriction noted above, I have proposed that in English the Small Clause (SC) of the RC should be treated as a complement of a matrix verb whereas in Korean a SC should be treated as an adjunct of a matrix verb or a light verb. When we adopt this proposal, it follows that the English RC allows an Object Resultative but not a Subject Resultative. A resultative subject in (22)a cannot raise to the subject position across the object position without a violation of minimality, for example the Shortest Movement Condition in (22)a while it can raise to the object position in compliance with minimality in (22)b. On the other hand, Korean allows multiple adjunction sites of a SC in the verbal domain because of being an adjunct. So it is possible that an SC is attached to a higher verbal domain ν P in (23)a or an SC is attached to a lower verbal domain VP in (23)b. When an SC is attached to a higher ν P in (23)a, it creates a Subject Resultative since a resultative subject can sideward move to the subject position without violating minimality. When an SC is adjoined to a lower VP in (23)b, it leads to an Object Resultative. A resultative subject can move sideward to the object position satisfying minimality. We take up the detailed derivational procedure in section 4.6.

In contrast to Korean, English has only one position for a SC being placed in the verbal domain on the assumption that it is a VP complement. It naturally follows that only an Object Resultative is available. We discuss extensively how we can handle different readings between a Subject Resultative and an Object Resultative in Korean. We determine the adjunction site of the SC plays a crucial role in determining its relevant reading in section 4.6.

First, however, we will provide arguments indicating that the resultative predication relation should be captured by an SC in the RC.

4.3 Arguments in Favor of Small Clause (SC) analysis

Most all theories agree that the RC contains a secondary subject-predication relation. Nevertheless this is implemented in various ways structurally. A so-called Small Clause analysis has emerged under the Principle and Parameters theory, aiming at capturing the traditional definition of the subject such as [NP, S], drawing on Chomsky's (1965) *Aspects Model*. This is advocated by Stowell (1981, 1983), Chomsky (1981), Kayne (1985), Hornstein and Lightfoot (1987), Hoekstra (1988), *inter alia*. In essence they maintain that the secondary predication relation should be represented in terms of syntax. The identification of an SC's categorical status still remains unsettled. It is assumed that there exists an independent constituent formed by a secondary predicate and its subject. On the other hand, Williams (1980, 1983), Rothstein (1985), Culicover and Wilkins (1984, 1986), McNulty (1988), Roberts (1988), and Carrier and Randall (1992), *inter alia* object to a Small Clause analysis. As the front man of the anti-Small Clause analysis, Williams (1983) claims that rather than assuming the existence of a small clause, a secondary predication relation should be represented in a flat syntactic structure in concert with a co-indexation mechanism. In his Predication Theory, there is a separate level of representation, predication structure, at which a subject and predicate relation is instantiated by co-indexing. Postulating another level of representation like predication structure is not compatible with the minimalist tenet in which we assume that there are only two levels of representation: Phonetic Form (PF) and Logical Form (LF).

The following instances of the RC in Korean and English corroborate the SC analysis on the empirical grounds.

4.3.1 Nominative Case marked Resultative Subject

Let us look at the Korean examples in (7), repeated in (24):

- (24) a. John-i [mos-ul napcakha-key] twutulki-ess-ta
 John-nom nail-acc flat-key pound-past
- b. John-i [mos-i napcakha-key] twutulki-ess-ta
 John-nom nail-nom flat-key pound-past
- c. After Scrambling of *mos-i napcakha-key* ‘nail-nom flat-key’
Mos-i napcakha-key_i John-i t_i twutulki-ess-ta
 Nail-nom flat-key John-nom pound-past
 ‘John pounded the nail flat’

As presented in (24), the resultative subject *mos* ‘nail’ can be marked with either accusative Case *-ul* or nominative Case *-i*. If we do not adopt the SC analysis, then we must assume that a resultative subject starts directly as the complement of a matrix verb. Nominative Case marking on the resultative subject *mos-i* ‘nail-nom’ raises the question concerning the source of the nominative Case. Where does it come from? One might be tempted to think that this example in (24)b may be seen as a garden-variety Multiple Nominative Construction (MNC) as in (25)a.

(25) Multiple Nominative Constructions: Inalienable Possession

- a. John-un [Bill-i pali-i cak-tako] malha-yess-ta
 John-top Bill-nom foot-nom small-comp say-past
 ‘John said that Bill’s foot was small’
- b. After Scrambling of *pal-i cak-tako* ‘foot-nom small-comp’
 *Pal-i cak-tako_i John-un [Bill-nom t_i] malha-yess-ta
 Foot-nom small-comp John-top Bill-nom say-past

The MNC of (25) is engaged in an inalienable possession relation. Now, we apply scrambling to the possessum *bal-i* ‘foot-nom’ and its predicate *cak-tako* ‘small-comp’ together, leaving the possessor *Bill-i* ‘Bill-nom’ behind. Now, we have (25)b. It is absolutely unacceptable. Let us turn to the RC involving a similar inalienable possession relation as presented in (26):

(26) Resultative Construction: Inalienable Possession

- a. Bill-i [mok-ul swi-key] kohamcil-ess-ta
 Bill-nom throat-acc hoarse-key shout-past
- b. Bill-i [mok-i swi-key] kohamcil-ess-ta
 Bill-nom throat-nom hoarse-key shout-past

After Scrambling of *mok-i swi-key* ‘throat-nom hoarse-key’

- Mok-i swi-key_i Bill-i t_i kohamcil-ess-ta
 Throat-nom hoarse-key Bill-nom shout-past
 ‘Bill shouted himself hoarse’

As we have done with the MNC in (25), we apply scrambling to the possessum *mok-i* ‘throat-nom’ and its predicate *swi-key* ‘hoarse-key’ together, stranding the possessor *Bill-i* ‘Bill-nom’. In stark contrast with (25)b, (26)c is perfectly acceptable. We take this contrast to indicate that (25)b and (26)c are not engaged in the same structure despite a resemblance on the surface to the MNC (see Maling and S-W Kim 1992 for more discussion of the MNC involving inalienable possession). In a genuine MNC a possessum *pal* ‘foot’ may depend on the same T as a possessor *Bill* for a Case concern whereas in the RC a possessum, namely a resultative subject *mok* ‘throat’ may not. In the latter a resultative subject checks Case inside the SC independent of a T for a possessor *Bill*.

Finally, if we assume the resultative subject *mos* ‘nail’ starts as a complement of the matrix verb *twutulki-* ‘pound’ as in (24), inevitably we end up having no Nominative Case source for the nominative marked resultative subject. Recall that the RC does not pattern with the MNC, and hence, the matrix T is not responsible for the nominative Case marking on the resultative subject.

How can we resolve this issue? The problem disappears under the SC analysis. Let us see how the SC analysis can handle the Case concern for nominative Case marked resultative subject. Instead of postulating that a resultative subject starts as a complement of a matrix verb, now we assume that a resultative subject merges with its resultative predicate first. It desirably follows that they thereby form a predication relation. Prior to raising into the matrix clause, the resultative subject gets its nominative Case checked inside the SC.

Under the SC analysis a nominative Case marked resultative subject can be easily explained away without a reference to a T in a matrix clause. However, if we assume that a resultative subject originates as the complement of the matrix verb, we will end up with a serious problem accounting for the nominative Case source.

As for the nominative Case source in the SC, we assume that there is a T may be responsible for nominative Case on a resultative subject. However, there is no tense morphology in the resultative predicate. The absence of the tense morphology does not immediately mean that it is lacking a nominative Case checker/assigner. Although frequently the relevant tense is identified by the overt tense morpheme: *-(u)n* for present, *-ass/-esee* for past, *-ass-ess/-ess-ess* for past perfect, *-keyss* for future, etc, there are two well-known cases where the tense is not encoded overtly: First, stative predicates including adjectives do not bear the present tense morpheme *-(u)n* on them in (27)a unlike (27)b with the past tense morphology *ess*.

- (27) a. Sue-ka chincelhata
 Sue-nom kind
 ‘Sue is kind’
- b. Sue-ka chincelha-ess-ta
 Sue-nom kind-past
 ‘Sue was kind’

Secondly, the first conjunct of *-ko* ‘and’ coordination constructions is tenseless. The first conjunct does not have any tense morpheme and hence depends on the second conjunct in order to identify tense. Consider the following examples:

- (28) [John-i sakwa-lul mek]-ko [Mary-ka orange-lul ssis-ess-ta]
 John-nom apple-acc eat-and Mary-nom orange-acc wash-past
 ‘John ate an apple and Mary washed an orange’
 ‘*John eats an apple and Mary ate an orange’

On the first conjunct, the tense morpheme is absent, as in (28). But as the English gloss exhibits, it requires having the same tense (here past tense) as the second conjunct. It cannot have a present reading. Based on the symmetric tense interpretation of the VP Coordination Constructions, J-H Yoon (1993, 1997) and J-M Yoon (1990, 1996) propose that the tense feature of the second conjunct should spread over to the verb of the first conjunct. It explains that the tenseless first conjunct should have the same kind of tense interpretation as the second conjunct.¹⁶

The point here is that the absence of the overt tense morpheme on the verb does not mean that the verb lacks a tense feature. On the contrary, it does indeed have a tense feature, but it is not simply realized morphologically. As shown in (27)a and (28), the

¹⁶ The symmetric tense interpretation in the VP coordination constructions does not hold of English as illustrated in (1):

- (1) a. John walked and washed the dog
 b. *John walked and wash the dog
 c. *John [walk and wash]ed the dog

Unlike Korean, in English the tense feature is not allowed to distribute over the whole conjunct. Each conjunct has to bear its own tense morpheme separately.

overtly tenseless predicates all have nominative marked subjects. It proves that the tense feature is present there and is responsible for nominative Case for subject. Under some circumstances, verbs may not bear an overt tense morpheme on them, but nevertheless the implicit tense feature is actively playing a role in semantics and syntax.

Let us return to the following example, repeated in (29):

- (29) a. John-i [mos-ul napcakha-key] twutulki-ess-ta
 John-nom nail-acc flat-key pound-past
- b. John-i [mos-i napcakha-key] twutulki-ess-ta
 John-nom nail-nom flat-key pound-past
- ‘John pound the nail flat’

As (29) shows, the resultative subject *mos* ‘nail’ displays Case alternation of nominative and accusative Case. We discussed this fact at length in chapter 2. For brevity, presumably in Korean Case related heads like T and *v* can optionally assign/value Case to a nominal element.

Furthermore, according to Higginbotham’s (1985) event theory, predicates may denote an event such as an action or a state, and hence should be linked to tense. But with secondary/resultative predicates, they may not have their own tense. Rather, they have tense anaphoric to the primary/matrix predicate.¹⁷ The resultative predicates are understood as being dependent on the matrix tense. In the RC, matrix predicates and resultative predicates may produce a symmetric tense interpretation: The resultative predicates are understood with the tense of the matrix clause.

¹⁷ It was suggested by Norbert Hornstein (p.c.).

4.3.2 Reflexive and Bound Pronoun on Resultative Subject

As we discussed in 4.1.1, in English the presence of the fake reflexive *herself* is required when an intransitive ergative verb (i.e. *yell*) occurs with a resultative predicate in the RC. The intransitive *yell* does not select for an internal argument *herself* and hence, the appearance of *herself* causes the unacceptability of (30)a. Furthermore, the matrix verb cannot take the resultative predicate *hoarse* alone as in (30)b. So the intransitive verb takes neither an internal argument nor a resultative predicate separately. It needs both an internal argument and its predicate at the same time as in (30)c. This requirement of the co-existence of a secondary subject and its predicate lends itself to a SC analysis.

- (30) a. *Mary yelled herself
 b. *Mary yelled hoarse
 c. Mary yelled [herself hoarse]

Without invoking an SC account, explaining the contrast in (30) seems requires an additional device. Levin and Rappaport Hovav (1995) capitalize on a condition as the DOR: a resultative phrase may be predicated only of a direct object and not a subject or an indirect object. They assume that the RC is subject to the DOR. In (30)b, the resultative phrase *hoarse* is predicated of a subject *Mary* not an object. Note that here we have an intransitive verb. Thus, there is no object. So it leads to a violation of the DOR. To fix the problem, we insert a fake reflexive *herself* in a direct object position and then the adjective *hoarse* comes to be predicated of a direct object *herself*, which is

coreferential with the subject. Consequently, the occurrence of the fake reflexive in the RC is forced for the purpose of complying with the DOR. In fact there is a relation between the matrix subject *Mary* here and the resultative predicate *hoarse* here. This relation may be established through the medium of a fake reflexive *herself*. It cannot, however, be established directly. Conversely, according to the SC approach, we can explain the direct relation between a matrix subject and a resultative predicate without recourse to a medium like a fake reflexive.

Levin and Rappaport Hovav treat examples like (31) containing a bound pronoun as a special type of “inalienable possession”. When the postverbal NP *his eyes* is an inalienably possessed NP, the pronoun should be coreferential with the subject (*John*) of the verb. They suggest that this obligatory coreferential reading of a pronoun with the subject may be related to what happens in the RC with a fake reflexive as in (30). A possessive pronoun may understood as a type of reflexive, since both are coreferential with the subject of the matrix verb. In other words a possessive pronoun and a reflexive should be bound by a subject.

(31) John_i cried his_{i/*j} eyes red

This insight does not seem implausible. Pronouns and reflexives are assumed to be similar in a certain case. Yet it seems too narrow empirically. They allow a possessive pronoun to be bound by a subject only when it is an inalienably possessed NP (generally denoting body part). How about (32) then? We have the same kind of unergative verb *run* and the possessive pronoun *their*. Like (32), the pronoun *their* should be bound by the

subject of a verb. However, the postverbal NP *their Nikes* cannot be considered an inalienably possessed NP since it is not a body part. Treating a bound pronoun as a reflexive may not be correlated with an inalienable possession reading. Rather it may be tied with the position in which a pronoun sits. Note that it is a possessive pronoun.

- (32) a. *The joggers ran their Nikes
 b. *The joggers ran threadbare
 c. The joggers_i ran their_{i/*j} Nikes threadbare

Now let us think about this bound pronoun reading from a different angle. Rather than conjuring up some stipulation in order to force this bound reading, here we attempt to derive this bound reading based on the assumption that a reflexive and a pronoun are a residue of A movement (see Hornstein 2001).

The close tie between binding and movement was noticed even early on in mid-seventies. Since then, various attempts have been made one way or another under the banner of reductionism in order to integrate one into the other instead of maintaining both of them in the theory. The one direction is viewing movement in terms of binding. The other direction is that analyzing binding by means of movement. Hornstein (2001) advocates the latter. He suggests that Condition A of the Binding Theory may be best analyzed in movement terms. Similarly for Condition B, but indirectly. He proposes that a reflexive is the residue of A movement, and assumes an NP trace can be spelled out as a pronoun when a movement is prohibited (see Hornstein 2001 for extensive discussion).

With this much as background, let us return to the example with a fake reflexive in (30)c, repeated in (33)a:

- (33) a. Mary yelled herself hoarse
 b. Mary yelled Mary hoarse

Conjoining the SC analysis with the view that reflexives are residues of A movement (Hornstein 2001), we assume that (33)a begins like (33)b. (34) outlines the derivation:

- (34) Mary T [_{VP} self [_{VP} Mary v [_{VP} yelled [_{TP} [Mary]self [T [_{AP} [Mary]self hoarse]]]]]]¹⁸
 θ/θ/Case Case θ/θ θ

By assumption the *self* form is attached to *Mary* as the Case holder. The resultative subject [*Mary*]*self* merges with its resultative predicate *hoarse* receiving a theta role. It forms a SC. Next [*Mary*]*self* moves to Spec of vP getting its second theta role. Then *self* checks the accusative Case. *Mary* raises to Spec of TP. It gets its nominative Case checked. This is exactly reminiscent of so-called Raising constructions (a.k.a. ECMs) as in (35). We return to this issue later on (in section 4.5). The technical implementation of this kind of derivation may not be simplistic, especially at first glance. Yet this technique should not be considered as an obstacle to obscure the point we want to make with the example in (30).

¹⁸ The notation indicates that ‘θ’ means a theta role that an argument receives and ‘Case’ means that its Case feature is checked.

Once we adopt the SC approach, the surface subject *Mary* originates with its predicate *hoarse*. En route to Spec of TP, *Mary* should stop at Spec of *v*P. There *Mary* is realized as a reflexive *herself*. This is because English is not a multiple Case checking language. In essence we do not stipulate any special status for this reflexive as a fake reflexive in the sense of Simpson and Levin and Rappaport Hovav. Recall that a fake reflexive is existent only for the RC involving an inalienable possession relation in Simpson and Levin and Rappaport Hovav. It sounds too construction-specific and definitely lacks independent motivation. On the SC analysis, however, this fake reflexive is merely a by-product of derivation just like a regular reflexive found in Raising (ECMs) shown as in (35):

- (35) a. Mary thinks herself to be honest
 b. Mary thinks Mary to be honest

Next we will look into the example in (32) with a bound possessive pronoun, as repeated in (36):

- (36) a. *John cried his eyes
 b. *John cried red
 c. John_i cried his_{i/*j} eyes red

As we observed in (30), the unergative intransitive verb *cry* cannot appear with the argument *his eyes* and the resultative predicate *red* alone, respectively in (36)a and (36)b.

It should come with the argument *his eyes* and the predicator *red* together as in (36)c. Thus the verb takes a SC *his eyes red* but not each of them independently.

On the SC approach, in concert with Kayne's (2001) doubling structure, building on Uriagereka (1995) where the clitic and its double start together. Kayne assumes that the antecedent and the pronoun are merged together and the antecedent moves into a surface position out of a doubling structure leaving the pronoun behind as in (37):¹⁹

- (37) a. ... [antecedent_i pronoun_i] ...
 b. ... antecedent_i [t_i pronoun_i] ...

In (38)b, *John* merges with the pronoun *his* first, obtaining the coreferential reading *John* moves out of the doubling structure [*John his eyes*] into a subject position. There, it receives an extra theta role from the matrix verb *cry*.

- (38) a. John_i cried his_{i/*j} eyes red
 b. John_i cried [t_i his_i eyes] red

In line with Hornstein (2001), Kayne (2001) contends that a construal relation such as the binding relation is reducible to a syntactic operation, namely movement.²⁰

¹⁹ Unlike Kayne (2001), Hornstein (2001) assumes that a pronoun does not exist in the lexical array. Rather it is treated as a spelled-out trace, especially in the case movement is prohibited.

²⁰ Jairo Nunes (p.c.) raised a question of how the present analysis can rule out (1)b.

- (1) a. John_i talked to his_i mother's friend
 b. *John_i cried his_i mother's eyes red

At this point, there seems to no plausible account for the contrast between (1)a and (1)b.

The point we want to drive home here is that the verb *cry* takes the SC *John his eye red* at the beginning of the derivation. It naturally ensues that the possessive pronoun *his* gets a coreferential reading with the subject *John* since the double *John* and the pronoun *his* form a doubling structure in the early stage of the derivation.

In short, we argued for the SC analysis by presenting examples with a reflexive and a bound pronoun whose reading must be bound by the subject of the verb in the RC. Once we adopt the SC approach, the coreferential nature of the reflexive and the pronoun with a subject can be accounted for.

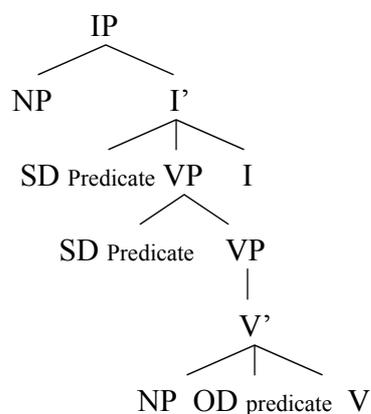
4.4 Arguments for Resultative Predicate in the Verbal Domain

In the previous section we argued that a resultative subject and its predicate have to be analyzed as a SC. We motivated the presence of a SC both in the Korean RC and in the English RC.

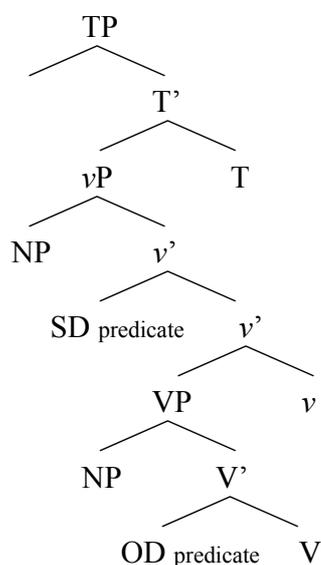
Now in this section we will provide evidence in favor of arguing that a resultative predicate belongs inside the verbal domain rather than outside of the verbal domain. Here we employ Koizumi's (1994) diagnostics in order to determine the structural position for a resultative predicate: Placement of a Floating Quantifier, VP-preposing, and the Pseudo-cleft Construction. Koizumi (1994) discusses the secondary predicate construction in Japanese and in particular the depictive construction. The Japanese depictive construction includes two types. One is the Subject Depictive and the other is the Object Depictive. Koizumi proposes that there exist two different positions for which a depictive predicate may be adjoined. The Subject Depictive predicate is adjoined to I', while the Object Depictive predicate is adjoined to V'. This proposal is modified by

Yatsushiro (1999). Yatsushiro maintains Koizumi's insight that there ought to be two different adjunction sites for the Japanese depictive construction in accordance with a reading of either the Subject or the Object Depictive. Yet as opposed to Koizumi's proposal that the Subject Depictive should be outside of VP, Yatsushiro proposes that the Subject Depictive is inside VP since she assumes the VP-internal subject hypothesis following Kuroda (1988), Fukui (1986), Kitagawa (1986), Koopman and Sportiche (1991), among others. Still Yatsushiro (1999) maintains a difference in the height of the adjunction site inside the verbal domain for the Subject Depictive (SD) and the Object Depictive (OD), as in (39) :

(39) a. Koizumi (1994)



b. Yatsushiro (1999)



What is relevant here are the two different adjunction sites within the verbal domain. The different readings between the Subject Depictive and the Object Depictive are attributed to where each predicate is attached in the verbal domain.

In an effort to determine the position of a resultative predicate, we start by considering one of Koizumi tests: placement of a floating quantifier.

4.4.1 Placement of Floating Quantifier

Consider the following two paradigms. (40) is the Subject Depictive while (41) is the Object Depictive.

(40) Subject Depictive

- a. Gakusee-ga 3-nin hadaka-de katuo-o tabeta
 Student-nom three-CL naked bonito-ac ate

- b. ?Gakusee-ga [hadaka-de 3-nin] katuo-o tabeta
 Student-nom naked three-CL bonito-ac ate
 ‘Three students ate the bonito naked’

The example in (40) has a Subject Depictive (SD) predicate *hadaka-de* ‘naked’ since it is predicated of a subject *gakusee-ga* ‘student-nom’. The SD predicate *Hadaka-de* ‘naked’ can be placed between the subject *gakusee-ga* ‘student-nom’ and its quantifier *3-nin* ‘three-classifier’. The instance in (41), however, has an Object Depictive predicate *nama-de* ‘raw’. It is predicated of an object *katuo-o* ‘bonito-acc’.

(41) Object Depictive

- a. Gakusee-ga 3-nin [nama-de] katuo-o tabeta
 Student-nom three-CL raw bonito-acc ate
- b. *Gakusee-ga [nama-de] 3-nin katuo-o tabeta
 Student-nom raw three-CL bonito-acc ate
 ‘Three students ate the bonito raw’

In contrast to (40)a demonstrating freedom of word order with a SD predicate, an intervention of the OD predicate *nama-de* ‘raw’ between the subject *gakusee-ga* and its quantifier *3-nin* ‘three-classifier’ causes unacceptability as in (41)b.

Koizumi accounts for this distributional difference between the SD and the OD predicate as follows. A numeral quantifier is, drawing on Miyagawa (1989), assumed to be base generated as an adjunct. And it should be in a local relation with its associate NP.

A subject, before embracing the VP-internal hypothesis, was believed to be base-generated in Spec of TP. Thus its quantifier should be adjoined to T' in order to have a local relation with its associate, a subject here. In the case of a SD predicate, it is base generated high enough to come between a subject and its quantifier as in (41). On the other hand, in the case of an OD predicate, it is not base-generated high enough to intervene between a subject and its quantifier as in (41).²¹ Consequently an OD predicate is prevented from interfering with a subject and its quantifier. Even after adopting the VP-internal subject hypothesis, Koizumi's account for the difference in (40)b and (41)b is not affected much. Still the difference between the two may be attributed to different positions of each predicate: the SD and the OD predicate.

Let us examine how the Korean depictive predicate behaves with respect to the placement of a floating quantifier. We have the same kind of two paradigms as we have seen above. The example in (42) is the SD while that in (43) is the OD.

The example in (42) has a SD predicate *hayngbokha-key* 'happy-key'. It is predicated of the subject *haksayng-i* 'student-nom'. The SD predicate *hayngbokha-key* 'happy-key' can intervene between the subject *haksayng-i* 'student-nom' and its quantifier *sey myeng* 'three classifier'.

(42) Subject Depictive

- a. Haksayng-i sey myeng hayngbokha-key ttena-ss-ta
 Student-nom three CL happy-key leave-past
- b. Haksayng-i [hayngbokha-key] sey myeng ttena-ss-ta

²¹ Koizumi (1994) assumes that an adjunct should be only base-generated in a one-bar level projection.

Student-nom happy-key three CL leave-past
 ‘Three students left happy’

Now we have an OD predicate *ttukep-key* ‘hot-key’ that is predicated of an object *kepi-lul* ‘coffee-acc’. As presented in (43), the appearance of the OD predicate *ttukep-key* ‘hot-key’ between the subject *haksayng-i* ‘student-nom’ and its quantifier *sey myeng* ‘three classifier’ degrades acceptability considerably.

(43) Object Depictive

- a. Haksayng-i sey myeng ttukep-key kepi-lul masi-ess-ta
 Student-nom three CL hot-key coffee-acc drink-past
- b. */??ksayng-i [ttukep-key] sey myeng kepi-lul masi-ess-ta
 Student-nom hot-key three CL coffee-acc drink-past
 ‘Three students drank coffee hot’

The contrast between (42)b and (43)b leads us to assume that the SD and the OD predicate do not occupy the same position. Importantly, as opposed to an OD predicate, a SD predicate may be placed high enough to intervene between a subject and its quantifier without affecting acceptability. A subject, following the VP internal subject hypothesis, is base-generated in Spec of *vP*. A SD may be a *vP* adjunct.

We have observed a contrast in the possibility of intervention of a depictive predicate between a subject and its numeral quantifier. The SD predicate is allowed to

come between a subject and its quantifier while the OD predicate is banned. This can be attributed to different positions to which they are attached.

As we argued in 4.2, we assume that unlike English a Korean resultative predicate may be hosted by a ν P/VP adjunct rather than a VP complement. We anticipate a resultative predicate to behave like a depictive predicate in Korean.

Stowell (1981, 1983) analyzes the depictive predicate as a SC adjunct. In his proposal, the depictive predicate is treated as a control structure with PRO in the subject position of a SC. The SD involves subject control and the OD engaged object control each as offered as (44) and (45):

(44) Subject Depictive

Bill_i ate the meat [_{AP} PRO_i naked]

(45) Object Depictive

Bill ate the meat_i [_{AP} PRO_i raw]

A question arises as to whether PRO as the subject of a SC is governed in terms Chomsky's (1986) Barriers. An adjunct SC is not subcategorized for and consequently, is not L-marked by the verb. Thus, the adjunct SC is not governed by a verb. But how about inside the SC? The PRO is still governed by the adjective. As a solution to this dilemma of a governed PRO, Uriagereka (1988), Bennis and Hoekstra (1989), Raposo and Uriagereka (1990), following Pollock's split IP analysis, suggest that an SC should be understood as AgrP. Then a PRO subject occurs in Spec of AgrP and hence belongs

outside of the domain of government by Adjective. At last a PRO in a SC is not governed within a SC: [_{AgrP} PRO Agr [_{AP} A ...]].²²

Hornstein and Lightfoot (1987) reject the PRO theorem and assume that PRO can be governed following Bouchard (1982) and Koster (1984) (see Hornstein and Lightfoot 1987).²³ (44) and (45) can be represented as (46) and (47) respectively:

(46) Subject Depictive

Bill_i INFL [_{VP/VP} [_{VP} ate the meat] [_{IP} PRO_i INFL [_{AP} naked]]]

(47) Object Depictive

Bill_i INFL [_{V'/V'} [_{V'} ate the meat] [_{IP} PRO_i INFL [_{AP} raw]]]

Hornstein and Lightfoot, drawing on Chomsky (1981) and Stowell (1981, 1983), assume that the SC of a depictive construction is an IP. The Infl may contain [+tense], [-tense], or no feature. The Infl of the depictive SC has no feature. Unlike an Infl with [+tense], an Infl with no feature does not behave as a barrier. As a result, a PRO subject in the SC may be governed by the verb *ate*. It follows that a PRO is governed and it behaves like an anaphor. The PRO in (46) and that in (47) should be coreferential with the closest m-commanding NP *Bill* and *the meat*.²⁴ Hornstein (1999, 2001) proposes that the control construction should be treated like the raising construction (see section 4.5).

²² It is assumed that Agr is not a governor.

²³ The following is cited from Hornstein and Lightfoot (1987, 26): ... *Like Koster we shall make the further claim that, when PRO is governed, it behaves like an anaphor, bound within its governing category; and that ungoverned PRO receives the arbitrary interpretation ...*

²⁴ Importantly Hornstein and Lightfoot (1987) argues that there is no maximal projection dominating PRO within a SC since S' is taken to be a maximal projection but not S.

Now consider the following paradigm. The examples in (48) are the Subject Resultative (SR) and (49) are the Object Resultative (OR).

(48) Subject Resultative

- a. Haksayng-i sey myeng nolay-lul mok-i swi-key pwul-ess-ta
 student-nom three CL song-acc throat-nom hoarse-key sing-past
- b. Haksayng-i [mok-i swi-key] sey myeng nolay-lul pwul-ess-ta
 student-nom throat-nom hoarse-key three CL song-acc sing-past
 ‘Three students sang songs so that they became hoarse’

The SR in (48) has a SR predicate *mok-i swi-key* ‘throat-nom hoarse’ that is predicated of a subject *haksayng-i* ‘student-nom’. The SR predicate *mok-i swi-key* ‘throat-nom hoarse-key’ can appear between the subject *haksayng-i* ‘student-nom’ and its numeral quantifier *sey myeng* ‘three classifier’.

On the other hand, we have an OR predicate *napcakha-key* ‘flat-key’ that is predicated of the object *kumsok-ul* ‘metal-acc’. Unlike the SR predicate, the OR predicate *napcakha-key* ‘flat-key’ cannot come between the subject and its numeral quantifier.

(49) Object Resultative

- a. Haksayng-i sye myeng napcakha-key kumsok-ul twutulki-ess-ta
 Student-nom three CL flat-key metal-acc pound-past
- b. *Haksayng-i [napcakha-key] sye myeng kumsok-ul twutulki-ess-ta
 Student-nom flat-key three CL metal-acc pound-past
 ‘Three students pounded the metal flat’

By analogy with what happens in the depictive construction, the contrast in the possibility of intervention of a resultative predicate between a subject and its numeral quantifier can be traced to a difference in the height of its attachment site. The SR predicate is allowed to appear between a subject and its quantifier since it is adjoined to *vP*.

4.4.2 VP-Preposing

The second piece of evidence comes from the VP Preposing Construction. The VP Preposing construction is argued to be the focus construction in M-Y Kang (1988) and M-K Park (1992). In Korean (and Japanese as well), it is possible to move a VP constituent when the VP is followed by the nominalizer *-ki* and the topic particle *-nun* in a sequence. The preposed VP is followed by the light verb (expletive verb) *ha* ‘do’. It is given in (50) and (51):²⁵

- (50) a. John-i kel-ess-ta
 John-nom walk-past
 b. [_{VP}Ket-ki-nun]_i John-i t_i ha-yess-ta
 Walk-nm-top John-nom do-past
 ‘Walk, John did’

²⁵ Here is a famous contrast in the English-type VP ellipsis and Korean/Japanese-type VP ellipsis. The light (expletive) verb *ha* cannot appear after the elliptic VP as shown in (1):

- (1) *John-i chayk-ul ilk-ess-ta (kuliko) Mary-ka [e] ha-yess-ta
 John-nom book-acc read-past and Mary-nom do-past
 ‘John read the book, and Mary did too’

(1) is bad since null VP is not allowed with light (expletive) verb *ha*.

- (51) a. John-i chayk-ul ilk-ess-ta
 John-nom book-acc read-past
- b. [_{VP} Chayk-ul ilk-ki-nun]_i John-i t_i ha-yess-ta
 book-acc read-nm-top John-nom do-past
 ‘Read the book, John did’

Following Chomsky (1986), a syntactic operation, including the movement operation, can target XP or X, but not the non-maximal X'. Whatever is fronted in (52) is not a VP, leaving the object *chayk-ul* ‘book-acc’ behind. This fronting is expected to be bad since the object trace t_i violates the Proper Binding Condition (PBC)²⁶. Yet in fact it is not as bad as it should be.

- (52) (?) [_{VP} t_j ilk-ki-nun] John-i chayk-ul_j ha-yess-ta
 Read-nom-top John-nom book-acc do-past
 ‘Read the book, John did’

Let us see what happens to the SR with respect to VP-preposing in (53):

²⁶ Fiengo (1974, 1977) formulates the Proper Binding Condition (PBC) as follows:

- (1) Proper Binding Condition (Fiengo 1977, 45)
 In surface structure S_α , if $[e]_{NP\alpha}$ is not properly bound by $[\dots]_{NP\alpha}$, then S_α is not grammatical.

The PBC is designed to make sure that every trace has a c-commanding antecedent at surface structure. Recently the PBC is integrated into a derivational view of the grammar instead of remaining as an output condition. When an element moves, it should move into a c-commanding position so that its trace is c-commanded after movement. Every step of movement must conform to the PBC. (see Kitahara 1997, Epstein, Groat, Kawashima and Kitahara 1998)

(53) Subject Resultative (SR)

- a. Mary-ka nolay-lul mok-i swi-key pwul-ess-ta
 Mary-nom song-acc throat-nom hoarse-key sing-past
 ‘Mary sang songs hoarse’
- b. ?[_{VP} Nolay-lul [_{SC} t_i mok-i swi-key] pwul-ki-nun] Mary-ka_i ha-yess-ta
 Song-acc throat-nom hoarse-key sing-nm-top Mary-nom do-past
 ‘Sing songs hoarse, Mary did’

After applying VP-fronting to (53)a, (53)b comes out mildly deviant. The mild deviance may be explained in terms of the PBC because the subject trace t_i of the SC violates the PBC. The antecedent, namely subject *Mary-ka* ‘Mary-nom’ is left behind and is not a part of the preposed element. Let us continue using SRs in (53)a but modifying VP-preposing slightly, as presented in (54):

- (54) a. * [_{VP} t_j [_{SC} t_i Mok-i swi-key] pwul-ki-nun] Mary-ka_i nolay-lul_j ha-yess-ta
 Throat-nom hoarse-key sing-nm-top Mary-nom song-acc do-past
 ‘*Sing hoarse, Mary did songs’
- b. ?(?) [_{VP} Nolay-lul t_k pwul-ki-nun] Mary-ka_i [_{SC} t_i mok-i swi-key]_k ha-yess-ta
 Song-acc sing-nm-top Mary-nom throat-nom hoarse-key do-past
 ‘*Sing songs, Mary did hoarse’

In (54)a, we do VP-fronting leaving out an object *nolay-ul* ‘song-acc’. It is less acceptable than (53)b. This evident unacceptability may relate to the following two factors. First, what is fronted may not be a constituent, namely a VP. Note that it does not

include an object *nolay-ul* ‘song-acc’, as in (54)a. The direct object trace t_j may give rise to a violation of the PBC. Second, the subject trace t_j may violate the PBC. This unacceptability is attributed by a double violation of the PBC. On the other hand, in (54)b, VP-preposing occurs, leaving out a SC t_i *mok-i swi-key* ‘ t_i throat-nom hoarse-key’. The entire VP is not fronted because the SC t_i *mok-i swi-key* ‘ t_i throat-nom hoarse-key’ is not accompanied by other VP components in fronting. Nevertheless it is marginally good. The fronted VP has a SC trace t_k . The trace t_k leads to a violation of the PBC. Yet the subject trace t_i of the SC satisfies the PBC since it is bound by an antecedent subject *Mary-ka* ‘Mary-nom’. In sum, one violation of the PBC may lead to mild deviance while two violations of the PBC may lead to strong unacceptability.

Next, consider the instance of the OR in (55):

(55) Object Resultative (OR)

- a. John-i mos-ul napcakha-key twutulki-ess-ta
 John-nom nail-acc flat-key pound-past
 ‘John pounded the nail flat’
- b. [_{VP} Mos-ul_i [_{SC} t_i napcakha-key] twutulki-ki-nun] John-i ha-yess-ta
 Nail-acc flat-key pound-nm-top John-nom do-past
 ‘Pound the nail flat, John did’

In the same manner that we discussed the examples of the SR above regarding VP-preposing, we now discuss the instances of the OR. First, we apply VP-fronting to (55)a. We have a resulting sentence like (55)b. Unlike (53)b, (55)b is clearly acceptable. As

opposed to (54)a where a SC subject trace violates the PBC, here the SC subject trace t_i meets the PBC since it is bound by the antecedent *mos-ul* ‘nail-acc’.

- (56) a. *_{[VP t_i [_{SC t_i Napcakha-key] twutulki-ki-nun]} John-i mos-ul_i ha-yess-ta}
- Flat-key pound-nm-top John-nom nail-acc do-past
- ‘*Pound flat, John did the nail’
- b. */*?_[VP Mos-ul_i t_k twutulki-ki-nun] John-i [_{SC t_i napcakha-key}]_k ha-yess-ta
- Nail-acc pound-nm-top John-nom flat-key do-past
- ‘*Pound the nail, John did flat’

In (56)a, the VP fronts to the exclusion of the object *mos-ul* ‘nail-acc’. It is unacceptable. Apparently, a double violation of the PBC is responsible for the unacceptability; One violation of the PBC comes from the object trace t_i . The additional violation of the PBC is caused by the subject trace t_i of a SC. (56)b is quite bad. The fronted VP strands the SC t_i *napcakha-key* ‘ t_i flat-key’. A SC trace t_i gives rise to one violation of the PBC. Moreover, the subject trace t_i of the stranded SC t_i *napcakha-key* ‘ t_i flat-key’ is not bound by an object *mos-ul* ‘nail-acc’. It ends up doubly violating the PBC.

We have shown that the SR and the OR do not pattern exactly the same way with respect to VP-presposing. In (53)b and (55)b, the VP is fronted along with the resultative predicate each. The example in (53)b of the SR is slightly deviant while (55)b of the OR is good. The mild deviance of the former is attributed to a PBC violation by the SC subject trace. But the latter does not cause a PBC violation because the SC subject trace is bound by the object.

The different behavior between the SR and the OR with respect to VP-preposing supports the present assumption of the existence of the SC in the RC.

4.4.3 Pseudo-Cleft Construction

Next, we discuss a third test: the so-called Pseudo-Cleft Construction for VP constituency. The point of the Pseudo Cleft construction is that it can only target a VP. The elements that get pseudo-clefted should form a VP. Koizumi (1994) invokes this test for the secondary predicate constructions in Japanese in order to demonstrate that a secondary predicate is base-generated within the VP. In a similar vein, we employ this test to show that a resultative predicate starts out the derivation inside the verbal domain. The pseudo cleft construction is illustrated in (57):

- (57) a. John-i han kes-un [_{VP} Mary-eykey kkoch-ul cwun]-kes-ista
 John-nom do nm-top Mary-dat flowers-acc give-nm-cop
 ‘What John does is give Mary flowers’
- b. *John-i [kkoch-ul]_i han kes-un [Mary-eykey t_i cwun]-kes-ista
 John-nom flower-acc do nm-top Mary-dat give-nm-cop
 ‘What John does flower is give to Mary’

It is evident that we can do pseudo-cleft the VP as a whole in (57)a but we cannot pseudo-cleft only part of the VP, as in (57) b.

With this much background, we will look at the SR in (53), as repeated in (58):

(58) Subject Resultative (SR)

- a. Mary-ka nolay-lul mok-i swi-key pwul-ess-ta
 Mary-nom song-acc throat-nom hoarse-key sing-past
 ‘Mary sang songs hoarse’
- b. (?)Mary-ka_i han kes-un [_{VP} nolay-lul [_{SC} t_i mok-i swi-key] pwulun]-kes-issta
 Mary-nom do nm-top song-acc throat-nom hoarse-key sing-nm-cop
 ‘What Mary does is sing songs hoarse’

After applying the pseudo-cleft operation to (58)a, we have the sentence in (58)b. It is slightly deviant. The subject trace of a SC *t_i nok-i swi-key* ‘*t_i throat-nom hoarse-key*’ can be blamed for the deviance. It causes a violation of the PBC. Consider the below:

- (59) a. ?Mary-ka_i [_{SC} t_i mok-i swi-key]_k han kes-un [_{VP} nolay-lul t_k pwulun]-kes-issta
 Mary-nom throat-nom hoarse-key do nm-top song-acc sing-nm-cop
 ‘*What Mary does hoarse is sing songs’
- b. *Mary-ka nolay-lul_j han kes-un [_{VP} t_j [_{SC} t_i mok-i swi-key] pwulun]-kes-issta
 Mary-nom song-acc do nm-top throat-nom hoarse-key sing-nm-cop
 ‘*What Mary does songs is sing hoarse’

In (59), we do not pseudo-cleft an entire VP. We do that piecemeal. In (59)a, a SC t_i *nok-i swi-key* ‘ t_i throat-nom hoarse-key’ is left out after pseudo-cleft while in (59)b an object *nolay-lul* ‘song-acc’ remains behind. The examples in (59)a and (59)b do not demonstrate the same degree of unacceptability. (59)a and (59)b are unacceptable. Between the two, (59)a is slightly better than (59)b. Just as we have discussed in 4.4.2 with VP-fronting, (59)a has two traces. Only one of the two violates the PBC. That is a SC trace t_k . Yet the other trace, namely a SC subject trace t_i , meets the PBC. On the other hand, (59)b is completely ruled out. The two traces: the former is an object trace t_j and the latter a SC subject trace t_i both violate the PBC. As we have found in 4.4.2, a double violation of the PBC eliminates out the sentence.

Now consider the OR in (55), as repeated here in (60):

(60) Object Resultative (OR)

- a. John-i mos-ul napcakha-key twutulki-ess-ta
 John-nom nail-acc flat-key pound-past
 ‘John pounded the nail flat’
- b. John-i han kes-un [_{VP} mos-ul]_j [_{SC} t_j napcakha-key] twutulkin]-kes-issta
 John-nom do nm-top nail-acc flay-key pound-nm-cop
 ‘What John does is pound the nail flat’

Doing pseudo-cleft to (60)a yields (60)b. Unlike the SR in (58)b, (60)b is acceptable. A SC subject trace t_j is bound by an object *mos-ul* ‘nail-acc’. So it satisfies the PBC.

- (61) a. *John-i mos-ul_j han kes-un [_{VP} t_j [_{SC} t_j napcakha-key] twutuln]-kes-issta
 John-nom nail-acc do nm-top flat-key pound-nm-cop
 ‘*What John does the nail is that pound flat’
- b. *John-i [_{SC} t_j napcakha-key]_k han kes-un [_{VP} mos-ul t_k twutuln]-kes-issta
 John-nom flat-key do nm-top nail-acc pound-nm-cop
 ‘*What John does flat is that pound the nail’

In (61), pseudo-clefting is not performed on the VP in its entirety. In (61)a, the object *mos-ul* ‘nail-acc’ is left behind whereas in (61)b a SC *t_i napcakhi-key* ‘t_i flat-key’ is stranded after a pseudo-cleft operation. In the former, there are two traces: one is an object trace t_j and the other is a SC subject trace t_j. It ends up doubly violating the PBC. The two traces are responsible for its unacceptability. First, a SC subject trace t_i is not bound and hence violates the PBC. Second, a SC trace *t_i napcakhi-key* ‘t_i flat-key’ causes the second violation of the PBC.

In this section we saw that a resultative predicate may be generated inside of a verbal domain. But depending on the reading of the SR or the OR, the acceptability of the resulting sentence differs after applying a pseudo-cleft operation. This difference in acceptability has been captured in terms of the PBC. One violation of the PBC gives slight deviance to the structure while a double violation of the PBC rules out the structure. Therefore, we may draw a conclusion that the SC of the SR and that of the OR are

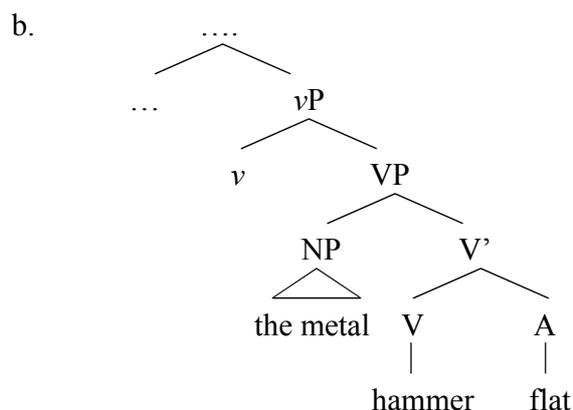
structurally placed in a different position. The former may be a *vP* adjunct while that of the SR is a VP adjunct.

4.4.4 Arguments Against the Complex Verb Account

As we saw in 4.2.1, the matrix verb in the English RC imposes a pretty tight selectional restrictions on the resultative predicate. We determined that it is impossible to generalize a principle of selection with reference to c-selection or s-selection. We cannot make the right prediction of which kind of resultative predicate is required by a given verb due to the arbitrary nature of selection for a resultative predicate. As a consequence, we turn to l-selection in the sense of Pesetsky (1995). L-selection fits with this arbitrary behavior of selectional restriction in the RC. We mentioned briefly that there exists an alternative approach to characterize this idiosyncratic selection for a resultative predicate. Dowty (1979), drawing on Chomsky (1955, 1975), proposes a Complex Predicate account. At D-structure, first a verb combines with a secondary predicate and then creates a complex predicate taking an argument together. Subsequently the primary predicate moves to the light verb *v* yielding the right word order in the sense proposed by Larson (1988)²⁷. A complex predicate account is represented in (62):

(62) a. John hammered the metal flat

²⁷ Chomsky (1975) argues that first the verb combines with the secondary predicate and the secondary predicate moves to the right of the object by a transformation rule.



This basic tenet is adopted from Rizzi (1986), Larson (1991), Stowell (1991) among others. Rizzi (1986) proposes that a small clause reanalysis rule applies to Italian in the mapping from D-structure (DS) to S-structure (SS). Building on Rizzi, Stowell (1991) argues for LF restructuring rule in concert with Huang's (1982) parameter related to *wh*-movement. Restructuring can take place either between DS and SS or between SS and LF. All this was done prior to Minimalism.

For conceptual, namely theory-internal reasons, it seems difficult to embrace this restructuring rule in the minimalist framework since it relies on the presence of DS and SS as relevant levels of representation. Under minimalism, we removed these two levels of representations. We are left with the two indispensable interfaces of LF and PF. Based on these assumptions any restructuring rule necessarily invoking DS and SS is inappropriate.

As a next step, we investigate the validity of the Complex Predicate analysis in the Korean RC. We will consider the following operations: Predicate Clefting, *wh*-movement, comparative constructions, and negative constructions in our effort to show that a matrix verb and a resultative predicate behave independently of each other in the

syntax. In other words, we assess whether a verb and a resultative predicate demonstrate syntactic behavior like one combined unit or two separate autonomous elements.

4.4.4.1 Predicate Clefting Construction

Like many African languages and Caribbean Creoles (Koopman 1983), Korean appears to have the Predicate Clefting Construction (M-Y Kang 1988). The predicate clefting construction is noted cross-linguistically by Koopman (1983), Larson and Lefebvre (1991), Dekydtspotter (1992) *inter alia*. Regardless of the type of predicate, an intransitive or a transitive verb, a predicate by itself can raise leaving everything behind. This is demonstrated in (63) and (64):

- (63) a. John-i kel-ess-ta
 John-nom walk-past
 b. Ket-ki-nun John-i kel-ess-ta
 walk-nm-top John-nom walk-past
 ‘John WALKED; *It is walk that John walked’

- (64) a. John-i chayk-ul ilk-ess-ta
 John-nom book-acc read-past
 b. Ilk-ki-nun John-i chayl-ul ilk-ess-ta
 Read-nm-top John-nom book-acc read-past
 ‘John READ the book; *It is read that John read the book’

With this much background, we see how the RC interacts with the predicate clefting construction. As with the VP preposing construction discussed above, the focused predicate is followed by the nominalizer *-ki* and the topic particle *-nun* in sequence. Consider the SR in (58), as repeated in (65):

Assuming the Complex Predicate analysis, we anticipate that we will be able to raise a verb and a resultative predicate together rather than a verb alone since a verb combines with a resultative predicate becoming a new complex predicate. Raising a verb *pwul-* ‘sing’ alone yields (65)b and raising an alleged complex predicate, that is a resultative predicate and a verb together *hoarse-key pwulu-* ‘hoarse sing’ brings about (65)c. As a matter of fact, (65)b is better than (65)c. The severe deviance of (65)c is not expected on the complex predicate analysis.

(65) Subject Resultative (SR)

- a. Mary-ka nolay-lul mok-i swi-key pwul-ess-ta
 Mary-nom song-acc throat-nom hoarse-key sing-past
 ‘Mary sang songs hoarse

Raising of Verb: *pwul-* ‘sing’

- b. [Pwul-ki-nun] Mary-ka nolay-lul mok-i swi-key pwul-ess-ta
 Sing-nm-top Mary-nom song-acc throat-nom hoarse-key sing-past
 ‘*It is sing that John sang songs hoarse’

Raising of Resultative Predicate + Verb: *hoarse-key pwulu-* ‘hoarse sing’

- c. *?[Mok-i swi-key pwul-ki-nun] Mary-ka nolay-lul mok-i swi-key pwul-ess-ta
 Throat-nom hoarse-key sing-nm-top Mary-nomsong-acc throat-nom hoarse-key
 sing-past

‘*It is sing hoarse that John sang songs hoarse’

Consider the OR in (60), as repeated as in (66):

(66) Object Resultative (OR)

- a. John-i mos-ul napcakha-key twutulki-ess-ta
 John-nom nail-acc flat-key pound-past
 ‘John pounded the nail flat’

Raising of Verb: *twutulki*- ‘pound’

- b. Twutulki-ki-nun John-i mos-ul napcakha-key twutulki-ess-ta
 Poun-nm-top John-nom nail-acc flat-key pound-past
 ‘It is pound that John pounded the nail flat’

Raising of Resultative Predicate +Verb: *napcakha-key twutulki*- ‘flat-key pound’

- c. *(?)Napcakha-key twutulki-ki-nun John-i mos-ul napcakha-key twutulki-ess-ta
 Flat-key pound-nm-top John-nom nail-acc flat-key pound-past
 ‘*It is pound flat that John pounded the nail flat’

The example in (66) confirms what we found out in (65). Raising a verb *twutulki*- ‘pound’ alone as in (66)b is better than raising a resultative predicate and a verb *napcakha-key twutulki*- ‘flat-key pound’ as a package as in (66)c. This contrast is not compatible with the complex predicate analysis. What we can draw from the contrast in (65) and (66) is that in the Korean RC the matrix verb maintains its own independent status, contrary to what the complex predicate assumption would lead us to expect.

The paradigm in (65) and (66) suggests that a complex predicate account is not on the right track for the RC. A verb may not merge with a resultative predicate, at least if we use the pseudo-cleft construction as a test. In the following section, we provide more evidence against the complex predicate approach.

4.4.4.2 Wh-Movement

Williams (1983) observes in English that a resultative predicate alone may undergo *wh*-movement in (67):

(67) How flat did John pound nail?

The example in (67) clearly exhibits the independence of the resultative predicate with respect to syntactic movement. A verb and a resultative predicate are syntactically separate rather than united.

Moreover, the resultative predicate *wh*-moves from the small clause in overt syntax, then the resultative predicate is already vacated. This poses a serious problem. How is it possible that the resultative predicate can be incorporated to a matrix verb? We are forced to say either that the restructuring is a lowering process or the trace of the resultative predicate should be incorporated to a matrix verb.

4.4.4.3 Comparative Construction

In a similar vein, we provide another piece of evidence in opposition to the complex predicate approach (see Green 1972). Consider (68):

(68) John pounded the nail flatter than the coin

As can be seen in (68) the resultative predicate *flatter than the coin* is too complex to head-adjoined to the matrix verb *pound* at LF.²⁸

In short, we discussed the autonomous behavior of a verb and a resultative predicate with respect to relevant syntactic operations, including pseudo-clefting, *wh*-movement and the comparative construction. The syntactic autonomy of a verb and a resultative predicate does not empirically motivate the complex predicate account. And we also examined the possibility of the LF restructuring. First, after *wh*-movement of the resultative predicate, it seems almost impossible to have the restructuring at LF unless we believe in the lowering operation. Second, it may not be plausible to apply head-adjunction to the complex predicate *flatter than coin*.

Therefore, we do not adopt the restructuring rule like the complex predicate approach for the RC. Before moving to the next section, we briefly mention the intended effects of the complex predicate approach.

4.4.4.5 Effects of Complex Verb Approach

The complex verb approach aims at getting two results. First, it captures an idiosyncratic selectional relation between a verb and a resultative predicate. A verb and a resultative

²⁸ This was pointed out by Norbert Hornstein (p.c.).

predicate are assumed to start as a complex predicate in the first place. Accordingly, the problem of selectional restriction is no longer an issue. We proposed capturing this effect by l-selection in the sense of Pesetsky (1995) without reference to complex predicates (see 4.2.1). Second, *prima facie*, complex predicates seem to resolve a potential violation of the Theta Criterion, especially when a matrix verb is a transitive verb. A complex predicate is assumed to assign two distinct theta roles to the same argument at the same time. This has been termed a ‘combo role’ by Carrier and Randall (1992).²⁹

A new problem, however, appears from the complex verb account. Carrier and Randall address an inevitable problem caused by so-called combo role.

- (69) a. The bears frightened the hikers speechless
 b. *The hikers frightened the bears speechless
 c. *The bears frightened the redwoods to death

²⁹ Chomsky (1986, 97) states Theta Criterion as follows:

- (1) Theta Criterion
 Each argument A appears in a chain containing a unique visible theta position P, and each theta position P is visible in a chain containing a unique argument A.

The Theta Criterion is revised by Carrier and Randall (1992, 180) as shown in (2):

- (2) Relativized Theta Criterion
 An XP chain can be associated with at most one argument position in any given argument structure. Each argument structure position must be satisfied by one and only one XP chain in the syntax.

For RCs, Carrier and Randall (1992), following Schein (1982) and Rappaport (1986), support the view that the postverbal NP may receive two separate theta roles because it is an argument of both the verb and the resultative predicate under the ternary analysis. It is provided in (3):

- (3) a. John watered the flowers flat
 b.
-
- $$\begin{array}{c} \text{VP} \\ \diagdown \quad | \quad \diagup \\ \text{V} \quad \text{NP} \quad \text{AP} \\ | \quad \triangle \quad | \\ \text{water} \quad \text{the flowers} \quad \text{flat} \\ \text{---}\theta\text{---} \quad \text{---}\theta\text{---} \end{array}$$

The example in (69)a shows that the postverbal argument *the hikers* satisfies the selectional restriction of both the verb *frighten* and the resultative predicate *speechless*. But in the examples in (69)b and (69)c are unacceptable, because the postverbal argument *the bears* and *the redwoods* each violate the selectional restriction of either a verb or a resultative predicate. In (69)b, *the bears* meets the selectional restriction of the verb *frighten* but not the resultative predicate *speechless*. On the other hand, in (69)c, *the redwoods* meets the selection requirement of the resultative predicate *to death* but not the verb *frighten*. Under the complex verb analysis, two theta roles come from a single theta role assigner: namely, a new complex predicate to the same argument. Intuitively, to respect the theta criterion, the two distinct theta roles merge into a combo role so that they get blurred. Ultimately this single combo-role is assigned to the postverbal argument. As a consequence, it is difficult to capture the difference between (69)b and (69)c.

Therefore, we pursue the view that an argument individually receives a theta role from a different predicate one at a time instead of receiving a combo role from a complex predicate once and for all. In the present analysis, we, following Hornstein (2001), treat a theta role as a morphological feature on the verb. An argument with two theta roles will receive one theta role from the resultative predicate and one theta role from the verb. Lasnik (1996) and Bošković (1997), and Bošković and Takahashi (1998), *inter alia* put forth a similar suggestion in which a theta role may be taken as a feature. We return to this in the following section.

4.5 Two Types of Resultative Construction

Now we will propose that the RC is structurally similar to raising constructions (a.k.a. ECMs) and control constructions. We consider (2) and (3), repeated in (70). The example in (70)a has an intransitive verb and (70)b has a transitive verb. We will see that the former fits into the raising type RC and the latter fit into the control type RC. This has been proposed by Dowty (1979), Simpson (1983), Carrier and Randall (1992), and Bowers (1997).

(70) Matrix verb: intransitive verb

- a. The joggers ran their Nikes threadbare

Matrix verb: transitive verb

- b. John hammered the metal flat

As we discussed in 4.3.2, the postverbal argument *their Nikes* in (70)a has a theta role from the resultative predicate *threadbare* and gets its Case checked by the matrix *v* whereas the postverbal argument *the metal* in (70)b receives two theta roles: one from the resultative predicate *flat* and the other from the verb *hammer*. It gets its Case checked by the matrix *v*. The syntactic properties of 0a and 0a are quite reminiscent of raising constructions (ECMs) and control constructions separately, as given in (71):

(71) Raising

- a. John believed Mary to be kind

Control

- b. John persuaded Mary to leave

Lasnik and Saito (1991) reject the non-raising approach to ECMs proposed in Chomsky (1973, 1981) and argue in favor of the raising account following Postal (1974). Lasnik and Saito argue that the infinitival subject raises to a position higher than matrix VP. It follows that it does not receive the extra theta role from the verb. It moves into a non-theta position, namely Spec of AgrOP in the matrix clause for accusative Case. Chomsky (1995) assumes a vP shell for a transitive verb. Accusative Case checking may be done in Spec of vP . The relevant point here is that in (71)a the argument *Mary* receives a theta role from the embedded adjective *kind* and raises into the matrix clause for accusative Case. This is what we also propose to be happening to the postverbal argument in (70)a.

Let us now examine the control construction. Traditionally Control is distinguished from Raising in generative grammar. They display a distinct syntactic behavior including assignment of thematic roles, selectional restrictions, pleonastic subject like *it* and *there*, and interpretation of an embedded idiomatic expression. (see Davies and Dubinsky 2004) Despite syntactic difference between the two, recently there have been attempts to unify the two in the context of the minimalism. One of the impediments to the reduction is theta theory. The theta criterion prevents an argument from getting more than one theta role. So (71)b is assumed to be represented as in (72):

- (72) a. John persuaded Mary to leave
 b. John persuaded Mary_i [PRO_i to leave]

PRO is postulated as a theta role holder to adhere to the theta criterion. The inherently referentially dependent PRO obtains its reference through a construal rule. Hornstein (1999, 2001) proposes that Control should be treated like Raising. This requires dispensing with the theta criterion. The disposal of the theta criterion allows the elimination of the grammatical formative PRO and the construal rule for PRO. As a consequence, Control and Raising can be unified via movement. In other words, PRO can be considered to be an NP-trace. All the above listed difference between Raising and Control may be attributed to the following: in the latter the embedded subject raises through a theta position on its way to a Case position in the matrix clause while in the former movement is directly to a Case position. Under the view of Control as movement the contrast between Raising and Control in (71) may be characterized as follows:

(73) a. Raising

[_{TP}John [_T past [_{vP} Mary [_{vP} John v+believed [_{VP} believed [_{TP} Mary [to be
 θ /acc

_{AP} Mary kind]]]]]]]
 θ

b. Control

[_{TP}John [_T past [_{vP} Mary [_{vP} John v+persuaded [_{VP} Mary Persuaded [_{TP}
 θ / θ /acc θ / θ
Mary [to [_{VP} Mary leave]]]]]]]]]
 θ

Mary in (73)a starts as the subject of the embedded clause receiving a theta role and raises directly into Spec of vP in the matrix clause for accusative Case checking. *Mary* in (73)b starts as the subject of the embedded clause receiving a theta role and moves

through the object of the matrix verb getting a second theta role en route to Spec of vP for accusative Case. Unlike the raising construction, *Mary* of Control drops by the object of the matrix verb collecting one more theta role on its way to the Case position.

In order to highlight common syntactic properties between the RC with an intransitive verb and Raising on the one hand, and the RC with a transitive verb and Control on the other hand, they are presented respectively in (74) and (75):

- (74) a. Raising
 The joggers ran their Nikes threadbare
 θ/acc
 b. John believed Mary to be kind
 θ/acc

- (75) Control
 a. John hammered the metal flat
 $\theta/\theta/acc$
 b. John persuaded Mary to leave
 $\theta/\theta/acc$

Here we focus on the underlined postverbal argument, as it bears on theta role and Case considerations abstracting away from other concerns.

4.5.1 Raising Resultative

Let us take a look at the Raising Resultative.

- (76) Raising Resultative

[_{TP}The joggers [_T past [_{vP} their Nikes [_{vP} the joggers v^+ ran [_{VP} ran [_{TP} their Nikes

$$\begin{array}{c}
 \theta/\text{acc} \\
 [_{\text{T}} [_{\text{AP}} \text{their Nikes threadbare}}]]]] \\
 \theta
 \end{array}$$

Recall that we motivated the SC account in 4.3. As shown in (76), *their Nikes* merges with the resultative predicate *threadbare*. There it receives a theta role. It raises to Spec of *vP* and gets accusative Case. This exhibits an obvious parallel with Raising in (73)a.

4.5.2 Control Resultative

Now we have the Control Resultative.

(77) Control Resultative

$$\begin{array}{c}
 [_{\text{TP}} \text{John} [_{\text{T}} \text{past} [_{\text{vP}} \text{the metal} [_{\text{vP}} \text{John } \nu\text{-hammered} [_{\text{vP}} \text{the metal hammered} \\
 \theta/\theta/\text{acc} \qquad \qquad \qquad \theta/\theta \\
 [_{\text{TP}} \text{the metal} [_{\text{T}} [_{\text{AP}} \text{the metal flat}}]]]]]] \\
 \theta
 \end{array}$$

The derivation of (77) proceeds as follows. Like (76), *the metal* merges with the resultative predicate *flat* getting a theta role. It moves to the direct object of the matrix verb *hammer* receiving a second theta role. At last it moves to a Case position, that is Spec of *vP*. So *the metal* ends up with two theta roles and accusative Case. It is aligned with Control in (73)a.

Can we extend this view of the English RC to the Korean RC? The first thing that comes to mind is that we have treated the SC of the RC differently between Korean and English in 4.2. We proposed that the SC should be taken as a complement of a matrix verb for the English RC while it should be understood as an adjunct for the Korean RC; the reason being the English RC demonstrates a rigorous selectional restriction for a

resultative predicate whereas the Korean RC does not. We will see if the adjunct treatment of the SC of the Korean RC hampers the present analysis where we view control as movement.

4.6 Sideward Movement

Can we move out of an adjunct? What we have seen in the English RC in (76) and (77), an argument can move out of a VP complement regardless of whether it is a raising or control construction. Now we face the situation where we have to say that an argument can move out of an adjunct. At first glance it does not seem promising since by and large we assume that there is an Adjunct Island Constraint in the grammar. This adjunct island constraint bans movement out of an adjunct.

We propose adopting sideward (interarboreal) movement developed by Nunes (1995, 2001) and Hornstein (2001). This provides a way to move out of an adjunct without violating the Condition on Extraction Domain (CED).

Nunes and Hornstein argue that given current movement assumptions about movement sideward movement is theoretically possible and that it is empirically instantiated. Sideward movement occurs in a derivation where there are substructures α and β and an item like γ , is copied from α and merged with β as illustrated in (78):

- (78) a. [α γ] [β] (two independent subtrees)
 b. [α γ] γ [β] (copying γ in α)
 c. [α γ] [γ [β]] (merging the copy with the subtree, β)

The example in (78) illustrates how sideward movement can be technically implemented. Next we consider how sideward movement may be implemented in the example in (79). We will learn that it is possible to control into an adjunct.

(79) John_i heard Mary_j [before PRO_{i/*j} entering the room]

(80) a. building up the adjunct³⁰

[adjunct before [TP John [T [vP John v [VP entering the room]]]]

b. constructing the main clause

[vP heard Mary]

c. sideward movement of *John*

[vP John v [VP heard Mary]

d. adjunct merging with vP

[vP/vP John v [VP heard Mary]] [adjunct before [TP John [T [vP John v [VP entering the room]]]]]

e. complete root tree

[TP John [T [vP/vP John v [VP heard Mary]]] [adjunct before [TP John [T [vP John v [VP John entering the room]]]]]]]

The above structure in (79) passes all the diagnostics of obligatory Control (see Hornstein 2001 for detailed discussions). Thus it may be reanalyzed in terms of movement on the

³⁰ For the ease of exposition, we call this an adjunct. But accurately speaking before merging with the main tree, it is not an adjunct yet. Only after adjoining to the main tree, it can be taken as an adjunct.

assumption that sideward movement exists and theta roles can be treated as features. This sideward movement conforms to enlightened greed (Lasnik 1995).

As shown in (80), the derivation proceeds as follows: The subtree PP is built first, the determiner *the* merges with the noun *room* forming a DP *the room*. Then the DP merges with *entering*. Here *the room* gets a theta role from *entering*. *John* raises to Spec of TP and the TP merges with *before*. Next, the matrix clause is constructed. The matrix verb *heard* merges with *Mary*. *Mary* receives a theta role from *heard*. Considering derivational economy: Merge is cheaper than Move. This is because Move is a complex operation combining Copy and Merge. *Mary* merges with *heard* instead of *John*. *John* sideward moves out of the PP to Spec of vP getting a second theta role. It is important to note that *John* moves out of the “unconnected” subtree in the course of the derivation. This kind of interarboreal movement does not give rise to the CED effect. Then the adjunct merges with vP. Now we build an adjunct structure since it is attached to the root tree. *John* keeps raising to Spec of TP and gets its nominative Case checked. The derivation converges.

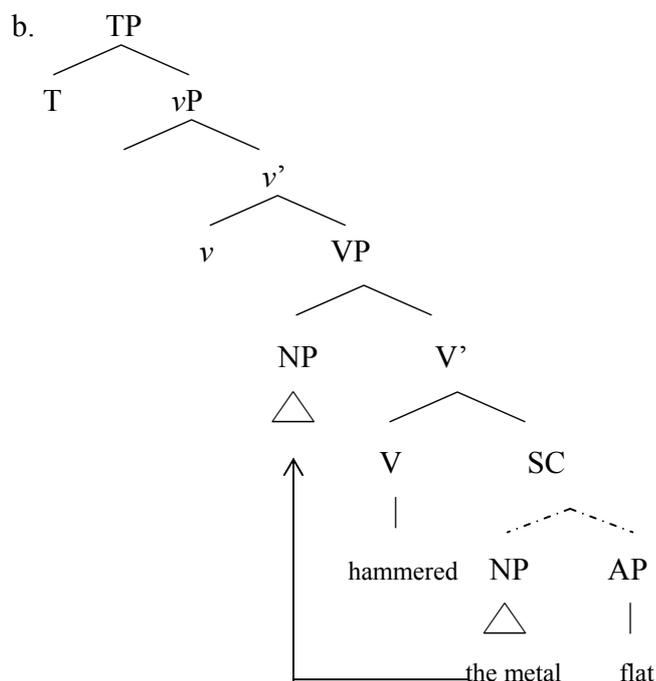
We saw that it is plausible that we can control into not only a complement but also an adjunct. So even if the Korean RC is an adjunct SC, we can uphold the view of control as movement. Next, we show how this accounts for the Korean RC. Not only does it account for OR, but also SR and that even indirect object oriented resultatives are possible.

4.6.1 Multiple Adjunction Sites of the SC in the Korean RC

As discussed in section 4.2, the SC of the English RC is assumed to be a VP complement while the SC of the Korean RC is assumed to be a ν P/VP adjunct. We laid out the empirical motivation for this different treatment of the SC between the English RC and the Korean RC previously. We corroborated this proposal by recalling empirical arguments pertaining to the contrast in possible readings.

Under the present proposal, the English RC is expected to be confined to an OR. The English RC generally prohibits the RC from having a SR. In that there exists a single site where the SC merges with a verb as a complement as shown in (22)a, as repeated in (81):

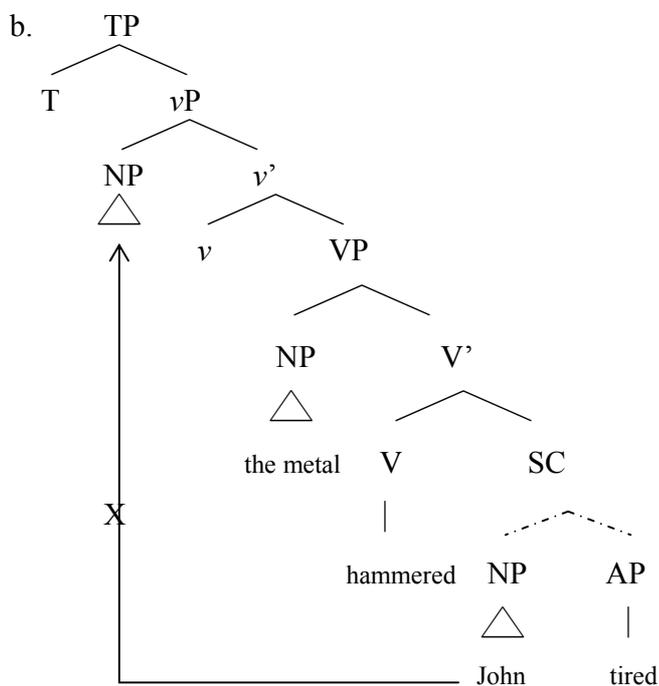
(81) a. John hammered the metal flat



We can naturally explain why the English RC allows the OR but not the SR. Under any version of minimality including the Minimal Link condition and the Shortest Move condition (see Rosenbaum 1970, Martin 1996, Manzini and Roussou 1999, and Hornstein 1999, 2001), the SC subject *the metal* should move to object position of the verb *hammered*. If *the metal* raises to Spec of vP across an object of the verb *hammered*, it gives rise to a minimality violation.

Look at the example in (82). It is ill-formed under the SOR where John hammered the metal and he became tired:

- (82) a. *John hammered the metal tired
 ‘John_i hammered the metal so that he_i became tired’



Now the SC subject is *John*. *John* merges with a resultative predicate *tired*. Recall the English RC has only one way it can belong to the root tree. It must merge with a verb as a complement. When it becomes a VP complement, the SC subject *John* is not permitted to raise to subject position, skipping object position. It would violate the Shortest Move condition. That is the reason behind the SOR is not available in English.

Here we do not rely on any kind syntactic constraint like the Direct Object Condition (DOC) of Levin and Rappaport Hovav (1995) that stipulates that a resultative should be predicated of an object but not of a subject. Instead, in the present analysis, this fact has been derived from the following assumptions: First, we argued the SC to be a VP complement in the English RC. Second, we adopted the proposal of control as movement. More importantly unlike the DOC these two assumptions are well motivated independently. Without reference of the DOR, the present analysis has the same effect as what the DOR achieves.

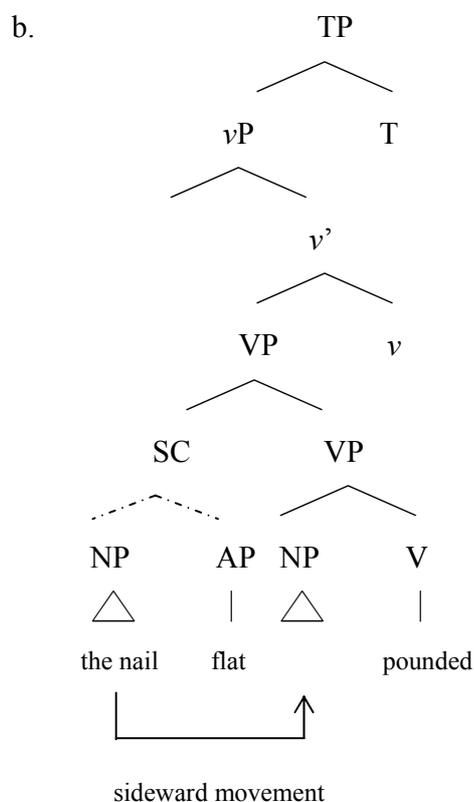
Contrary to English RCs, the Korean RC allows Object, Goal, and Subject resultatives because the SC of the Korean RC is considered to be an adjunct, and hence, it allows multiple adjunction sites in the verbal domain. Depending on the adjunction site, we can end up with one of three Resultatives: Subject, Object, and Goal Resultatives.

4.6.2 Object Resultative

Here we have an instance of the Object Resultative in (7), repeated in (83):

- (83) a. John-i [mos-ul napcakha-key] twutulki-ess-ta
 John-nom nail-acc flat-key pound-past

‘John pounded the nail flat’



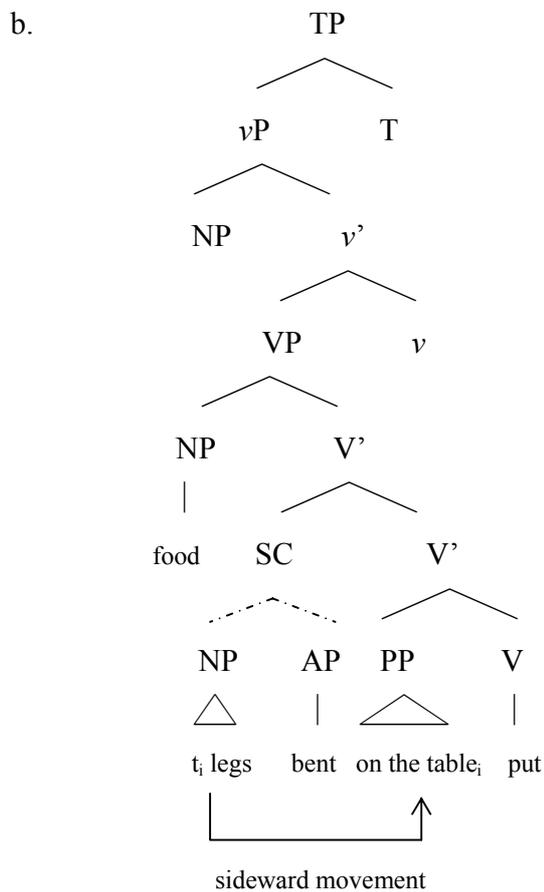
As shown in (83), the VP attachment of the SC may lead to the direct object oriented reading. The adjunct SC is adjoined to the low site of the verbal domain. It naturally follows that the SC subject *mos* ‘nail’ here, if possible, sideward moves to an object of the matrix verb *twutulki-* ‘pound’. It allows *mos* ‘nail’ to get a second theta role from the verb *hammer*.

4.6.3 Goal Resultative

As we have already addressed, interestingly the Goal Resultative is available in Korean.

It is repeated in (84):

- (84) a. Mary-ka umsik-ul sang-ey tali-ka hwui-key chali-ess-ta
 Mary-nom food-acc table-on leg-nom bent-key put-past
 ‘Mary put food on the table_i so that its_i legs became bent’



We adopted Larson's (1988) VP shell, where the double object construction is assumed to have a hidden SC following Kayne (1984). Presumably a verb and a goal argument constitute a type of SC. Maling and S-W Kim (1992) argued that in the inalienable possession construction in Korean the whole NP (possessor) and the part NP (possessum)

may get their Case marked by a different head.³¹ The relevant example is presented as in (85):

- (85) a. John-i Mary-eykey phal-ey cwusa-lul noh-ass-ta
 John-nom Mary-dat arm-dat shot-acc give-past
- b. John-i Mary-lul phal-ul cwusa-lul noh-ass-ta
 John-nom Mary-acc arm-acc shot-acc give-past
- c. John-i Mary-lul phal-ey cwusa-lul noh-ass-ta
 John-nom Mary-acc arm-dat shot-acc give-past
- d. ??John-i Mary-eykey phal-ul cwusa-lul noh-ass-ta
 John-nom Mary-dat arm-acc shot-acc give-past

As in (85)a and (85)b, we have patterns showing the Case match between the possessor *Mary* and the possessum *phal* ‘arm’. Either both of them have dative Case *-eykey* or accusative Case *-lul*. Yet, Case mismatch also is possible in (85)c. On the basis of this, Maling and S-W Kim proposed that the Case checking in the inalienable possession construction should be done by a different functional head against Case agreement. This

³¹ It is a well-established fact that possessor raising is possible when an inalienable relation (part-whole, kinship, body part, etc) holds (Y-S Kang 1986, H-S Choe 1986, M-Y Kang 1987, J-S Lee 1992, among many others), as in (1):

- (1) a. John-uy son-i cakta
 John-gen hand-nom small
- b. John-i_j [t_j son]-i cakta
 John-nom hand-nom small
 ‘John’s hand is small’

As in (1), the possessor *John* is assumed to raise and hence gets its nominative Case checked. Otherwise, *John* will check genitive Case. In fact possessor raising is possible in many languages including Chamorro, Acehnese, Swahili, Hawaiian, and Japanese, to list few (see Ura 1996 for more details on possessor raising).

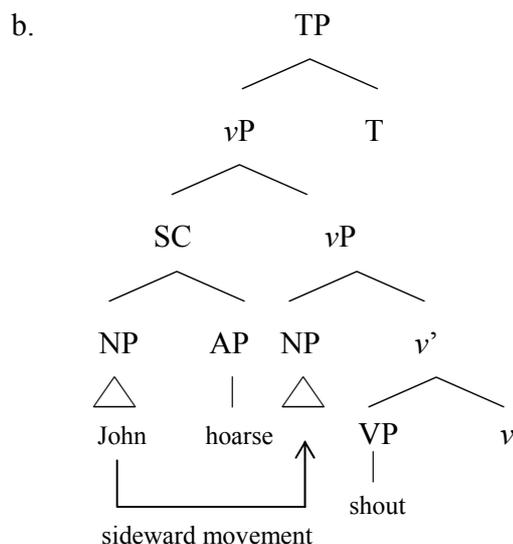
follows Y-J Kim (1990) for the Korean Multiple Case construction and Sigurðsson (1989) for the Icelandic Small Clause. So the whole NP *Mary* in (85)c moves to Spec of vP and gets accusative Case checked. The part NP *phal* ‘arm’, however, stays and hence gets an inherent dative Case since it does not move to Spec of vP .

The reason for this digression is that we want to demonstrate that in the inalienable construction it is possible for the whole NP to move to a Case position leaving the part NP behind. Now going back to (84), the SC subject *tali* ‘leg’ is actually starts as *sang-uy tali* ‘table-gen leg’, the whole NP *table* sideward moves and then merges with the locative postposition *-ey* ‘on’. It results in forming an indirect object *sang-ey* ‘table-on’. Later, the adjunct SC merges with the root tree. It brings about the indirect object oriented resultative construction.

4.6.4 Subject Resultative

At last we take up the Subject Resultative. To obtain the Subject Resultative, we anticipate that the subtree SC will be attached to the root tree higher than the Object Resultative as provided in (86):

- (86) a. John-i [mok-i swi-key] koham cil-ess-ta
 John-nom hoarse-key shout-past
 ‘John_i shouted himself_i hoarse’



The adjunct SC is adjoined to vP . As a consequence the SC subject *John* sideward moves to Spec of vP getting a theta role. In other words, the SC subject originally looks like *John's throat* involving the inalienable possession relation. As we have discussed in (84), the whole NP *John* may move to Spec of vP and the Part NP *throat* remain inside the SC. Then, *John* gets an agent role from v and has nominative Case checked by T.

When we assume that a SC of the RC in Korean is an adjunct instead of a complement, it makes sense that various readings are available in the Korean RC as opposed to the English RC since presumably there are multiple adjunction sites in the verbal domain..

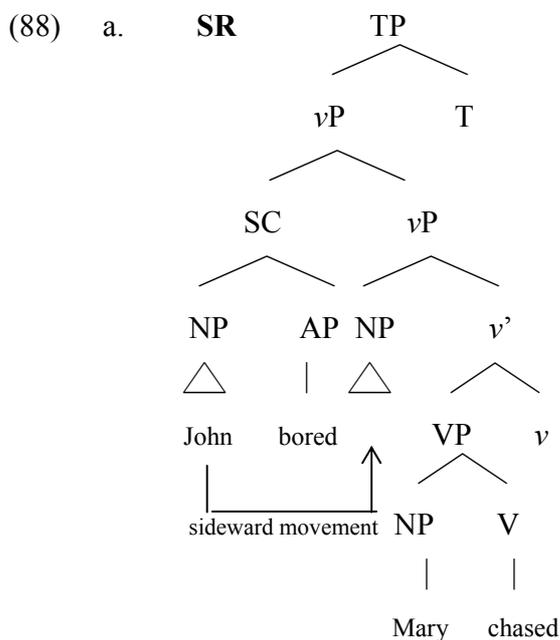
4.6.5 Ambiguity between the SR and the OR

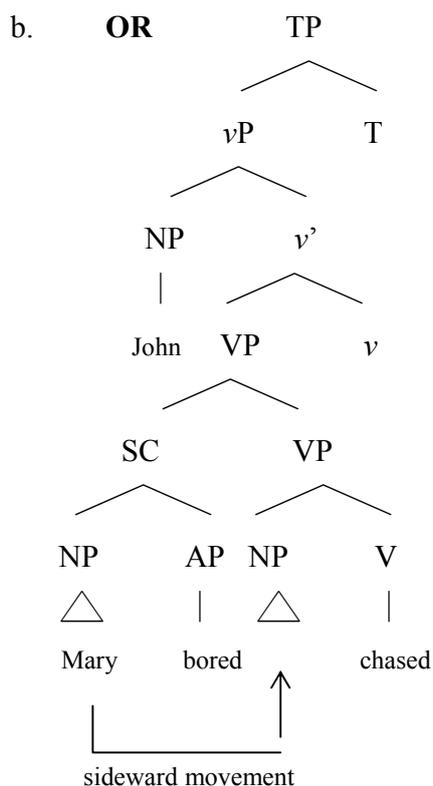
Here is a piece of evidence in favor of the present proposal taking a SC as an adjunct in the Korean RC. On the assumption that a SC is an adjunct, it is possible that a SC is attached to a different position within the verbal domain. So in principle it is possible to have an ambiguous RC with one surface form. The relevant example is offered in (87).

Yet we can disambiguate the ambiguous RC by identifying where in the verbal domain a SC is adjoined. The example in (87) comes from Cormack and Smith (1999):

- (87) John-un Mary-lul cilwuha-key ccochatani-ess-ta
 John-top Mary-acc bored-key chase-past
 ‘John_i chased Mary_j so that he_i/she_j became bored’
 (Cormack & Smith 1999)

The resultative predicate *cilwuha-* ‘bored’ can be predicated either of the subject *John* or the object *Mary*. On the surface, the SR and the OR look exactly the same. However they may have a different history of derivation as provided in (88):





As for the SR engaging in vP adjunction, the SC subject is *John*. It merges with the resultative predicate *cilwuha-* ‘bored’ first getting a theta role and subsequently sideward moving to Spec of vP , where it receives a second theta role (an agent role). It raises to Spec of TP getting nominative Case checked. On the other hand, the OR involves VP adjunction, the SC subject is *Mary*. First it merges with the resultative predicate *cilwuha-* ‘bored’. There, it receives a first theta role. Then, sideward moves to object of the verb *cchochatani-* ‘chase’, where it receives a second theta role, namely the persuadee. It moves to Spec of vP getting its accusative Case checked.

Here, we have another example of an ambiguous resultative between the SR and the OR. By analogy with (88), we can tease them apart by invoking a difference in the adjunction site.

- (89) John-i mal-ul cichi-key talli-ess-ta
 John-nom horse-acc tired-key run-past
 ‘John_i ran the horse_j so that he_i/it_j became tired’
 (J-B Kim 1999)

The SR is assumed to be tied in with *v*P adjunction of an SC whereas the OR is believed to be tied in with VP adjunction.

4.6.6 Complement vs. Adjunct

The issue of the complement and adjunct distinction needs to be addressed. We usually believe that there is such a distinction that cross-cuts complements and adjuncts. Nonetheless, we find out that this distinction is far from clear. A well-known rule is that a complement is selected (subcategorized) by the head of a phrase while an adjunct is not. However, in some examples an adverb is selected by a verb as shown in (90):

- (90) Jean se comporte *(bien) avec les amis
 ‘Jean behaves (well) with friend’

Rizzi (1990) notes that in French a verb like *se comporter* ‘to behave’ obligatorily selects a manner adverbial and optionally selects an argumental comitative complement. This indicates that not only an argument but also an adjunct may be selected by a verb. As a result, selection (subcategorization) is not sufficient to justify complementhood to the exclusion of adjuncthood.

Another commonly used yardstick is whether it can be omitted. We usually say that the direct object of a transitive verb is obligatory and hence a complement whereas an adverbial is generally optional and therefore not a complement. Yet in many languages, complements can be freely omitted when they are understood from the discourse. So the obligatory appearance is not good help to draw a distinction. Note that omission should be distinct from pronominalization. Generally pronouns are taken to be complements. In some languages, however, pronouns are realized as verbal affixes. As a consequence, the distinction of a complement and an adjunct may become a theory-internal question (see Baker 1996).

Larson and Segal (1995) have opened the door to a new stand on adverbs as arguments. They also allude to a possibility of adverbs as predicates. They have discussed the pros and cons of each analysis.

To our interest in Korean certain adverbials can be marked with accusative Case as shown in (91):³²

- (91) a. John-i han sikan-tongan-ul cam-ul ca-ass-ta
 John-nom one hour-for-acc sleep-acc sleep-past
 ‘John slept for an hour’
- b. Sue-ka Chicago-lul twu pen-ul pangmwunha-ess-ta
 Sue-nom Chicago-acc two times-acc visit-past
 ‘I visited New York twice’

³² See chapter 3 for extensive discussions.

The reason we have brought this into the discussion is that Wechsler and Y-S Lee (1996) do not make a distinction between complements and adjuncts. They treat them equally. The adjunct *twu pen* ‘two times’ in (91)b is considered to be a complement. It is marked with accusative Case on a par with a complement.³³

Wechsler and Y-S Lee assume that accusative Case marked adverbials are “situation delimiters” whose thematic roles qualify over the set of events or states that a VP denotes. So, adverbials are taken to be a delimiting phrase.

Here we discuss the issue of delimiting an event a little bit more. Tenny (1994) argues that a direct object, that is an internal argument, plays a crucial role in aspectual structure since it can aspectually delimit the event to which the verb refers. She goes on to contend that a subject and an indirect object cannot measure out the event. On Tenny’s own terminology the direct object may measure out the event. What do I mean by “measuring out the event”? Coarsely speaking, it imposes the terminus on the event (see Tenny 1994 for detailed elaboration on “measuring out”).

We employ the two well-accepted diagnostics for delimitedness: first, the *in an hour/for an hour* test and secondly, the imperfective entailment test so as to prove that it is far from conclusive that only a direct object can delimit an event.

Consider the following paradigm in (92) containing *in an hour/for an hour*:

- (92) a. Sue ran for an hour/*in an hour
 b. Sue ran to the hill *for an hour/in an hour

³³ Adverbials can be subject to structural Case marking, which is attested cross-linguistically. This seems to be the case for Korean (Maling 1989, S-W Kim and Maling 1993, 1996), Chinese (Li 1990), Finnish (Maling), Russian (Babby 1980, Fowler 1987), and Polish (Przepiórkowski 1997).

In (92), the verb *run* falls under a different aspectual classification depending on the appearance of the delimiting phrase (here goal) a PP *to the hill*. For example, (92)a is compatible with a durative time adverbial *for an hour* while (92)b is not. On the contrary, (92)b is compatible with limited time adverbial *in an hour* whereas (92)a is not. Thus, (92)a refers to an undelimited event, but (92)b expresses a delimited event. The related interpretation of the limited time adverbial *in an hour* is that the event is assumed to continue for an hour and then finish. So, the goal adverbial *to the hill* also delimits the running event.

Furthermore, the imperfective entailment test may be also used to demonstrate the telicity of the event. It is generally assumed that the atelic sentence yields the perfective entailment while the telic sentence gives the imperfective entailment. In the Vendler classification, accomplishments or achievement are uncontroversially regarded to describe events with a definite endpoint.³⁴ This is illustrated in (93):

- (93) a. Sue is running
 => Sue has run (atelic)
- b. Sue is running to the hill
 ≠> Sue has run to the hill (telic)

³⁴ Vendler (1967) introduces the four-class taxonomy of verbal aspect. First, “statives” are ongoing in time. Second, “activities” are also ongoing in time, but can be distinguished from statives by some tests. Third, “accomplishments” have a definite terminus and some duration. Lastly, “achievements” have a definite terminus but happens instantaneously with little or not duration.

The example in (93)a without the goal adverbial *to the hill*, succeeds in the imperfective entailment test while the example in (93)b with a goal adverbial fails it. This suggests that, unlike (93)a, (93)b pertains to telicity.

Therefore, (92) and (93) straightforwardly indicate that Tenny's proposal that only the direct object may measure out an event cannot be correct. Here the goal adverbial clearly delimits the event providing a terminus for it.

We have two more arguments that cast doubt on Tenny's proposal. Let us go back to the example in (3), as repeated in (94):

- (94) a. The joggers are running their Nikes threadbare
 b. The joggers ran their Nikes threadbare *for an hour/in an hour
 c. The joggers have run their Nikes threadbare

Here we have an intransitive verb *run*. As we discussed beforehand, *run* can have a postverbal argument *their Nikes* when it occurs with a resultative predicate *threadbare*. As illustrated in (94)b, it should express a delimited event since first, it is compatible with *in an hour* but not *for an hour*. Moreover, it does not pass the imperfective entailment test. (94)a does not entail (94)c. If this is the case, can we say that the direct object *their Nikes* delimits an event of running? The answer may be negative. If we say yes, we will regard the postverbal argument *their Nikes* as an affected object. Generally a direct object of a transitive verb is treated as an affected object. And the direct object bears a semantic relation to a verb. The type of shoes *their Nikes* here is not necessarily a semantic argument of the verb *run*. The example in (94) is not to describe an actual

change in the wornness of the shoes *their Nikes*. It is used as hyperbole to express that the action is performed to excess. Goldberg (1995) explicitly makes a similar point along the same line: ... *It would be anomalous to attribute the predicate's holding to some particular property of this kind of postverbal argument ...*

At last we return to Tenny's (1994) suggestion that a direct object can delimit an event but not a subject or an indirect subject. We have good pieces of evidence against this proposal. Here we have the Subject Resultative in (86) and the Goal Resultative in (84). They are presented in (95) and:

- (95) John-i [mok-i swi-key] koham cil-ess-ta
 John-nom hoarse-key shout-past
 'John_i shouted himself_i hoarse'

The Subject Resultative in (95) does not have a direct object. The example in (95) RC has a resultative predicate *mok-i swi-* 'hoarse', indicating the terminus of the shouting event. The shouting event is delimited by John's being hoarse.

- (96) Mary-ka umsik-ul tali-ka hwui-key sang-ey chali-ess-ta
 Mary-nom food-acc leg-nom bent-key table-dat put-past
 'Mary put food on the table_i so that its legs_i became bent'

In (96), unlike (95) the indirect object resultative contains an object *umsik* 'food'. Still the object *umsik* 'food' does not determine the end point of the event but the goal argument

sang ‘table’ does. The event of putting food on the table will come to an end when the table’s legs become bent. The examples of (95) and (96) are indicative of the fact that not only a subject but also an object and a goal may measure out the event.

Tenny (1994, 100) set forth Measure-Out Constraint on Direct Internal Arguments: ... *Among a verb’s various arguments, only the direct internal argument can ‘measure out the event’ to which the verb refers, where ‘measuring out’ refers to the role played by the argument in marking the temporal terminus of the event* ... This does not hold true of Korean in the face of Korean RC, where the Subject Resultative and the Goal Resultative are available.

4.7 Conclusion

In chapter 4, we have discussed the Resultative Construction (RC) in English and Korean. We provided a syntactic account for why the English RC behaves differently from the Korean RC. To do so, we claimed the DOR (Direct Object Restriction) does not hold in Korea. Note that Korean permits a resultative predicate being predicated of not only an object but also a subject and a goal. We characterized differences between the English and the Korean RC in terms of the selectional restrictions on resultative predicates. The English RC is subject to a restrictive selectional restrictions on resultative predicates while the Korean RC is not.

English shows a selectional restrictions on resultative predicates. The arbitrary selectional relation cannot be appropriately captured with respect to c-selection and s-selection. Thus we turned to l-selection (Pesetsky 1991, 1995). On the contrary, Korean enjoys a wide latitude of possible resultative predicates. This led us to suggest that

Korean is free from selectional restriction. As a consequence, unlike English, the Korean resultative predicate may not be part of a vP/VP complement but instead, a part of a vP/VP adjunct. Under this view we expect the Korean RC to have various kinds of RCs including Object, Subject, and Goal Resultatives. The difference is dependant upon the the height of the adjunct site in the verbal domain. As opposed to Korean, English allows limitedly the Object Resultative but not the Subject and the Goal Resultative. Under the present analysis, we can expect an English resultative subject to move to the object position of the matrix verb in compliance with minimality. We do not expect, however, that the resultative subject move to matrix subject position, since the SC of the RC is taken as a complement of the matrix verb. On the other hand, in the case of Korean, the SC of the RC is considered to be an adjunctk, primarily due to the lack of a selection restriction. This adjunct treatment of an SC enables the resultative subject to move to any argument position of the matrix verb, including subject, object, and goal. Here, we adopted sideward movement (Nunes 1995, 2001; Hornstein 2001). Thus, a resultative subject in one subtree, namely, SC can sideward move to a position in another subtree before being merged. For example, when an SC is adjoined to V' , the resultative subject in the SC sideward moves to the goal position of a matrix verb and ends up as a Goal Resultative. Yet, when an SC is adjoined to VP, a resultative subject in the SC sideward moves to an object position of a matrix verb and yields the Object Resultative. By analogy, the Subject Resultative emerges when a SC merges with vP and a resultative subject in the SC moves to a subject position of a matrix verb.

A Move-based account of the RC has two major consequences. First, it makes the right prediction that the English RC is confined to the Object Resultative since movement

of a resultative subject to a subject position across an object position is prevented because of minimality. So, the Subject Resultative is not possible in English. Instead of having a syntactic constraint like the DOR (Direct Object Restriction) (Levin and Rapoport Hovav 1995), the DOR effects can be nicely derived. Secondly, since our proposed treatment of the SC as an adjunct in Korean, we can expect the Korean RC to have various kinds of readings beyond Object Resultative. The SC is allowed to have multiple adjunction sites in the verbal domain. Therefore, unlike English, a resultative subject in Korean can move to any argument position of a matrix verb without violating minimality.

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