THE NATURE OF LEGIBILITY CONDITIONS

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Abstract

This thesis investigates the nature of Legibility Conditions in the Minimalist Program. In this thesis, Legibility Conditions are considered as a set of general well-formedness conditions holding at PF and LF interfaces. Thus, they inspect not only the erasure of uninterpretable features but also non-feature-related phonological/semantic well-formedness. It is demonstrated that Legibility Conditions have the property of filtering out certain derivations, which would otherwise be convergent as far as formal feature-checking is concerned. The demonstration of the nature of Legibility Conditions involves empirical studies in Korean negation, object licensing in various languages, and numerous Case phenomena in Korean.

Chapter 1 deals with the theoretical implications of Legibility Conditions in the Minimalist Program, a derivational model of grammar. Legibility Conditions, when understood correctly in a derivational grammar, are shown to be capable of filtering out certain derivations for phonological/semantic ill-formedness.

In Chapter 2, we consider Legibility Conditions at the PF interface. An analysis of
Korean negation is provided to demonstrate the filtering-out nature of PF Legibility Conditions. The two different forms of negation are compared to the two different forms of some adverbs. It is shown that Korean negation and these adverbs are affixal. Thus, they require affixation for PF legibility. When they fail to be properly affixed, a derivation is filtered out due to the failure of PF legibility.

In Chapter 3, Legibility Conditions at the LF interface are considered. In a discussion of object licensing, we arrive at the conclusion that licensing is not due to a licensing feature such as, as is normally assumed, a Case feature. It is proposed that a Case feature of a nominal, as it is argued to be not a licensing feature, is an interpretable feature, contra Chomsky (1995). It is demonstrated that the legitimacy of a nominal crucially depends on its LF legibility. Specifically, LF legibility requires that the meaning of an object in a given position be compatible with the meaning associated with that position (e.g., telicity in direct object position).

Chapter 4 provides further evidence for the validity of the conclusion drawn in Chapter 3. Various Korean Case phenomena, such as Multiple Case Constructions, Stacking, Alternation, and Deletion, are accounted for under the view that licensing of nominals is crucially sensitive to LF legibility rather than a Case feature. It is shown that due to LF legibility, nominals in three different syntactic positions must be compatible with the meaning associated with their respective positions. Here again, we see that the failure to be legible at the LF Interface has a filtering effect.
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Chapter 1. Introduction

Legibility Conditions hold at the PF and LF interfaces of a derivational model of grammar. Therefore, the status of Legibility Conditions should be understood in relation to a derivational grammar. This chapter deals with certain aspects of a derivational grammar that are pertinent to understanding Legibility Conditions. In particular, we consider i) where in the grammar conditions on operations and conditions on representations, if any, should be encoded; ii) whether over-generation and optionality are tolerated in the syntactic component of the grammar; iii) and how phonological/semantic influence on syntactic operations should be captured in the grammar. The discussion of these issues will help us understand the status of Legibility Conditions from a theoretical point of view. Namely, we will see that Legibility Conditions, when understood correctly in a derivational grammar, are capable of filtering out certain syntactically well-constructed derivations for phonological/semantic ill-formedness.
1. Legibility Conditions in a derivational theory of grammar

1.1 Conditions on operations and conditions on representations

The Minimalist Program (Chomsky 1993 *et seq.*), is a derivational model of grammar. There are no ‘representations’ to which grammar can refer, except at the end of computation where the grammar interfaces with non-grammatical faculties such as sensorimotor systems and thought systems. Thus, a derivation proceeds without providing a snapshot of representation until it reaches the PF and LF interfaces. It follows that there cannot be any conditions on representations, i.e., well-formedness conditions; there can only be conditions on operations. The economy principle, for example, is understood to be a condition on operation rather than on representation. In fact, Chomsky (1995: 253) makes this notion clear by including such a condition as part of the definition of the operation Move. He states that Move must meet several conditions such as c-command, uniformity, Last Resort, and the Minimal Link Condition as part of its definition.

At both interfaces, a derivation must be fully interpreted (Principle of Full Interpretation). For a derivation to be fully interpreted, it must be interpretable. It must meet Bare (i.e., non-ranked) Output Conditions, also known as Legibility Conditions (Chomsky 1998). At these interfaces only, the grammar can ‘see’ representations. Thus, Legibility Conditions are conditions on representations. At these end points a derivation
should be 'well-formed' both phonologically and semantically in order to be fully interpreted. Primarily, the Legibility Conditions require all uninterpretable features (e.g., D feature of T) to have been erased in a given derivation by the time of their application. Since the erasure of uninterpretable features entails syntactic operations for checking those features, the Legibility Conditions' inspection of uninterpretable features makes a direct relation to syntactic operations. I hold that the Legibility Conditions furthermore include conditions on general, non-feature-related, phonological and semantic 'well-formedness' of representations at these interfaces. It follows then, should a grammar include well-formedness conditions, they must be relevant only to either the PF interface or the LF interface. Since phonological well-formedness and semantic well-formedness are relevant to PF interface and LF interface respectively, grammar under the current program should not allow any conditions motivated by syntactic well-formedness.

Two interesting theoretical consequences follow from the derivational model of grammar as described above. One has to do with the possibility of over-generation and/or optionality within the computational component. Another has to do with how grammar is to treat the effect of phonology/semantics on syntax.
1.2 Over-generation and Optionality in a Derivational theory

Under this model of grammar, it is conceivable that the syntactic operations Move and Merge may ‘over-generate’ derivations. Syntactic operations generate derivations that may eventually be illegible. In other words, some of the derivations which are well-constructed through syntactic operations may not meet Legibility Conditions at one or both interfaces, thus failing to be fully interpreted. These over-generated derivations are syntactically convergent yet illegible derivations.

When we are in a position to accept that the computational component of grammar may over-generate derivations, we may need to take a further step and reconsider the notion of optionality (e.g., optional movement). The notion of optionality is controversial within the Minimalist Program since it seems to go against the very nature of the framework. However, under a closer look, we find that it is not altogether impossible to tolerate optionality within the theory.

Optionality causes conceptual difficulty within the Minimalist Program. But, it will be shown that the Minimalist Program can tolerate optionality. First of all, the conceptual difficulty may have to do with the ‘global’ interpretation of the principle of economy. According to the global interpretation of economy, grammar is to minimize the number of operations necessary for convergence (Kitahara 1995). Naturally, the grammar needs to compare two convergent derivations and see which has a fewer number of operations
applied. In this scenario, optionality is inconceivable since a derivation with an optional movement will always be less economical than the one without it. However, if one adheres to the ‘local’ interpretation of economy (Collins 1997), then this problem disappears.

There is another, perhaps more challenging, reason why optionality is a controversial notion in the Minimalist Program. It is controversial because all operations are deemed to be feature-driven. There should not be an operation that happens without direct motivation, a drastic and significant departure from the GB framework. However, not all operations in the Minimalist Program are feature-driven. The operation Merge is specifically non-feature-driven, thus costless. If feature-drivenness is the sole source of non-optionality, then the fact that Merge is non-feature-driven implies that the Minimalist Program in fact tolerates optionality. Especially, with the disposal of Projection Principle, Merge is essentially free to occur.¹ A derivation will proceed unhindered regardless of how Merge operates or fails to operate. Thus, Merge is technically only subject to interpretation. In line of this reasoning, Fukui & Saito (1998) and Takano (1998) allow optionality in the Minimalist Program by redefining Merge so as to include a type of movement which shows optionality.²

¹ Chomsky (1998) departs from this view in restricting pure Merge only to theta positions. The present discussion follows the Minimalist Program outlined in Chomsky (1995).
² Besides the ‘redefinition of Merge’ approach, there are yet several other attempts to allow optional movements in MP. Chomsky (1991) deals with optionality in the following manner. "If some feature F may be either strong or weak, the operation resulting in the checking of the feature
1.3 Phonological/semantic influence on syntactic operations

The derivational model of grammar implies an interesting consequence in terms of the modularity of syntactic operations. Under the view that Syntax precedes both Phonology and Semantics, syntactic operations should be blind to phonological and semantic properties. Under the Minimalist Program, for instance, no syntactic operations should be motivated by either phonological features or semantic features even though they may be present in syntax: they should be motivated strictly by syntactic 'formal' features alone. Any attempt to derive a syntactic movement either by phonological feature or semantic feature is in direct opposition with the very tenet of the framework. Adopting this framework of grammar, therefore, one is committed to such a view.

Interestingly, however, it is not uncommon to find in natural languages some interactions between (morpho-)phonological well-formedness and/or semantic well-formedness on the one hand and syntactic well-formedness on the other. Especially, some conditions on morpho-phonology and/or semantics do appear to affect syntax: cliticization, specificity of a direct object. The derivational model offers a narrow but

will appear to be optional. If two derivations have the same number of steps, then global economy allows both derivations." This implies that a derivation with the 'seeming' optional movement and a derivation without it should end up having the same LF representation, contrary to the scrambling phenomena in general. On the other hand, Collins (1997) proposes another twist to optionality. A feature which is neither strong nor weak allows movement before or after Spell-Out
clear directive on how one is to meet such a challenge. Such interactions are to be dealt with at and only at the interfaces. More specifically, the phonological and/or semantic influence on syntax should only be captured by Legibility Conditions at PF and LF interfaces. Legibility conditions themselves do not trigger any operations. Operations are conducted according to their own independent requirements, i.e., formal features. The product of such operations is simply yielded to PF and LF, blind to Legibility Conditions. Thus, there is no operation that is conducted for the sake of Legibility Conditions. But, importantly, Legibility Conditions can filter out some derivations as uninterpretable. It is this filtering mechanism of Legibility Conditions that should treat phonological/semantic effect on syntactic operations.

The idea that semantics and/or phonology sometimes affect syntax may constitute a controversial issue. In fact, one could contend that semantics/phonology never affect syntax. Empirical evidence for or against the existence of such effects aside, let us consider a theoretical consequence following from the non-existence of such effects. If it is indeed the case that semantics or phonology never affects syntax, but only the reverse is true, then the work of the interface would be quite simple, if not arbitrary. In fact, nothing much would be going on at an interface except that all syntactic representations are simply interpreted phonologically or semantically. In this case, it might be unreasonable to accept even the existence of interface in grammar. I hold that it is in the very nature of interface that while it interprets, it also filters: interpretation entails the existence of uninterpretable input. If there is no need for filtering in a given system, the very existence
of interface should be questioned.

2. **Goal and organization of the thesis**

The goal of this thesis is to investigate the property of Legibility Conditions at PF and LF interfaces. Particularly, this study answers the question of how semantic and phonological effects on syntax should be captured in the Minimalist Program, a derivational theory of grammar. The empirical study conducted for the purpose of this theoretical pursuit covers Korean negation, object splits/alternations/shifts in various languages, and various Case phenomena in Korean.

The most crucial theoretical concept this study attempts to develop is the idea that interfaces assume the role of filtering derivations. We will see how PF Legibility Conditions, which inspect phonological well-formedness, assume the filtering role. By the same token, we will investigate how the inspection of semantic well-formedness by LF Legibility Conditions serve to filter certain derivations which are otherwise syntactically convergent.

This study will show, furthermore, that the conditions that filter derivations at interfaces are quite simple. At the PF side, one that operates quite pervasively for the purpose of inspecting morpho-phonological well-formedness is a simple condition assuring
all words have a proper morphological closure (Kang 1988, Lasnik 1981). At the LF side, one condition found to operate quite generally concerns the compatibility between the meaning of a lexical item and the meaning associated with its syntactic position (e.g., direct object and telicity). In the process of studying LF Legibility Conditions, we reach the conclusion that a Case feature is not a licensing feature, contrary to a common assumption. This leads to the claim that a Case feature of a nominal be interpretable, contra Chomsky (1995). We find that the legitimacy of nominals in a given structure is crucially determined by their legibility at LF.

This thesis is organized as follows. Chapter 2 deals with Legibility Conditions at the PF interface. We begin with identifying what we already know about PF Legibility Conditions and proceed to consider negation constructions in Korean. In doing so, we will see how Legibility Conditions at the PF interface assume a filtering role. In Chapter 3, we discuss LF Legibility. Again, beginning with identifying some familiar phenomena in languages as relevant to LF Legibility Conditions, we deal with the issue of licensing of nominals. We will see how this issue is intricately related to LF Legibility. The LF Legibility Conditions will also be shown to filter certain derivations. In Chapter 4, we take the conclusion reached in Chapter 3 and investigate how it fares with numerous Case phenomena in Korean such as Multiple Case Constructions, Stacking, Alternation, and Deletion. The intricate relationship between licensing and LF legibility will be explicated.
Chapter 2. Legibility at PF Interface

1. Introduction

Legibility Conditions at the PF interface ensure that any given derivation be interpretable phonologically. It follows that all elements of a derived sentence must be phonologically well-formed. As suggested in the previous chapter, a possible scenario would be one where a given derivation is convergent at the point of PF interface as far as computation is concerned, and yet phonologically illegible for a completely independent reason. The derivation would be simply ‘filtered out’ for failing PF Legibility Conditions.

There are a few existing studies that clearly suggest such a view of the PF interface. One such study is found in Bošković (in press) where he investigates the second position cliticization in Serbo-Croatian. He contends that the second position cliticization effect in Serbo-Croatian is strictly phonological in nature, showing it is determined prosodically: a clitic must be suffixed to the initial I-phrase. It is this phonological property that has a filtering effect on an over-generating syntax at the PF interface. Specifically, the filtering effect of the phonological property extends to constructions where clitics are found in any other but the second position of their I-phrase. What is important about his conclusion is that he maintains, contra Zec and Inkelas (1990), a strict view of derivational grammar where Syntax uniquely feeds Phonology, not vice-versa. A
clitic is located in a position in the syntactic component without reference to the conditions held at the PF interface. Since Syntax may or may not choose to locate the clitic in the right position (following the initial I-phrase), when it chooses not to do so in a given derivation, the derivation will simply be filtered out for the failure to be legible at the PF interface.

Another study of the same nature is found in Bobaljik (1995, 1997), who follows Halle & Marantz (1993) in the assumption that morphemes (Halle & Marantz’s Vocabulary Items) are inserted late, post Spell-Out, in the computation. The author proposes that the Spec TP Parameter (Bures 1993, Bobaljik & Jonas 1994), among other syntactic phenomena, is achieved by a post-syntactic filtering mechanism. The Spec TP Parameter distinguishes the languages that license Spec TP as a potential landing site for the subject NP from the languages that do not license this position. It is proposed that syntactic phenomena such as Object Shift of full NP’s, Transitive Expletive Construction, and other ‘Diesing effects’ may obtain in a given language if the specifier of TP is licensed in the language. As will be discussed below, Bobaljik (1995, 1997) shows that the Spec TP Parameter can be derived from properties of the overt inflectional morphology of the languages in question.

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3 Bobaljik (1995, 1997) advocates that it is post-syntactic morpho-phonology, a module of grammar, which acts as a filter on syntactic derivations. I hold essentially the same view. More specifically, however, I believe that it is at the point of PF interface where the actual ‘filtering out’
Bobaljik & Jonas (1994) argue that the head T must raise to AgrS prior to verb raising (Chomsky (1993)'s independent T raising) in a given language if the language does not license Spec TP. In other words, in a given language, the Spec TP is licensed, thus the syntactic phenomena mentioned above may obtain, if and only if there is no independent T raising in that language.

Starting from this position, Bobaljik (1995, 1997) argues that independent T raising, which optionally alternates with successive cyclic V raising, is nevertheless forced by the morpho-phonological shape of a verbal head in a given language. It is forced because a derivation with independent T raising concatenates the terminal elements in such a way that only a certain morpho-phonological shape of a verbal head can fit there. He proposes that independent T raising, but not successive cyclic V raising, is compatible with a language if verbs in that language do not inflect for tense and agreement independently. For instance, if verbs do not inflect for tense and agreement independently since tense and agreement morphemes are in complementary distribution in a given language (e.g., English), then independent T raising must occur in that language. Since independent T raising entails failure to license Spec TP, languages such as English do not allow such syntactic phenomena as Object Shift of full NP's, Transitive Expletive Construction, and other 'Diesing effects'. On the other hand, if verbs do inflect for tense and agreement independently in a language (e.g., Icelandic), then a derivation with independent T raising is not, but a derivation with successive cyclic V raising is, takes place for morpho-phonological reasons.
compatible with that language. It follows that languages such as Icelandic allow the syntactic phenomena mentioned above. In short, an available syntactic derivation such as independent T raising or successive cyclic V raising can be blocked in a given language because the morpho-phonological shape of verbal heads does not fit the terminal elements concatenated by the derivation. What Bobaljik (1995, 1997) demonstrates amounts to the claim that syntactic derivations may in effect be filtered out due to PF legibility.

Furthermore, Bobaljik (1995) advocates that Holmberg’s generalization (Holmberg 1986) is an effect of morpho-phonological well-formedness. Holmberg (1986) notes that object shift of NP’s and pronouns alike in the Scandinavian languages is restricted to those environments in which the main verb raises overtly out of the VP. The relationship between verb movement and object shift is captured by the morpho-phonological principle that adjacency is required for morphological merger.

Consequently, unmerged morphemes due to the lack of adjacency will be phonologically illegible failing to fulfill Legibility Conditions. That is, in SVO order object shift is permitted when the verb raises but prohibited when the verb does not raise. When the verb remains in situ, a shifted object would disrupt the adjacency between Infl and uninflected verb. This also explains the absence of Holmberg’s generalization in head final Germanic languages such as Dutch.

In a nutshell, Bobaljik’s proposal advocates that a potential derivation can be blocked for a purely morpho-phonological reason: the incompatibility between a verbal
head derived in the syntax and a Vocabulary Item. The incompatibility will naturally amount to illegibility at the PF interface. Consequently, the syntactic difference between the two groups of languages is found in the morpho-phonology of their verbs.

In Bobaljik's study as well, we find that he maintains that Syntax uniquely feeds Phonology, a significant property of derivational grammar. Both studies show that PF Legibility Conditions do not trigger syntactic operations. They merely inspect phonological well-formedness independently from syntactic operations. Thus, syntactic operations are conducted blind to the conditions held at PF interface. Naturally, any backward influence is dealt with by the filtering mechanism of Interface.

2. Korean negation

The aim of this section is, first, to provide an analysis for Korean negation forms and, second, to present a case where PF Legibility Conditions ensuring morpho-phonological well-formedness filter certain syntactic derivations. I assume the late insertion view of morphology, following Halle & Marantz (1993). The essence of the phenomenon discussed in this section is that negation and some adverbs in Korean surface in two distinct forms, traditionally referred to as short and long forms. I present an analysis which accounts for the phenomenon as the byproduct of a general PF Legibility Condition, namely, "a word must have a proper morphological closure." (Morphological Closure of Kang (1988), Stranded Affix Filter of Lasnik (1981)).
2.1 Short-form vs. Long-form

Korean has two forms of negation: one is short-form negation (S-neg henceforth), the other long-form negation (L-neg henceforth). Morphemes of negation such as an (not) and mos (unable) show both patterns as seen below: all the example sentences in this paper show only an, but they equally apply to mos. In (1), (a) is an example of a simple matrix sentence in Korean. (b) and (c) are their negative counterparts, S-neg and L-neg respectively.

1) S-neg vs. L-neg
   a. Swuni-ka ca-ss-ta
      S.-Nom sleep-Pst-Dec
      "Swuni slept."

---

Korean examples are transcribed using the Yale Romanization system, except that the high back rounded vowel is consistently transliterated as wa, even after labials. For the sake of readability, the morphological decomposition of Korean verb forms is sometimes omitted when largely irrelevant to the concerns of the ongoing discussion. The following is the list of abbreviations used in this thesis.

Nom: Nominative Case, Acc: Accusative Case, Gen: Genitive Case
Pres: Present, Pst: Past, Dec: Declarative, Comp: Complementizer
Pl: Plural, Hon: Honorific, Rel: Relative clause ender
b. Swuni-ka an(i) ca-ss-ta
   S-Nom not sleep-Pst-Dec
   "Swuni did not sleep."

S-neg

\[<\text{an(i)}\text{ ha-ess-ta} / \text{an h-ass-ta}>\]

\[\text{S-Nom sleep-ci not do-Pst-Dec not do-Pres-Dec}\]

"Swuni did not sleep."

L-neg

Notice that for the L-neg construction, an is to the right of the main verb ca ‘sleep’ and a
dummy verb ha ‘do’ inflects instead of the main verb. The variation between \textit{an(i)-ha} and
\textit{an-h} is that between the archaic and contracted form respectively.

A sentence can be doubly negated using both S-neg and L-neg constructions, as
shown in (2-a). The two negation forms cancel each other in meaning. However, it is not
possible to use the S-neg pattern for double negation. (2-b) and (2-c) show that one
cannot have two an’s next to each other before an inflected verb, whether the inflected
verb is a main verb or a dummy verb.

\[5\] There is an ongoing debate on the identity of -ci. Song (1988), for example, claims that -ci is a
Complementizer and an allomorph of -ki. I leave the syntactic identity of -ci undetermined here
since it is largely irrelevant to the discussion of this study.
2) double negation

a. Swuni-ka an ca-ci an h-ass-ta
   S.-Nom not sleep-ci not do-Pst-Dec
   “It is not the case that Swuni didn’t sleep.”

b. *Swuni-ka an an ca-ss-ta
   S.-Nom not not sleep-Pst-Dec

c. *Swuni-ka ca-ci an an h-ss-ta
   S.-Nom sleep-ci not not do-Pst-Dec

In contrast, the L-neg pattern can be used iteratively. (3) is an example where one S-neg and three iterative L-neg constructions are used in a single sentence.

3) multiple negation: iterative L-neg

Swuni-ka an ca-ci an ha-ci an ha-ci an h-ass-ta
S.-Nom not sleep-ci not do-ci not do-ci not do-ci not do-Pst-Dec
“It is not the case that it is not the case it is not the case that Swuni did not sleep.”
(Swuni slept.)

Despite appearance, L-neg constructions, along with S-neg constructions, involve a single clause construction. There are two compelling pieces of evidence in support of their monoclausal status. In Korean, Negative Polarity Item (NPI, henceforth) licensing and the incompatibility between adjectives and present tense contribute to show clausal boundaries. The two pieces of evidence, thus, come from observing how both negation
constructions behave with respect to NPI licensing and the incompatibility of present tense morphology with adjectives. In the following section, I digress to present a brief discussion of NPI licensing in Korean, which then will serve as a ground for the discussion of the monoclausal status of S-neg and L-neg constructions in section 2.3.

2.2 NPI licensing

Korean NPI licensing contrasts with that of English. First, subject NPI is licensed in Korean (4), whereas it is usually not in English (5). For all the examples in this section, the grammaticality judgment works uniformly with long-form negation unless indicated otherwise.

4)  
a. amwuto an o-ass-ta^7  
   anyone not come-Pst-Dec  
   “No one came.”

---

^6 Subject NPI is licensed in English if it is c-commanded by a downward-entailing operator as in the following sentence (John Whitman p.c.).

i) Not once did anyone leave.

^7 The word for ‘someone’ is different from an NPI in Korean. It is nwukwu.
b. **amwuto** pap-ul **an** mek-ess-ta
   anyone meal-Acc eat-Pst-Dec
   "No one had a meal."

5) *Anyone did not come.

Related to the subject NPI licensing is the generalization that Korean NPI licensing involves some kind of locality condition. H.-S. Choe (1988) first noted that the NPI licensing obeys a clause-mate condition: an NPI is licensed by a negation within a single clause. (6) illustrates the phenomenon.

6)
      I-Top M.-Nom anything read-Pst-Dec-Comp not believe-Pst-Dec
      "I did not believe that Mary read anything."

   b. Mary-ka **amwukesto** **an** ilk-ess-ta
      M.-Nom anything not read-Pst-Dec
      "Mary did not read anything."

In contrast, such a locality condition is not found in English (7). The NPI in an embedded clause is licensed by the negation in the matrix clause.¹

¹ However, a syntactic island can intervene NPI licensing in English.

i) Ross (1967)
   a. Do you believe (*the claim) that anybody was looking for anything?
   b. * I deny that McIntyre has any money is certain.
7) Peter does not think [that Mary saw anyone].

However, there are cases which apparently challenge the locality condition of Choe (1988). NPI can be moved to the front of the clause (8-a) (8-b), or it can be moved from the embedded clause, where it is supposedly licensed by a negation, even to the front of the matrix clause (8-c).

8)

a. **amwuto** Mary-nun **t an** manna-ss-ta
   anyone M.-Del not meet-Pst-Dec
   "Mary did not meet anyone."

b. John-un [**amwuto** Mary-ka **t an** manna-ss-ta-ko] sayngkak.hay-ss-ta
   J.-Top anyone M.-Nom not meet-Pst-Dec-Comp think.do-Pst-Dec
   "(lit.) John thought that anyone Mary did not meet."

c. ? **amwuto** John-un [Mary-ka **t an** manna-ss-ta-ko] sayngkak-hay-ss-ta
   anyone J.-Del M.-Nom not meet-Pst-Dec-Comp think-do-Pst-Dec
   "(lit.) Anyone, John thinks that Mary did not meet."

---

8) *I never met the man who anybody tried to kill.*

Laka (1992), on the other hand, claims that English also obeys a clausalmate condition: examples like (7) are licensed by a negative feature in Comp.

9 *’?’ indicates a slight degradation in reading. The sentence is nevertheless grammatical.*
Interestingly, an exact opposite case also obtains. An otherwise ungrammatical sentence becomes grammatical when an NPI is moved from the embedded clause, where it fails to be licensed by a matrix negation, to the front of the matrix sentence where it is now licensed (9).\textsuperscript{10}

9) 
\begin{enumerate}
\item[a.] \textit{\*na-nun [John-i amwukesto mek-ess-ta-ko] an mit-ess-ta}
I-Top John-Nom anything eat-Pst-Dec-Comp not believe-Pst-Dec
"I did not believe that John ate anything."
\item[b.] \textit{?amwukesto na-nun [John-i t mek-ess-ta-ko] an mit-ess-ta}
\end{enumerate}

Despite the apparent challenge to the locality condition, what (8) and (9) suggest is that the clause-mate condition of NPI licensing applies to any member of the NPI’s chain. As long as a member of its chain obeys the locality condition, the NPI is licensed.

There is another apparent challenge to the locality condition. (10) appears to present a counter-example to the clause-mate condition.

10) \textit{John-un amwuto chencey-la-ko an mit-ess-ta}
J.-Top anyone genius-Dec-Comp not believe-Pst-Dec
"John did not believe that anyone was genius."

\textsuperscript{10} As pointed out in Nishiya\textsuperscript{m}a et al. (1996), under the assumption that NPI licensing occurs at LF, examples like (9) contradict Saito (1989) who claims that scrambling can be completely ‘undone’ at LF.
Notice, however, that the matrix verb is an ECM verb. ECM constructions do exist in Korean as shown in (11). ECM is optional when it is possible (11-a,d); is restricted to ECM verbs (11-b); and can occur across a tensed clause (11-d). (11-c) and (11-d) illustrate that there is a semantic constraint on the ECMed clause.

11) ECM constructions in Korean

a. Swuni-nun John-*ul/i chencey-la-ko mitnunta
   Swuni-Top J.-Acc/Nom genius-Cop-Comp believe
   “Swuni believes that John is a genius.”

b. apeci-nun John-*ul/i elisek-ta-ko sulphchasesstta
   father-Top J.-Acc/Nom stupid-Dec-Comp was.sad
   “His father was sad that John was stupid.”

c. Swuni-nun John-*ul/i pap-ul mek-ess-ta-ko mitesstta
   Swuni-Top J.-Acc/Nom rice-Acc eat-Pst-Dec-Comp believed
   “Swuni believed that John had a meal.”

d. John-un sensayngnim-*ul/i hwankap-ul cinay-ss-ta-ko mitesstta
   J.-Top teacher-Acc/Nom 60th.birthday-Acc pass-Pst-Dec-Comp believed
   “John believed that the teacher passed his 60th birthday.”

In short, the semantic constraint is such that the subject of the ECMed clause must take an
individual-level predicate. In other words, an ECMed constituent must be sufficiently characterized by the rest of the clause: ‘having the 60th birthday’ is sufficient enough to

11 That Korean ECM is restricted to individual-level predicates has been challenged, for instance, by J.-S. Lee (1991) who gives the following sentence.

i) Mary-ka John-i/ul caphiesstako mitessta
M.-Nom J.-Nom/Acc caught believed
"Mary believed John to have been caught."

However, a close examination of this type of sentences reveals that the semantic constraint mentioned above is still at work. When John is marked with the Accusative case, i) renders a reading where John's captivity is a significant state that characterizes him, thus making up an individual-level predicate. For instance, it works best when he is a well-known serial killer. i) gets significantly worse, if not unacceptable, with the insertion of an adverb ecey 'yesterday' since it forces a stage-level (temporary characterization), rather than an individual-level (permanent characterization), predicate:

ii) ??? Mary-ka John-ul ecey caphiesstako mitessta
M.-Nom J.-Acc yesterday caught believed
"Mary believed John to have been caught yesterday."

Now compare i) with iii) which is clearly unacceptable:

iii) *Mary-ka John-ul ecey kkangphay-eykey macesstako mitessta
Mary-Nom John-Acc yesterday gansters-dative was.beaten believed
"Mary believed John to have been beaten by gansters yesterday."

‘Having been beaten up by gangsters yesterday’ clearly fails to make an individual-level predicate. More tests of this type will be provided in Chapter 4.
characterize a person while ‘having a meal’ does not. For more discussions on Korean ECM constructions, please refer to J. Cho (1994) and the references therein (see also Chapter 4, section 1.1 for a relevant discussion).

Now observe in (12) that a subject NPI of the embedded clause is licensed in the exactly same way ECM occurs. An ECM verb must be involved (12-b), and the subject of the ECMed clause, i.e., NPI, must be sufficiently characterized by the rest of the embedded clause (12-c) (12-d). Note that an NPI in Korean is not Case-marked.

12)  

a. John-un amwuto chencey-la-ko an mitessta  
   J.-Top anyone genius-Dec-Comp not believed  
   “John did not believe that anyone was genius.”

b. apeci-nun amwuto caki cip-eyse chencey-la-ko an sulphehasiessta  
   father-Top anyone self house-Loc genius-Cop-Comp not was.sad  
   “Father was not sad that anyone was a genius in his family.”

c. * John-un amwuto nolla-ss-ta-ko an mitessta  
   J.-Top anyone be.surprised-Pst-Dec-Comp not believed  
   “John did not believe that anyone was surprised.”
d. John-un amwuto wuli-cwung-ey hwankap-ul cinayssta-ko
J.-Top anyone we-midst-in 60th.birthday-Acc passed-Comp

an mitessta
not believed

"John did not believe that anyone among us passed the 60th birthday."

There is evidence that the ECMed constituent is in fact in the matrix clause. J. Yoon (1996), for instance, presents the following pair of sentences in support of the claim that the ECMed subject is in the matrix clause.

13) (J. Yoon 1996:117)

J-Top M-Nom foolishly intelligent-Comp thinks
"(intended) John foolishly thinks that Mary is intelligent."

b. John-un Mary-lul, elisekkeyto, [ t, yenglihata-ko] sayngkakhanta
J-Top M-Acc foolishly intelligent-Comp thinks
"John foolishly thinks that Mary is intelligent."

If the ECMed subject Mary-lul and the non-ECMed counterpart Mary-ka occupied the same syntactic position, we wouldn’t expect the difference in grammaticality observed in (a) and (b) above. The (a) sentence is ungrammatical in that it does not render the
intended reading. Thus, it shows that *elisekkeyto* ‘foolishly’, along with ‘Mary’, is in the embedded clause. Moreover, its real reading, where the adverb is interpreted internal to the embedded clause, amounts to a strange interpretation due to the incompatibility between the adverb “foolishly” and the predicate “intelligent”. The (b) sentence renders the intended reading. Thus, it shows that *elisekkeyto*, along with ‘Mary’, is in the matrix clause.\(^{12}\)

Therefore, the apparent counter-example to the locality condition of NPI licensing observed in (10) does not constitute a counter-example but rather supports the characteristics of the locality condition: namely, an NPI is licensed if and only if a member of its chain obeys the locality condition. Consequently, we hold that Korean NPI licensing is characterized by its locality condition and that the locality is defined by a clause.\(^{13}\)

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\(^{12}\) In Japanese, there is evidence for VP adjunction scrambling, first noted by Saito (1989), which allows constituents to be scrambled out of clauses of certain types and adjoined to the higher VP in Japanese. Sells (1990), for instance, concludes that this is what is at work in Japanese ECM data parallel to (13). If the same holds for Korean, then this means that the ECMed subject *can* be in the matrix clause since scrambling is optional (Whitman p.c.). In any case, optionality is enough to make the point that the apparent counterexamples to the clausemate condition in NPI licensing are only apparent.

\(^{13}\) I do not attempt to work out a complete analysis of Korean NPI licensing here; for a detailed discussion on NPI licensing in Korean, see K.-W. Sohn (1996). Given what we have here, however, it appears that the licensing may occur via some kind of checking (see also Chung & Park 1997). For example, the licensing may occur as a free rider when an NPI and a negation or a negated verb stand in a checking relation at some point of a derivation. The following fact further supports the idea of checking. English allows multiple NPI’s with a single negation, while Korean
2.3 Monoclausal status of both S-neg and L-neg

The first piece of evidence for the monoclausal status of both S-neg and L-neg constructions comes from their interaction with NPI's. As we have established above, Korean NPI licensing is characterized by its locality condition: NPI licensing is clause-bound. (14), therefore, provides a crucial piece of evidence that both negations involve a single clause. Both S-neg and L-neg uniformly license NPI's as shown by the pairs of sentences (14-a) (14-b), and (14-c) (14-d).14

---

does not allow more than one NPI with a single negation. The one to one relationship could be due to the fact that licensing occurs via checking.

i)

a. John did not give anything to anyone.

   J.-Nom anything anyone-dative-even not give-Pst-Dec
   “John did not give anyone anything.”

14 It may be suggested that A-movement from one clause to another reduces the barrier between the clauses, as pointed out by E. Cowper (p. c.). ‘Mary’ in (14-b) presumably would have raised to higher subject position in a biclausal analysis. However, as shown below, A-movement from one clause to another in raising construction or in a passive+raising construction does not reduce the barrier between the clauses. The NPI in an embedded clause is not licensed by negation in the higher clause.
14)

a. Mary-ka *amwukesto* an ilk-ess-ta
   M.-Nom anything not read-Pst-Dec
   "Mary did not read anything."

b. Mary-ka *amwukesto* ilk-ci an h-ass-ta
   M.-Nom anything read-ci not do-Pst-Dec
   "Mary did not read anything."

c. *amwuto* chayk-ul an ilk-ess-ta
   anyone book-Acc not read-Pst-Dec
   "No one read the book."

d. *amwuto* chayk-ul ilk-ci an h-ass-ta
   anyone book-Acc read-ci not do-Pst-Dec
   "No one read the book."

The second piece of evidence for the monoclausal status comes from the
incompatibility of "present tense" morphology and adjectives, as previously pointed out by

i)

a. *Mary-ka [ t *amwukesto* mekesstenkes] an kassta
   M.-Nom anything ate not seem
   "Mary does not seem to have eaten anything."

b. *Mary-ka [ t *amwukesto* mekesstako] an sayngkaktoyessta
   M.-Nom anything ate not was.thought
   "Mary was not thought to have eaten anything."
Kang (1988) and Hagstrom (1995). In particular, it shows the monoclausal status of L-neg constructions. In Korean, adjective predicates, unlike verbal predicates, cannot be marked with an overt present tense morpheme: the absence of a tense morpheme instead renders a present tense reading, as shown in (15-a) and (15-b).

15)

a. ilk-nun-ta
   read-Pres-Dec
   “Someone reads.”

b. yeyppu-(*n)-ta
   pretty-Pres-Dec
   “Someone is pretty.”

(16), below, shows that the incompatibility between adjectives and present tense does not extend across clause boundaries.

    J. -Top    M.-Nom pretty-Dec-Comp say-Pres-Dec
    “John says that Mary is pretty.”

In L-neg constructions, however, the incompatibility is respected. Comparison between (17-a) and (17-b), therefore, suggests that L-neg constructions, unlike (16), involve a single clause.
17)  

a. Mary-ka chayk-ül ilk-ci an h-nun-ta  
   M.-Nom book-Acc read-ci not do-Pres-Dec  
   “Mary does not read a/the book.”

b. Mary-ka ycyppu-ci an h-(~nun)-ta  
   M.-Nom pretty-ci not do-Pres-Dec  
   “Mary is not pretty.”

The monoclausal status, supported by the two pieces of evidence, may suggest a possibility that the two forms of negation have one and the same syntactic position.

Naturally, claims have been made as to the existence of a single NegP from which both S-neg and L-neg are derived (e.g., J-Y. Yoon 1990).\(^\text{15}\) However, in the following section, I argue that although both forms are within a single clause, their syntactic positions are different.

2.4 Distinct syntactic positions of S-neg and L-neg

The evidence for different syntactic positions of S-neg and L-neg constructions comes from the facts regarding i) scope of negation in coordinate structures, and ii) relative scope interaction between negation and adverbs/QP’s.

Let us observe how S-neg and L-neg behave in coordinate structures. Observe (18).

18) L-neg vs. S-neg in the final conjunct when the first conjunct is tenseless

a. John-i pap-ul mek-ko cam-ul an ca-ss-ta
   J.-Nom meal-Acc eat-ko sleep-Acc not sleep-Pst-Dec
   "John had a meal and did not sleep."

   J.-Nom meal-Acc eat-ko sleep-Acc sleep-ci not do-Pst-Dec
   "John had a meal and did not sleep." OR
   "It is not the case that John had a meal and slept."

In (18), we see that the final conjunct can be negated by S-neg, as in (a), or L-neg, as in (b). Notice that, when the initial conjunct is tenseless, the scope of negation is restricted to the final conjunct if it is negated by S-neg. However, the scope of negation can optionally be over both conjuncts when negated by L-neg. Under the usual assumption that scope of negation is sensitive to the syntactic positions of negation, this phenomenon suggests that L-neg is somehow syntactically higher than S-neg.¹⁶

Now, let us observe the scope interaction between negation and adverbs. (19)

below, shows how S-Neg and L-neg interact with the frequency adverb *hangsang* ‘always’.

19) With frequency adverbs

a. L-neg
   Chelswu-nun *hangsang* chayk-ul ilk-ci an h-ass-ta
   C.-Top always book-Acc read-ci not do-Pst-Dec
   “Chelswu only occasionally read books.”  neg [always]  
   “Chelswu never read books.”  always [neg]

b. S-neg
   Chelswu-nun *hangsang* chayk-ul an ilk-ess-ta
   C.-Top always book-Acc not read-Pst-Dec
   “*? Chelswu only occasionally read books.”  *? neg [always]  
   “Chelswu never read books.”  always [neg]

Notice that, with L-neg, the negation and the frequency adverb can have scope over each other, giving ambiguity. On the contrary, with S-neg, the frequency adverb must have scope over the negation.

Interestingly, with the manner adverb, *ppali* ‘fast’, the opposite pattern obtains.

Observe (20).
20) With manner adverbs
   a. L-neg
      Chelswu-nun ppali chayk-ul ilk-ci an h-ass-ta
      C. -Top fast book.Acc read-ci not do-Pst-Dec
      "Chelswu did not read the book fast; he did it slowly."
      neg [fast]
      "* Abruptly, Chelswu stopped reading the book."
      * fast [neg]

   b. S-neg
      Chelswu-nun ppali chayk-ul an ilk-ess-ta
      C.-Top fast book.Acc not read-Pst-Dec
      "Chelswu did not read the book fast; he did it slowly."
      neg [fast]
      "? Abruptly, Chelswu stopped reading the book."
      ? fast [neg]

With S-neg, the negation and the manner adverb can have scope over each other, thus
rendering ambiguity. On the other hand, with L-neg, the negation must have scope over
the adverb. Under the well-established understanding that frequency adverbs are
syntactically higher than manner adverbs, (19) and (20) also support the view that L-neg is
syntactically higher than S-neg.

Lastly, let us see how L-neg and S-neg interact with a QP, motun ‘all’. (21-a, b)
show the interactions between the L-neg and motun in subject position (21-a), and in
object position (21-b). Note that motun and the negation may have scope over each other
whether motun is in subject or in object position,
21) With motun ‘all’

L-neg

a. motun sensayngnim-tul-i John-ul manna-ci an h-ass-ta
   all teacher-Pl-Nom J.-Acc meet-ci not do-Pst-Dec
   “Not all the teachers met John: only some did”.
   neg [all]
   “All the teachers didn’t meet John: none did”.
   all [neg]

   J.-Nom all teacher-Pl-Acc meet-ci not do-Pst-Dec
   “John didn’t meet all the teachers: he met only some of them.”
   neg [all]
   “All the teachers, John didn’t meet: he met none of the teachers.”
   all [neg]

On the other hand, S-neg cannot have scope over motun; motun must have scope
over the negation whether motun is in subject or object position.

21) S-neg

c. motun sensayngnim-tul-i John-ul an manna-ss-ta
   all teacher-Pl-Nom J.-Acc not meet-Pst-Dec
   “* Not all the teachers met John: only some did”.
   * neg [all]
   “All the teachers didn’t meet John: none did”.
   all [neg]

d. John-i motun sensayngnim-tul-ul an manna-ss-ta
   J.-Nom all teacher-Pl-Acc not meet-Pst-Dec
   “* John didn’t meet all the teachers: he met only some of them.”
   * neg [all]
   “All the teachers, John didn’t meet: he met none of the teachers.”
   all [neg]
Again, the sentences in (21) suggest that L-neg is somehow syntactically higher than S-neg.

With regard to the exact positions of S-neg and L-neg, it is sufficient to say for now that S-neg is within VP while L-neg is outside VP. Scope relations between manner adverbs/frequency adverbs are accounted for under the assumption that i) manner adverbs are within VP and frequency adverbs outside VP (or adjoined to VP) (McConnell-Ginet 1982), and ii) \( \alpha \) has scope over \( \beta \) when \( \alpha \) c-commands \( \beta \) (Aoun & Li 1993). L-neg and frequency adverbs have scope over each other because they c-command each other (19-a). In contrast, S-neg and manner adverbs have scope over each other because they c-command each other (20-b). Consequently, L-neg uniquely has scope over manner adverbs (20-a), while frequency adverbs uniquely have scope over S-neg (19-b). Scope relations with the QP, motun 'all' are also accounted for under the same assumption if QP raises outside VP at LF where it uniquely c-commands S-neg but reciprocally c-commands L-neg (21). Note that here we are dealing with relative scope relations between a negation and another QP. This is different from the clause-mate condition of NPI licensing, which does not involve relative scope relations.

According to what we have observed so far, we can come to the conclusion that S-neg and L-neg constructions both involve a single clause but their structural positions are different. The possibility of double negation (L-neg and S-neg in a single clause, (2-c)) further suggests that they do not originate in the same position. As mentioned above, this
conclusion is in opposition to the single NegP analysis (e.g., J-Y. Yoon 1990) where an is a head of NegP for both S-neg and L-neg. (10) provides a representative structure of the single NegP analysis.

22) An example of the Single NegP analysis (based on J.-Y. Yoon 1990)

a. S-neg

```
      CP
     /   \
    TP   C
   /     -ta
  T'    \\
 /        
NegP       T
 /          -ass-
VP           Neg
             an
V             manna-
```

an manna-ss-ta
not meet-Pst-Dec
“did not meet.”
According to this type of analysis, when the verb *manna* ‘meet’ moves either through or over the head of NegP and further to other functional heads, we obtain the S-neg construction: *an* comes before the main verb. On the other hand, when the verb fails to move either through or over the head of NegP for some reason such as the presence of *ci* (or because the verb movement is optional), the dummy verb *ha* is inserted before the tense morpheme to support the inflectional affixes. Other problematic issues of this type of analysis aside, we reject the basic idea that both S-neg and L-neg originate from a single syntactic position because of the facts presented above which strongly suggest that they have distinct syntactic positions.

Having established the distinct syntactic positions of S-neg and L-neg, we now ask
what their syntactic identity is. In what follows, we first consider what they are not: a
derivational negative affix (section 2.5), an inflectional affix (section 2.6), a constituent
negation (section 2.7). In section 2.8, we find that Korean negation an, and mos are
comparable to an adverb cal ‘well’.

2.5 Derivational negative affixes

Now that we have established the distinct syntactic positions of S-neg and L-neg,
one natural question to pose is whether the S-neg is in fact ‘syntactic’. Is S-neg any
different from an affix that negates a word at a derivational level: i.e., is it a word-internal
negation such as English un in unhappy? The following suggests that it is different from
derivational negative affixes. (23) shows derivational negative affixes that negate
adjective predicates.

23) Derivational Affixes: pwul-, mwu- ‘not’

a. pwul-phyenha ‘not-comfortable’
b. mwu-sikha ‘not-smart’

These derivational affixes, however, are syntactically inactive. For instance, they
do not license NPI’s although they are within the same clause.^[2]
24) NPI licensing of *pwiul-, *mwu-

a. *amwuto pwiul-phyenhay-ss-ta
   anyone not-comfortable-Pst-Dec
   "(intended) No one was comfortable."

b. *amwuto mwu-sikhay-ss-ta
   anyone not-smart-Pst-Dec
   "(intended) No one was smart."

On the other hand, as we have observed earlier in (14) and as we see again below, S-neg is syntactically active in that it licenses NPI’s as long as they are within the same clause as the S-neg.

25) NPI licensing by S-neg

a. John-i Sam-eykeye amwukesto an poney-ss-ta
   J.-Nom S.-dative anything not send-Pst-Dec
   "John did not send anything to Sam."

b. John-i amwu-eykeyto senwul-ul an poney-ss-ta
   J.-Nom anyone-dative present-Acc not send-Pst-Dec
   "John did not send the present to anyone."

17 Recall that subject NPI is licensed in Korean (see (4)).
c. **amwuto Sam-eykey senwul-ul an poney-ss-ta**
   anyone S.-dative present-Acc not send-Pst-Dec
   "No one sent the present to Sam:

2.6 **Inflectional affixes**

Another possibility is that *an* is an inflectional morpheme. However, the following shows that it does not pattern with other inflectional morphemes. In Korean, when the subject denotes plurality, the plural marker *tul* may optionally be attached to elements within the clause as shown in (26-a).

26)  
   a. **ai-tul-i pak-eyse-(tul) sikkurepkyey-(tul) nol-ko-(tul) iss-ess-ta**
      child-Pl-Nom outside-at-Pl noisily-Pl play-Prog-Pl be-Pst-Dec
      "Children are playing noisily outside."

   b. **ai-tul-i pak-(*tul)-eyse sikkurepkkyey nol-(*tul)-ko iss-(*tul)-ess-ta**
      child-Pl-Nom outside-(Pl)-at noisily play-(Pl)-Prog be-(Pl)-Pst-Dec
      "Children are playing noisily outside."
c. ?ai-tul-i pap-ul ani-tul mek-ess-ta
   child-Pl-Nom meal-Acc not-Pl eat-Pst-Dec
   "Children did not have the meal."

d. ?ai-tul-i pap-ul mek-ci ani-tul hay-ss-ta
   child-Pl-Nom meal-Acc eat-ci not-Pl do-Pst-Dec
   "Children did not have the meal."

But, as first noted by D.-I. Cho (1994), tul can never appear between affixal elements inside a word (26-b). Notice in particular, that it cannot appear between inflectional morphemes. In contrast, tul can be marginally attached to an of both short and long forms (26-c,d). If an were an inflectional morpheme, this would not obtain since tul would be appearing between an inflectional morpheme and its stem, unlike the pattern shown in (26-b).

2.7 Constituent negation

Perhaps, one would entertain the idea that S-neg is a constituent negation. Let us see first what constituent negation is like in English. First, constituent negation negates only the constituent it modifies as exemplified below.

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18 I treat an and ani as equivalent since they share identical properties as evidenced by their syntactic distribution (30), their having the long-form counterparts (1), and the morphological restriction on the number of syllables of their host (45). However, they differ in that ani but not an
27)
   a. Sam planned to give the present to NOT John.
   b. Sam planned to NOT give the present to John.

Second, constituent negation licenses NPI’s within the constituents it modifies.

28) NPI licensing by constituent negation

   a. *Jim was eating anything healthy NOT this afternoon
   b. Jim has been worrying NOT about anything interesting.

But, the S-neg in Korean does not show the same patterns as the English constituent negation. On the contrary, S-neg licenses NPI’s within its clause ((25) repeated here as (29)).

29) NPI licensing by S-neg

   a. John-i Sam-eykey amwukesto an poney-ss-ta  
      J.-Nom S,-dative anything not send-Pst-Dec  
      "John did not send anything to Sam."

   b. John-i amwu-eykeyto senwul-ul an poney-ss-ta  
      J.-Nom anyone-dative present-Acc not send-Pst-Dec  
      "John did not send the present to anyone."

can appear before tul. I leave this issue aside.
c. **Amwuto** Sam-eykey senmwul-ul **an** poney-ss-ta
   anyone   S.-dative       present-Acc not send-Pst-Dec
   "No one sent Sam a present."

2.8 **Comparison with *cal* ‘well’**

Having observed that *an* (and *mos* ‘unable’) is not like derivational negative
affixes, nor like inflectional affixes, nor like constituent negation, we now turn to see how
best to characterize it. Comparison with an adverb, *cal* ‘well’, yields important insights.
First of all, as noted by Nam & Koh (1985), *an* and *cal* uniformly show a distributional
constraint that they must be left-adjacent to a verb or adjective, as shown in (30) and (31).

30) **an(i) ‘not’**

a. John-i pap-ul **an(i)** mek-ess-ta
b. **an(i)** John-i pap-ul mek-ess-ta
c. *John-i **an(i)** pap-ul mek-ess-ta*
d. *John-i pap-ul mek-ess-ta an(i) *
   J.-Nom  meal-Acc  eat-Pst-Dcl
   "John did not have a meal."
31) *cal ‘well’

a. John-i pap-ul *cal mek-ess-ta
b. *cal John-i pap-ul mek-ess-ta
c. *John-i *cal pap-ul mek-ess-ta
d. *John-i pap-ul mek-ess-ta cal

J.-Nom meal-Acc eat-Pst-Dec

"John ate well."

Secondly, as with an, cal can also be attached with the plural morpheme tul (cf. 26 c,d):

32) i haksayng-tul-i kongpwu-lui cal-tul ha-n-ta
this student-Pl-Nom study-Acc well-Pl do-Pres-Dec

"These students study well."

Lastly, it is very interesting to note that an and cal both have their counterpart ‘long-forms’. When these forms are positioned in a particular place violating the adjacency requirement in both cases, there is a way to rescue the violation. In all such cases, the dummy verb ha ‘do’ appears with inflection, as shown in (1), repeated below as (33), and (34).\textsuperscript{19, 20}

\textsuperscript{19} ‘Do’-support analysis, first introduced by Chomsky (1955), has been discussed recently by a few researchers such as Lasnik (1994), Halle & Marantz (1993), Bobaljik (1995) among others. (i) below shows instances of ‘do’ support in English. In all Cases, something (either Neg, subject, or [+Accented]) intervenes to disrupt the inflection or the inflectional affixes are simply left without a
33)

b. Swuni-ka an ca-ss-ta
   S-Nom not sleep-Pst-Dec
   "Swuni did not sleep."

S-neg

c. Swuni-ka ca-ci an h-ass-ta
   S-Nom sleep-ci not do-Pst-Dec
   "Swuni did not sleep."

L-neg

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host verb, thus motivating the late insertion of 'do'.

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i) Instances of 'do'-support in English
a. Sam does not eat apples.  Neg
b. When did Sam eat apples?  Subject
   [+Accented]
c. Sam DOES eat apples.  VP-ellipsis

d. Sam does not eat apples even though Pat does.

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20 A further comparison with English never (and seldom, hardly) is also noteworthy. At an initial glance, they show the same pattern as Korean cal as below.

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i) compare with (30) and (31) above
a. Sam never speaks.
b. *Sam speaks never.
c. *Never Sam speaks.

---

ii) compare with (33) above.
  a. Sam never speaks.  S-never
  b. Never does Sam speak.  L-never

Whether they are in fact of the same nature or not, however, would need further investigation.
34)  
   a. John-i pap-ul **cal** mek-ess-ta  
      J.-Nom meal-Acc well eat-Pst-Dec  
      “John had a meal well.”  

   b. John-i pap-ul mek-ki **cal** ha-ess-ta  
      J. -Nom meal-Acc eat-KI well do-Pst-Dec  
      “John did it well to have a meal.”

As a result of this similarity, I follow S.-C. Song (1967) and M.-K. Park (1994) that Korean negation *an* (and *mos* ‘unable’) is an adverb of the same class as *cal*. The adverbial status of *an* is further supported in child language where the adjacency requirement to a verb is not operative, as noted by K.-J. Park-Hahn (1981), Y.-M. Cho & K.-S. Hong (1988), and Y.-J. Kim (1993), Whitman (1995).

35)  Child Korean (Y.-J. Kim 1993)
   a. na an pap mek-e  
      I not meal eat-informal  
      “I won’t eat food.”

   b. an ippal ssek-e  
      not teeth decay-informal  
      “(My) teeth won’t decay.”
Now we are faced with two important questions: i) why does the long-form appear only in one particular position (to the right periphery of a clause): why don’t other positions have counterpart long-forms? and ii) why does it occur with a dummy verb?

2.9 A solution: morpho-phonological well-formedness and PF Legibility

Conditions

In response to the questions posed above, I make the following proposal. First of all, in line with J. Yoon & J.-M. Yoon (1990), H.-S. Choe (1988), and M.-K. Park (1994), I assume that the verb in Korean is merged with inflectional morphemes at PF without head movement (see Halle & Marantz (1993), Bobaljik (1995) and Lasnik (1994) for a similar claim for formation of English verbal morphology). With this assumption, I propose a simple solution: adverbs such as Korean an, mos, cal are affixal. The morphological property of these affixal adverbs is such that they, like clitics, are prefixal to a verbal or adjectival stem. That they are affixes will explain the existence of long forms of these adverbs when they occur in a certain syntactic position. At the PF interface, Legibility Conditions inspect morpho-phonological well-formedness. I assume that one of these conditions is something as simple as “a word must have a proper morphological closure for PF legibility”\(^\text{21}\) in the spirit of Kang’s (1988) Morphological Closure and

\(^{21}\) Here, the definition of ‘word’ would be purely morpho-phonological. I presume what makes a ‘word’ would be different from one language to another.
Lasnik’s (1981) Stranded Affix Filter. Thus, any combination of morphemes which is not ‘complete’ in forming a word would violate such a condition.

The fact that these adverbs are affixal entails that they must be affixed to form a proper word. I follow Marantz (1984) and Halle & Marantz (1993) in the notion of morphological ‘merger’ that affixation/merger occurs under adjacency within the PF component. Since affixation/merger occurs under adjacency and these adverbs are prefixes, it follows that they, being prefixes, must be left-adjacent to their morphologically specified host: verb or adjective. Accordingly, (36) is a structure where affixation/merger can occur since the adverb is left-adjacent to a verb (30-a, 31-a). This structure will consequently yield ‘legible’ morpho-phonological elements at the point of the PF interface. On the other hand, when adjacency is disrupted as in structure (37), which corresponds to

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22 If the Stranded Affix Filter ensures the well-being of individual affixes, Morphological Closure ensures the well-being of individual words.

23 One phenomenon that follows from this morpho-phonological well-formedness in Korean is verbal coordinate structures where the semantically null morpheme ko is provided at the PF component in order to close off the verbs of non-final conjuncts when they are left bare without tense or mood specification.

i) Chelswu-nun pap-lul  mek-ko  cip-ey  ka-ss-ta
    Chelswu-Top meal-Acc eat-ko  house-to go-Pst-Dec
    “Chelswu had a meal and went home.”

24 In line with the idea that X^c adjunction is syntactically possible (Ghomeshi & Massam 1994, Cowper 1992, and K.-Y. Choi 1991), I hold that some, if not all, adverbs may adjoin at various
(30-b,c,d, 31-b,c,d), such syntactic derivations will be consequently filtered out by the PF
Legibility Conditions at the point of PF interface, for failing to provide morpho-
phonologically well-formed elements. These derivations are otherwise convergent in
terms of syntactic operations.

36) $V'/V$

   $\text{an/cal} \quad V$

affixation under adjacency

e.g., Swuni-ka nolay-lul an pwul-ess-ta
   S.-Nom song-Acc not sing-Pst-Dec
   “Swuni did not sing a song.”

37) $^*VP$

   $\text{an/cal} \quad V'$

   $\text{XP} \quad V$

affixation disrupted

e.g., * Swuni-ka an nolay-lul pwul-ess-ta
   S.-Nom not song-Acc sing-Pst-Dec
   “(intended) Swuni did not sing a song.”

When the adjacency requirement is not met, but recoverable with the most
economical effort (which will be explained shortly below), there is a way to remedy the

places including an $X^e$ level (cf. Travis 1988).
problem. Halle & Marantz (1993) propose the late insertion mechanism of Vocabulary Items, along with other morpho-phonological operations such as merger, fusion, and fission, in the PF component. I hold that the insertion of Vocabulary Items is available throughout the course of PF component including the point of the PF Interface where the Legibility Conditions apply. Thus, when Legibility Conditions are violated but rescuable, a semantically empty, i.e., dummy, verb can be inserted since the late insertion mechanism is still at work. Dummy verb ha 'do' is morpho-phonologically merged, thus without affecting syntactic structures, with the affixal adverb. It is inserted to support the adverb if and only if ha itself, a verb stem, can also be supported by other inflectional affixes: this situation is qualified for 'the most economical effort'. In (38), the structure of (33-c) and (34-b), both repeated below, the prefixal adverb is not left-adjacent to a host. However, it is in a position where the adjacency requirement can be rescued with the most economical effort.\(^{25}\) The merging of the adverb with a dummy verb ha causes not only the affixal adverb, but also tense and mood affixes to be properly affixed simultaneously.\(^{26}\)

\(^{25}\)This explains why in English the rescuable position is at the left periphery of the sentence (see (19-b)) while in Korean it is the right periphery: the inflectional affixes appear to the left of the sentence in English whereas they appear to the right in Korean.

\(^{26}\)I hold that the condition responsible for the adjective-present tense incompatibility shown in (17) is operative before the application of the repair strategy. Thus, the insertion of ha does not affect the incompatibility.
33-c)
Swuni-ka ca an ass-ta
S-Nom  sleep not Pst-Dec
“Swuni did not sleep.”
↓
Swuni-ka ca-ci an h-ass-ta
S-Nom  sleep-CI not do-Pst-Dec
“Swuni did not sleep.”

34-b) John-i pap-ul mek cal ess-ta
J.-Nom meal-Acc eat well do-Pst-Dec
“John did it well to have a meal.”
↓
John-i pap-ul mek-ki cal ha-ess-ta
J.-Nom meal-Acc eat-KI well do-Pst-Dec
“John did it well to have a meal.”

I hold that right-adjunction, if allowed in a language, is restricted to an XP-level
(cf. English heavy NP shift, Korean rightward dislocation (Choe 1988)). Thus, when an
shows up the right of a verbal stem, it cannot be located VP-internally. Consequently, \textit{L-neg} cannot be formed VP-internally. This is consistent with the results observed in section 2.4.

Notice that after the insertion of \textit{ha}, the main verb stem is now left unaffixed; verb stems are bound morphemes in Korean. Due to the condition that a word must have a proper morphological closure for PF legibility, semantically null \textit{ki/ci} is merged with the verb so that the verb stem, together with \textit{ki/ci}, would form a morpho-phonologically well-formed word. Thus, the job of \textit{ki/ci} is purely morpho-phonological: to properly close off a word. The verb stem is supported by \textit{ci} when followed by a negative verb and by \textit{ki} when followed by an affirmative verb.

Halle & Marantz (1993) do not attempt to set forth a refined definition of adjacency under which morphological merger occurs. Rather, they leave the definition quite loose. The following discussion on further comparison between \textit{an} and \textit{cal} suggests a direction with which one can proceed in sharpening the notion of ‘merger under adjacency’.

Although \textit{cal} and \textit{an} have the same structural distribution within a sentence as we have seen in (30) and (31), when they occur together in front of a verb or an adjective, the relative order between them is fixed as shown in (39). In verb conjunctions, they also display a scopal difference with respect to the verbal conjuncts. When they appear to the
left of the conjunctions, *cal* can have either a wide or narrow scope over the conjunctions while *an* must only have a narrow scope, as shown in (40).

39) relative order with ‘cal’
   a. **cal an** mek-ess-ta
      well not eat-Pst-Dec
   b. **an cal** mek-ess-ta

40) verb conjunction
   a. **cal** mek-kö ca-ss-ta
      well eat-and sleep-Pst-Dec
      “Someone ate well and slept well.” OR
      “Someone ate well and slept”
   b. **an** mek-kö ca-ss-ta
      not eat-and sleep-Pst-Dec
      “Someone did not eat but slept.”
      “*Someone did not eat and sleep.”

Differences between *cal* and *an*, namely i) relative order, ii) scope in verbal conjunction, suggest the following. First, the relative order may simply further indicate that they are affixal morphemes. Affixes have morphological restrictions which enforce certain orders among them (i.e., templates), and some orders are strictly internal to morpho-phonology; they do not have reflections in syntactic structures. Thus, it may well be the morphology that restricts the order to *cal-an-V*. Secondly, the scopal difference
between *cal* and *an* also follows from a morpho-phonological restriction, as the following discussion will show. In short, a morpho-phonological restriction on *an* blocks an otherwise well-constructed syntactic derivation at PF. As a result, one of the two syntactically possible scope readings is ruled out for *an*.

(40) suggests either both *cal* and *an* can be located within the first verbal conjunct, as shown in (41-b) and (42-b). The difference between *an* and *cal* in (40) further suggests that (41-a) but not (42-a) is allowed.\textsuperscript{27} We will see that the structure in (42-a) is ruled out for PF illegibility.

\begin{itemize}
\item[(41)]
\begin{itemize}
\item\textbf{a.} \[ \begin{array}{c}
V' / V \\
\text{cal} \quad V \\
\quad V \\
\quad V
\end{array} \]
\item\textbf{b.} \[ \begin{array}{c}
V \\
\quad V
\end{array} \]
\quad \begin{array}{c}
\text{cal} \\
V
\end{array}
\end{itemize}
\end{itemize}

\textsuperscript{27} The impossibility of (42-a) is restricted to $X^0$ coordinate structures. That is, *an* can merge with *V* in the following structure (c.f., (36)).

\begin{itemize}
\item\textbf{i.} \[ \begin{array}{c}
V' \\
\text{an} \quad V^0
\end{array} \]
\end{itemize}
The contrast between (41-a) and (42-a), to be accounted for below, leads one to question how morphological merger operates in a situation where an item is adjacent to an X⁰ conjunction structure. I assume that an item adjacent to an X⁰ conjunction structure morphologically merges with the syntactically highest X⁰. This, reminiscent of A-over-A condition (Chomsky 1964), refines the definition of ‘adjacency’ for morphological merger. Thus, in a structure such as that given below, Y must morphologically merge with X1 but not with X2, where the dotted line indicates the morphological merger.

Y cannot merge with X₂⁰ in structure (43). It can merge with X₂⁰ only when they are in a structure such as (44).
44)

\[ X^0 \]

\[ X_1^0 \quad X_3^0 \]

\[ \text{Y} \quad \text{X}_2^0 \]

This refinement may have to do with either the notion ‘adjacency’ or ‘merger’. However it is implemented in the theory, it would make the theory more restrictive in that morphological merger between Y and \( X_2^0 \) is disallowed in a coordinate structure such as (43).

Under the more restrictive notion of ‘merger under adjacency’, it is now easy to account for (40). The solution lies in the observation, which is first noted by Renaud-Kim (1974), that \textit{an}, but not \textit{cal}, has some morpho-phonological irregularities: \textit{an} cannot attach to an item which is morpho-phonologically too big. The following data show that ‘an’ cannot be attached to a stem which has more than two syllables (45).

45)

\textbf{an(i)-coh-ta} \quad \textbf{an(i)-pissa-ta} \quad \textbf{*an(i)-pucilenha-ta} \quad \textbf{*an(i)-alumtap-ta}

\text{good-\text{Dec}} \quad \text{expensive-\text{Dec}} \quad \text{diligent-\text{Dec}} \quad \text{beautiful-\text{Dec}}

In the case of conjunctions, the conjoined structures (e.g., V1 in (46-a)) will always end up having more than three syllables due to the presence of the conjunctive morpheme \textit{ko} ([V2-ko V3 v1]). Accordingly, \textit{an} cannot merge with V1 for a morpho-
phonological reason. It can only be merged in the fashion shown in (46-b): thus rendering only one possible reading.

46)

\[ \text{a. } V'/V \]
\[ \begin{array}{c}
\text{an} \quad \text{---} \quad V1 \\
\text{V2-ko} \quad \text{V3}
\end{array} \]
\[ \begin{array}{c}
\text{b. } V \\
\text{V} \quad \text{V}
\end{array} \]

[ruled out for PF illegibility]

On the other hand, \textit{cal} can successfully merge with a \textit{V} in both structures, as shown below: thus rendering the ambiguity in meaning.

47)

\[ \text{a. } V'/V \]
\[ \begin{array}{c}
\text{cal} \quad \text{---} \quad V \\
\text{V} \quad \text{V}
\end{array} \]
\[ \begin{array}{c}
\text{b. } V \\
\text{V} \quad \text{V}
\end{array} \]

In sum, let us recall the two negation constructions in Korean, reproduced below as (48).
48) S-neg vs. L-neg

a. Swuni-ka ca-ss-ta
   S-Nom sleep-Pst-Dec
   "Swuni slept."

b. Swuni-ka an ca-ss-ta
   S-Nom not sleep-Pst-Dec  S-neg
   "Swuni did not sleep."

c. Swuni-ka ca-ci    an(i) ha-ess-ta / an h-ass-ta
   S-Nom sleep-ci not  do-Pst-Dec not do-Pres-Dec  L-neg
   "Swuni did not sleep."

We have seen that both S-neg and L-neg involve a monoclausal structure but they
are syntactically different: S-neg is within VP while L-neg is outside VP. We have also
seen that an and other such morphemes as mos, and cal, are affixal adverbs. Under this
view, the restriction in their syntactic positions as well as the presence of their long-form
counterparts indicate a PF Legibility Condition inspecting morpho-phonological well-
formedness. A PF Legibility Condition, which simply requires that a word must have a
proper morphological closure, inspects the status of an and other such affixal adverbs. As
a result, when such affixes are stranded and fail to form a morphologically proper word in
a given derivation, the derivation is filtered out due to illegibility. When all affixes are
properly affixed to form a word in a given derivation, on the other hand, the derivation is
legible (e.g., S-neg). Furthermore, a repair strategy, available through the late insertion
mechanism of Vocabulary Items at the point of PF interface, is shown to respect economy.
By the repair strategy, a derivation with unaffixed affixes in certain positions can be
rescued (e.g., L-neg) for the purpose of legibility.

In conclusion, this section has provided evidence for the filtering mechanism of the
PF Legibility Conditions. On empirical grounds, we have established that certain adverbs
including négation are affixal in Korean. Consequently, it is required that in pre-Spell-Out
these affixal adverbs be placed in a syntactic position where they can undergo affixation
(i.e., morphological merger) at PF. We have seen that an otherwise syntactically
convergent derivation is filtered out due to the failure of PF legibility when these affixal
adverbs are in an improper syntactic position to undergo affixation.
Chapter 3. Legibility at LF Interface

1. Introduction

The Legibility Conditions at LF interface pertain to semantic well-formedness. Besides inspecting the presence of any unchecked uninterpretable features, they also guarantee general, non-feature-related semantic legibility. In other words, a string of words in a given structure needs to be semantically well-formed in order to receive full interpretation. This idea is relatively familiar to us from the well-known, syntactically well-formed gibberish, “Colorless green ideas sleep furiously” (Chomsky 1975:15). While there may be different sources for gibberish, one may sense that the notion of ‘compatibility’ is the general thread that ties together most semantically ill-formed structures, as will be discussed in detail later in this chapter. At the point of LF interface, I assume that there holds a syntax-semantics mapping, a way to interpret meanings associated with syntactic positions. An obvious assumption made here is that syntactic structures can have certain meanings associated with them.\textsuperscript{28} This view is consistent with, among others, the Universal Alignment Hypothesis of Perlmutter and Postal (1984) and with the Aspecual Interface Hypothesis of Tenny (1992). Both hypotheses crucially make a direct connection between syntactic position and meaning. This view is also reminiscent

\textsuperscript{28} This does not mean that all such associations arise because a syntactic position is \textit{inherently} associated with meanings. I use the term ‘association with meaning’ rather loosely. As will be illustrated shortly below, a syntactic position can end up being associated with meanings due to a
of the spirit of Construction Grammar (Goldberg 1995).

With this view of grammar, I adopt The Compatibility Constraint of Ghomeshi and Massam (1994) as in (1).

1) The Compatibility Constraint

Meaning contributed from a given source must be compatible with meaning contributed from all other sources.

For instance, meanings associated with syntactic structures must be compatible with components of meaning contributed by other parts of the grammar, such as the lexicon. Otherwise, the mapping will fail to provide an interpretable output. There may be different cases where an element may be incompatible with a particular syntactic position. One such case would be thematic incompatibility, which is essentially the incompatibility between the inherent meaning of a noun and the meaning contributed by its predicate head. For example, an inanimate DP situated in a position where an agentive thematic role is assigned may cause awkwardness, if not semantic ill-formedness, because the DP is semantically incompatible with the thematic meaning contributed by the verb. There may also be aspectual incompatibility. Many studies on the distribution of various adverbs have shown that an adverb situated in a position of a clause must be aspectually compatible with the position in which it appears (Jackendoff 1972, Travis 1991, Alexiadou lexical item in its vicinity.
1998, Earnst 1997, Cinque 1999 *inter alia*). Also, a number of studies have shown that an object in its canonical object position must be compatible with the aspectual properties associated with the position such as delimitedness/boundedness/perfectivity (Ghomeshi & Massam 1994, Borer 1994, Ramchand 1997 *inter alia*).

In this chapter, we investigate the nature of LF Legibility Conditions. We want to do that by focusing upon the issue of licensing, the grammatical module responsible for where overt nominals may or may not surface. Through this discussion, we will see how licensing is intricately related to the filtering nature of LF Legibility Conditions.

2. Licensing

I will begin the discussion by reviewing how licensing is dealt with in the Principles and Parameters approach. Non-trivial redundancies among constraints that execute licensing will be shown to exist in this framework. I will then quickly move on to briefly review some theoretical issues concerning licensing within the Minimalist Program. It will be indicated that to view Case features as licensing elements causes some theoretical difficulties. We will focus on internal arguments cross-linguistically to identify the empirical difficulty with viewing Case as a licensing feature. Finally, it will be proposed that licensing can be achieved without delegating it to a particular formal feature such as Case. Rather, it will be argued that what is involved in licensing is a collaboration of
general syntactic properties and, crucially, the Legibility Conditions at LF.

2.1. Licensing in Principles and Parameters approach

In the Principles and Parameters approach (Chomsky 1981), three independent constraints inspect the legitimacy of nominals in a clause, thereby assuming the role of licensing. They are the Projection Principle, the Case Filter and the Theta Criterion, of which the Case Filter and the Theta Criterion were later tied together under the notion of Visibility. According to the Projection Principle, D-structure is derived via projection from the lexicon. Thus, D-structure syntactic configurations are determined by lexical properties of individual items. As a result, in order for a nominal to be licensed, it must be projected from the lexicon. On the other hand, the Theta Criterion, below, requires a nominal to receive a theta-role in order to be licensed.

2) Theta-Criterion

Each argument bears one and only one theta-role, and each theta-role is assigned to one and only one argument. (Chomsky 1981:36)

Furthermore, the Case Filter, putting aside PRO, requires a nominal to receive Case in order to be licensed.
3) Case-filter

*NP if NP has phonetic content and has no Case. (Chomsky 1981:49)

What we find among the three constraints is that there are non-trivial redundancies from the viewpoint of licensing. One obvious redundancy is found between the Projection Principle and the Theta Criterion, namely: if syntactic structures are projected according to an individual item's lexical properties which include theta-grid, then the Theta Criterion will not be independently necessary since at LF, when the Theta Criterion applies, it will have been already satisfied via the Projection Principle.

The Theta Criterion and the Case Filter are also found to contain redundancies. This issue is not as straightforward as the one between the Theta Criterion and the Projection Principle, nonetheless it is not difficult to find some overlaps between the two. For instance, the existence of inherent cases, which by definition are theta-related, allows doubt as to whether the Case Filter needs to exist independently from the Theta Criterion for the purpose of licensing nominals.

One important phenomenon that demands the existence of the Case Filter independent of the Theta Criterion is the raising of subjects in passive construction and in non-finite clauses of English. Putting aside PRO, subjects of passive constructions and infinitival clauses are not licensed in their base-generated position since they receive a

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29 I leave aside the issue of expletives.
theta-role but no Case there. Because they are not assigned Case in their base-generated position, they must raise to a higher position to receive Case: e.g., *Tom was praised, I expected Tom to be sick, Tom appears to be sick*. Therefore, from the viewpoint of licensing, raising occurs in order for these nominals to be legitimate. In other words, what the raising phenomenon tells us is that the Theta Criterion is not enough to license nominals. However, after all, it is not clear whether or not raising occurs for the purpose of licensing, i.e., for Case reasons. As much research in the Minimalist Program advocates (e.g., Chomsky 1995), syntactic movement in general is not motivated by needs of the moving element (Greed) but rather by needs of the target (Attract). Accordingly, raising occurs not in the interest of the Case feature of a moving DP but rather in the interest of its target’s D feature. Case is only a free-rider. Under this picture, raising cannot be assumed to occur for the sake of licensing. Consequently, since raising occurs independently from licensing, then the necessity of the Case Filter in addition to the Theta Criterion should be seriously reconsidered. Accordingly, there have been some efforts to collapse the Case Filter and the Theta Criterion into one principle: see, for example, Chapter 6 of Chomsky (1981) for a discussion on eliminating the Case Filter.

Furthermore, contrary to common beliefs about infinitivals, overt subjects can generally be licensed by nonfinite clauses in such languages as Russian, Finnish, Latin, Irish, Dutch, and European Portuguese (Schütze 1997). Schütze claims that most nonfinite clause types even in English in fact license overt subjects. If this is correct, then we are faced with a situation more complicated than what the Case Filter and the Theta
Criterion may handle. Eventually, we are forced into one of two possible positions.

Under one position, we uphold both the Case Filter and the Theta Criterion and further assume that certain nonfinite clauses, but not others, in fact assign Case, thus licensing subjects in their base-position. Here, we must adopt the assumption that those infinitivals where subjects are licensed in languages indeed assign Case to their subjects. This position entails that Case assignment of subjects is due to something other than the finite/non-finite distinction of a clause, and furthermore that it is parametrically determined. This may not be a welcome result. Under another position, we assume that Case is in fact irrelevant to licensing of nominals. Under this position, we do not have to make the unwelcome assumption that subjects in some, but not other, infinitivals are assigned Case.

Consequently, it is reasonable to pursue the idea that all that a nominal needs in order to be properly licensed is a theta role, or some other proper semantic interpretation.

2.2 Licensing in the Minimalist Program

The Minimalist Program eliminates the Projection Principle (Chomsky (1993, 1995)) due to its redundant nature with respect to other principles of grammar as briefly

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30 The concept of the Projection Principle may have slipped back into the theory via the definition of pure Merge in Chomsky (1998). I adopt the position taken in Chomsky (1995).
noted above. The elimination of the Projection Principle relates to the costless nature of the operation Merge. Namely, there is no checking involved in Merge. In other words, nothing constrains the operation of Merge except for the legibility of merged items at PF and LF interfaces. Independently proposing the elimination of the Projection Principle, Ghomeshi & Massam (1994) spell out how the legibility of merged items is to be achieved at LF. They propose the Free Linking Hypothesis coupled with the aforementioned Compatibility Constraint. Their proposal is indicative of the role the LF Legibility Conditions are to play, with the disposal of the Projection Principle.

4) The Free Linking Hypothesis
Any syntactic position can contain any semantic participant, subject to interpretability.

5) =1) The Compatibility Constraint
Meaning contributed from a given source must be compatible with meaning contributed from all other sources

With the elimination of the Projection Principle, a Case feature is considered, tacitly most of the time, to be the licensing feature.\textsuperscript{31} A Case feature is the only uninterpretable feature on a lexical category: thus, it necessitates feature checking for the sake of the lexical category itself. The survival of an unchecked Case feature on a DP will lead to a crash at LF. Consequently, a Case feature of a DP essentially replaces the Case

\textsuperscript{31} Schütze (1997), for instance, clearly makes the assumption that Case is the licensing feature.
There are clearly two basic parts to the licensing mechanism: licensor and licensee. In the Minimalist Program, then, the uninterpretable Case feature on a DP plays the role of licensee: it signals the need of licensing. What plays the role of licensor? Since a DP can be licensed when it enters into a checking relation with a functional category, FP, for Case, it is then the need of an FP that eventually licenses the presence of a DP. Essentially, the uninterpretable Case feature of an FP assumes the role of licensing nominals within a clause.

If this is all that is involved with Case, then we can be more or less assured that the uninterpretable Case feature of an FP ‘licenses’ DP’s in a given clause in the Minimalist Program. Needless to say, however, the picture is not as simple as described above. Thus, the idea of equating the Case feature with the licensing feature is also not as clear as it may appear.

First, a difficulty comes from the existence of default cases cross-linguistically. There is obvious inconsistency between the idea that Case is a licensing feature and the fact that default cases exist in languages. The very idea that Case is a licensing feature, thereby controlling the number of DP’s in a given clause, does not allow the possibility of default cases. If Case is indeed the licensing feature and default cases do exist, then a language with a default case should be able to allow any number of nominals in a given
Secondly, there is difficulty related to the existence of inherent cases. As normally assumed, an inherent case is not realized on a DP as a result of the DP’s entering into a checking relation with a FP for Case. If, however, it is licensed in the same way as a DP with structural Case by also entering into a checking relation with a FP for Case, then the following results.\textsuperscript{32} Case on a FP must be able to check Case multiply. If this is possible, then Case on a FP practically loses its licensing function; it does not have an effect on how many DPs can surface in a clause.

2.3 Licensing objects

Having noted briefly some theoretical issues of licensing, we now turn to a set of data. We focus our attention on how objects, internal arguments, are licensed in a given clause. In this section, we will verify, on empirical grounds, the theoretical difficulty identified in the previous section. Namely, we will see that Case cannot be considered as a licensing feature. Through the discussion of object splits of various languages and object shift of Germanic and Scandinavian languages, we will discern that licensing of an

\textsuperscript{32} On the other hand, we may say that a DP with an inherent case does not check Case with a FP but is Case-checked, thus licensed, by the head of a lexical category VP or PP. Under this story, we lose the constraint on checking. Namely, checking does not occur at Merge.
object nominal is sensitive to the compatibility between the inherent meaning of an object and the meaning associated with its syntactic position.

### 2.3.1 Object splits

A number of studies have productively shown a consistent result in the classification of two distinct kinds of direct objects (Cheng (1986), Tenny (1987), van Voorst (1988), Mahajan (1990), Rappaport (1991), Mohammad & Karimi (1992), Diesing (1992), Ghomeshi & Massam (1994) *inter alia*). These two classes of objects are divided on the basis of their particular properties. (6) shows a summary of the properties associated with the two classes of objects, following Ritter and Rosen (in press). These properties will be illustrated in section 2.3.1.1.

6)

<table>
<thead>
<tr>
<th>Syntactic/morphological: Case-agreement</th>
<th>Class I objects</th>
<th>Class II objects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semantic: specific/presupposed</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Aspectual: delimited/bounded/perfective</td>
<td>yes</td>
<td>no</td>
</tr>
</tbody>
</table>

The class I objects, sometimes referred to as canonical objects, exhibit syntactic/morphological properties such as Accusative Case and/or the triggering of overt agreement marking on the verb. As we know, however, not all languages show case or agreement morphology overtly. Therefore, these syntactic/morphological properties may
obtain in a given language if the language shows overt case and/or agreement morphology for objects. Class II objects, on the other hand, exhibit none of these properties. They do not bear structural accusative Case, nor do they trigger object agreement. There are other syntactic properties such as syntactic inertness (i.e., immovability) usually associated with the class II objects. However, the associations are not entirely robust cross-linguistically, as will be shown later. I assume that the property of syntactic inertness follows from the syntactically deficient internal structure of some of class II objects (i.e., N instead of NP or DP). But not all of class II objects' internal structure is deficient. Thus, the property of syntactic inertness will certainly be indicative of class II objects, but will not constitute sufficient indication of class II objects.

What is interesting is that the syntactic properties of class I objects are correlated with particular semantic properties (Hopper & Thompson 1980). Class I objects are uniformly specific and presupposed. Class II objects, on the contrary, are interpreted as non-specific and non-presupposed. There are other semantic properties such as referentiality and predicativity (being predicational) that seem to be related to the classification of objects as well. I hold, following Sproat (1985), that referentiality is a property of phrases, not of heads. Therefore, referentiality, although potentially indicative of class I objects, is not necessarily the property associated with them. The predicativity of class II objects makes it possible for them to stand in a modification relation with their predicate head. This property, I hold, is not universally available and is determined by the lexical properties of a particular predicate head.
The aspectual properties, delimitedness/boundedness/perfectiveness, are also associated with class I objects. It follows that the lexical property of a class I object must be compatible with the delimited/bounded/perfective interpretation of the event described by the verb. On the contrary, the associated event of class II objects is non-delimited, unbounded or imperfective. I follow Ritter & Rosen (in press) in the view that these aspectual properties are also not universally available.\textsuperscript{33}

Below, we will briefly examine a variety of languages with object splits. Languages with object splits exhibit the two classes of objects. The two classes will be identified with their associated properties. Note, however, that many properties, except for presuppositionality/specificity, are necessary but not sufficient characteristics for class I objects. For the sake of presentation, object splits are classified here into two kinds: i) object alternations and ii) cognate objects. After observing and identifying the two classes of objects in these languages in section 2.3.1.1 and 2.3.1.2., we will pay special attention to the implications they have for a theory of licensing in section 2.3.1.3.

\textsuperscript{33} I assume, contra Ritter & Rosen (in press), that they are parametrically determined.
2.3.1.1 Object alternations

Persian, for example, shows an alternation with the corresponding characteristics of the two classes of objects, as in (7) below. The class II objects, which Ghomeshi & Massam (1994) generate under N⁰ as sister to V under V⁰, are claimed to be non-referential and non-delimiting. The class I objects, on the other hand, are shown to be referential and delimiting. Case/agreement, however, does not distinguish the two classes of objects.

The aspectual difference between the two types of object is diagnosed with adverbial modifiers (Vendler 1967, Dowty 1979, Pustejovsky 1988), as shown below. The relevant modifiers here are durative adverbials, i.e., *for an hour*, which are compatible only with non-delimiting objects, and frame adverbials, i.e., *in two minutes*, which are compatible only with delimiting objects. (7) and (8) show that class I objects in (a) sentences delimit the event since they are compatible only with frame adverbials, whereas class II objects in (b) sentences do not delimit the event since they are compatible only with durative adverbials.


a. (man) sīb-rās dar do daqīq e xord-am
   I apple+def. in two minutes ate+1ssg
   "I ate the apple in two minutes."
b. *(man) dar do daqiçe sib xord-am
   I in two minutes apple ate+1ssg
   "I ate apples in two minutes."

8)

a. *(man) sib-râş barasye yek sâ’s at xord-am
   I apple+def. for one hour ate+1ssg
   "I ate the apple for one hour."

b. (man) barasye yek sâ’at sib xord-am
   I for one hour apple ate+1ssg
   "I ate apples for one hour."

Other well-known languages showing the alternation of the two classes of objects
are Finnish, Palauan, and Mandarin. In these languages as well, class I objects are claimed
to be specific and delimit the event described by the verb. Unlike Persian, however, Case
or agreement does distinguish class I objects from class II objects in these languages.

(9) shows an example from Finnish which distinguishes the two types of object
with different cases. The class I object is marked with Accusative Case, whereas the class
II object is marked with Partitive Case, which is claimed to be a default objective Case in
Finnish (Vainikka 1989). Note the aspectual difference between (a) and (b) sentences,
indicated by the translations.
9) Finnish
   a. Ammu-i-n karhu-n
      shoot-Pst-1sg. bear-Acc
      “I shot the/a bear.”
   b. Ammu-i-n karhu-a
      shoot-Pst-1sg. bear-Part
      “I shot at the/a bear.”

Palauan, on the other hand, marks the two objects with the presence/absence of object agreement. According to Woolford (1995), Palauan objects trigger agreement if the clause is perfective and the object is human or, if not human, specific and singular. Note in (10) that the clause is perfective when the object triggers agreement, but imperfective when the object does not trigger agreement.

10) Palauan (Woolford 1995)
   a. Te-’illebed-ii a bilis a rengalek
      3pl-PERF.hit-3sg dog children
      “The children hit the dog.”
   b. Ng-milengelebed a bilis.
      3sg-IM.hit dog
      “S/he hit a dog/the dogs/some dog(s).

While in Persian, Finnish, Palauan and Mandarin, class I objects are specific and
also delimit the event, in languages such as Hebrew, Turkish, Swahili, and Zulu, the class I objects are specific but they do not necessarily delimit the event described by the verb. Event is simply irrelevant in these languages. Accordingly, it is necessary to tease apart aspectual properties from other semantic properties of class I objects.\textsuperscript{34}

(11) and (12) show examples from Hebrew and Turkish where only class I objects are marked with Accusative Case. Note that objects with Accusative Case must be specific but compatible with non-delimiting, imperfective aspect.

11) Hebrew (Ritter and Rosen, in press)

a. ani ma\textit{ki}rt\textit{et/}\textit{\&} Dani
   I know Acc Dani
   “I know Dani.”

b. ani ma\textit{ki}r (*et) harbe yeladim xaxamim.
   I know (*Acc) many children smart
   “I know many smart children.”

\textsuperscript{34} On the other hand, Borer (1994) and Ramchand (1997) propose a projection which directly encodes delimitedness and assigns Accusative Case. They would be forced to make a uniform association between class I objects and aspectual properties in all languages.
12) Turkish (Underhill, 1979)

a. Dani-ı tamı-yor-um
   Dani-Acc know-Pres.Prog-1sg.
   “I know Dani.”

b. BirCok akIIli Cocuk tamı-yor-um
   Many smart child know-Pres.Prog-1sg.
   “I know many smart children.”

In Bantu languages, compared to the case marking of Hebrew and Turkish, the class I objects induce agreement with the verb. Note here that object agreement obtains only when the object is specific and that aspectual difference is irrelevant, as in Hebrew and Turkish.

13) Swahili (Croft 1988) (also in Zulu)

a. U-me-leta kitabu
   2sg-Perf-bring book
   “Have you brought a book?”

b. U-me-ki-leta kitabu
   2sg-Perf-3sg-bring book
   “Have you brought the book?”

In Polynesian languages such as Niuean, Tongan and Samoan, canonical objects
are in Absolutive Case. Objects, however, can optionally be in Middle Case, which is morphologically the same as that assigned to goals ("to") or locatives ("at"). Middle objects, unlike their Absolutive counterparts, exhibit class II properties. Middle objects show syntactic properties of class II objects: they cannot be raised to subject, fronted in a lower clause to be assigned exceptional Case by a higher verb, or deleted under relativization or question movement. Middle objects also show class II semantic/aspectual properties such that they are nonaffected and nondelimiting (Ghomeshi & Massam 1994: 206).\(^{35}\)

(14) illustrates the alternation in Niuean. Note the difference of aspectual properties between (a) and (b) sentences.

14) Niuean (Seiter 1980): also in Tongan, Samoan (Chung 1978)

a. Ko e kai a mautolu he talo
   Pres eat Abs we(pl exclusive) at taro
   "We are eating (some) taro."

b. Ko e kai a mautolu e talo
   Pres eat Erg we(pl exclusive) Abs taro
   "We are eating up the taro."

\(^{35}\) Tenny (1994) has shown that affectedness entails delimitation.
In Kurdish and Hindi, the alternation is found between Absolutive and Accusative objects, where Accusative objects show class II properties. In these languages, the class I vs. class II properties are rather subtle. There is a correlation between past tense and Absolutive object on the one hand, and between present tense and Accusative object on the other. If we, following Ghomeshi & Massam (1994), view present tense as referring to a point in time, as such it cannot contain an entire event, then the correlation between perfective and past on the one hand and imperfective and present on the other hand is easily made.

15) Kurdish (Garrett 1989): also in Hindi

a. ez hesp-î dibîn-im
   1sg-Nom horse-Acc see-pres-1sg
   "I see the horse."

b. keçkê hesp dît
   girl-Erg horse-Abs see-pst-3sg
   "The girl saw the horse."

In sum, object alternations are exhibited in numerous languages such as Persian, Finnish, Palauan, Mandarin, Hebrew, Turkish, Swahili, Zulu, Tongan, Samoan, Kurdish and Hindi. The object alternations in each of these languages demonstrate the existence of the two classes of objects with their associated properties shown in (6).
2.3.1.2 Cognate objects

It has been argued that there are two types of Cognate Objects (Pham 1996, Pereltsvaig in press). Languages such as Vietnamese, Russian, Edo, Hebrew and Biblical Hebrew show both types of Cognate Objects. The two types very well correspond to class I and class II objects. Class II Cognate Objects (II COs henceforth), for example, show the common characteristics of class II objects. For instance, II CO’s, contrary to I CO’s, cannot occur with strong determiners, cannot be pronominalized (i.e., are non-referential), and do not delimit the event. Furthermore, II CO’s, although Case-marked in some languages, are syntactically inert in that they cannot be passivized, cannot be extracted by A’-movement, questioned by “How” but not “What”, and coordinated with manner adverbs (see Pereltsvaig 1999a for a further discussion).

(16) illustrates the two types of CO’s in Vietnamese. Notice the incompatibility between II CO’s and the strong determiner tung (every).

16) Vietnamese (Pham 1996)

a. Ti phebing toi (*tung) su phebing gaygat.
   II CO
   Ti criticize me (every) CL criticism sharp
   “Ti criticized me with (*every) sharp criticism.”
b. Hien gap tung gap (rau)
   I CO
   Hien pick every pick (vegetables).
   "Hien picked every pick (of vegetables)."

Russian also demonstrates the two types of COs. Notice the difference in the Case assigned in the examples of (17).

17) Russian (Perel'svaig 1999a)
   a. On ljubil eje strastnoj ljubovju.
      he loved her passionate:INSTR love:INSTR
      "He loved her passionately."
   b. Xvatit takie shutki shutit
      enough such jokes:Acc to-joke
      "Enough of making such jokes."

(18) further shows that the II CO's cannot be pronominalized whereas I CO's can.

18) Russian (Perel'svaig 1999a)

II CO's
   a. Ivan ulybnuslja schastlivoj ulybkoj.
      Ivan.Nom smiled happy smile.INSTR
      "Ivan smiled a happy smile."
a'. * Ivan ulybnulsja ej /ona /eto / etm.
    Ivan.Nom smiled her.INSTR/she.Nom /it.Nom / it.INSTR
    "Ivan smiled it."

I CO's

b. Tanec malen'kix lebedej tancujut molodye tancory.
    dance.Acc small swans.Gen dance.3pl young dancers.Nom
    "Young dancers dance the Small Swans' Dance."

b'. Ego tancujut molodye tancory.
    it.m.Acc dance.3pl. young dancers.Nom
    "Young dancers dance it."

(19) shows examples from Modern Hebrew. Note the incompatibility between II CO's and strong determiners in (19-a').

19) Modern Hebrew (Perel'tsvaig, in press)

II CO

a. Tali bikra et dani bikurim rabim
    Tali visited Acc Danny visits many
    "Tali visited Danny many times."

---

36 According to Perel'tsvaig (in press), the two types are in some Cases further distinguished by their morphological templates in Modern Hebrew. II CO is formed by a template corresponding to a particular verbal paradigm (binyan) whereas I CO is formed by more 'nominal' morphology.
a'. * Tali bikra et dani et kol ha-bikurim / et rov ha-bikurim / et bikur ze.
Tali visited Acc Danny Acc all the visits / Acc most the-visit / Acc visit this
"Tali visited Danny all the visits / most of the visits / this visit."

I CO

b. rakadnu rikudim rabim
danced:we dances many
"We danced many dances."

b'. rakadnu et kol ha-rikudim / et rov ha-rikudim / et rikud ze
danced:we Acc all the-dances / Acc most the-dances / Acc dance this
"We danced all the dances / most of the dances / this dance."

In this section, we have seen that the two classes of objects are also demonstrated by Cognate Objects of Vietnamese, Russian, Hebrew and Biblical Hebrew.

2.3.1.3 Object splits and licensing

Having observed that there are two classes of objects, we now ask the following question. How are the objects licensed? Let us assume, following Chomsky (1995), that an object enters into a ‘checking’ relation with a VP-dominating functional projection. There, the checking crucially involves a D feature and may further involve other features such as Case and phi-features when necessary (i.e., Schütze’s (1997) Accord relation). As for the class I objects with overt case/agreement marking, it is quite clear that they enter
into the checking relation. Therefore, it is reasonable to assert that these class I objects are licensed through the checking of a Case feature. Thus, the Case feature can be thought of as the licensing feature.

In opposition to class I objects, however, class II objects do not appear to enter into the checking relation with a VP-dominating functional projection. How then are they licensed? Let us assume for now that class II objects are for some reason structurally deficient, thus they do not constitute full DP's. Let us then try to answer this question by saying that class II objects, failing to be full DP's, do not need Case, thus do not need to be licensed either. However, it is not clear whether class II objects do not need Case, thus are outside the scope of licensing. We have observed that Finnish (9) and Russian (17 & 18) class II objects are overtly Case-marked. Furthermore, the following question is in order. If class II objects do not need Case, then what happens to the uninterpretable Case feature of the functional projection? The unchecked uninterpretable feature should lead a derivation to a crash, contrary to our data. Many of the object alternation examples we observed above involve the same transitive verb such as shoot, hit, eat, know, and buy in each alternant. It is obviously an unwelcome result to maintain that the functional projection responsible for object Case does not exist or does not have the Case feature when the same verb appears with class II objects.

Let us assume then that class II objects are indeed licensed in the same way as class I objects: through Case-checking with the functional projection. We can categorize
the class II objects observed in the previous sections into three kinds in accordance with their contrasting class I objects' properties of Case and agreement. The first type of class II objects contrasts with their class I counterparts either in the presence/absence of overt structural Case marking (e.g., Hebrew and Turkish) or in the presence/absence of overt object agreement (e.g., Palauan and Swahili). The second type contrasts neither in overt Case nor in overt agreement due to the fact that there is no overt Case/agreement marking in a given language (e.g., Persian and Vietnamese). The third type contrasts in structural vs. non-structural Case marking (e.g., Russian, Finnish, Niuean, Kurdish). Both the first and the second types of class II objects lack overt Case marking while the last type does not. The classification of the three types of class II objects is summarized in (20).

20) Contrast between Class I and Class II objects in overt Case/agreement

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Class II Objects</th>
<th>Class I Objects</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Hebrew, Turkish, Palauan, Swahili)</td>
<td>none</td>
<td>overt structural Case/object agreement</td>
</tr>
<tr>
<td>Type 2</td>
<td>none</td>
<td>None</td>
</tr>
<tr>
<td>(Persian, Vietnamese)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type 3</td>
<td>overt non-structural Case</td>
<td>overt structural Case</td>
</tr>
<tr>
<td>(Russian, Finnish, Niuean, Kurdish)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We may maintain that class II objects are licensed through Case-checking by assuming that the checking occurs covertly in the first and the second types of class II objects. However, immediately we face an obstacle due to the presence of the third type of class II objects which shows overt Case marking different from structural Case. Of course, we can still assert that the third type of Case-marked class II objects, marked with
non-structural Case, also enter into the checking relation with the functional projection covertly. This position results in something undesirable as mentioned earlier in this chapter. This implies that all DP's, regardless of their overt Case marking, enter into a checking relation with a functional projection for structural Case. Therefore, when there is an object with inherent/default Case along with an object with structural Case within a single clause, both objects would enter into the checking relation with the single functional projection for structural Case. It follows then that the Case feature of the functional projection immediately loses its licensing nature since it, being able to check Case multiply, can license any number of nominals. Languages such as Korean, which exhibit multiple class II objects, suggest that the functional projection must indeed check Case multiply: Chapter 4 deals exclusively with this phenomenon. The Case feature of the functional projection would not be able to control which nominals should surface and which should not.

In sum, it is not easy to maintain Case as the licensing feature when we consider objects in different positions. Certain objects do seem to enter into a Case-checking relation with a functional projection. But, there are other objects that do not seem to do this. It is hard to maintain either that the latter type of objects does not need to be licensed or that they enter into the checking relation covertly. It is quite certain that Case is somehow involved with objects. But, Case does not prove to be crucial to the legitimacy of the presence of objects.
Now, we move on to the discussion of more empirical data regarding objects. We turn our attention to the situations where both classes of object surface in a single clause.

2.3.2 Two objects

In this section, we observe cases where both classes of objects identified in the previous section surface overtly. We begin by observing certain noun incorporation data and move on to cases where both classes of objects surface without any morphological support. With this set of data, we further challenge the idea that Case is a licensing feature.

2.3.2.1 Morphologically supported objects

When both classes of objects surface, there are instances where one of the two objects is morphologically supported via incorporation. Mithun’s Noun Incorporation type II (Mithun 1984, 856), for example, falls into this category, as illustrated below.

21) Yucatec Mayan
k-in-č‘ak-če’-t-ik in-kool
Incomp-I-chop-tree-Tr-Impf my-cornfield
“I clear my cornfield.”
22) Chukchi
kopálhin na-alát-kogesnat

walrus.blubber they-knife-mincing

"They are mincing walrus blubber with knife."

23) Mohawk
kvtsyu v-kuwa-nya’t-ó:’ase

fish will-they/her-throat-slit

"They will throat-slit a fish."

In (21)-(23), there are two objects per clause: one incorporated and one
unincorporated object. It appears that incorporation conspires to allow only one real
(morphologically independent) object per clause. This would be a welcome result for the
Case-related licensing approach if we assumed that incorporated objects do not need Case.
This assumption approximates Baker (1988) who claims that an object's need for Case is
satisfied by being incorporated into a verb. Thus, the unincorporated object's need for
Case is satisfied in a usual way, by entering into a checking relation with a functional
projection, while the incorporated object's need for Case is obviated or satisfied by
incorporation. From the viewpoint of the Case-related licensing approach under which
one unincorporated object is Case-checked by one functional projection, incorporation
must occur when there are two objects in a single clause. If incorporation does not

37 If one assumes that a functional projection checks Case of both objects, then the Case-checking
by the functional projection cannot be considered to perform licensing due to its lack of restrictiveness, as discussed earlier.
occur for the second object, then it will fail to be licensed.

Contrary to this view, however, there are languages where incorporation is
optional even when there are two objects in a single clause, as shown in (24). We do see
instances of obligatory incorporation. But, the obligatoriness of incorporation is usually
determined by the lexical properties of the incorporating verb (Johns 1999) rather than for
the purpose of licensing an extra object. (24) shows Korean light verb constructions
where an extra object may optionally incorporate into the verb.

24) Korean Light-verb

a. Chelswu-ka swuhak-ul kongpwu-lul hayssta
   C.-Nom math-Acc study-Acc did
   “Chelswu studied math.”

b. Chelswu-ka swuhak-ul kongpwu-hayssta
   C.-Nom math-Acc study-did
   “Chelswu studied math.”

If (21)-(24) are indeed instances of the same syntactic phenomenon and if there
exist languages such as Korean that show optional noun incorporation, then the claim that
incorporation of an extra object occurs for licensing purposes is seriously challenged. In
other words, the optionality of noun incorporation in (24) suggests that we cannot
consider the morphological support of an extra object to be a means of eliminating the
need for a second instance of object licensing. That is, if licensing primarily occurs via Case-checking by a functional projection and if noun incorporation occurs for the purpose of licensing an extra object which fails to be Case-checked by the functional projection, then we cannot expect to see optionality in noun incorporation.

2.3.2.2 Morphologically independent objects

More challenging to the idea of Case as a licensing feature are the instances where both classes of morphologically independent objects surface. They indicate more directly that a Case feature is not responsible for the licensing of nominals. Below, I present two instances where both objects surface without morphological support: namely, Cognate Objects and Accusative Adverbials.

Recall that there are two kinds of Cognate Objects. The second type of Cognate Object, namely II CO type, can co-occur with class I, non-cognate, regular objects. Examples are given from Vietnamese, Modern Hebrew, and Russian.

25) Vietnamese: (Pham 1996)

a. Ti phbinh toi moi su phbinh gaygat
   Ti criticize me Det Cl. criticism sharp
   "Ti criticized me a sharp criticism."
b. Ho chaodon nha nghesi mot su chaodon nongnhiet
   They welcome Det actor Det Cl. welcoming warm
   "They gave a warm welcome to the actor."

26) =19-a) Modern Hebrew (Pereltsvaig, in press)

   Tali bikra et dani bikurim rabim
   Tali visited Acc Danny visits many
   "Tali visited Danny many times."

27) Russian: (Pereltsvaig 1999a)

   On ljubil eje strastnoj ljubovju.
   he loved her passionate:INSTR love:INSTR
   "He loved her passionately."

Note that, unlike Russian, there are no overt case markers for class II objects in
Vietnamese and Hebrew, suggesting that it is not the availability of morphological case
markers that allows both objects to surface. If, on the other hand, one considers that the
structural objective Case feature of a functional projection is responsible for checking
Case features of both objects, then, as has been discussed previously, licensing loses its
restrictiveness since it cannot be predicted how many nominals can be allowed.

Another instance where both objects surface without morphological support is
found with so-called Accusative Adverbials. Studies on adverbial nominals show that a
number of languages allow adverbial nominals as long as they are associated with certain aspectual properties. Below, we find that nominals of durative expression are common across languages. Note that in Russian, Latin and Finnish, the duratives are marked with overt Accusative Case.


a. English
   They will talk a few minutes.

b. Bengali
   o  ṣek ghonta gail-lo.
   she one hour  sing-Pst.
   “She sang for one hour.”

c. Swedish
   Vi jobbade fyra timmar
   we worked  four hours.
   “We worked for four hours.”

d. French
   Il a dormi une heure.
   he Aux slept  one hour.
   “He slept for one hour.”

38 English bare NP adverbials are subject to complex conditions including lexical idiosyncracy, choice of determiner, modification by relative clauses, etc. (see Bresnan & Grimshaw 1978, Emonds 1976, 1985, 1987, Larson 1985, and McCawley 1988).
e. Russian

My byli tam nedelju.
we were there week-Acc
“We were there for a week.”

f. Latin

Decem annos regnavit.
ten years-Acc he.reigned.
“He reigned for ten years.”

g. Finnish

Anne rakensi talo-a tunni-n
Anne build house-Part hour-Acc
“Anne was building a house for an hour.”

Studies by Wechsler & Lee (1997) and Pereltsvaig (1999b) suggest that the Accusative Adverbials exhibit the properties of class I objects. Pereltsvaig (1999b) explicitly claims that in Russian and Finnish the Accusative Adverbials receive structural Accusative Case whereas the other objects, which fall into our class II objects, receive default objective Case: Accusative and Partitive, respectively (cf. ‘weak structural Case’ of de Hoop 1992, ‘structural default Case’ of Vainikka 1989). Most notably, these adverbials must carry the aspectual properties of the class I objects: namely, delimitedness/boundedness.

Recall the usual diagnosis with adverbial modifiers for aspectual difference
(Vendler 1967, Dowty 1979, Pustejovsky 1988). Durative adverbials, e.g., *for an hour*, are compatible only with non-delimiting objects, while frame adverbials, e.g., *in an hour*, are compatible only with delimiting objects. Given that an event can be delimited (i.e., quantized) only once (Krifka 1989), the reason for this (in)compatibility may come from the fact that durative adverbials participate in delimiting an event while frame adverbials don’t. Thus, durative adverbials are allowed only when the thematic object in the same clause does not delimit the event. That is why in Finnish an Accusative adverbial is available only when the thematic object takes a Partitive Case, as shown in (28-g) and (29).

29) Tenny (1987)
   a. Maria kantoi kirjaa koko  illan.
      Mary carried book:PRT whole evening:Acc.
      “Mary carried a book for the whole evening.”
   b. * Maria kantoi kirjan koko illan.
      Mary carried book:Acc whole evening:Acc.
      “Mary carried the book for the whole evening.”

Furthermore, Wechsler & Lee (1997) show that Accusative Adverbials in English are systematically improved when their durative interpretation is enforced.

30)
   a. *John watched TV his vacation.
   b. John watched TV his entire vacation.
c. *John played the flute the concert.

d. John played the flute the entire concert.

Accusative Adverbials, however, are not limited to durational adverbials.

Pereltsvaig (1999b) shows three other kinds of possible interpretations in Russian.

31) Pereltsvaig (1999b:5)

a. Multiplicative
   Tom bezhal marafon dva raza.
   Tom ran marathon two:Acc time:Gen
   "Tom ran a marathon twice."

b. Distance Measure
   Tom bezhal dve mili
   Tom ran two:Acc miles:Gen
   "Tom ran two miles."

c. Locational Measure
   Tom bezhal vsju dorogu.
   Tom ran all:Acc way:Acc
   "Tom ran all the way."

In an attempt for a precise classification, Wechsler & Lee (1997) unify all of these interpretations under the heading of a SITUATION DELIMITER, i.e., a situation-quantifier. They define SITUATION DELIMITER as "an extensive measure function which temporally quantifies the event or state depicted in the clause". An ‘extensive
measure function’ is briefly explained in the following (see Luce and Suppes (1993) for more on extensive measures in measurement theory). First of all, a measure function is a function from objects to numbers (points on scale) that is transitive, where transitivity is defined as below.

32)

A function $f$ is transitive iff:

if $f(x) \geq f(y)$ and $f(y) \geq f(z)$, then $f(x) \geq f(z)$.

Take, for instance, a piece of metal with weight thirty grams, and temperature nine degrees Celsius. Both weight and temperature have the property of transitivity: if $x$ is equal or greater in weight than $y$, and $y$ is equal or greater in weight than $z$, then $x$ is equal or greater in weight than $z$; same for temperature. Measures of this property are called MEASURE FUNCTIONS. An extensive measure function is a measure function that has the property of additivity, where additivity is defined as below.

33)

A function $f$ is additive iff:

$f(x) \oplus f(y) = f(x \oplus y)$

Suppose we concatenate two pieces of metal $x$ and $y$; call this concatenation $x \oplus y$. The weight of $x \oplus y$ will necessarily be the sum of the weight $x$ plus the weight $y$. But the same inference does not follow for temperature. Accordingly, weight, but not
temperature, is said to be an EXTENSIVE MEASURE. In the domain of situations, consider an event $x$ of driving at an average speed of 90 km per hour for the duration of one hour. Both average speed and duration are measure functions since they are transitive. Now take a second event $y$ of driving at an average speed of 100 km per hour for one hour. Their concatenation $x \oplus y$ has an average speed of 95 km per hour and a duration of two hours. Therefore, duration is an extensive measure function while average speed is not.

Accusative Adverbials in (28) and (31) have the semantics of extensive measure functions. As such, they serve “to quantize an event” (Wechsler & Lee 1997:647) just as class I objects quantize an event by being a terminal bound of an event. What is essential to us here is that these Accusative Adverbials fit into the aspectual properties of class I objects. Consequently, their occurrence with a thematic, Class II object will constitute a situation where both classes of objects surface, as illustrated by Russian examples below. Note that knigu ‘book’ is a class II object, receiving a default objective case, in (a) and (b) sentences since it is marked by the aspectual property (i.e., imperfect) of the class II objects (recall (6) in section 2.3.1.). In these two sentences, knigu may occur with an Accusative Adverbial which receives a structural objective case. In sentence (c), on the other hand, knigu ‘book’ is a class I object, receiving a structural objective case, since it has the aspectual property of the class I object, namely perfectivity. In this sentence, knigu cannot occur with an Accusative Adverbial. This can be accounted for in terms of availability of structural positions for two class I objects.
34) Russian
a. Maria taskala knigu ves’ vecher.
   Mary carried:Imprf book:Acc all:Acc evening:Acc
   “Mary carried a/the book the whole evening.”

b. Lena chitala knigu dva chasa
   “Lena read a/the book two hours.”

c. * Lena dochitala knigu dva chasa
   Lena read:prf:Pst book:Acc two:Acc hours:Gen
   “Lena read a/the book two hours.”

We have observed in this section that languages sometimes allow both classes of objects to surface in a single clause. The implication of this phenomenon is quite clear for any attempt to associate licensing with the structural Case of a functional projection. Namely, if one structural Case of a functional projection is responsible for licensing both objects, then licensing loses its restrictiveness since it cannot control how many nominals can surface in a clause. Then, if not Case, what in fact is responsible for licensing objects? For this question, we now turn to the examination of Diesing’s (1992) Mapping Hypothesis. In consideration of Diesing’s Mapping Hypothesis, we will seek an explanation for the properties associated with the two classes of objects discussed in the previous sections. As a result, the significance of LF legibility for the purpose of object licensing will be attested.
2.3.3 The Mapping Hypothesis and licensing objects

Diesing (1992) proposes a version of the syntax-semantics mapping hypothesis:

35) The Mapping Hypothesis

VP maps into the Nuclear Scope (the domain of existential closure)
IP maps into the Restriction (of an operator)

This mapping hypothesis above may be viewed as a detailed part of a more general syntax-semantics mapping principle discussed in the beginning of this chapter, connecting syntactic positions and their associated interpretations. At the LF interface, therefore, the compatibility between elements within VP or outside VP and their corresponding interpretations is inspected in accordance with the Mapping Hypothesis.

2.3.3.1 The Mapping Hypothesis and object shifts

One important consequence of Diesing’s Mapping Hypothesis concerns objects. According to the Hypothesis, specific/presupposed objects cannot be properly interpreted within VP since they cannot felicitously be existentially bound there. In German, for instance, object pronouns by virtue of their specificity cannot stay within VP. They must move out of VP overtly, as shown below.
36) Diesing (1997:380)

a. *...weil ich selten sie streichle
   since I seldom her pet

b. ... weil ich sie selten streichle
   since I her seldom pet
   "since I seldom pet her."

According to the Mapping Hypothesis coupled with the Compatibility Constraint in (5),
(36-a) is ruled out because the pronoun sie fails to receive an appropriate interpretation
VP internally: the definiteness of this pronoun is incompatible with existential closure. We
may see this as a violation of a Legibility Condition at LF. Examples like (34), however,
leave one to wonder whether the obligatory movement of the object pronoun is in fact due
solely to LF Legibility Conditions. In other words, we do not know for sure whether the
movement of the object pronoun out of VP is strictly syntactic so that it would have to be
carried out anyhow, irrespective of its semantic repercussion. If this were the case, then
(36-a) would not constitute a case of ‘filtered-out’ derivations since a derivation (36-a)
will crash for an independent reason, i.e., the survival of a formal uninterpretable feature
as a result of non-movement.

However, a closer examination of object shift in Scandinavian languages reveals
more about the nature of pronominal object shift. In Norwegian, it is clear that
pronominal object shift is syntactically optional, but clearly conditioned by semantics. In other words, not all pronominal objects undergo object shift in Norwegian. Thus, while a definite pronominal undergoes movement, an indefinite pronominal does not, as shown below.

37) Norwegian: Diesing (1997:413)

a. Nei, jeg har ingen paraply
   no  I  have no umbrella

   men jeg køper muligens en i morgen
   but  I  buy  possibly  one  tomorrow.

   "No, I have no umbrella, but I will possibly buy one tomorrow."

b. *men jeg køper en muligens i morgen.
   but  I  buy  one  possibly  tomorrow

Thus, pronominal objects in some languages, if not all, serve to indicate the compatibility between structural position and lexical meaning. What is important here is the idea that object movement is available but optional in syntax\(^{39}\), following Chomsky (1993) and Collins & Thráinsson (1997) among others, and that the movement is strictly syntactic, not motivated by semantic features. The fact that verb movement must co-occur with object

\(^{39}\) For a discussion of optional movement in the Minimalist Program, see Chapter 1.
shift in Scandinavian languages suggests further that the movement is strictly syntactic. This particular situation, where syntactic operation is available but optional, allows us to see the effect of LF Legibility Conditions subsuming (5) and (35). In Norwegian, it is clear that object shift of a pronoun is syntactically available, but not forced. We note that what eventually determines the legitimacy of pronominal objects is their compatibility with the syntactic position with respect to legibility.

Furthermore, full DP’s in German and Icelandic show a clearer indication of the application of the LF Legibility Conditions. As we see in (38) below, the object movement of full DP’s is not syntactically obligatory: an object can stay both VP-internally and VP-externally.

38) Diesing (1997:378)

a. $^M$ ... weil ich selten die Katze streichle
   since I seldom the cat pet

b. ... weil ich die Katze selten streichle
   since I the cat seldom pet
   “since I seldom pet the cat.”

(38-a) shows that the VP-internal definite DP is nevertheless awkward. The

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40 Object shift of full DP’s is not allowed in Mainland Scandinavian languages. I take this as a language-particular syntactic property.
grammaticality indication ‘M’ refers to markedness in the sense that some contrastive context is required for felicity. According to Diesing (1997), the reason for the requirement of contrastive context is as follows. Variables bound by existential closure must be new to the discourse. Contrastive stress marks new information and thus permits the definite DP’s that carry such stress to remain in place. In other words, a VP-internal definite DP object in neutral, noncontrastive context will in fact result in ungrammaticality. This ungrammaticality cannot be due to syntactic reasons since the object movement, as we see in (38), is syntactically optional. Clearly, it occurs as a result of the application of LF Legibility Conditions. Such a sentence will be filtered out for being illegible at the LF interface.

The same phenomenon obtains in Icelandic. However, a first glance at full definite DP’s in Icelandic suggests that full DP’s may optionally be located VP-internally or VP-externally without any forced interpretations.

39) Icelandic (Holmberg 1986)
   a. Jón keypti ekki bókina.
      John bought not book-the
      “John didn’t buy the book.”
   b. Jón keypti bókina ekki.
      John bought book-the not
      “John didn’t buy the book.”
However, according to Diesing (1997), the VP-internal DP in (39-a) in fact receives contrastive stress, which makes its VP-internal presence licit. Notice that the VP-internal definite DP in (39-a) is in phrase-final position, where it is not possible to deaccent it so as to rule out a contrastive interpretation. When there is a sentence-final adverb, as in (40), we find that the VP-internal object DP is awkward (40-a). The effect is pronounced if the adverb is given contrastive stress, thereby deaccenting the object DP and eliminating the possibility of a contrastive interpretation.

40) Icelandic (Diesing 1997)
   a. *? Hann las ekki bőkina oft.
      He read not the-book often.
   b. Hann las bőkina ekki oft
      He read the-book not often
      “He didn’t read the book often.”

The data above collectively show that the application of syntactic operations to objects is not the key issue for the legitimacy of their presence. Rather, given the availability/optionality of certain syntactic operations, it is the semantic compatibility between an object and the interpretation associated with its structural position that determines whether or not the object is licit in a certain position.
2.3.3.2 The Mapping Hypothesis and object splits

In the discussion of object splits (section 2.3.1), we have observed that two classes of objects have distinct properties associated with them. Recall, for example, that class I objects are associated with the semantic property of specificity/presuppositionality and with the aspectual property of delimitedness/boundedness/perfectivity. Why should such properties obtain for a class of objects? In light of the Mapping Hypothesis discussed above, the semantic property of specificity/presuppositionality follows directly from the position of class I objects. Furthermore, if we follow Borer (1994; 1996) and Ramchand (1997) that the syntactic head of a VP-dominating functional projection (their AspBM or AspP, or AgrOP, uP), whose Spec position is the landing site of object movement, encodes information about the terminal bound of the event, then the aspectual properties of class I objects also follow from their structural position. We assume, though, that there is a parametrical variation in the functional projection’s encoding of the terminal bound of the event due to the presence of some languages where aspectual property is irrelevant to class I objects. Accordingly, the two classes of objects with their associated semantic and aspectual interpretations are well accounted for under the Mapping Hypothesis as long as we can establish their structural position.

Recall the syntactic/morphological property associated with class I objects. In some languages, class I objects bear structural Accusative Case and/or trigger agreement with the verb. Under the Minimalist Program, this property follows directly from the
checking relation with a VP-dominating functional projection. Accordingly, we can establish that class I objects occupy a VP-external position and class II objects occupy a VP-internal position (cf. Ritter & Rosen, in press). Consequently, the phenomenon of object splits in general (section 2.3.1) can be equated with the phenomenon of object shift (section 2.3.4.1). What is crucial to the legitimacy of objects in both phenomena is their compatibility in meaning with their structural position.

One clarification is in order here. Languages with object shift do not distinguish VP-external from VP-internal objects morphologically: both types of objects are marked with Accusative Case (see (38), (39)). Thus, morphological case marking does not reflect their syntactic position. These languages may be like Russian in that a VP-internal (Class II) object receives a default objective Case which is homophonous with the structural Accusative Case. It may also be that the Accusative Case on both VP-internal and VP-external objects is a default case in these languages. At any rate, what is important for us is that in these languages an object, regardless of its case morphology, must be compatible with its overt structural position in meaning.

In contrast, many languages with object splits show the difference between the two classes of objects with Case/agreement morphology: class I objects either are marked with structural Case or trigger agreement in contrast to class II objects (e.g., Hebrew, Turkish, Palauan, Swahili). For these languages, morphological marking reflects syntactic position. But, it may reflect syntactic position in two ways. On the one hand, the morphological
marking of Case/agreement for objects may indicate their overt syntactic position at the Spec of VP-dominating functional projection (see Diesing (1992) who adopts this position for Turkish). On the other hand, the morphological marking of Case/agreement for objects may indicate their covert syntactic position at the Spec of VP-dominating functional projection. I hold that, object movement in these languages, whether it is covert or overt, results in checking Case/agreement.

If the object movement is overt, object splits are no different from object shift in that the legitimacy of an object depends on its compatibility in meaning with its overt structural position. If the object movement is covert, the situation is a little more complicated. I consider such covert movement as an instance of an LF repair strategy (Diesing 1992, 1997) comparable to PF ‘do’/ha support. Interestingly, this repair strategy also displays the behavior associated with economy as ‘do’/ha support does (see Chapter 2). When an object with the semantic and aspectual properties of a class I object is located VP-internally and has not undergone a movement out of VP overtly, the covert movement is necessary on two accounts. First, the movement is necessary for checking Case/agreement. Second, it is necessary for interpretation. Therefore, the movement respects economy in that it achieves two things at the same time: it satisfies the checking of Case/agreement and it repairs the potential incompatibility in interpretation. This predicts that such object movement as a repair strategy will not be available if the movement itself is not motivated by checking a formal feature.
In sum, the two classes of objects shown in both object splits and object shift phenomena uniformly respect the Mapping Hypothesis. We have seen that in order for an object to be legitimate, the semantic and aspectual properties of the object must be compatible with the meaning associated with its VP-internal or VP-external position. We have also seen that sometimes the incompatibility is rescued via a repair strategy which respects economy.

2.4 Conclusion: Licensing without a licensing feature

Let us now go back to the question posed in the beginning of this chapter: what licenses nominals?

First, we noted that there are theoretical difficulties with equating Case with a licensing feature. In particular, we have found that the existence of inherent cases and more crucially default cases is simply incompatible with the idea of Case as a licensing feature.

Secondly, our investigation on object splits (section 2.3.1), which is briefly summed up below, verifies the theoretical difficulty:
41) Two classes of objects are associated with distinct interpretations.

i. One, or both objects can surface.

ii. Class II objects do not always bear morphological case (recall (20)).

From these facts we arrived at the following. Case, more precisely a Case feature, does not have the role of licensor. First, we noted that structural objective Case cannot account for licensing. Objects of both classes, when they both surface, cannot be considered to be licensed uniformly by entering into the checking relation with a functional projection because the Case feature of the functional projection would have to be able to check multiply (cf. Ura 1996). Multiple checking and a licensing function are simply incompatible, thus cannot hold of one and the same feature.\textsuperscript{41} Secondly, non-structural Case or morphological case cannot assume the role of licensing, either. First of all, there are many instances of morphologically independent class II objects without morphological case (recall (20)). Furthermore, if morphological case includes default cases, then we have a difficulty because default cases do not have restrictiveness which is required for a licensor. Consequently, a Case feature, if it exists as a formal feature in a given language, cannot be considered to exist for the purpose of licensing nominals but for syntactic purposes related to functional projections.

Thirdly, through the investigation of object shifts and their relation to LF Legibility

\textsuperscript{41} I do not necessarily object to Ura’s (1996) idea of multiple feature checking. Rather, I object to the idea of multiple feature checking for Case if Case feature is considered a licensing feature.
Conditions we have come to an explanation of the properties associated with the two classes of objects in general. Consequently, we have arrived at the following:

42) A nominal is licit when
   a) it is in a syntactically licit position, and
   b) it is properly interpreted, respecting the Compatibility Constraint in (5)

Accordingly, there is no one licensing feature that assumes the licensing work of nominals. A nominal must be in a syntactically licit position. This is primarily taken care of by the proper applications of Merge and Move. All the rest depends crucially on interpretability at the LF (and PF) interface. We do not need anything more than already existing Legibility Conditions of which the Compatibility Constraint is an important one.\footnote{Under this proposal, we must ask questions about language variation with respect to allowing different kinds of objects. Vietnamese, for example, allows both types of Cognate Objects whereas English allows only class I objects (Massam 1990). Consequently, English does not allow both object positions to surface at the same time. Why not? To answer this, I make the following suggestion. Recall from section 2.3.1. that one of the sufficient, but not necessary, semantic properties of class II objects is predicativity. In other words, a class II object is semantically a predicate modifier. As noted previously, whether or not this semantic interpretation is possible is determined by the lexical property of the existing predicate head (Johns 1999). In some noun incorporation languages, for example, only certain verbs are reported to allow and sometimes require Noun Incorporation. In other words, there is a selectional restriction on Noun Incorporation. Under this view, English verbs, except for a small set of verbs such as ‘be/have’, do not allow another nominal element to enter into a modification relation with them due to their lexical specifications. On the other hand, some Vietnamese lexical heads allow a nominal to modify them, thus the nominal is semantically a predicate modifier.}
Chapter 4. Legibility and Case in Korean

The conclusion of the previous chapter is, in short, two-fold: i) Case is not a licensing feature, and ii) the meaning of a nominal must be compatible with the meaning associated with its syntactic position for LF legibility. The aim of this chapter is to take the conclusion and apply it to a study of some phenomena in the Korean Case system: Multiple Case Constructions on the one hand, and Case Stacking, Case Alternation and Case Deletion on the other. Again, we will see how licensing of nominals is achieved crucially by LF Legibility Conditions which inspect a nominal's compatibility with its associated positional meaning.

1. Multiple Case Constructions

Korean Multiple Case Constructions are a fairly well-known phenomenon. In particular, the multiple occurrences of Nominative-marked DP's and Accusative-marked DP's have been well documented over the years. In J. Cho (1994), I show that multiple occurrences of a single Case may originate from different sources. For instance, Multiple Nominative Constructions are claimed to be of two kinds: Predicated Nominatives and Part-whole Nominatives. Multiple Accusative Constructions are also of two kinds: Delimiting Accusatives and Part-whole Accusatives. Below, I discuss how these types of
multiple case syntactically differ from one another and show what implications they have for a theory of licensing.

1.1 Predicated Nominatives

Extra nominals, marked with Nominative Case, are allowed to the left of sentential subjects in Korean as exemplified below. They are referred to as gapless topics (J. Cho 1994) or broad subjects (Doron & Heycock, in press *inter alia*).  

1)  

Generic  
a. kwail-i pineapple-i pissa-ta  
fruit-Nom pineapple-Nom expensive-Dec  
"As for fruits, pineapples are expensive."

Kinship relation  
b. Inho-ka emeni-ka aphu-si-ta  
Inho-Nom mother-Nom ill-Hon.Dec  
"As for Inho, his mother is ill."

---

It has been suggested that constructions in (1) involve a movement (S. Song 1967, Y. Kang 1986): the pattern in (1-b) is described as a possessor raising construction (S. Cho 1998), while (1-c) has been analyzed as a locative nominative construction (Whitman 1991). Please refer to J. Cho (1994:15) for rejecting a movement analysis for (1) in general. Furthermore, examples (9) and (10) in this section show that the locative nominative pattern is allowed when the nominative-marked locative is in a transitive clause, thus arguing against a movement analysis for (1-c).
Location

c. ku nongcang-i sakwa namwu-ka cal calanta
that farm-Nom apple trees-Nom well grow
"As for that farm, apple trees grow well there."

Although they are categorized in (1) according to the relationship between the extra nominal and the clausal subject, as generic, kinship, and location, there is a unifying condition for all of these sentences. At first glance, it could be suggested that the condition for these sentences is that the predicate of each sentence be stative. However, this cannot be the correct generalization since we can use a non-stative verb such as tuleka ‘enter’ as in (2) below.

2)

Inho-ka tongsayng-i Harvard-cy tulekassta
Inho-Nom brother-Nom Harvard-Loc entered
"As for Inho, his brother entered Harvard."

It has been suggested by J.-S. Lee (1992) that it is the intransitivity of the verb which sanctions the extra nominatives. However, (3) below refutes this suggestion as well.

3)

a. kay-ka Husky-ka sselmay-lul cal kkulnta
dogs-Nom Husky-Nom sled-Acc well pulls
"As for dogs, Huskies pull sleds well."
Kuno (1973) claims that the semantic relationship between an extra Nominative and the rest of the sentence is that of "aboutness": the rest of the sentence should be "about" the topic (cf. the aboutness condition in HolliDay (1967:212)). Characterizing the sentences above in this manner seems more promising than attempting to categorize certain predicate-types as the relevant condition for these sentences. All the sentences presented so far do obey the "aboutness" relationship. However, a closer look at the semantic relationship between the extra Nominative and the rest of the sentence suggests that it is not as general a relationship as "aboutness". K.-S. Hong (1992), for instance, claims that the semantic condition for these sentences is that of "sufficient characterization". The rest of the sentence must not only be about the extra nominal but must also provide "sufficient" information about the nominal (i.e., refer to permanent rather than temporary characteristics). It follows that an individual level-predicate, rather than a stage-level predicate, is more appropriate for such characterization.

Notice in (4) that if the predicates do not give a sufficient characterization of the initial nominal, then the sentences are ungrammatical. For instance, the fact that some pineapples rotted yesterday (4-a) does not sufficiently characterize the class of fruits as a whole, whereas the fact that pineapples are an expensive kind of fruit (1-a) does give
important information about fruits. In the same line of reasoning, someone's brother entering a famous university (2) may characterize that individual, while the fact that someone's brother entered a house (4-b) fails to provide sufficient information to characterize that person.

4)

a. *kwail-i pineapple-i ecey ssekessta
fruit-Nom pineapple-Nom yesterday rotted
"As for fruits, pineapples rotted yesterday."

b. *Inho-ka tongsayng-i cip-ey tulekassta
Inho-Nom brother-Nom house-Loc entered
"As for Inho, his brother entered a house."

In (5) we note that the fact that one's uncle lives in Seoul does not characterize Seoul. But the fact that president Kim was born in Pusan does characterize Pusan. This illustrates that these extra nominals are in part pragmatically licensed.

5)

a. *Seoul-i khun apeci-ka sa-si-n-ta
Seoul-N big father-N live-Hon-Pres-Dec
"In Seoul, (my) uncle lives there."

b. Pusan-i Kim taythonglyeng-i thayena-si-ess-ta
Pusan-N Kim president-N born-Hon-Pst-Dec
"As for Pusan, president Kim was born there."
The claim is further supported by (6). When it is interpreted to be grammatical, it gives a reading where Youngswu's mother is more chronically ill than temporarily ill. It supports the idea that an individual-level (permanent characterization) predicate is preferred to a stage-level (temporary characterization) predicate since it more clearly gives a nominal sufficient characterization.

6)
Youngswu-ka emeni-ka a-phu-si-ta
Y.-Nom mother-Nom ill-Hon-Dec
"Youngwu's mother is (chronically, not temporarily) ill."

I claim that the extra Nominative is a form of subject predicated by the rest of the clause, hence the term 'Predicated Nominatives'. The rest of the clause acts as a predicate of the nominal in question. I assume that the condition of 'individual-level' predicate follows from a semantic condition on the relation between a nominal and a headless predicate (i.e., there is no predicate head in a sentential predicate): a predication relation between a nominal and a headless predicate is established if it is an individual-level predicate. What is interesting is the fact that the occurrence of an extra Nominative is conditioned by interpretability. In other words, provided that Korean syntax allows structural positions for these extra nominals, they must be compatible with the interpretation that is available for such a structural relation.
In Korean, Nominative is not a structural Case but rather a default case (Y.-S. Kang 1986, Y.-J. Kim 1990 *inter alia*). We predict then that more than one extra nominal marked with Nominative may surface, given that the syntactic position is available, if interpretability is indeed the only concern for the legitimacy of extra Nominatives. The following shows that the prediction is borne out.

7)

a. mıkwuk-i Boston-i hąkkıyo-ka manhi isst-ta
   USA-N Boston-N school-N many exist-Dec
   "As for USA, in Boston there are many schools."

b. pwukmi-ka Canada-ka inkwु-ka cek-ta
   North America-N Canada-N population-N small-Dec
   "As for North America, Canada has small population."

c. nampankwu-ka mwunmyengkwukka-ka namca-ka
   southern hemisphere-Nom civilized country-Nom man-Nom

   swumyeng-i ecalp-ta
   life span-Nom short-Dec

   "As for the southern hemisphere, men's lifespan in civilized countries is short."

   adapted from Kuno (1973)

Now, let us see where these extra Nominatives are located structurally.

Scrambling facts show that an XP cannot scramble to a position above the Predicated
Nominative. It can only scramble to a position below the Predicated Nominative. (8) and (9) show examples with one Predicated Nominative NP, whereas (10) shows an example with two Predicated Nominative NP’s.

8)  
a. Kay-ka Husky-ka **sselmay-lul** cal kkulnta  
dog-Nom H.-Nom sled-Acc well pull  
“As for dogs, Huskies are good at pulling sleds.”

b. * **sselmay-lul** kay-ka Husky-ka cal kkulnta  
sled-Acc dog-Nom H.-Nom well pull

c. Kay-ka **sselmay-lul** Husky-ka cal kkulnta  
dog-Nom sled-Acc H.-Nom well pull

9)  
a. Canada-ka motun salam-i **hockey-lul** cohahanta  
C.-Nom all person-Nom h.-Acc like  
“As for Canada, everyone likes hockey.”

b. * **hockey-lul** Canada-ka motun salam-i cohahanta  
h.-Acc C.-Nom all person-Nom like

c. Canada-ka **hockey-lul** motun salam-i cohahanta  
C.-Nom h.-Acc all person-Nom like
10)  

a. Asia-ka kuktong kwukka-ka salam-tul-i mokyok-ul culkinta  
A.-Nom far.east country-Nom person-Pl-Nom bath-Acc enjoy  
“As for Asia, people enjoy bath in Far East countries.”

b. *mokyok-ul Asia-ka kuktong kwukka-ka salam-tul-i culkinta  
bath-Acc A.-Nom far.east country-Nom person-Pl-Nom enjoy

c. *Asia-ka mokyok-ul kuktong kwukka-ka salam-tul-i culkinta  
A.-Nom bath-Acc far.east country-Nom person-Pl-Nom enjoy

d. Asia-ka kuktong kwukka-ka mokyok-ul salam-tul-i culkinta  
A.-Nom far.east country-Nom bath-Acc person-Pl-Nom enjoy

Following Chomsky (1995:248), I assume that adjunction/substitution distinction is real. Substitution creates a new projection of the projecting head. On the other hand, adjunction forms a two-segment category, creating a segment of the existing projection of the head. I hold that scrambling exemplified in (8) to (10) occurs as a result of adjunction to TP, in the spirit of Saito & Fukui (1998). Since Predicated Nominative NP’s surface above scrambled elements, I propose that they are merged to an adjunction site of CP. I assume that a predication interpretation is the available interpretation between a nominal base-generated at the adjunction site of CP and the CP.

In sum, Predicated Nominative NP’s, a type of Multiple Case Construction in Korean, are under a semantic constraint: they must be interpreted in a certain way. The
semantic constraint is such that a Predicated Nominative NP must be interpreted as the argument of an individual-level predicate. This semantic constraint follows directly from the position of the Predicated Nominative NP, namely the adjunction site of CP. Since a predication relation is the available interpretation between a base-generated nominal at the adjunction site of CP and the CP, the nominal must be compatible with such interpretation. As suggested above, that the CP must be individual-level predicate follows from the fact that the predicate is headless, i.e., sentential.

1.2 Delimiting Accusatives

Along with others, Korean is also a language that exhibits Accusative Adverbials, discussed in Chapter 3. An occurrence of an Accusative Adverbial along with a thematic object constitutes an instance of double Accusatives.

11) John-i chayk-ul ithul-ul ilk-ess-ta 
J.-Nom book-Acc two-days-Acc read-Pst-Dec
"John read a book for two days."

As discussed previously, what is essential to the occurrence of these extra Accusatives is that they delimit an event described by the verb; hence the term, Delimiting Accusatives. This is illustrated in (12).
12)  

a) John-i chayk-ul **sey-sikan-ul** ilk-ess-ta  
   J.-Nom book-Acc three-hours-Acc read-Pst-Dec  

**sey-ben-ul**  
three-times-Acc  

**sampayk-phayici-lul**  
three.hundre-pages-Acc  

***mokyoil-ul**  
Thursday-Acc  

***cinan cwu-lul**  
last week-Acc  

***mayil-ul**  
everyday-Acc  

***maycwu-lul**  
every week-Acc  

Duration, cardinal count, and path length all contribute to delimiting the event described by the verb (for a detailed discussion, see section 2.3.2.2 in Chapter 3). Other adverbial nominals which are not compatible with 'event-delimiting' cannot take the extra Accusative Case. This phenomenon is easily explained if we adopt the position that
aspectual properties such as delimitedness/boundedness are inherently associated with a 
VP-dominating functional projection, say vP, where object Case/agreement typically 
occcurs. That an event cannot be delimited more than once explains the fact that no more 
than one Delimiting Accusative can appear. Furthermore, a close examination in (13) and 
(14) supports that the location of Delimiting Accusatives is the Spec/vP: (13) shows that 
Delimiting Accusatives are possible with transitives and unergatives, while (14) shows that 
they are impossible with unaccusatives.

13) 
Transitives

a. John-i cha'y-kul ithul-ul ilk-ess-ta
   J.-Nom book-Acc two-days-Acc read-Pst-Dec
   “John read a book for two days.”

b. Chelswu-ka wundongcang-ul han-pakhwi-lul tol-ass-ta
   C.-Nom track-Acc one-circle-Acc circle-Pst-Dec
   “Chelswu circled the track once.”

Unergatives

c. Chelswu-ka sam-nyen-ul salassta
   C.-Nom three-year-Acc lived
   “Chelswu lived for three years.”

d. John-i il-mail-ul ttwi-ess-ta
   J.-Nom one-mile-Acc run-Pst-Dec
   “John ran for one mile.”
14) Unaccusatives

a. *John-i hwa-ka onul sey-ben-ul/i na-ss-ta
   J-Nom anger-Nom today three-times-Acc/Nom occur-Pst-Dec
   "John got angry three times today."

b. *John-i Mary-ka il-nyen-ul/i kuliw-ess-ta
   J.-Nom M.-Nom one-year-Acc/Nom miss-Pst-Dec
   "John missed Mary for one year."

This is certainly an expected result if a Delimiting Accusative is in the Spec position of vP, which is responsible for objective Case and agreement. Accordingly, (13) and (14) constitute another piece of evidence that a Delimiting Accusative occupies VP-external object position, where it receives structural objective Case.

I hold that Korean, like Russian, has two types of Accusative. The morphological spell-out, (l)ul, represents either structural objective Case or objective default case. The former is checked at the Spec of vP, whereas the latter gets spelled out within the domain of vP. We will return to this proposal later in this chapter.

Note again that, as in the case of Predicated Nominatives, the occurrence of an

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44 Agentivity is the determinant of the inergetive/unaccusative distinction in Korean. For various diagnostics for unaccusativity in Korean, see Y.-J. Kim (1990).
extra Accusative-marked nominal, i.e., Delimiting Accusative, depends upon its interpretability, given the availability of structural position.

1.3 Part-whole Constructions

Another well-known instance of Multiple Case Construction involves nominals in Part-whole relation. The Part-whole constructions involve internal arguments. Thus, these constructions are available for nominals marked with either Accusative or Nominative Case as long as they are internal arguments. Notably, part nominals show the properties of VP-internal (Class II) objects.

1.3.1 Part-whole Accusatives

(15) shows examples of typical transitive sentences in Korean:

15)

a. Chelswu-ka Yenghi-lul capassta
   C.-Nom    Y.-Acc    held
   “Chelswu held Yenghi.”

b. Chelswu-ka chayksang-lul kochiessta
   C.-Nom    desk-Acc    repaired
   “Chelswu repaired the desk.”
These transitive sentences can take an extra nominal VP-internally if it stands in part-whole relation with the other nominal:

16)  
   a. Chelswu-ka Yenghi-lul son-ul capassta  
       C.-Nom Y.-Acc hand-Acc held  
       “Chelswu held Yenghi by the hand.”

   b. Chelswu-ka chayksang-lul tali-lul kochiessta  
       C.-Nom desk-Acc leg-Acc repaired  
       “Chelswu repaired the desk’s legs.”

If the two nominals do not stand in a part-whole relation, the sentence is ungrammatical:

17)  
    * Chelswu-ka Yenghi-lul kapang-ul capassta  
        C.-Nom Y.-Acc bag-Acc held  
        “Chelswu held Yenghi’s bag.”

Furthermore, it is possible to have more than two nominals in Part-whole relation:

18)  
    Chelswu-ka chayksang-lul tali-lul kkut-ul kochiessta  
        C.-Nom desk-Acc leg-Acc end-Acc repaired  
        “Chelswu repaired the end part of desk’s legs.”
Given that we have objective default case in Korean, it is expected that all these nominals should be case-marked with Accusative, as shown in (18).

If the Part-whole construction is available in Korean for any VP-internal nominal as long as it respects this semantic relation, we predict that unaccusatives should also allow Part-whole constructions with Nominatives (recall that Nominative is a default case in Korean). This prediction is borne out.

1.3.2 Part-whole Nominatives

(19) shows typical dyadic unaccusative sentences in Korean. Note that an experiencer argument can be either Nominative or dative:

19) Dyadic unaccusatives

a. John-eykey/i emeni-ka kulipta
   J.-dative/Nom mother-Nom miss
   "John misses his mother."

b. John-eykey/i cwi-ka mwusepta
   J.-dative/Nom mouse-Nom fear
   "John is afraid of mice."
(20) is an example of monadic unaccusatives:

20) Monadic unaccusatives

a. namwu-ka elessta
tree-Nom froze
“The tree froze.”

b. Chelswu-ka aphassta
C.-Nom ached
“Chelswu ached.”

We can have an extra internal argument that stands in a part-whole relation with the other one, as (21) and (22) show.

21) Part-whole construction in dyadic unaccusatives

a. John-eykey/i emeni-ka son-i kulipta
J.-dative/Nom mother-Nom hand-Nom miss
“John misses his mother’s hands.”

b. John-eykey/i cwí-ka kkoli-ka mwusepta
J.-dative/Nom mouse-Nom tail-Nom fear
“John is afraid of mice’s tails.”
22) Part-whole constructions in monadic unaccusatives

a. namwu-ka kaci-ka elessta
tree-Nom branch-Nom froze
"The tree froze in its branches."

b. Chelswu-ka meli-ka aphassta
C.-Nom head-Nom ached
"Chelswu’s head ached."

As in the case with transitive Part-whole constructions, the part-whole relation must be respected. Otherwise ungrammaticality results. Also, more than two internal nominals with a part-whole relation are allowed. This is illustrated below.

23) Part-whole constructions in dyadic unaccusatives

a. *John-eykey/i emeni-ka cha-ka kulipta
J.-dative/Nom mother-Nom car--Nom miss
"John misses his mother’s car."

b. John-eykey/i cwi-ka kcoli-ka kkut pwupwun-i mwusepta
J.-dative/Nom mouse-Nom tail-Nom end part-Nom fear
"John is afraid of the end part of mice’s tails."

24) Part-whole constructions in monadic unaccusatives

a. *namwu-ka swuph-i elessta
tree-Nom forest-Nom froze
b. Chelswu-ka mom-ı heli-ka apahassta
   C.-Nom body-Nom back-Nom ached
   "(lit.) Chelswu’s body’s back ached."

What is it that allows Part-whole constructions? Why do these nominals have to be in a part-whole relation? A closer examination of the nature of part-nominals helps us better understand the issue at hand. Besides the obvious fact that they have to be in part-whole relation with the whole-nominal, part-nominals show other properties that are typically related to VP-internal objects in general. Namely, they resist demonstratives and non-restrictive modification. In (25), both (a) and (b) show that a demonstrative cannot precede a part-nominal.

25)

a. * kay-ka Swuni-lul ku tali-lul mwalessta
dog-Nom S.-Acc that leg-Acc bit
"The dog bit that leg of Swuni."

b. * John-i ku tali-ka elessta
J.-Nom that leg-Nom froze
"John froze in that leg."

(c) and (d) show that adjectives can precede part-nominals if they are used in a restrictive modification.
25)

c. kay-ka Swuni-lul wenccok tali-lul mwulessta  
dog-Nom S.-Acc left leg-Acc bit  
"The dog bit Swuni's left leg."

d. John-i olunccok tali-ka elessta  
J.-Nom right leg-Nom froze  
"John froze in the right leg."

(e) and (f), on the other hand, show that adjectives cannot precede part-nominals if they  
are used in a non-restrictive (i.e., appositive) modification.

25)

e. * John-un namwu-lul khun kaci-lul calassta  
J.-Top tree-Acc big branch-Acc cut  
"John cut the tree's big branch."

f. * John-i kin tali-ka elessta  
J.-Nom long leg-Nom froze  
"John froze in the long leg."

Normal readings of (e) and (f) would be unacceptable. However, if the modification is  
forced to be restrictive, both (e) and (f) can be acceptable. For instance, when the reading  
of (f) is acceptable, it is acceptable in the context that the lengths of John's legs are  
different. So, it is not the type of adjective but the function of modification that is crucial  
here.
I take it that these properties indeed suggest VP-internalness. Thus, part-nominals fall into a category of VP-internal objects. They not only show the semantic properties of VP-internal objects such that they are not presupposed nor specific, but they also act as predicate modifiers, as VP-internal objects generally do. Thus, a part-nominal and its predicate head must stand in a modification relation. Their resistance to demonstratives and non-restrictive modification follows directly from their status as a predicate modifier. Simply put, a modifier cannot be theta-saturated, in the spirit of Higginbotham (1985) (for more discussion on this issue, see J. Cho (1994)). Furthermore, the fact that a VP-internal object acts as a predicate modifier means that a VP-internal object and a predicate head semantically form a compositional predicate. I hold that the semantic formation of compositional predicate entails the semantic condition of part-whole relation.\textsuperscript{45}

Here again with Part-whole constructions, we witness a common thread that runs through other instances of Multiple Case Constructions, namely, the importance of interpretability. Given that VP-internal object positions are multiply available syntactically (i.e., Fukui & Speas's (1986) free recursion of $X'$), what is crucial is whether or not a

\textsuperscript{45} Part objects in Korean are nevertheless different from general VP-internal objects in other languages. The difference lies in the possibility of multiple formation of compositional predicate. In Korean Part-whole constructions, I assume, a compositional predicate consisting of a part-nominal and a predicate head can further form a compositional predicate with another part-nominal. Therefore, we have multiple occurrences of part nominals. On the other hand, in languages where a VP-internal object is not multiply possible, the multiple formation of
nominal and its predicate head can enter into a modification relation. Consequently, the part-whole relation, a natural consequence of the semantic formation of compositional predicates, is crucial for the sake of the legitimacy of the nominals.

1.4 Multiple Case Constructions and LF Legibility

The description of Korean Multiple Case Constructions can be briefly summarized as the following:

26)

a. Predicated Nominatives: A nominal is allowed at the adjunction site of CP if it is the argument of an individual-level predicate.

b. Delimiting Accusatives: A nominal is allowed at the Spec of vP if it delimits an event described by the verb.

c. Part-whole Constructions: An extra nominal is allowed VP-internally if it stands in a part-whole relation with the other nominal.

In reality, we see mixtures of these Multiple Case Constructions in a single clause as shown below.

______________________________________________________________

compositional predicate is prohibited.
27) Chelswu-ka halmeni-ka simcang-i aphisita
C.-Nom grandmother-Nom heart-Nom aches

Part-whole relation

[ ] Predication

“As for Chelswu, his grandmother has a chronic heart disease.”

b. Chelswu-ka sey sikina-ul Yenghi-lul son-ul capassta
C.-Nom 3 hour-Acc Y.-Acc hand-Acc held

Part-whole relation

Delimiting Accusative

“Chelswu held Yenghi by the hand for three hours.”

In all three cases of Multiple Case Constructions described in (26), a nominal is allowed in a certain structural position if the nominal can be interpreted that position. The interpretability of a nominal at the adjunction site of CP depends on whether or not it can stand in a predication relation with an individual-level predicate. The interpretability of a nominal at the Spec of vP depends upon whether or not it is compatible with the aspectual property of delimitedness/boundedness. The interpretability of a VP-internal nominal along with another nominal depends upon whether or not it can semantically form a compositional predicate with a predicate head. And the part-whole relation follows from this condition.
The implication that Multiple Case Constructions in Korean have for licensing is quite clear. In Chapter 3, we arrived at the following conclusion:

28) A nominal is licit when
    a) it is in a syntactically licit position, and
    b) it is properly interpreted, respecting the Compatibility Constraint.

Multiple Case Constructions clearly support this conclusion. Licensing of nominals is indeed dependent upon i) the availability of syntactic position, and ii) LF legibility. Furthermore, it is also shown that Case or morphological case does not assume the role of licensing. Morphological case marking is quite generous in Korean. Thus, it is fairly easy to be misled into thinking that the availability of morphological case marking is directly responsible for Multiple Case Constructions. However, we have observed that the availability of case morphology does not play a role in determining the legitimacy of nominals in Multiple Case Constructions. Morphological case merely does a morphological job on nominals that are licit on other accounts of the grammar.
2. (Non)Stacking, Alternation, Deletion

Korean Case Stacking has been noted as a challenging phenomenon to the studies of Case in general. In this section, I show that Case Stacking is not real: the apparent Case Stacking is in fact stacking of a Case particle with a postposition marker (see Schütze (1998) who also denies the existence of Case Stacking in Korean for a different reason). The apparent Case Stacking phenomenon will then be examined in relation to other Case phenomena such as alternation and deletion. It will be shown that the apparent Case Stacking phenomena are in fact further instances of Predicated Nominatives and Delimiting Accusatives discussed in the previous section. Accordingly, the Case Stacking phenomenon also turns out to be crucially subject to LF legibility.

2.1 Post-nominal affixes

2.1.1 Dative particle

Korean has three classes of post-nominal morphemes: (a) case markers, (b) postpositions, and (c) delimiters. It is relatively easy to distinguish between case markers and delimiters since the latter carry quantificational information and do not make the structural distinctions typically associated with case. In fact, the same delimiter can appear with either a subject or a direct object. However, the distinction between case markers and postpositions has been an ongoing issue. In this paper, I follow O'Grady
(1991) who claims that the following three are case markers: the nominative suffix (-ka after stems ending in a vowel, -i elsewhere), the accusative suffix (-lul after stems ending in a vowel, -ul elsewhere), and the genitive suffix (-uy).

O'Grady distinguishes the three case markers from postpositions based on two simple tests. The first test is a distributional test which shows that case markers differ from postpositions in not being able to precede other postnominal particles such as delimiters as illustrated in (29) (-man means 'only', -(n)un carries a contrastive reading).

29) Case markers preceding other particles (O'Grady 1991:5)

a. *kay-ka-man John-ul mwulessta
dog-Nom-Del John-Acc bit
"Only the dog bit John."

b. *Chayk-ul-un John-i ilkessta
book-Acc-Top John-Nom read
"As for the book, John read it."

c. *John-uy-man cha
John-Gen-Del car
"John and only John's car"
29) Postpositions preceding other particles

d. hakkyo-eyse-nun John-i kongpwu hanta
   school-at-Del John-Nom study do
   "John is studying at school."

e. cha-lo-man salam-i kanta
   car-by-Del man-Nom go
   "The man travels only by car."

The second test shows that case markers differ from postpositions in their optionality, given the appropriate syntactic condition (see section 2.2 in this chapter for more discussion on Case Deletion). As (30) illustrates, case markers are deletable whereas postpositions are not.

30) (O'Grady 1991:6)

a. mas-(i) issta
taste-(Nom) exist
   "(It) is tasty."

b. haksayng-i chayk-(ul) ilkessta
   student-Nom book-(Acc) read
   "The student read a book."

c. John-(uy) chayk
   John-(Gen) book
   "John's book"
A long-standing problem in the distinction between case markers and postpositions has to do with the status of the so-called 'dative' particle -eykey. However, in the two tests employed above, this particle patterns like a postposition. (31-a) shows that -eykey may co-occur with a delimiter, and (31-b) shows its non-optionality.

31)

a. kay-eykey-man John-i mwulliessta
dog-dative-Del John-Nom was.bitten
"John was bitten by only the dog."

b. John-i Sue-*eykey) malhayssta
John-Nom Sue (dative) spoke
"John spoke to Sue."

Kuh (1987) notes still another difference between -eykey and the case markers. He observes that -eykey can occur inside a coordinate structure whereas the case markers cannot. In this, it resembles postpositions.
32) a. [Joe-(*ka) -kwa Mary]-ka
   Joe- (Nom)-and Mary- Nom

b. [emeni-(*lul)-wa apeci]-lul
   mother-(Acc)-and father- Acc

c. [John-(*uy)-kwa Mary]-uy
   John- (Gen)-and Mary- Gen

d. [Mary-(eykey)-wa Sue]-eykey
   Mary-(dative)-and Sue- dative

e. [hakkyo-(eyse)-wa cip]-eyse
   school-(at)-and house- at

These facts quite clearly indicate that -eykey is not a case marker. Therefore, I adopt the position that the dative particle -eykey is a postposition.

2.1.2 Combination of post-nominal affixes

According to the classification of Yang (1972) and much other recent work including Cho & Sells (1995), I adopt the well-known template in (33) for the nominal system in Korean, with each position exemplified by the particles shown in (34). No
more than one particle in each position can appear post-nominally.

33) \( N_{poot} \) - Postposition - Conjunctive - X-LIM - Z-LIM

34) Postpositions

- eykey(se), hanthe(se) dative
- kkey hon.dative
- kkeyse hon.Nom
- ey, eyse locative
- ey, (u)lo directive
- (u)lo instrumental
- hako, (k)wa comitative

Conjunctives

- hako, (k)wa conjunctor
- pota comparator
- (i)na disjunct/or
- (lo)pwuthe ‘something like’
- chelem ‘from’
- (l)ul ‘like’

Delimiters

- ‘X-LIM’
- man ‘only’
- kkaci ‘even’
- mace ‘even’
- cocha ‘even’
- pakkey ‘only’

- ‘Z-LIM’
- (n)un Topic/Focus
- to ‘also’/Focus
- (i)lato ‘even’
- i/ka NOM
- (l)ul ACC
- uy GEN

The four post-nominal particle slots shown above indicate what combinations of particles are available morphologically. For instance, the combination of Genitive Case uy with another Case particle, Accusative or Nominative, is morphologically impossible because they occupy the same morphological slot:
35)
   a. * Chelswu-uy-ka/ky-ey
      C.-Gen-Nom/Nom-Gen

   b. * Chelswu-uy-lul/lul-uy
      C.-Gen-Nom/Nom-Gen

On the other hand, the Genitive Case particle uy can combine with particles from other morphological slots. (36-a) shows an example where the Genitive Case particle combines with a particle from the Conjunctive slot. (36-b) is an example where the Genitive Case particle combines with both a particle from the Conjunctive slot and a particle from the X-LIM slot.

36)
   a. caki-lopwuthe-uy cayu
      self-from-Gen freedom
      “Freedom from self”

   b. Chelswu-wa-man-uy mannam
      C.-conjunctor-only-Gen meeting
      “A meeting with Chelswu only.”

 Needless to say, the Genitive Case particle can combine with particles from the Postposition slot as shown below.
37)  

a. Seoul-eyse-uy mannam  
   S.-locative-Gen meeting  
   "A meeting in Seoul"  

b. Pusan-ulo-uy yehayng  
   P.-directive-Gen travel  
   "A travel to Pusan"  

c. Chelswu-eykeyse-uy phyenci  
   C.-dative-Gen letter  
   "A letter from Chelswu"  

What has been called the ‘Case Stacking’ phenomenon in Korean typically involves the combination of a structural Case with the dative particle eykey. Adopting the position that dative particle is not a Case marker but rather a postposition, Case Stacking turns out to be not ‘Case’ stacking where more than one Case stacks on top of the other. What has been suspected to be Case Stacking is in fact no more than a situation in (37) where a Case particle morphologically combines with postposition particle simply because it is morphologically possible.

What follows shows further that Case Stacking is not real. Granted that the status of the dative particle is controversial, a better example would be where two structural Cases could stack on top of the other. ECM constructions offer one such scenario, since in Korean ECM constructions the subject of an embedded clause moves from a position
where Nominative Case can be assigned (38-a). If Case stacking were real, then we would expect a Nominative stacking with an Accusative under an ECM construction. However, the result shows that Nominative and Accusative do not stack, as we see below.

38)

a) John-un [Mary-ka yenglihata-ko] sayngkakhanta
   J.-Top  M.-Nom intelligent-COMP thinks
   "John thinks that Mary is intelligent."

b) John-un Mary-lul [ t₁ yenglihata-ko] sayngkakhanta
   J.-Top  M.-Acc intelligent-COMP thinks
   "John thinks that Mary is intelligent."

c) *John-un Mary-ka-lul [ t₁ yenglihata-ko] sayngkakhanta
   J.-Top  M.-Nom-Acc intelligent-COMP thinks

The impossibility of (38-c), however, could simply be due to the morphological restriction according to the template given in (33): both Nominative and Accusative Case particles occupy the Z-LIM morphological slot. This is the position taken by J. Yoon (1996) who maintains that Case Stacking is real in Korean. There could be yet another explanation for this. Since Nominative is a default Case in Korean, the Nominative Case marking presumably occurs at PF, or at least later in the computation. This means that Nominative marking would not occur for any DP's that are already case-marked. Therefore, even if Case Stacking were real we would not expect to see Case Stacking with a Nominative.
Hence, a better example to test the validity of Case Stacking is an instance where a subject in the embedded clause is marked not with Nominative but with Honorific Nominative. Note that the Honorific Nominative Case is in the morphological slot of Postpositions; thus, there is no morphological conflict between Honorific Nominative and Accusative. Furthermore, Honorific Nominative is not a default Case. Therefore, we predict that they would stack if morphological unavailability is truly what is responsible for blocking Case Stacking in (38). On the contrary, they do not stack as shown below.

39)  

\begin{align*}
\text{a) John-un [sensayngnim-} & \text{kk} \text{ey} \text{se } \text{h} \text{w} \text{ul} \text{y} \text{wun} \text{g} \text{h} \text{a} \text{s} \text{i} \text{a} \text{t} \text{-} & \text{ko] sayngkakhanta} \\
& \text{J-Top teacher-HON.Nom wonderful-Comp thinks} \\
& \text{“John thinks that the teacher is wonderful.”}
\end{align*}

\begin{align*}
\text{b) John-un sensayngnim-} & \text{ul} \text{i } [t_i \text{ hw} \text{ul} \text{y} \text{wun} \text{g} \text{h} \text{a} \text{s} \text{i} \text{a} \text{t} - \text{ko] sayngkakhanta} \\
& \text{J-Top teacher-Acc wonderful-Comp thinks}
\end{align*}

\begin{align*}
\text{d) * John-un sensayngnim-} & \text{kk} \text{ey} \text{se} - \text{lu} \text{l}_i [t_i \text{ hw} \text{ul} \text{y} \text{wun} \text{g} \text{h} \text{a} \text{s} \text{i} \text{a} \text{t} - \text{ko] sayngkakhanta} \\
& \text{J-Top teacher-HON.Nom-Acc wonderful-Comp thinks}
\end{align*}

This strongly suggests that there is no Case Stacking in Korean. The combination of structural Case particle with dative particle does not constitute an instance of Case Stacking since the dative particle is a postposition. The stacking of two structural Cases is impossible, and this is not due to a morphological restriction, contrary to J. Yoon (1996).

In the following sections, we examine the properties associated with the apparent
Case Stacking phenomenon in light of other Case phenomena in Korean.

2.2 Accusatives

As mentioned earlier, the alleged Case Stacking phenomenon in fact involves stacking Accusative or Nominative Case with a dative particle. In this section, we examine the alleged Case Stacking with Accusative Case. We begin with instances where Accusative Case combines with a postposition, as shown in (40). The stacking is optional in that Accusative Case does not have to be stacked on top of a postposition. (40-b,d) are grammatical without the stacking.\(^{46}\)

40)

a. recipient of ‘give’

\[
\begin{array}{ll}
Na-nun & Chelswu-\text{eykey-}(-\text{ful}) & \text{ton-ul} & \text{cwuessta} \\
I-\text{Top} & C.-\text{dative-Acc} & \text{money-Acc} & \text{gave} \\
& & & "I gave Chelswu money." \\
\end{array}
\]

b. goal of tenci- ‘throw’, ponay- ‘send’.

\[
\begin{array}{ll}
Na-nun & Chelswu-\text{eykey-}(-\text{ful}) & \text{kong-ul} & \text{tenciessta} \\
I-\text{Top} & C.-\text{dative-Acc} & \text{ball-Acc} & \text{threw} \\
& & & "I threw Chelswu a ball." \\
\end{array}
\]

\(^{46}\) There are idiolectal variations among Korean speakers in their grammatical judgments of Case Stacking data in general. I tried to limit the examples to those that have been widely taken as typical instances of Case Stacking. I believe my own judgment is relatively conservative among those who do allow Case Stacking.
c. goal of ‘go’.

?Inho-ka Seoul-e(y)-(lul) kassta
Inho-Nom Seoul-directive-Acc went
“Inho went to Seoul.”

d. temporal location

Inho-ka seysi-e(y)-(∗lul) kassta
Inho-Nom 3 o’clock-locative-Acc went
“Inho went at three o’clock.”

As (40) illustrates, not all instances of Accusative combining with a postposition are allowed. (40-a) and (40-b) contrastively show that only some instances of combination with eykey is grammatical, whereas (40-c) and (40-d) show the same with ey. What then determines the possibility of the combination? How do we distinguish the recipient and the goal of (40-a,c) from the goal and temporal location of (40-b,d)? The distinction is possible when we use the notion of ‘terminal bound’ of event. Both the recipient of cwu-‘give’ and goal of ka-‘go’ defines the terminal bound of the event described by the verb. On the contrary, the goal of tenci-‘throw’, ponay-‘send’ and the temporal location of ka-‘go’ do not define the terminal bound of the event: the goal of ‘throw’ or ‘send’ is different from that of ‘give’ in that only in the latter the object of the verb is necessarily in the possession of the goal.

The following further shows the importance of the aspectual property discussed above.
41)

a. Chelswu-ka wuntongcang-**ulpwuthe-(**ul)**eyse-(**ul)** ttwiesstta/kelesstta
   C.-Nom field-from-Acc/locative-Acc ran/walked
   "Chelswu ran/walked from the field/in the field."

b. Chelswu-ka Seoul-**ulpwuthe-(**ul)** ttenasstta/chwulpalhaysstta
   C.-Nom Seoul-from-Acc left/departed
   "Chelswu left/departed from Seoul."

d. Chelswu-ka Seoul-ey-(**ul)** tochakhaysstta
   C.-Nom Seoul-directive-Acc arrived
   "Chelswu arrived in Seoul."

(41) shows that an initial point of the event, or the location cannot tolerate Accusative
stacking (a-b) whereas the completion of the event described by the destination of ‘arrive’
can (c). Consequently, we arrive at the following descriptive conclusion:

42) Accusative can stack if its host delimits an event.

(42) is familiar to us in that it is reminiscent of the property of the VP-external
object in general, discussed in Chapter 3. From this it follows that the stacked Accusative
is best viewed as the structural Case checked at the Spec of tP. Now, we move on to
another Case phenomenon that runs quite parallel to the stacking phenomenon.
Case Alternation is also a fairly well-known phenomenon in Korean: notably, dative postposition alternates with Accusative Case. However, it is quite interesting to note that not all datives can alternate with Accusative Case:

43)

a. Na-nun Chelswu-eykey/lul ton-ul cwuessta
   I-Top C.-dative/Acc money-Acc gave
   “I gave Chelswu money.”

b. Na-nun Chelswu-eykey/*lul kong-ul tenciessta
   I-Top C.-dative/*Acc ball-Acc threw
   “I threw Chelswu a ball.”

Note (43-a) and (43-b) in comparison with (40-a) and (40-b) respectively. (43-c) and (43-d) below also runs parallel with (40-c) and (40-d).

43)

c. Inho-ka Seoul-ey/lul kassta
   Inho-Nom Seoul-directive-Acc went
   “Inho went to Seoul.”

d. Inho-ka seysi-ey/*lul kassta
   Inho-Nom 3 o’clock-locative-Acc went
   “Inho went at three o’clock.”

Thus, only when Accusative can stack, can it also alternate with a postposition. It follows
then that (44) is true:

44) Accusative can alternate with another post-nominal particle if its host delimits an event.

The following data further confirm this position:

45)

a. Chelswu-ka Yenghi-eykey/*lul Swuni-ul sokayhayssta  
C.-Nom Y.-dative/Acc S.-Acc introduced  
"Chelswu introduced Swuni to Yenghi."

b. Chelswu-ka hakkyo-eyse/*lul canghakkum-ul patassta  
C.-Nom school-locative/Acc scholarship-Acc received  
"Chelswu received a scholarship from/at school."

Compare (41-a) and (41-b), repeated below, with (46-a) and (46-b).

41)

a. Chelswu-ka wuntongcang-ulopwuthe-(*lul)/eyse-(*lul) ttwiessta/kelessta  
C.-Nom field-from-Acc/locative-Acc ran/walked  
"Chelswu ran/walked from the field/in the field."

b. Chelswu-ka Seoul-lopwuthe-(*lul) ttenassta/chwulpalhayssta  
C.-Nom Seoul-from-Acc left/departed  
"Chelswu left/departed from Seoul."
46)

a. Chelswu-ka wuntongcang-ul ttwiessta/kelessta
   C.-Nom field-Acc ran/walked
   “Chelswu ran/walked the field.”

b. Chelswu-ka Seoul-ul ttenassta/chwulpalhayssta
   C.-Nom Seoul-Acc left/departed
   “Chelswu left/departed Seoul.”

(41-a) and (41-b) are examples where stacking is not possible. Since stacking is not possible, we predict alternation to be impossible, according to (42) and (44). However, contrary to our prediction, (46-a) and (46-b) are nevertheless grammatical. The reason for this apparent counterexample is that when the Accusative in (46-a) and (46-b) alternates with postpositions of (41-a) and (41-b) it brings about different interpretations. Notice that the translations of (46-a) and (46-b) are different from those of (41-a) and (41-b): ‘running in/from the field’ is different from ‘running the field’, and ‘leaving from Seoul’ is different from ‘leaving Seoul’. In particular, the aspectual interpretation is different in that in (46), but not in (41), the event is delimited by the object: ‘field’ and ‘Seoul’ in (46), but not in (41), serve to delimit an event by being a terminal bound of the event.

The alternation pattern shown in (41) and (46) is comparable to the ‘DO/IO Alternation’ in English below:
47)

a. fly (in) the sky
b. walk (in) the park
c. run (in) the track
d. leave (from) the city
e. shoot (at) the duck
f. climb (up) the mountain

Notice that in English as well, the alternation to direct object necessarily accompanies a change in aspectual meaning. The direct object brings about a delimiting effect on the event described by the verb. In other words, the alternation is possible only when the object can participate in making the event delimited: John looked *(at) the picture (see Ghomeshi & Massam (1994) for relevant discussion).

Why should there be this change in meaning when alternation occurs? In light of the stacking phenomenon where the stacked Accusative is best viewed as the structural Case, and in light of the corresponding pattern in English, the answer is quite clear. This change in meaning is brought about because the alternating Accusative Case in Korean is a structural objective Case checked at the Spec of vP. By virtue of being in that position, it is required that it be compatible with the aspectual properties associated with the position, namely, delimitedness/boundedness. The following data further confirm this approach. The indefinite object with a dative postposition is ambiguous between an existential and a specific reading. However, when lui is stacked or alternates with the postposition, it becomes unambiguous: it can only be specific.
48)
   a. John-i etten-salam-*eykey* chayk-ul cwuessta  [existential or specific]
      J.-Nom some-person-dative book-Acc gave
      "John gave someone a book."
   b. John-i etten-salam-*eykey-lul/lul* chayk-ul cwuessta  [specific only]
      J.-Nom some-person-dative-Acc/Acc book-Acc gave

This result in (48) is in line with our conclusion in that the stacked/alternating *lul* requires
its host to be outside the nuclear scope, namely VP.

Now, we compare these phenomena with Case Deletion. First, a general
understanding of Case Deletion is in order. Case deletion usually occurs in casual speech.
H.-D. Ahn (1996) proposes that adjacency with the verb is required for deletion.
However, as (49) shows, deletion is still allowed even when an adverb intervenes.

49)
   Chelswu-nun sihem-(ul) wancenhi mangchiesse
   C.-Top  exam-(Acc) completely destroyed
   "Chelswu completely bombed the test."

Although Case still needs to be close enough to the verb for deletion, a requirement of
strict adjacency to the verb turns out to be too strong. Ahn also proposes that only
Accusative can delete. However, it is also possible with Genitive as well as VP-internal
Nominative:

50) 

a. Chelswu-(uy) tonsayng  
   C.- (Gen) brother  
   "Chelswu's brother"

b. Chelswu-nun cwi-(ka) mwusewe  
   Chelswu-Top mouse-(Nom) fear  
   "Chelswu fears mice."

Case deletion on subjects is not generally possible. However, there are some instances where this appears to be allowed. I follow K.-S. Hong (1992) in that the apparent Nominative deletion on a subject is in fact nun 'Topic' deletion. Accordingly, it would be reasonable to assume that Case Deletion is generally possible with VP-internal non-subjects. Given this, let us now observe the Case deletion pattern in (51). Note that (51) is in exact parallel with (40) and (43).

51) 

a. ?Na-nun Chelswu ton-ul cwuesse  
   I-Top C. money-Acc gave  
   "I gave Chelswu money."

b. *Na-nun Chelswu kong-ul tenciesse  
   I-Top C. ball-Acc threw  
   "I threw Chelswu a ball."
(51) shows that deletion is possible in places where stacking and alternation is possible.

This does not mean that Case Deletion is possible only in such a circumstance. Case Deletion, as we have seen above, is generally possible with Genitive, and VP-internal Accusative or Nominative. In other words, what (51) shows is that deletion on these particular nominals is possible only when they delimit the event described by the verb. This is further confirmed in (52), where (a), (b) correspond to (45-a,b), and (c), (d) correspond to (46-a,b).

52)

a. * Chelswu-ka Yenghi Swuni-ul sokayhayssta
   C.-Nom Yenghi S.-Acc introduced
   "(intended) Chelswu introduced Swuni to Yenghi."

b. * Chelswu-ka hakkyo canghakkum-ul patassta
   C.-Nom school scholarship-Acc received
   "(intended) Chelswu received a scholarship from/at school."
c. Chelswu-ka wuntongcang ttwiessta/kelessta
   C.-Nom field ran/walked
   “Chelswu ran/walked the field.”

d. Chelswu-ka Seoul ttenassta/chwulpalhayssta
   C.-Nom Seoul left/departed
   “Chelswu left/departed Seoul.”

The result in (51) and (52) is not surprising at all since we know that Case Deletion obviously involves Case but not postpositions. Since Case Deletion involves Case and deletion of a postposition is prohibited, deletion on nominals in (51) and (52) obtains only when they can alternate with Accusative. Thus, the deletions seen in (51) and (52) are in fact deletion of Accusative Case, not a postposition, nor Accusative stacked with a postposition. For instance, (51-a) above corresponds to (53-a), not to (53-b) or (53-c):

53) a. Na-nun Chelswu-(lul) ton-ul cwuesse
    I-Top C.-Acc money-Acc gave
    “I gave Chelswu money.”

b. Na-nun Chelswu-(eykey) ton-ul cwuesse
    I-Top C.-dative money-Acc gave

c. Na-nun Chelswu-(eykey-lul) ton-ul cwuesse
    I-Top C.-dative-Acc money-Acc gave
In sum, our observations can be summarized as in (54):

54)

a. Stacking and Alternation of Accusative is possible only when its host delimits the event described by the verb.

b. If Accusative can stack and alternate, it can also delete.

Thus, we have arrived at the conclusion that the Accusative Case involved in stacking, alternation, and its corresponding deletion is a structural objective Case checked at Spec of vP. This conclusion is further supported by the fact that the movement patterns of the host of the stacking, alternating and deletable Accusative Case are the same as those of Delimiting Accusatives. This is discussed in detail in the Appendix.

Therefore, when the goal of 'give' in (53) is in the form of *Chelswu-eykey-lul*, or *Chelswu-(lul)*, the nominal moves up to the Spec of vP to check its structural objective Case. On the other hand, when it is in the form of *Chelswu-eykey*, it remains VP-internal. In both instances, the other object *ion-ul* gets a default objective Case.

---

47 I assume that the movement to Spec vP is optional as other instances of object shift are. I also assume, following our discussion in Chapter 3, that the Case feature is not uninterpretable, thus the Case feature of v does not need to be erased for convergence. As to whether this movement occurs overtly or covertly, I leave it open.
55)

a.

\[
\begin{array}{c}
\text{uP} \\
\text{N1}_j \\
\text{VP} \\
\text{t}_j \\
\text{N2} \\
\text{V}
\end{array}
\]

N1: Chelswu-eykey-lul, Chelswu-(lul)
N2: ton-ul

“Na-nun Chelswu-eykey-lul/(lul) ton-ul cwuessta
I-Top C.-dative-Acc/(Acc) money-Acc gave
“I gave Chelswu some money.”

b.

\[
\begin{array}{c}
\text{VP} \\
\text{N1} \\
\text{N2} \\
\text{V}
\end{array}
\]

N1: Chelswu-eykey
N2: ton-ul

“Na-nun Chelswu-eykey ton-ul cwuessta
I-Top C.-dative money-Acc gave
“I gave Chelswu some money.”

One important aspect of this proposal is that *Chelswu* cannot stay within VP without a postposition and later get a default objective case. In order for it to receive full
interpretation it must either get a postposition or move up to the Spec of vP. I assume
that there is no dative verb in Korean: no verb in Korean is subcategorized for a goal
argument. In other words, *Chelsewu* does not receive a goal interpretation VP-internally
by virtue of the lexical property of the verb *cwu* ‘give’. In order to receive a goal
interpretation, it must either be marked with a postposition *eykey* or move up to the
position whose associated meaning gives the terminal bound which in turn results in the
goal interpretation.

Consequently, the stacking, alternating, and deleting behavior of structural
Accusative Case ultimately constitutes yet another piece of evidence for the Compatibility
Constraint discussed in Chapter 3. A nominal in the Spec of vP must be compatible with
the meaning associated with this position, i.e., delimitedness, in order for it to be legible at
the LF interface.

2.3 Nominatives

The so-called Case Stacking also occurs with Nominative. The stacking typically
occurs with the dative particle in dyadic unaccusative constructions, although there are
other environments where Nominative stacking occurs as will be shown later. Recall from
section 1.3.2. that in dyadic unaccusative constructions in Korean, the experiencer can
take either dative or Nominative. A typical example is shown in (56).
56)

a. Chelswu-**eykey**/ka swuhak-i swipta
   C.-dative/Nom    math-Nom easy.
   “For Chelswu, math is easy.”

b. Chelswu-**eykey-ka** swuhak-i swipta
   C.-dative-Nom    math-Nom easy.
   “For Chelswu, math is easy.”

At first glance, Nominative seems to be able to stack whenever it can alternate with the dative postposition. However, (57) shows that the situation is not so simple. Compare (56) and (57). Although alternation is possible (57-a), stacking leads to a considerable degradation (57-b).

57)

a. Chelswu-**eykey**/ka ipen sihem-ey swuhak-i swiessta
   C.-dative/Nom    this exam-at math-Nom was easy
   “Math was easy for Chelswu at this exam.”

b. ??? Chelswu-**eykey-ka** ipen sihem-ey swuhak-i swiessta
   C.-dative-Nom    this exam-at math-Nom was easy

The difference between (56) and (57) is in the aspectual meaning of the predicate. In (56), that ‘math is easy’ serves as an individual-level/permanent characterization of Chelswu. However, in (57), that ‘math was easy at this exam’ gives only a stage-level/temporary description of Chelswu. (58) and (59) show more examples of this effect. The (a)
sentences have individual-level predicates, whereas the (b) sentences have stage-level predicates. Only the (a) sentences allow stacking. The (b) sentences are either completely unacceptable or considerably degraded. Notice that alternation is still possible with stage-level predicates as shown in the (c) sentences.

58)
   a.  pwucacip-ey-ka  totwuk-i  cal  tulnta
       rich-house.-at-Nom  thief-Nom  well  enter
       "Thieves usually enter rich houses."

   b.  *  pwucacip-ey-ka  eceyspam-ey  totwuk-i  tulessta
       rich-house-dative-Nom  last  night-at  thief-Nom  entered
       "Last night, thieves entered a rich house."

   c.  pwucacip-ey/1  eceyspam-ey  totwuk-i  tulessta
       rich-house-dative/Nom  last-night-at  thief-Nom  entered
       "Last night, thieves entered a rich house."

59)
   a.  haksayngtul-eykey-ka  ton-i  philyohata
       students-dative-Nom  money-Nom  need
       "Students are (in general) in need of money."

   b.  ???  haksayngtul-eykey-ka  ipen  hakkii-ey  manhun  ton-i  philyohayssta
       students-dative-Nom  this  semester-at  much  money-Nom  needed
       "Students needed a lot of money this semester."
c. haksayngtul-eykey/i ipen hakk-ey manhun ton-i philyohayssta
students-dative/Nom this semester-at much money-Nom needed
“Students needed a lot of money this semester.”

Why should the stacking be constrained by the semantic type of the predicate? In light of
our earlier discussion of Predicated Nominatives (section 1.1), it is natural to equate the
stacked Nominatives with Predicated Nominatives for the following reasons. As we
discussed above, Predicated Nominatives, adjoined to CP, enter into predication with the
rest of the clause. Crucially, in order for them to enter into the predication relation, the
predicates must be of the individual-level type. The following sentences with indefinite
subjects provide further evidence for this. The indefinite subject with a dative postposition
or Nominative Case is ambiguous between an existential and a specific reading (60-a, c).
However, when the postposition and the Nominative Case are stacked (60-b,d), the
subject becomes unambiguous: it can only be specific or generic. This shows that the
stacked Nominative Construction requires its host to be outside VP.

60) adapted from Schütze (1998)

a. etten-salam-eykey/i Yenghi-ka cohta [existential or specific]
some-person-dative/Nom Y.-Nom like
“Some people like Yenghi.”

b. etten-salam-eykey-ka Yenghi-ka cohta [specific only]
some-person-dative-Nom Y.-Nom like
“Some people like Yenghi.”
c. sopangswu-eykey/ka kyewul palam-i mwusepta [existential or generic]
   fireman-dative/Nom winter wind-Nom fear
   "Firemen fear winter wind."

d. sopangswu-eykey-ka kyewul palam-i mwusepta [generic only]
   fireman-dative/Nom winter wind-Nom fear
   "Firemen fear winter wind."

There is another piece of evidence supporting the claim that stacked Nominatives are indeed Predicated Nominatives. Recall that an XP cannot scramble to a position above the Predicated Nominatives. It can only scramble to a position below them. (8), repeated below as (61), illustrates this.

(61) = 8)

a. Kay-ka Husky-ka sselmay-lul cal kkulnta
   dog-Nom H.-Nom sled-Acc well pull
   "As for dogs, Huskies are good at pulling sleds."

b. * sselmay-lul kay-ka Husky-ka t cal kkulnta
   sled-Acc dog-Nom H.-Nom well pull

c. Kay-ka sselmay-lul Husky-ka t cal kkulnta
   dog-Nom sled-Acc H.-Nom well pull

(62-d) shows that when an XP scrambles above the host of a stacked Nominative,
the sentence becomes severely degraded. The (a) and (b) sentences, on the contrary, show that when there is no stacking involved, an XP can freely scramble above the host.

62)

a. Chelswu-eykey/ka **ton-i** manhta
   C.-dative/Nom money-Nom be.much
   “Chelswu has a lot of money.”

b. **ton-i** Chelswu-eykey/ka t manhta
   money-Nom C.-dative-Nom be.much
   “A lot of money, Chelswu has.”

c. Chelswu-eykey-ka **ton-i** manhta
   C.-dative-Nom money-Nom be.much
   “Chelswu has a lot of money.”

d. ???? **ton-i** Chelswu-eykey-ka t manhta
   money-Nom C.-dative-Nom be.much

If Stacked Nominatives are truly Predicated Nominatives, Stacked Nominatives should not be confined to an experiencer argument of an unaccusative verb. Rather, they should be allowed with any element as long as it is compatible with the predication relation. This prediction is borne out:
63) Seoul-eyse-ka namcatul-i anay-lul concwunghanta
    Seoul-locative-Nom men-Nom wife-Acc respect
    “In Seoul, men respect their wives.”

Furthermore, the Stacked Nominative Seoul-eyse-ka in (63) displays the same scrambling pattern. Compare (62) with (64).

64) a. Seoul-eyse namcatul-i anay-lul concwunghanta
    Seoul-locative men-Nom wife-Acc respect
    “In Seoul, men respect their wives.”

b. anay-lul Seoul-eyse namcatul-i t concwunghanta
    wife-Acc Seoul-locative men-Nom respect
    “Wives, men respect in Seoul.”

c. Seoul-eyse-ka namcatul-i anay-lul concwunghanta
    Seoul-locative-Nom men-Nom wife-Acc respect
    “In Seoul, men respect their wives.”

d. * anay-lul Seoul-eyse-ka namcatul-i t concwunghanta
    wife-Acc Seoul-locative-Nom men-Nom respect

Accordingly, we arrive at the following conclusion:

65) Stacked Nominative NPs and Predicated Nominative NPs are adjoined to CP.
Although Stacked Nominatives are syntactically comparable to Stacked Accusatives in that both involve movement from one place to another, Stacked Nominatives are different from Stacked Accusatives in a few respects. First, with Nominatives, there is no correlation between the possibility of stacking and the possibility of deletion: Stacked Nominatives simply do not delete. This is not surprising because, as we saw earlier, Case deletion is possible only with VP-internal non-subjects. Since we are mainly dealing with sentential subjects here, the deletion is not expected to be possible. Secondly, unlike Accusatives which alternate with postpositions only when they delimit the event, the alternation between a postposition and Nominative is not always constrained by interpretation. As we noted earlier, with unaccusative constructions, alternation is free to occur irrespective of interpretation (see (57), (58-b,c), (59-b,c)). Thus, unlike Accusatives, there is no correlation between stacking and alternation for Nominatives. Why is this? The answer lies in the nature of Nominative Case.

Nominative is a default case in Korean. Therefore, in the absence of a dative postposition, Nominative is always available for a bare NP regardless of the position of its host. It follows that an NP can be Nom-marked VP-internally. Furthermore, I hold that the VP-internal nominal without a postposition receives an ‘experiencer’ interpretation because the lexical property of an unaccusative verb allows for an experiencer argument. Therefore, even without the help of a postposition, it can still be fully interpreted. It follows that when a Stacked Nominative occurs in an environment other than an
unaccusative construction, we expect to see a different result. And this is borne out.

66)

a. Seoul-eyse/i namcatul-i anay-lul concwunghanta
   Seoul-locative/Nom men-Nom wife-Acc respect
   "In Seoul, men respect their wives."

b. Seoul-eyse-ka namcatul-i anay-lul concwunghanta
   Seoul-locative-Nom men-Nom wife-Acc respect
   "In Seoul, men respect their wives."

c. Seoul-eyse/*/i Chelswu-ka Yenghi-lul mannassta
   Seoul-locative/*/Nom C.-Nom Y.-Nom met
   "In Seoul, Chelswu met Yenghi."

d. * Seoul-eyse-ka Chelswu-ka Yenghi-lul mannassta
   Seoul-locative-Nom C.-Nom Y.-Nom met
   "In Seoul, Chelswu met Yenghi."

(66) shows that when alternation is possible, stacking is also possible. This one-to-one relation between stacking and alternation is in parallel with the behavior of Accusatives. What this entails is that Seoul-i is in the same position as Seoul-eyse-ka, while Seoul-eyse is in a lower position. This can be tested with scrambling. If Seoul-i is indeed in the same structural position, i.e., adjoined to CP, as the Seoul-eyse-ka, then an XP will not be able to scramble above it. This is borne out as shown in (67). This contrasts with (64-a,b) which shows that scrambling is possible over Seoul-eyse.
67)  

a. Seoul-i anay-lul namcatul-i t congwunghanta  
Seoul-Nom wife-Acc men-Nom respect  
"In Seoul, men respect their wives."

b. * anay-lul Seoul-i namcatul-i t congwunghanta  
wife-Acc Seoul-Nom men-Nom respect  
"In Seoul, men respect their wives."

In short, we have arrived at the following conclusion: Nominative stacking occurs when its host adjoins to CP. Nominative alternation indicates positional difference of its host when it is not in an unaccusative construction. But, Nominative alternation does not indicate positional difference in an unaccusative construction. (68) schematizes this:
Unaccusative
 NP1: Stem-postposition-Nom
 NP2: Stem-postposition, or Stem-Nom
 'Stacking indicates a positional difference'

Others
 NP1: Stem-postposition-Nom, or Stem-Nom
 NP2: Stem-postposition
 'Both stacking and alternation indicate a positional difference'

The patterns in (68) are supported by the fact that those nominals at the adjunction site of CP behave like Predicated Nominatives: they must be arguments of an individual-level predicate. Furthermore, the syntactic behavior of these nominals is also proven to be the same as that of Predicated Nominatives. This is shown extensively in the Appendix.

Now, there is one remaining question. If Nominative is truly a default case, why is it that a nominal adjoined to CP must bear a Nominative Case even when it is already marked with a postposition? Should default case marking not occur only in the absence of a relevant nominal affix? Nothing should force Nominative case marking except for the absence of relevant affixes. And indeed nothing appears to force Nominative case
marking except when its host is at the adjunction site of CP. Why is this?

In line with Koster (1978) who claims that subject position is defined as an NP position, I assume that a subject (of a non-verbal predicate) must be nominal in Korean. I further assume that nominalization of PP requires a Case marker in Korean. Thus, when a PP stands in a subject-predicate relation with a non-verbal predicate, it must undergo nominalization which results in Case marking. This is shown to be true in predicate nominal constructions, exemplified in (68). Note that Nominative marking is obligatory here.

69)\[49\]

a. pang-an-ulo-*\(\text{ka}\) macnun panghyang ita
   room-in-to-Nom right direction is
   “In to the room is the right direction.”

\[48\] I assume that a case marker is a necessary condition for nominal status in Korean.

\[49\] The following sentence is an apparent counterexample since Nominative marking is optional here.

Cikum-pwuthe-(ka) Swunhl-ka mwensey ita
now-from-Nom S.-Nom problem is

However, the meaning of the sentence is drastically different depending on the presence/absence of the Nominative marker. When absent, cikum-pwuthe simply acts as an adjunct. When present, however, cikum-pwuthe-\(\text{ka}\) is in predication relation with the rest of the sentence.
b. cengwon-cyse-* (ka) Swunhi-ka cesim-ul mek-nun kot ita
garden-at-Nom S.-Nom lunch-Acc eat-REL place is.
"In the garden is where Swuni eats lunch."

By virtue of being in subject-predicate relation with a non-verbal predicate, the default Case marking becomes necessary in order to mark the nominal status of the subject. Likewise, when a PP is the argument of a predicate CP, as in (65-b), the Nominative marking, although default, becomes necessary.

As with the stacking, alternating, and deleting behavior of structural Accusative Case, the stacking and occasional alternating behavior of Nominative Case constitutes another example of the Compatibility Constraint at work. In order to be legible a nominal at the adjunction site of CP must be compatible with the interpretation available for the position.

3. **Summary**

In this chapter, we have observed Case phenomena in Korean and witnessed how they interact with LF Legibility. In the discussion of Multiple Case Constructions, we have seen the result summarized in (26), repeated below as (70).
70) 
   a. Predicated Nominatives: A nominal is allowed at the adjunction site of CP if the 
      nominal is the argument of an individual-level predicate.
   
   b. Delimiting Accusatives: A nominal is allowed at the Spec of vP if it delimits an 
      event described by the verb.
   
   c. Part-whole Constructions: An extra nominal is allowed VP-internally if it stands in 
      a part-whole relation with the other nominal.

In the discussion of Stacking (which turns out to be not ‘Case’ stacking), Alternation and 
Deletion, we have made the following observations:

71) 
   a. Stacking and Alternation of Accusative is possible only when its host delimits the 
      event described by the verb. If Accusative can stack and alternate, it can also 
      delete.
   
   b. In Unaccusative constructions, stacking of Nominative is possible only when its 
      host is the argument of an individual-level predicate. In non-unaccusative 
      constructions, both stacking and alternation are possible under the same condition.

Accordingly, we can conclude that (70) and (71) follow directly from (72). The host of 
stacking, alternating and deletable Accusative Case is at the Spec of vP whereas the host 
of stacking and occasionally alternating Nominative is adjoined to the CP. The Multiple 
Case Constructions as well as Stacking, Alternation, Deletion phenomena thus jointly
support the following:

72) 

a. 

\[ \begin{array}{c}
\text{CP} \\
X & \text{CP}
\end{array} \]

CP is predicated of X

b. 

\[ \begin{array}{c}
\text{vP} \\
Y & v
\end{array} \]

Y is delimiting/bounding

c. 

\[ \begin{array}{c}
V' \\
Z & V
\end{array} \]

Z is a predicate modifier

A nominal in each of these positions is shown to be subject to interpretability. It must be compatible with the meaning associated with the position for LF legibility. Sometimes, the association of meaning and position comes directly from the encoding of the meaning into a particular position as in the case of aspectual properties with Spec vP. Other times, the association results from the availability of particular interpretations for a given structure. Modification is the only available interpretation between a predicate head and a VP-internal nominal. Predication relation is the only possible interpretation available for a nominal at the adjunction site of CP and CP. Importantly, LF Legibility filters out certain derivations where the compatibility in meaning between a nominal and its position is not satisfied.
4. Concluding Remarks

Legibility Conditions, although they may be bare, are quite active in their operations. Their role is not limited to inspecting the erasure of unchecked uninterpretable formal features. Instead, it is rather pervasive in that it guarantees general morpho-phonological and semantic well-formedness; e.g., all words must have proper morphological closure, all nominals must be compatible with their syntactic positions in meaning. Throughout this thesis, we have seen the active role of Legibility Conditions at times resulting in the ‘filtering out’ of otherwise convergent derivations.

In Chapter 2, we have seen that Legibility Conditions at the PF interface ensure that any given derivation is interpretable morpho-phonologically. It follows that all elements of a sentence must be morpho-phonologically well-formed. Under the late-insertion theory of morphology, a possible scenario is one where a given derivation is convergent as far as computation is concerned, and yet morpho-phonologically uninterpretable for a completely independent reason. The derivation would be simply ‘filtered out’ for failing PF Legibility Conditions. An analysis of Korean negation and other adverbs is provided to show that their affixal status requires affixation for PF legibility. When they fail to be affixed to form a properly closed word, a derivation crashes for the failure of PF legibility.

In Chapter 3, we considered Legibility Conditions at the LF interface. Legibility
Conditions at the LF interface pertain to semantic well-formedness. In the discussion of object licensing, we have arrived at the conclusion that licensing is not conducted by checking a licensing (Case) feature. Rather, the legitimacy of a nominal crucially depends on its LF legibility. Under the assumption that there exists a syntax-semantics mapping at the point of the LF interface, an object in a given position must be compatible with the position in meaning.

Chapter 4 provides further evidence for the validity of the conclusion drawn in Chapter 3. We have seen that Korean Case phenomena are well accounted for under the view that licensing of nominals is sensitive to LF legibility. Nominals in three different syntactic positions are shown to respect the compatibility with the meaning associated with their positions. Again, the failure of compatibility, a LF Legibility Condition, leads to a crash in derivation.

This thesis answers the question of how semantic and phonological effects on syntax should be captured in the Minimalist Program, a derivational model of grammar. All of the above supports the central claim of the thesis. Namely, Legibility Conditions handle such effects by inspecting morpho-phonological and semantic well-formedness of a given derivation at PF and LF interfaces, and in so doing they sometimes filter out otherwise convergent derivations.
Appendix: Movements in Multiple Case Constructions

Here we examine movements of nominals in Multiple Case Constructions. The examination shows the following results. First, we observe that movement patterns in sentences with Predicated Nominatives and Delimiting Accusatives parallel those of their ‘stacked’ counterparts, further supporting our analysis. Second, we observe that part-nominals are not syntactically immobile, contrary to common belief about VP-internal objects in general. Thirdly and most importantly, with Predicated Nominatives and also Part-whole constructions, movements are subject to a c-command relation between nominals: a Predicated Nominative must c-command a sentential subject, and a whole-nominal must c-command a part-nominal. This relation does not hold for Delimiting Accusatives.

1. Predicated Nominatives

In clauses with a Predicated Nominative, the Predicated Nominative must be overtly higher than the sentential subject: it is subject to a c-command relation. In simplex sentences, for instance, a sentential subject cannot scramble to the left of a Predicated Nominative:
1) Simplex sentences

a. Kwail-i Pineapple-i pissata
   fruit-Nom Pineapple-Nom expensive
   "As for fruits, pineapples are expensive."

b. *Pineapple-i kwail-i t pissata

a'. Chelswu-ka emeni-ka phyenchanusita
   C.-Nom mother-Nom ill
   "As for Chelswu, his mother is ill."

b'. *emeni-ka Chelswu-ka t phyenchanusita

a". Canada-ka motun salam-i hockey-lul cohahanta
   C.-Nom all person-Nom hockey-Acc like
   "As for Canada, everybody likes hockey."

b". *motun salam-i Canada-ka t hockey-lul cohahanta

(2) further shows that while Predicated Nominatives and sentential subjects can
move out of an embedded clause either independently or together, their relative order
must be respected.
2) Complex sentences

a. Chelswu-nun [kwail-i Pineapple-i pissatako] malhayssta
   C.-Top fruit-Nom Pineapple-Nom expensive said
   “Chelswu said that as for fruits Pineapples are expensive.”

b. Kwail-i Chelswu-nun [ t Pineapple-i pissatako] malhayssta

c. * Pineapple-i Chelswu-nun [kwail-i t pissatako] malhayssata

d. ? Kwail-i Pineapple-i Chelswu-nun [ t t pissatako] malyassta

a’. Yenghi-nun [Chelswu-ka emeni-ka phyenchanusitako] tulessta
   Y.-Top C.-Nom mother-Nom ill heard
   “Yenghi heard that as for Chelswu his mother is ill.”

b’. Chelswu-ka Yenghi-nun [ t emeni-ka phyenchanusitako] tulessta

c’. * emeni-ka Yenghi-nun [Chelswu-ka t phyenchanusitako] tulessta


a”’. Chelswu-nun [Canada-ka motun salam-i hockey-lul cohahantako] mitnunta
   C.-Top C.-Nom all person-Nom hockey-Acc like believe
   “Chelswu believes that as for Canada everybody likes hockey there.”

b”’. Canada-ka Chelswu-nun [ t motun salam-i hockey-lul cohahantako] mitnunta
c".  *motun salam-i Chelswu-nun [Canada-ka t hockey-lul cohahantako] mitnunta

d".  ?Canada-ka motun salam-i Chelswu-nun [ t t hockey-lul cohahantako] mitnunta

(3) shows that the linear order is irrelevant. A Predicated Nominative must still be structurally higher than a sentential subject.

3) Relativization

a.  ?[t Pineapple-i pissan] kwail
   Pineapple-Nom expensive fruit
   "Fruits for which Pineapples are expensive"

b.  *[kwail-i t pissan] pineapple
   fruit-Nom expensive pineapple

a'.  [ t emeni-ka phyenchanusin] Chelswu
   mother-Nom ill C.
   "Chelswu, whose mother is ill"

b'.  *[Chelswu-ka t phyenchanusin] emeni
    C.-Nom ill mother
2. Derived Predicated Nominatives

The ‘stacked’ counterpart of Predicated Nominatives, which I call Derived Predicated Nominatives, shows the same pattern, further supporting our analysis. (4) to (6) are in exact parallel with (1) to (3) above. The relative order between the two nominals must be kept.

4) Simplex sentences

a. Inho-eykey-ka kiphun sangche-ka issta
Inho-dative-Nom deep wound-Nom is
“As for Inho, he has a deep wound.”

b. * Kiphun sangche-ka Inho-eykey-ka t issta

a’. Pwukmi-eye-ka wencwumin-tul-i manhun pwuliik-ul patassta
North.America-dative-Nom aboriginal-Pl-Nom much disadvantage-Acc received
“As for North America, aboriginals there were greatly taken disadvantage of.”
b'. * Wencwumin-tul-i Pwukmi-eyse-ka t manhun pwuliik-il patassta

5) Complex sentences

a. Chelswu-nun [Inho-eykey-ka kiphun sangche-ka isstako] tulessta
   C.-Top     L.-ative-Nom  deep wound-Nom is    heard
   “Chelswu heard that Inho has a deep wound.”

b. Inho-eykey-ka Chelswu-nun [t kiphun sangche-ka isstako] tulessta

c. * kiphun sanche-ka Chelswu-nun [Inho-eykey-ka t isstako] tulessta

d. Inho-eykey-ka kiphun sangche-ka Chelswu-nun [t t isstako] tulessta

a'. Chelswu-nun [Pwukmi-eyse-ka wencwumin-tul-i manhun pwuliik-ul
   C.-Top         North.America-at-Nom aboriginal-Pl-Nom much disadvantage-Nom
   patasstako] mitnunta
   received    believe
   “Chelswu believes that as for North America aboriginals there were greatly taken
disadvantage of.”

b'. Pwukmi-eyse-ka Chelswu-nun [t wencwumin-tul-i manhun pwuliik-ul
   patasstako] mitnunta
c'. \* \textit{Wencwumin-tul-i Chelswu-nun [Pwukmi-eyse-ka t manhun pwulii-k-ul patasstako] mitun}ta

d'. \textit{Pwukmi-eyse-ka wencwumin-tul-i Chelswu-nun [t t manhun pwulii-k-ul patasstako] mitun}ta

6) Relativization

a. \[t \textit{kiphun sangche-ka issnun}] \textbf{Inho}
   
   deep wound-Nom is \textbf{Inho}
   
   “Inho who has a deep wound”

b. \* \[\text{Inho-eykey-ka t issnun}] \textit{kiphun sangche}
   
   Inho-dative-Nom is deep wound

a'. \[t \textit{wencwumin-tul-i manhun pwulii-k-ul patun}] \textbf{pwukmi}
   
   aboriginal-Pl-Nom much disadvantage received North.America

b'. \* \[\text{Pwukmi-eyse-ka t manhun pwulii-k-ul patun}] \textit{wencwumin-tul}
   
   North.America-dative-Nom much disadvantage-Acc received aboriginal-Pl

3. Part-whole Constructions

   Interestingly, the same pattern obtains for Part-whole constructions. In this case, a whole-nominal must be syntactically higher than its part-nominal (see Brunson (1992) for the discussion of this phenomenon in English). We see the exact parellel results in (7) to
(9) for Part-whole Nominatives and (10) to (12) for Part-whole Accusatives.

**Part-whole Nominatives**

7) Simplex sentences

a. Sonamwu-ka iph-i sulphukey ttelecikoissessta
   Pine.tree-Nom leaf-Nom sadly was.falling
   "The pine tree's leaves were falling sadly."

b. *Iph-i sonamwu-ka t sulphukey ttelecikoissessta

a'. Yenghi-ka meli-ka kapcaki apha-o-ass-ta
   Y.-Nom head-Nom suddenly ache-come-Pst-Dec
   "Yenghi's head was suddenly beginning to ache."

50 Sentences like the ones below do not seem to pattern together with (7). The extraction of a part-nominal seems possible.

a. elkwul-i Swuni-ka khuta
   face-Nom S.-Nom big

b. maum-i emeni-ka nelpta
   heart-Nom mother-Nom big

However, these sentences, when they are interpreted to be grammatical, do not render a reading where extraction occurs. Rather, they render a reading that is without extraction. The first nominals are treated as Predicate Nominatives. Thus, a) means "As for faces, Swuni's is big." and b) means "As for hearts, mother's is big."
b'. * meli-ka Yenghi-ka t kapcaki apha-o-assta

8) Complex sentences

a. Chelswu-nun [sonmwu-ka iph-i ttelecikoisstako] sayngkakhayssta
   C.-Top pine.tree-Nom leaf-Nom was.falling thought
   "Chelswu thought that the pine tree's leaves were falling."

b. sonamwu-ka Chelswu-nun [ t iph-i ttelecikoisstako] sayngkakhayssta

c. * iph-i Chelswu-nun [sonmwu-ka t ttelecikoisstako] sayngkakhayssta

d. ? sonmwu-ka iph-i Chelswu-nun [ t t ttelecikoisstako] sayngkakhayssta

a'. Chelswu-nun [Yenghi-ka meli-ka apha-o-ass-ta-ko] tulessta
   C.-Top Y.-Nom head-Nom ache-come-Pst-Dec-Comp heard
   "Chelswu thought that Yenghi's head was beginning to ache."

b'. Yenghi-ka Chelswu-nun [ t meli-ka apha-o-asstako] tulessta

c'. * meli-ka Chelswu-nun [Yenghi-ka t apha-o-asstako] tulessta

d'. ? Yenghi-ka meli-ka Chelswu-nun [ t t apha-o-asstako] tulessta
9) Relativization

a. [t iph-i ttelein] sonamwu
   leaf-Nom fell pine.tree
   "The pine tree whose leaves fell."

b. *[sonmwu-ka t ttelein] iph
   pine.tree-Nom fell leaf

a'. [t me-li-ka apha-on] Yenghi
    head-Nom ache-come Y.

b'. *[Yenghi-ka t apha-on] meli
    Y.-Nom ache-come head

Part-whole Accusatives

10) Simplex sentences

a. Yenghi-ka Inho-lul son-ul capassta
   Y.-Nom I.-Acc hand-Acc held
   "Yenghi held Inho by the hand."

b. *[Yenghi-ka son-ul Inho-lul t capassta

c. Inho-lul Yenghi-ka t son-ul capassta
d. * son-ul Yenghi-ka Inho-lul t capassta

e. ? Inho-lul son-ul Yenghi-ka t t capassta

a'. Yenghi-ka chayksang-ul tali-lul kochiessta
Y.-Nom desk-Acc leg-Acc repair
“Yenghi repaired the desk legs.”

b'. * Yenghi-ka tali-lul chaysang-ul t kochiessta
c'. chayksang-ul Yenghi-ka t tali-lul kochiessta
d'. * tali-lul Yenghi-ka chayksang-ul t kochiessta
e'. ? chayksang-ul tali-lul Yenghi-ka t t kochiessta

11) Complex sentences

a. Chelswu-nun [Yenghi-ka Inho-lul son-ul capasstako] tulessta
C.-Top Y.-Nom I.-Acc hand-Acc held heard
“Chelswu heard that Yenghi held Inho by the hand.”

b. Inho-lul Chelswu-nun [Yenghi-ka t son-ul capasstako] tulessta

c. * son-ul Chelswu-nun [Yenghi-ka Inho-lul t capasstako] tulessta
d.  ? Inho-lul son-ul Chelswu-nun [Yenghi-ka t t capasstako] tulessta

a'. Chelswu-nun [Yenghi-ka chayksang-ul tali-lul kochiesstako] mitessta

C.-Top  Y.-Nom  desk-Acc  leg-Acc  repaired  believed

“Chelswu believed that Yenghi repaired the desk legs.”

b'. Chayksang-ul Chelswu-nun [Yenghi-ka t tali-lul kochiesstako] mitessta

c'.  * Tali-lul Chelswu-nun [Yenghi-ka chayksang-ul t kochiesstako] mitessta

d'.  ? Chayksang-ul tali-lul Chelswu-nun [Yenghi-ka t t kochiesstako] mitessta

12) Relativization

a.  [Yenghi-ka t son-ul capun] Inho

Y.-Nom  hand-Acc  held  Inho

“Inho whose hand Yenghi held.”

b.  * [Yenghi-ka Inho-lul t capun] son

Y.-Nom  l.-Acc  held  hand

a'. [Yenghi-ka t tali-lul kochin] chayksang

Y.-Nom  leg-Acc  repaired  desk

“The desk whose legs Yenghi repaired.”

b'.  * [Yenghi-ka chayksang-ul t kochin] tali

Y.-Nom  desk-Acc  repaired  leg
4. Delimiting Accusatives

Unlike clauses with Predicated Nominatives and Part-whole Constructions, a Delimiting Accusative is free to move irrespective of its relation with other nominals in the same clause. (13) to (15) illustrate this.

13) Simplex sentences

a. ? Inho-nun seysikan-ul pap-ul mekessta
   I.-Top three.hour-Acc meal-Acc ate
   “Inho was having a meal for three hours.”

b. Inho-nun pap-ul seysikan-ul mekessta

c. seysikan-ul Inho-nun pap-ul mekessta

a’. ? Inho-nun hantal-ul chayk-ul ilkessta
   I.-Top one.month-Acc book-Acc read
   “Inho read books for one month.”

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51 The slight strangeness improves when a duration meaning is forced by adding a morpheme tongan ‘during’:

i) Inho-nun seysikan-tongan-ul pap-ul mekessta
   Inho-Top three.hour-during-Acc meal-Acc ate
   “Inho ate a meal for three hours.”
b'. Inho-nun chayk-ul **hantal-ul** ilkessta

c'. **hantal-ul** Inho-nun chayk-ul ilkessta

14) Complex sentences

a. Chelswu-nun [Inho-ka pap-ul seysikan-ul mekesstako] mitnunta
   C.-Top I.-Nom meal-Acc three.hours-Acc ate believe
   “Chelswe believes that Inho was having a meal for three hours.”

b. **Pap-ul** Chelswu-nun [Inho-ka seysikan-ul t mekesstako] mitnunta

c. ? **Seysikan-ul** Chelswu-nun [Inho-ka t pap-ul mekesstako] mitnunta

d. **Pap-ul seysikan-ul** Chelswu-nun [Inho-ka t t mekesstako] tulessta

a'. Chelswu-nun [Inho-ka chayk-ul hantal-ul ilkesstako] mitnunta
   C.-Top I.-Nom book-Acc one.month-Acc read believe
   “Chelswu believed that Inho read books for one month.”

b'. **Chayk-ul** Chelswu-nun [Inho-ka hantal-ul t ilkesstako] mitnunta

c'. ? **Hantal-ul** Chelswu-nun [Inho-ka t chayk-ul ilkesstako] mitnunta

d'. **Chayk-ul hantal-ul** Chelswu-nun [Inho-ka t t ilkesstako] tulessta
15) Relativization

a. [Inho-ka seysikan-ul t mekun] pap
   I.-Nom three.hours-Acc ate meal
   “The meal that Inho was eating for three hours.”

b. [Inho-ka t pap-ul mekun] seysikan
   I.-Nom meal-Acc ate three.hours
   “The three hours during which Inho had a meal.”

a'. [Inho-ka hantal-ul t ilkun] chayk
   I.-Nom one.month-Acc read book
   “The book that Inho was reading for one month.”

b'. [Inho-ka t chayk-ul ilkun] hantal
   I.-Nom book-Acc read one.month
   “The one month during which Inho was reading books.”

5. Derived Delimiting Accusatives

The Derived Delimiting Accusatives, the ‘stacked’ version of Delimiting Accusatives, show the same pattern. They are free to move.
16) Simplex sentences.

a. Chelswu-ka (1) Yenghi-eykey-lul (2) ton-ul (3) cwuessta
   C.-Nom Y.-dative-Acc money-Acc gave
   “Chelswu gave Yenghi some money.”

b. any order of 1,2,3 is possible

(17) further shows that other forms of Delimiting Accusative also pattern together.

17) Simplex sentences

a. Chelswu-ka (1) Yenghi-{lul} (2) ton-ul (3) cwuessta
   C.-Nom Y.-Acc money-Acc gave
   “Chelswu gave Yenghi some money.”

b. any order of 1,2,3 is possible

Likewise, the grammaticality judgment of (18) is equally true when the Delimiting Accusative Yenghi-eykey-lul take other morphological forms such as Yenghi-lul or Yenghi.
18) Complex sentences

a. Inho-nun [Chelswu-ka Yenghi-eykey-lul ton-ul cwuesstako] mitessta
   I.-Top C.-Nom Y.-dative-Acc money-Acc gave believed
   “Inho believed that Chelswu gave Yenghi some money.”

b. Yenghi-eykey-lul Inho-nun [Chelswu-ka t ton-ul cwuesstako] mitessta

c. Ton-ul Inho-nun [Chelswu-ka Yenghi-eykey-lul t cwuesstako] mitessta

d. Yenghi-eykey-lul ton-ul Inho-nun [Chelswu-ka t t cwuesstako] mitessta

e. Ton-ul Yenghi-eykey-lul Inho-nun [Chelswu-ka t t cwuesstako] mitessta

19) Relativization

a. [Chelswu-ka t ton-ul cwun] Yenghi
   C.-Nom money-Acc gave Yenghi
   “Yenghi to whom Chelswu gave some money.”

b. [Chelswu-ka Yenghi-eykey-lul t cwun] ton
   C.-Nom Y.-dative-Acc gave money
   “The money that Chelswu gave Yenghi.”
6. **Implications**

As indicated in the beginning of the appendix, the patterns observed in the movements of nominals have the following implications. First, the uniform syntactic behavior between Predicated Nominatives, Delimiting Accusatives and their corresponding ‘stacked’ versions supports the analysis given in this chapter. Second, the fact that both nominals can in fact move in Part-whole constructions shows that part-nominals are not inherently syntactically different from whole-nominals.

The most interesting discovery in the movements in the Multiple Case Constructions is that the c-command relation must hold between nominals of Multiple Case Constructions involving Predicated Nominatives and Part-whole Nominatives/Accusatives but not Delimiting Accusatives. First of all, let us ask why there should be such a distinction among Multiple Case Constructions: what do Predicated Nominatives and Part-whole Constructions have in common that Delimiting Accusatives do not? The answer may lie in the fact that the former involves some form of predication relation while the latter does not. Predicated Nominatives are ‘predicated’ of the sentential predicate. In Part-whole Constructions, part-nominals participate in forming a compositional ‘predicate’ with its predicate head. Thus, both Predicated Nominatives and nominals in Part-whole Constructions are interpreted in relation with other elements, especially nominals, in the same clause. In other words, their syntactic relation with other elements in the clause is crucial for the interpretability. On the contrary, Delimiting
Accusatives are not interpreted in relation with other nominals in the clause. All they have to do is to delimit an event described by the verb.

The movement patterns further suggest that the Syntax-Semantics mapping involves a certain syntactic integrity, such as the c-command relation, for the purpose of interpretation. In light of the fact that the c-command relation is a vital part of Binding Theory, which I assume is pertinent to LF interpretation, this is not a surprising result at all. In fact, that their syntactic positions are subject to the c-command relation is a further indication that the licensing of nominals in Multiple Case Constructions crucially depends upon LF legibility.

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52 This result is exactly same as that of Brunson (1992) who deals with thematic discontinuity which occurs when the refererence of a single thematic role is expressed by several syntactic constituents. Brunson proposes a syntactic constraint on thematic disconstituents, as shown. Note that these constituents must respect the m-command relation.

Syntactic Constraint on Thematic Discontinuity Brunson (1992:203)

X₁ ... Xₙ are constituents expressing the role θᵣ, with

X₁θᵣ ⊳ θ₁ X₂θ₁ ⊳ θ₂ ... ⊳ θₙθₙ

iff Xₖ m-commands Xₖ₊₁, for 1 ≤ j ≤ n-1

(where X₁θᵣ ⊳ θ₁ X₂θ₁ is true iff X₁ is coarser-grained with respect to the role θ₁ than X₂.)
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