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SYNTACTIC FOCUS MOVEMENT AND ELLIPSIS: A MINIMALIST APPROACH

Jeong-Seok Kim, Ph.D.

The University of Connecticut, 1997

The goal of this thesis is to explore focusing effects in the phenomenon of ellipsis within a minimalist framework (Chomsky 1993, 1995).

In chapter 2, I explore Pseudogapping constructions in English vs. Korean/Japanese. Lasnik (1995, 1997) argues that English Pseudogapping is VP ellipsis, with the remnants having moved to Spec of Agr in overt syntax, in a split VP structure (Koizumi 1995). In the first part, I examine Lasnik's theory. In the second part, I observe that there is a similar construction to English Pseudogapping in Korean/Japanese. I argue that pseudogapped remnants in Korean/Japanese move out of the ellipsis site via syntactic focus movement. Given the standard minimalist assumption that all movements are driven by feature checking, focus movement will also have to be driven by a feature, [+focus]. I define [+focus] as a formal feature which represents accented new information. I assume that Foc(us)P is placed above TP in Korean/Japanese, and argue that the focused constituent undergoes syntactic

focus movement. In short, I argue that Korean/Japanese Pseudogapping is syntactic focus movement followed by VP ellipsis.

In chapter 3, I investigate Sluicing in Japanese/Korean vs. English. I argue that Japanese/Korean Sluicing is syntactic focus movement followed by TP ellipsis or VP ellipsis. The second part is devoted to Sluicing in English. Based on the observation that Sluicing is allowed only in interrogative WH-clauses, I argue that English Sluicing is syntactic focus movement plus WH-movement followed by TP ellipsis.

In chapter 4, I explore Gapping constructions in Korean/Japanese vs. English. I argue that Gapping in Korean/Japanese is syntactic focus movement followed by TP ellipsis. In the second part, I argue that Gapping in English is syntactic focus movement followed by TP ellipsis. In sum, I argue that Gapping in these languages is an instance of incomplete TP ellipsis, with the remnants having moved out of the ellipsis site via syntactic focus movement.

**SYNTACTIC FOCUS MOVEMENT AND ELLIPSIS:
A MINIMALIST APPROACH**

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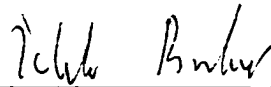
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Chapter I

Introduction

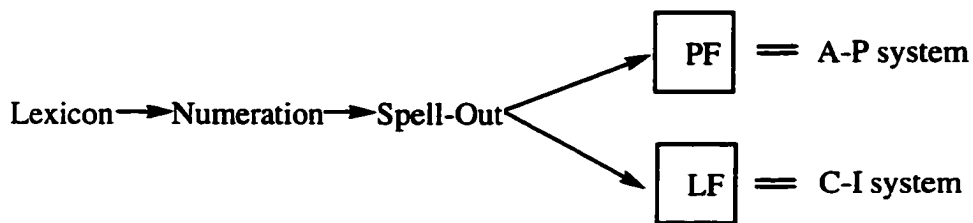
1.1 Minimalist Assumptions

Since the mid 1950s, Noam Chomsky has endeavored to develop Universal Grammar in a more optimal way, arguing that an innate linguistic knowledge exists. That is, Chomsky argues that children are born with a genetically encoded language faculty. This is why children are able to acquire a given language relatively easily in an impoverished environment. For the past few decades, it has been believed that Universal Grammar is composed of a few universal principles (that restrict the class of attainable grammars and constrain their form) and language-specific parameters (that have to be fixed by experience), and that the interaction of these principles and parameters is responsible for different manifestations of each language.

Economy considerations have always played a role in the tradition of generative grammar. Recently, Chomsky has increasingly focused on developing the concept of *Economy* in linguistic theory. The Economy principles, some general consideration of simplicity, play a crucial role in the minimalist program of Chomsky (1991, 1993, 1994, 1995) and Chomsky & Lasnik (1993). The minimalist program is based on the

notion of conceptual necessity. Within this model, the independent levels of D-structure and S-structure, which are postulated in the pre-minimalist framework (Chomsky 1981, 1986a, 1986b), does not have any linguistic significance. The basic model of the system is illustrated below:

(1)



Language is believed to consist of a lexicon and a computational system. The lexicon lists all the lexical items of a language including their idiosyncratic properties. Lexical items are selected from the lexicon by Numeration, and are then inserted into the computational system. The computational system, which generates each linguistic expression, consists of the derivation from Numeration to the LF interface. More precisely, the derivation from Numeration to Spell-Out (= a point in the derivation where splitting occurs, leading to the two interface levels, PF and LF) is called *overt syntax*, and the derivation from Spell-Out to the LF interface is called *covert syntax*. PF is the interface between the language faculty and the articulatory-perceptual system. LF is the interface between the language faculty and the conceptual-intentional system. The operations of the computational system that produce linguistic expressions must be optimal; superfluous steps in a derivation are prohibited (derivational economy). Similarly, unnecessary symbols are not allowed at interface levels, leaving only legitimate PF and LF objects (representational economy).

Since the mid 1980s, it has been argued that every movement operation must be motivated by some requirement (the last resort view of movement). In the minimalist framework, this claim is fulfilled by a feature checking mechanism. Specifically, Chomsky (1993) proposes that the morphological features of a linguistic expression must be checked by functional head morphemes with the matching features. If all the relevant features are checked, the derivation converges; otherwise, it crashes. These features are subdivided into two groups, depending on whether their strength is strong or weak. According to Chomsky (1993), an unchecked strong feature is an ill-formed object in PF, causing a PF crash.¹ As a result, it must be checked off before it reaches PF. On the other hand, a weak feature is assumed not to cause a PF crash. Thus, it need not be checked off in overt syntax. Consequently, it is not allowed to be checked off earlier in the derivation by Chomsky's (1993) Procrastinate, which favors covert over overt operations. Chomsky (1995) further argues that since movement is always triggered by the need for formal features to be checked, all else being equal, only formal features move. When movement is overtly triggered by a strong feature, the considerations of PF interpretability require that entire categories move via a type of pied piping since lexical items with scattered features cannot be interpreted or pronounced at PF. However, when movement is covert, PF requirements are inoperative so that in LF the operation Move applies only to formal features.²

The goal of this thesis is to explore focusing effects in the phenomenon of ellipsis within a minimalist framework. Specifically, the nature of prior movement in ellipsis and its relevance to the licensing of ellipsis will be extensively discussed. I will confine my discussion of ellipsis to Pseudogapping, Sluicing, and Gapping.

1.2 Outline of the Thesis

Ellipsis is generally understood as a process which affects a phrase under identity with an antecedent phrase.³ There are two approaches to ellipsis. One is the interpretative approach; the elided part is generated as a phonetically null element and a copying process provides an interpretation to the elided part at LF (e.g., Wasow 1972, Williams 1977). The other is the deletion approach; the elided part is generated as a full category and then is deleted under identity with the antecedent part (e.g., Sag 1976).

As pointed out in Lasnik (1995c), given Chomsky's (1995) Move-F, no LF operation can create a relevant configuration required for ellipsis since only formal features move in LF by economy. In order for an operation to create an ellipsis site, it must be overt rather than covert. If the configuration licensing ellipsis is created before Spell-Out, then ellipsis could be a PF deletion phenomenon. This is the basic tenet that I will assume throughout the thesis. In general, this thesis attempts to give a unified account of certain ellipsis phenomena as prior movement of remnants followed by PF deletion of XP, an account which is consistent with the claim (Chomsky & Lasnik 1993) that ellipsis involves a PF deletion process rather than an LF copying one.

In chapter 2, I explore Pseudogapping constructions in English vs. Korean/Japanese. I first examine Lasnik's (1995c, 1997a) analysis of English Pseudogapping. Agreeing with Jayaseelan's (1990) core idea that an ellipsis rule affects only a continuous portion of the structure, Lasnik argues that English Pseudogapping is PF deletion of VP, with the remnants having moved to Spec of Agr in overt syntax, in a split VP structure (Koizumi 1993, 1995). I confirm that Lasnik's theory is essentially correct that Pseudogapping results from VP ellipsis. In the second part, I explore several ellipsis phenomena in Korean/Japanese focus constructions. First, I observe that there are constructions in Korean/Japanese, similar to English

Pseudogapping constructions. I show that movement to Spec of Agr is not a good candidate for extracting pseudogapped remnants in Korean/Japanese. Instead, I argue that pseudogapped remnants in Korean/Japanese move out of the ellipsis site via syntactic focus movement. Given the standard minimalist assumption that all movements are driven by feature checking, focus movement will also have to be driven by a feature, which I call [+focus]. I define [+focus] as a formal feature which represents accented new information. I assume that Foc(us)P is placed above TP in Korean/Japanese, and argue that the focused constituent moves to Spec of FocP⁴. In short, I argue that Korean/Japanese Pseudogapping is focus movement followed by PF deletion of VP. In addition, I observe that there is a potential candidate in Korean for Stripping, and argue that Korean Stripping is focus movement followed by PF deletion of TP. I suggest that the licensing condition for VP ellipsis and TP ellipsis may differ. More precisely, I suggest that VP ellipsis is licensed by an auxiliary verb with a [+tense] feature and that TP ellipsis is licensed by a focus head with a [+focus] feature.

In chapter 3, I investigate Sluicing in Japanese/Korean vs. English. In the first part, I discuss Sluicing in Japanese/Korean. I first examine two competing analyses, a deletion analysis (Takahashi 1994a) and a cleft analysis (Nishiyama, Whitman, & Li 1996), and then, explore a new analysis in a minimalist framework. I argue that Japanese/Korean Sluicing is overt focus movement followed by TP deletion or VP deletion. I observe that there are two types of Sluicing in Japanese/Korean: TP Sluicing is licensed by a [+focus] head and VP Sluicing is licensed by a [+tense] head. I argue that VP Sluicing is a byproduct of the fact that both subject and object remain inside VP overtly and that the stranded tense is supported by expletive *da* 'be'. The second part is devoted to Sluicing in English. Based on the observation that Sluicing is

allowed only in interrogative WH-clauses, I argue that English Sluicing is focus movement plus WH-movement followed by TP deletion.

In chapter 4, I explore Gapping constructions in Korean/Japanese vs. English. In the first part, I explore Korean/Japanese Gapping constructions. As for previous research, I examine Saito's (1987) right node raising analysis, Abe & Hoshi's (1993, 1995) LF copying analysis, and Sohn's (1994b) PF deletion analysis. I extend Sohn's analysis within a minimalist framework. I argue that Gapping in Korean/Japanese is (leftward) focus movement followed by PF deletion of TP. In the second part, I investigate the Gapping construction in English. I do not attempt to exhaust the range of Gapping and its properties. Instead, I focus on the apparent non-constituency of Gapping. As for previous research, I examine Larson's (1990) analysis and Johnson's (1994) analysis. I argue that Gapping in English is (rightward) focus movement followed by PF deletion of TP. In sum, I argue that Gapping in these languages is an instance of incomplete TP ellipsis, with the remnants having moved out of the ellipsis site via focus movement.

Given Chomsky's (1995) Move-F, the movement of remnants in ellipsis must be motivated by strong feature checking. Rejecting Chomsky's (1995) suggestion that feature strength is solely a formal property of functional heads, I argue that in some configurations, a strong feature resides in the moved phrases rather than the target. In this case, two options are available to eliminate the strong feature. One is to be checked by overt raising to the target. The other is to stay in an ellipsis site, consequently being eliminated by PF deletion (Lasnik 1995c, 1997a, b, c). Assuming that ellipsis is a PF deletion process, I argue that Pseudogapping, Sluicing, and Gapping provide potential evidence for Chomsky's (1993) view of strong features; an unchecked strong feature causes a derivation to crash at PF.

Regarding the multiple remnants in Pseudogapping, Sluicing, and Gapping, which are observed in Korean/Japanese, but not in English, I propose that the difference between these languages results from the locus of a strong feature. I argue that English ellipsis normally does not tolerate multiple remnants since the strong feature resides only in the target, while Korean/Japanese ellipsis allows multiple remnants since the strong feature resides in the moved items as well as in the target. In order to explain the phenomenon of multiple remnants in Korean/Japanese ellipsis, I propose a new checking mechanism, *Checking-through-Adjunction*. Roughly put, a lower phrase moves to a higher phrase in order to check off its strong feature against the matching strong feature of the latter, through adjunction. Although the two phrases successfully checked off their formal inadequacy, their complex must raise higher to check off the strong feature of the target. Putting aside the issue of which feature is responsible for multiple remnants, I show that a certain difference between Korean/Japanese and English can be reduced to a locus of strong features.

Notes to Chapter I

¹ Several different views have been advanced on the technical aspects of strong feature checking. Unlike in Chomsky (1993), Chomsky (1994) argues that failure to check a strong feature before Spell-Out leads to an LF crash. In an analysis of English Pseudogapping, Lasnik (1995c) suggests that an unchecked strong feature may cause both PF and LF crash. Instead of regarding a strong feature as an ill-formed object at the interface levels, Chomsky (1995) defines strong features derivationally. More precisely, he defines strong features as objects that are not tolerated by the derivation and thus must be checked off immediately upon insertion into the derivation.

² Procrastinate was postulated in Chomsky & Lasnik (1993) and Chomsky (1993) to ensure that operations are delayed as late as possible. However, this principle is derivable from Move-F. In Chomsky's (1995) Move-F, LF movement is always cheaper than overt movement in that it affects less material. In other words, since covert movement is more economical than overt movement, the former should be preferred to the latter (cf. Bošković 1997c).

³ I use *ellipsis* as a neutral term between *copying* and *deletion*.

⁴ Focus movement has been claimed for languages such as Papiamentu (= Papiamentu, a Spanish-based Creole spoken on Aruba, Bonaire, and Curaçao in the Netherlands Antilles) (Muysken 1978), Aghem (= a Grassfields-Bantu language) (Hyman 1979, Watters 1979), Arabic (Al-Sweet 1983), Hungarian (Horvath 1986, Rochemont 1986, Kiss 1987, 1995), Basque (Ortiz de Urbina 1986), Chinese (Hoh & Chiang 1990), Malayalam (Jayaseelan 1996), Korean (H. S. Choe 1988, 1994, 1995), and Serbo-Croatian (Stjepanović 1995, Bošković 1996a, 1997b), among others.

Chapter II

Extracting Pseudogapped Remnants

2.1 Introduction

In this chapter, I explore Pseudogapping constructions in English vs. Korean/Japanese within a minimalist framework (cf. Chomsky 1991, 1993, 1994, 1995, Chomsky & Lasnik 1993).¹

Let us first define the phenomena. (1) is an instance of Gapping (Ross 1970).

(1) John eats apples, and Mary ~~eats~~ bananas

A property of Gapping is that it has a right side remnant. (2) shows VP ellipsis.

(2) John eats apples, and Mary does too

One property of VP ellipsis is that it has an Aux(iliary) verb. (3) illustrates Pseudogapping (Levin 1978, 1979/1986).

(3) John eats apples, and Mary does ~~eat~~ bananas

Pseudogapping has a property of Gapping in that it has a right side remnant. It is also reminiscent of VP ellipsis because it has an Aux.

Let us turn to Korean/Japanese. Descriptively speaking, English-type VP ellipsis does not obtain in Korean/Japanese:

(4) *John-i sakwa-lul mek-nunta (kuliko) Mary-ka [e] (ha)-nta
 -Nom apple-Acc eat-Pres and -Nom do-Pres
 *John-ga ringo-o tabe-ru (soshite) Mary-ga [e] (su)-ru
 -Nom apple-Acc eat-Pres and -Nom do-Pres
 ‘John eats apples, and Mary does too’

(4) is bad even if expletive *ha* or *su* ‘do’ appears after the elliptic VP. However, null VP is allowed with expletive *y(a)* or *da* ‘be’:^{2, 3}

(5) John-i sakwa-lul meknunta (kuliko) MARY-to [e] ya
 -Nom apple-Acc eats and -Foc is
 John-ga ringo-o taberu (soshite) MARY-mo [e] da
 -Nom apple-Acc eats and -Foc is
 ‘John eats apples, and MARY does too’

In (5) the second conjunct contains a focused remnant, marked by the focus marker *to* or *mo* ‘also’, and the expletive verb *y(a)* or *da*. So far, this type of construction has

not been discussed in the literature. I claim that (5) is an instance of Pseudogapping in Korean/Japanese in the sense that it has a remnant and an expletive verb.⁴

This chapter is organized as follows. In the first part, I examine Lasnik's (1995c, 1997a) analysis of English Pseudogapping. Rejecting the possibility of an ellipsis rule affecting a discontinuous portion of the structure, I confirm Jayaseelan's (1990) and Lasnik's (1995c, 1997a) proposals that Pseudogapping results from VP ellipsis, with the remnant having moved out of the VP via some operation. In the second part, I explore ellipsis in Korean focus constructions, consistent with the minimalist perspective. In section 2.3.1, I discuss the so-called main-verb-only constructions (= null object constructions or VP ellipsis in disguise). Along the lines of Hoji (1994) for Japanese and M.-K. Park (1994) for Korean, I argue that Korean/Japanese main-verb-only constructions do not involve VP ellipsis, contrary to Otani & Whitman (1991). In section 2.3.2, I explore how Korean verbal morphology is formed. In section 2.3.3, I speculate on the agreement projection in Korean. Section 2.3.4 deals with Korean Pseudogapping constructions. I argue that good pseudogapped remnants have to undergo syntactic focus movement out of the (highest) VP, in a split VP structure, proposed by Koizumi (1993, 1995) and further defended by Lasnik (1995b, c, 1997a). In section 2.3.5, I explore several other ellipsis phenomena in relation to Pseudogapping.

2.2 Pseudogapping in English is Incomplete VP Ellipsis

Jayaseelan (1990) analyzes Pseudogapping as VP ellipsis with a prior movement of the remnant out of VP. This prior movement is performed by Heavy NP Shift. As an illustration, consider again the following:

- (6) a. John eats apples, and Mary does ~~eat~~ bananas
 b. ..., and Mary does [_{VP} [_{VP} ~~eat~~ t_i] bananas_i]

According to Jayaseelan, in the second conjunct, *Mary* moves to Spec of IP for Case reason and *bananas* moves out of VP via Heavy NP Shift. If the lower VP is deleted in PF, (6a) is derived. Jayaseelan calls (6a) a case of *incomplete VP ellipsis*.

For example, this analysis would explain why Pseudogapping cannot strand a preposition, since Heavy NP Shift cannot do so, either:

- (7) a. *John stood near Mary, and Bill did ~~stand near~~ Susan
 b. *Tom stood near t_i yesterday [every one of the woman we'd been discussing]_i

However, Heavy NP Shift analysis of Pseudogapping cannot be maintained, as argued by Lasnik (1995c):

- (8) a. ?John gave Bill a lot of money, but Mary will ~~give~~ Susan ~~a lot of money~~
 b. *John gave t_i a lot of money [the fund for the preservation of VOS languages]_i
 (9) a. *John gave Bill a lot of money, but Mary will ~~give Bill~~ a lot of advice
 b. John gave Bill t_i yesterday [more money than he had ever seen]_i

As shown in (8), the first object in a double object construction is a good Pseudogapping remnant but it cannot be dislocated by Heavy NP Shift. Conversely, in (9), the second object is a poor remnant in Pseudogapping but it may undergo Heavy NP Shift.

In this light, Lasnik (1995c, 1997a) presents an alternative analysis within a minimalist framework. More precisely, adopting a split VP hypothesis (Koizumi 1993, 1995), Lasnik (1995c) analyzes English Pseudogapping as VP deletion in the PF component, preceded by the overt raising of a complement to Spec of Agro. His analysis is motivated on the observation that the good remnant in the following Pseudogapping examples is accusative Case-marked:

- (10) John will select me, and Mary will ~~select~~ you
- (11) a. ?John gave Bill a lot of money, but Mary will ~~give~~ Susan ~~a lot of money~~
 b. *John gave Bill a lot of money, but Mary will ~~give~~ ~~Bill~~ a lot of advice
- (12) a. ?John gave a lot of money to Bill, and Mary will ~~give~~ a lot of advice ~~to~~
 ~~Bill~~
 b. ?*John gave a lot of money to Bill, and Mary will ~~give~~ ~~a lot of money~~ ~~to~~
 Susan

In a simple transitive construction as in (10), the remnant is the direct object. (11) shows that the good remnant in a double object construction is the first object. As shown in (12), the good remnant in a dative construction is also the direct object.

Under the classic minimalist framework (Chomsky 1993), raising of an accusative NP to Spec of Agro is covert, taking place in LF. Hence, the movement to Spec of Agro would favor an LF copying theory of ellipsis since the configuration required for ellipsis is not created overtly. But, given Chomsky's (1995) Move-F, the necessary structure would not even be created in covert syntax since by economy only formal features, not an entire constituent, move in LF. In order for a movement to create an ellipsis site, it must be overt rather than covert (Lasnik 1995b, c). Note that if the

dislocation movement is covert, only LF copying is viable. But, if the movement is overt, PF deletion is viable too.

In order to place the following discussion into perspective, I briefly review the split VP structure. Koizumi (1993, 1995) argues that there are two VPs in a transitive verb construction. That is, two VPs are separated by some functional projection such as *Agro*. The external argument is generated within the higher VP and the internal arguments are generated within the lower VP. Both subject and object move overtly. If the main verb moves overtly to a higher V position, the Subject-Object-Verb order is derived. Adopting the core idea of Koizumi's split VP structure, Lasnik (1995c, 1997a) motivates overt NP raising and overt V raising in the following way: the overt raising of an NP is driven by the strong EPP feature that resides in *Agr*. He assumes that *Agro* and *Agrs* are really the same category (cf. Chomsky 1991, 1993). The consequence of this proposal is that if the strong EPP feature resides in *Agrs*, then it does in *Agro* too. Then, the overt movement of both subject and object can be regarded as the same phenomenon, that is, the checking of the strong EPP feature in *Agrs* and *Agro*.⁵ Regarding overt V raising to a higher V position, Lasnik proposes that θ -features of a verb belong to formal features and that they are strong features which trigger the overt raising of the verb itself (cf. Bošković & Takahashi 1995).⁶ In sum, in Lasnik (1995c, 1997a), the necessary mechanism for removing the accusative NP from the VP is the overt movement of an object to Spec of *Agro*. Then, Pseudogapping can be an instance of VP deletion.

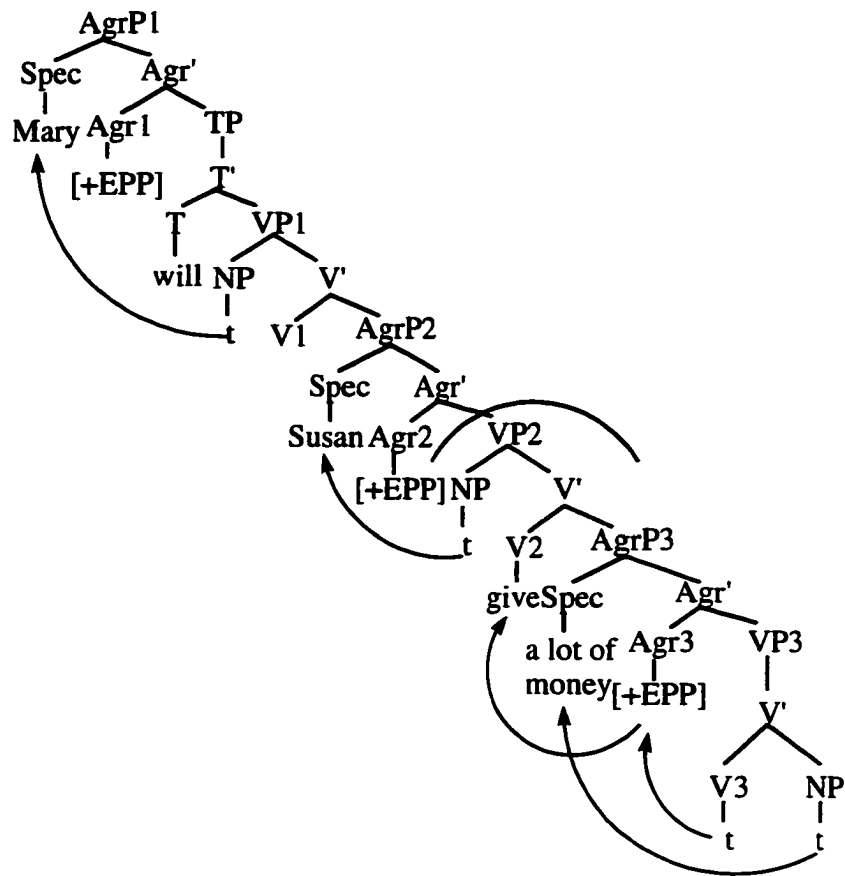
Let us now examine Lasnik's (1995c, 1997a) account for (10), which is reintroduced as (13a).

illustrated in (13b). Suppose now that the verb remains within VP2. Suppose also that the strength of θ -features resides in the moved item, that is, the verb.⁷ If VP2 is deleted in PF, the unchecked strong feature in V is eliminated by a PF deletion operation.

In sum, Lasnik (1995c, 1997a) argues that a strong feature is eliminated in two different ways. One is to be checked by a checking operation. The other is to be contained in an ellipsis site. PF deletion could eliminate the unchecked strong feature. Hence, Pseudogapping provides potential evidence for Chomsky's (1993) view that an unchecked strong feature in overt syntax causes a derivation to crash at PF if ellipsis is a PF deletion process (Chomsky & Lasnik 1993).⁸

Let us turn to double object constructions. Consider first (11a), which is reintroduced as (14a).

- (14) a. ?John gave Bill a lot of money, but Mary will ~~give~~ Susan a lot of money
 b.



In (14b) there are three VPs and three AgrPs, since there are three arguments.⁹ These three arguments undergo overt movement to Spec of Agr to check the strong EPP feature residing in Agr. Once again, we need to assume that there is a step in which only arguments have moved out of each VP and the verb has not yet moved. If VP2 deletes in PF, the string in (14a) is derived.

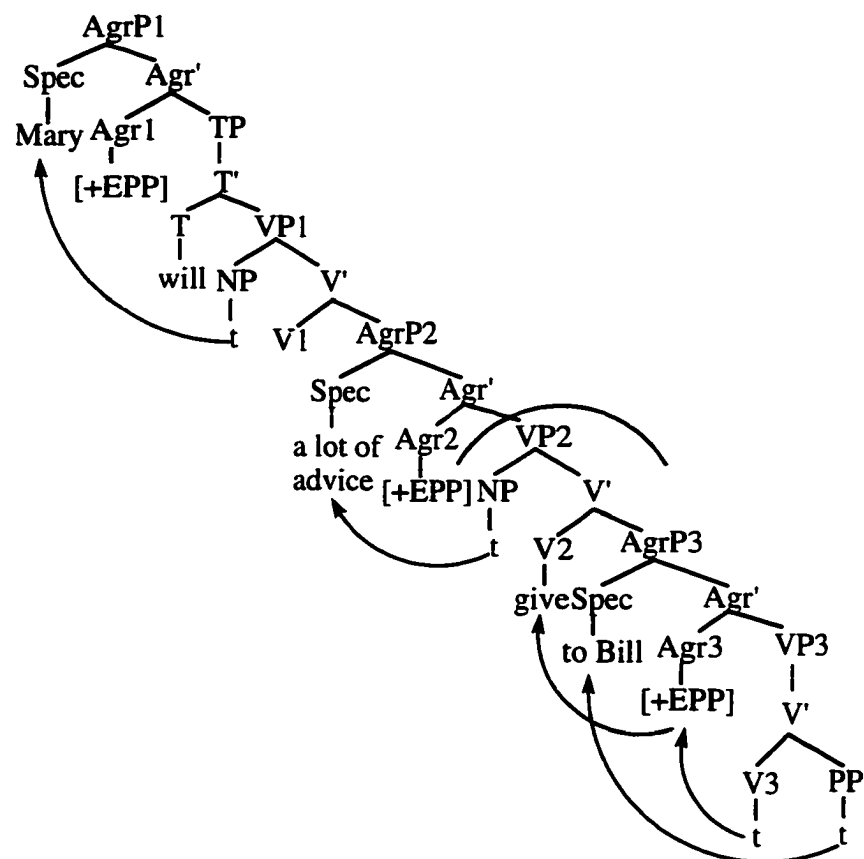
Consider now (11b), which is reintroduced as (15).

- (15) *John gave Bill a lot of money, but Mary will ~~give~~ Bill a lot of advice

The ungrammaticality of (15) also falls under Lasnik's (1995c) analysis. Refer back to the representation in (14b). Given a split VP structure, the subject *Mary* would originate within the highest VP and the indirect object *Bill* would originate higher than the direct one *a lot of advice*. It is not possible to delete any constituent which excludes the direct object *a lot of advice* but includes the indirect object *Bill*.

Let us now examine dative constructions. Consider first (12a), which is reintroduced as (16a).

- (16) a. ?John gave a lot of money to Bill, and Mary will give a lot of advice to Bill
b.



One might wonder what drives the movement of the PP complement *to Bill*. Lasnik (1995c) suggests that PP complements, just like NP complements, raise to Spec of Agro in order to check the EPP feature in Agro. Given that the subject begins within a higher VP and moves to Spec of Agrs to check the EPP in Agrs, Lasnik claims that the complement (NP or PP) which originates within a lower VP must move to Spec of Agro to check the EPP in Agro.¹⁰ As shown in (16b), deletion of VP2 would result in the string (16a).

Let us turn to (12b), which is reintroduced as (17).

- (17) ?*John gave a lot of money to Bill, and Mary will ~~give a lot of money~~ to Susan

This is ruled out by the assumption that only constituents can be deleted; there is not any constituent which includes a NP complement but excludes a PP complement since the NP complement begins higher than the PP complement.

Next, let us compare (18a) with (11a), which is reintroduced as (19a).

- (18) a. *John gave Bill a lot of money, but Mary will give Susan ~~a lot of money~~

- b. ... [_{AgrP1} Mary₁ Agr₁ [_{TP} will [+tense] [_{VP1} t₁ give [_{AgrP2} Susan₂ Agr₂ [_{VP2} t₂ t_{v2} [_{AgrP3} ~~a lot of money~~₃ Agr₃ [_{VP3} t_{v3} t₃]]]]]]]]]

- (19) a. ?John gave Bill a lot of money, but Mary will ~~give~~ Susan ~~a lot of money~~

- b. ... [_{AgrP1} Mary₁ Agr₁ [_{TP} will [+tense] [_{VP1} t₁ V₁ [_{AgrP2} Susan₂ Agr₂ [_{VP2} t₂ V₂ [_{AgrP3} ~~a lot of money~~₃ Agr₃ [_{VP3} ~~give~~ t₃]]]]]]]]]

As in (18b), suppose a derivation where the verb moves to a higher V position out of its lower VP. If VP2 is deleted in PF, then (18a) should be good, contrary to fact. In order to circumvent this undesirable possibility, Lasnik (class lecture, 1996 Spring) suggests a VP ellipsis constraint such that “VP ellipsis is prohibited if VP has lost its head.” However, Lasnik (1997a) rejects this possibility, on the ground that a number of languages such as Hebrew (Doron 1990), Portuguese (Martins 1994), and Irish (McCloskey 1991), which are overt V raising to I languages, allow VP ellipsis without its head V. Lasnik (1997a) suggests that the licensing condition for VP ellipsis may solve the potential problem in (18). Following Martin (1996), suppose that the licensing head of VP ellipsis is an Infl head with the [+tense] feature. In good cases such as (19a), there is no intervening head with substantive content between the VP ellipsis licenser (= Tense) and the elliptic VP. On the other hand, in bad cases such as (18a), a potentially governing substantive head (= the lexical verb *give*) intervenes between the crucial VP ellipsis licenser (= Tense) and the elliptic VP. In sum, Lasnik (1997a) suggests that some version of relativized minimality plays a role in differentiating (18a) and (19a).¹¹

2.3 Pseudogapping in Korean/Japanese

In what follows, I will investigate Pseudogapping constructions in Korean/Japanese, and show how they are reduced to VP ellipsis constructions by the application of Lasnik’s (1995c) analysis of Pseudogapping in English. I note that English Pseudogapping and Korean/Japanese Pseudogapping, which are seemingly unrelated, pattern together and could be given a unified account; VP ellipsis preceded by a prior

movement, although some parametric differences are involved between these languages.

2.3.1 Main-Verb-Only Constructions in Korean/Japanese

In this section, I will examine previous analyses of the so-called *main-verb-only construction* in Korean. It has been controversial whether this construction involves VP ellipsis (see Huang 1991 for Chinese; Otani & Whitman 1991, Hoji 1994, Takahashi 1996 for Japanese; M.-K. Park 1994 for Korean). Consider first English VP ellipsis examples:

- (20) a. Mary meets Bill, and Sue does [_{VP} e] too
 b. Mary meets Bill, but Sue does not [_{VP} e]

One important property of VP ellipsis is that it has an Aux verb like *do* as in (20). However, the corresponding VP ellipsis does not seem to obtain in Korean, as follows:

- (21) a. *Mary-ka Bill-ul manna-nta kuliko Sue-ka [_{VP} e] (ha)-nta
 -Nom -Acc meet-Pres and -Nom do-Pres
 ‘Mary meets Bill, and Sue does too’
 b. *Mary-ka Bill-ul manna-nta kulena Sue-ka [_{VP} e] ani-(ha)-nta
 -Nom -Acc meet-Pres but -Nom not-do-Pres
 ‘Mary meets Bill, but Sue does not’

In the Korean counterpart, *ha* ‘do’ cannot appear alone with the preceding main verb elided. In other words, null VPs are not allowed before Aux *ha*. To obtain grammatical sentences corresponding to ungrammatical sentences in (21), we must use main verbs without *ha*-support:

- (22) a. Mary-ka Bill-ul manna-nta kuliko Sue-ka *(manna)-nta
 -Nom -Acc meet-Pres and -Nom meet-Pres
 ‘Mary meets Bill, and Sue meets (Bill)’
 b. Mary-ka Bill-ul manna-nta kulena Sue-ka ani-*(manna)-nta
 -Nom -Acc meet-Pres but -Nom not-meet-Pres
 ‘Mary meets Bill, but Sue does not meet (Bill)’

This state of affairs in Korean is in clear contrast to that in English, where *do* appears alone in affirmative and negative sentences where null VPs obtain.

This is somewhat surprising in that in other contexts, Korean has an option of salvaging stranded inflectional affixes, that is, *ha*-support, which is comparable to *do*-support in English (cf. M.-K. Park 1994):

- (23) a. VP focus constructions
 John-i ku chayk-ul ilk-ki-nun *(ha)-nta
 -Nom the book-Acc read-Nm-Top do-Pres
 ‘John at least reads the book’
 b. Negative constructions
 John-i ku chayk-ul ilk-ci ani-*(ha)-nta
 -Nom the book-Acc read-Nm not-do-Pres

'John doesn't read the book'

c. VP fronting constructions

[_{VP} Ku chayk-ul ilk]-ki-nun John-i [_{VP} e] *(ha)-nta
 the book-Acc read-Nm-Top -Nom do-Pres
 'John reads the book'

(23) shows that the impossibility of VP ellipsis in Korean is not due to a lack of strategy supporting morphologically stray affixes.

However, Otani & Whitman (1991) argue, following Huang's (1991) work in Chinese, that VP ellipsis, analogous to VP ellipsis in English, exists in Japanese (and Korean). Assuming that Korean/Japanese are overt V raising to I languages, Otani & Whitman (1991) claim that a null VP exists in Korean/Japanese. Their claim is based on the availability of a sloppy reading in a main-verb-only construction in Korean. Consider first an English VP ellipsis case:

(24) John threw away his letter, and Mary did [_{VP} e] too

In (24) the second conjunct is ambiguous. It has a *strict (referential)* reading such that 'Mary threw away John's letter.' In addition, it has a *sloppy (bound-variable)* reading such that 'Mary threw away her own letter.' Such ambiguity is also found in a main-verb-only construction in Korean:

(25) a. John-i [caki-uy pyenci]-lul periessta
 -Nom self-Gen letter-Acc threw away
 'John threw away his own letter'

- b. Mary-to [e] periessta
 -Foc (also) threw away
 = 'Mary also threw away John's letter'
 = 'Mary also threw away Mary's letter'

(25b) has a sloppy reading, just as the second conjunct of (24) does.

However, Hoji (1994) proposes that what is considered as the sloppy reading in Korean/Japanese, reported in Huang (1991) and Otani & Whitman (1991), is not a genuine sloppy reading, compared to the corresponding reading available in English VP ellipsis. Consider the following:

- (26) a. John-un caki-lul wuilohayssta
 -Top self-Acc consoled
 'John consoled himself'
 b. Bill-to [e] wuilohayssta
 -Foc consoled
 = 'Bill consoled John'
 ≠ 'Bill consoled Bill'

If (26b) is analyzed as an instance of VP ellipsis, it should be construable as (28), just as in the English example (27b):

- (27) a. John consoled himself
 b. Bill did too

- (28) Bill-to caki-lul wuilohayssta
 -also self-Acc consoled
 ‘Bill consoled himself too’

In fact, however, (26b) could not be construed as (28).¹² Agreeing with Hoji (1994), M.-K. Park (1994) presents two other arguments, showing that VPs in Korean cannot be null.

One piece of supporting evidence, showing that VPs of the construction at issue are not null in overt syntax, comes from the distribution of adverbials. In English VP ellipsis constructions, adverbials can be deleted under identity:

- (29) a. John runs fast, and Mary does ~~run-fast~~ too
 b. John leaves for such a reason, and Mary does ~~leave-for such a reason~~ too

This fact can be interpreted as indicating that even if deleted, adverbials within VP can be recoverable. In contrast, manner and reason adverbials in what Otani & Whitman call apparent VP ellipsis constructions in Korean cannot be recoverable in VP ellipsis contexts:

- (30) a. John-i ppalli tali-ko Mary-to *(ppalli) tali-nta
 -Nom fast run-and -also fast run-Pres
 ‘John runs fast, and Mary runs fast too’
 b. John-i kulen iwu-lo ttena-ko Mary-to *(kulen iwu-lo) ttena-nta
 -Nom such reason-for leave-and -also such reason-for leave-Pres
 ‘John leaves for such a reason, and Mary leaves for such a reason too’

In (30a, b) once VPs containing manner or reason adverbials are elided, the elided adverbials cannot be recovered. Such examples thus constitute evidence against the VP ellipsis analysis (cf. Otani & Whitman) of main-verb-only constructions.

There is further evidence against Otani & Whitman's analysis. This comes from another distinction between English VP ellipsis constructions and Korean main-verb-only constructions. As Hankamer & Sag (1976) note, null VPs in English cannot appear without linguistic antecedents:

(31) (watching someone making pizza) ¹³

#I will [e] too

'I will make pizza'

However, what Otani & Whitman calls VP ellipsis constructions in Korean does not require linguistic antecedents:

(32) (watching someone making pizza)

Na-to [e] mantul-keyss-e

I-also make-will-Dec

'I will make it too'

This clearly indicates that Korean main-verb-only constructions behave differently from English VP ellipsis constructions (M.-K. Park 1994).

Departing from Huang (1991) and Otani & Whitman (1991), Hoji (1994) and M.-K. Park (1994) argue that main verb only constructions do not involve VP ellipsis but

null argument NPs, i.e., *pro* in the object position.¹⁴ That is, (32) is represented as follows.

- (33) (watching someone making pizza)
- | | | |
|----------------------|------------------------------|----------------|
| Na-to | [_{NP} <i>pro</i>] | mantul-keyss-e |
| I-also | | make-will-Dec |
| 'I will make it too' | | |

Example (33) does not involve a null VP but a null object NP which is *pro*.¹⁵

Regarding VP ellipsis in Korean/Japanese, what Otani & Whitman (1991) have in mind is that VP ellipsis may obtain in the construction at issue if the verb moves out of VP overtly and adjoins to Infl. Since the empirical bases of the Otani & Whitman-type analysis of the construction turn out to be invalid, it is clear that main-verb-only constructions are not evidence of overt verb raising in Korean/Japanese. It is, however, equally evident that this interim conclusion does not preclude the possibility of overt verb raising in Korean/Japanese. In head-final and Spec-initial languages like Korean/Japanese where rightward adjunctions to XP are allowed only if the XP is a Spec (cf. Fukui 1993), it is hard to tell whether there is overt verb raising or not. Regarding this question, I will examine M.-K. Park's (1994) argument below.

2.3.2 Korean Verbal Morphology: PF Merger

M.-K. Park (1994) argues that there is no overt verb raising in Korean. Consider the following:¹⁶

- (34) [_{XP} John-i yakwu-lul cohaha]-(ess)-(*ta) ko
 -Nom baseball-Acc like-(Past)-(*Dec) and
 [_{XP} Mary-ka nongkwu-lul silheha]-*(ess)-*(ta)
 -Nom basketball-Acc dislike-*(Past)-*(Dec)
 = ‘John liked baseball, and Mary disliked basketball’
 ≠ ‘John likes baseball, and Mary disliked basketball’

In (34) verbal affixes such as *ess* (past tense marker) or *ta* (mood marker) are obligatory in the sentence-final position. On the first conjunct, however, the mood marker *ta* is prohibited, while tense marking may be absent. When the first conjunct does not have verbal affixes, the marking on the sentence-final position distributes over the entire conjunct. That is, the first conjunct in (34) cannot mean ‘John likes baseball.’ In English, however, no verbal affixes can distribute over the entire conjunct, as follows:

- (35) a. Mary washed and ironed the clothes
 b. *Mary washed and iron the clothes
 c. *Mary [wash and iron]ed the clothes

Inflectional affixes, however, can distribute over the entire conjunct on condition that they hop on Aux verbs:

- (36) a. John did(n’t) [read books and see plays]
 b. Did(n’t) John [read books and see plays]

In contrast to verbal morphology, English affixal possessive marker 's, in fact, can distribute over the entire conjunct as follows. Compare the subject verb agreement in (37a) with that in (37b):

- (37) a. [The boy and the girl]'s kite *is* broken
 b. [The boy]'s and [the girl]'s kites *are* broken

Seemingly, English possessive marker 's patterns together with Korean tense and mood markers.

Faced with these kinds of data, M.-K. Park (1994) argues, adopting Zwicky's (1987) terminology, that there are two types of inflectional morphemes; *phrasal inflections* and *head inflections*. The former includes the possessive marker 's in English, and the Infl and Comp markers in Korean, while the latter includes the Infl marker and the plural marker in English. M.-K. Park (1994) further argues that phrasal inflections are distinguished from head inflections. The former attaches to a phrase and can have scope over the whole conjunct. The latter attaches to a head and cannot have scope over the entire conjunct. Then, the problem is how a verb in the second conjunct is amalgamated with Infl and Comp markers since it is unlikely that a verbal head undergoes head movement to XP-inflectional morphemes. Recently, Lasnik (1995a) argued that English main verbs are introduced into syntax bare, while Aux verbs are fully inflected from the lexicon, and that inflectional markers are amalgamated with main verbs at PF via affix-hopping under the condition of adjacency. Similarly, M.-K. Park (1994) also argues that Infl and Comp in Korean are projected independently of a verbal head in syntax (J. Yoon & J.-M. Yoon 1990) and that they are affixed to the phrases at PF which they subcategorize for.¹⁷

In this thesis, I assume, along the lines of M.-K. Park (1994), that there is no (overt) main verb raising out of VP in Korean and that the verb is merged with its verbal inflections not by syntactic head movement but by PF merger.

2.3.3 On AgrP in Korean

In Chomsky (1993), verbs are taken from the lexicon as fully inflected forms and the inflectional features on the verb must be checked off in the course of derivation. To achieve this goal, the verb raises and adjoins to various functional heads above the VP overtly or covertly, with the result that it checks off its inflectional features against the abstract features of the functional heads until none remains. More precisely, the feature complex on Tense and Agr(eement) must match the inflectional features of the verb when the latter adjoins to the former. If the feature complex on Tense and Agr and those specified by verbal affixes should fail to match, the derivation crashes since an unchecked feature will be an ill-formed LF object and furthermore, an ill-formed PF object if it is strong. This checking theory also holds that when NPs are inserted into syntactic structures, they already have Case features. These NPs must also move to the appropriate positions where their Case features can be licensed: nominative Case is licensed in Spec of Agrs and accusative Case is licensed in Spec of Agro via Spec-Head relation.

Extending Pollock's (1989) proposal that IP be subdivided into TenseP, AgrP, and NegP, Chomsky (1991, 1993) divides AgrP further into AgrsP (the subject agreement projection) and AgroP (the object agreement projection). In Chomsky (1991, 1993), these are just mnemonics for distinguishing two different functional roles of Agr. In the following, I will speculate about Agr projection in Korean.

2.3.3.1 Evidence for AgrsP in Korean

In Korean the honorific morpheme *si* may appear with a verb. Consider the following examples:

- (38) a. Na-uy apeci-ka o-si-essta
 I-Gen father-Nom come-Hon-Past
- b. ??Na-uy apeci-ka o-essta
 I-Gen father-Nom come-Past
- ‘My father came’
- (39) a. John-i apeci-lul pwulu-essta
 -Nom father-Acc call-Past
- b. *John-i apeci-lul pwulu-si-essta
 -Nom father-Acc call-Hon-Past
- ‘John called his father’

As shown above, the honorific morpheme *si* is licensed only by the subject. Following J.-Y. Yoon (1990), I propose that the honorific agreement is an instance of subject-verb agreement.

Another piece of evidence for AgrsP in Korean comes from number agreement, although its overt realization is optional:¹⁸

- (40) a. Haksayng-tul-i ppalli talye-(tul) o-assta
 students-Pl-Nom quickly run-Pl come-Past

'The students came quickly'

- b. Han haksayng-i ppalli talye-(*tul) o-assta
 one student-Nom quickly run-Pl come-Past

'One student came quickly'

- (41) a. Nehi-tul cal ka-kera-(tul)
 you-Pl well go-Imp-Pl

'You (plural), good bye'

- b. Nehi cal ka-kera-(*tul)
 you well go-Imp-Pl

'You (singular), good bye'

- (42) a. John-i [ku-tul-i sensayng-nim-ekey ka-ass-ta-ko-(tul)] malhayssta
 -Nom they-Nom teacher-Hon-to go-Past-Dec-Comp-Pl said

'John said that they went to the teacher'

- b. John-i [Mary-ka ai-tul-ekey yaykiha-ess-ta-ko-(*tul)] mayhayssta
 -Nom -Nom child-Pl-to tell-Past-Dec-Comp-Pl said

'John said that Mary told (a story) to the children'

As shown above, the plural morpheme *tul* attached to a verb is licensed only by a plural subject.

In sum, I propose that the honorific agreement and the number agreement between a verb and its subject constitute evidence for AgrsP in Korean (J.-Y. Yoon 1990).

On the position of AgrsP, I argue that it is below TP. Evidence is shown in the following:

- (43) a. Na-uy apeci-ka o-si-ess-ta
 I-Gen father-Nom come-Agrs-Past-Dec
 'My father came'
- b. *Na-uy apeci-ka o-ess-si-ta
 I-Gen father-Nom come-Past-Agrs-Dec
- (44) a. Na-uy emenim-i pyenci-lul ssu-si-n-ta
 I-Gen mother(+Hon)-Nom letter-Acc write-Agrs-Pres-Dec
 'My mother writes a letter'
- b. *Na-uy emenim-i pyenci-lul ssu-n-si-ta
 I-Gen mother(+Hon)-Nom letter-Acc write-Pres-Agrs-Dec

The above contrast shows that subject agreement morphemes are followed by tense morphemes, but not vice versa. Since Korean is a head-final language, this fact indicates that AgrsP is placed below TP (cf. Baker's (1988:13) Mirror Principle).

2.3.3.2 What Lasnik & Saito's (1991) observations say about AgroP in Korean

It has been controversial whether Korean/Japanese have AgroP. Regarding this issue, I will examine one claim that has been advanced in previous literature. Before doing this, I will briefly review Lasnik & Saito's (1991) observation in relevant respects.

Lasnik & Saito (1991) point out that there are height effects (e.g., regarding binding theory) in English ECM constructions and simple transitive constructions:

- (45) a. ?*The DA proved [the defendants_i were guilty] during each other_i's trials

- b. ?The DA accused the defendants_i during each other_i's trials
 - c. ?The DA proved [the defendants_i to be guilty] during each other_i's trials
- (46)
- a. John believes [he_i is a genius] even more fervently than Bob_i's mother does
 - b. ?*John believes him_i even more fervently than Bob_i's mother does
 - c. ?*John believes [him_i to be a genius] even more fervently than Bob_i's mother does

(45a) and (46a) indicate that the subject of an embedded tensed clause does not c-command the matrix adjunct phrase, whereas (45b) and (46b) illustrate that the object of a clause c-commands certain types of adjunct phrases of the same clause. Furthermore, (45c) and (46c) show that the subject of an embedded infinitival clause behaves like the matrix object. Based on these facts, Lasnik & Saito (1991) propose that the height of the ECM subject is the result of a movement operation to an A-position high enough to c-command adjunct phrases. Since Lasnik & Saito (1991), there have been a number of authors who have argued that in overt syntax the ECM subject is located not in the embedded Spec of IP but in the matrix Spec of AgroP (Koizumi 1993, 1995, Ura 1993, Bošković 1994, 1997a, Lasnik 1995b, c, among others).

On the other hand, as observed in S.-W. Kim (1994), there are no height effects in Korean ECM constructions and simple transitive constructions. Consider the following:

- (47)
- a. *Ku kemsan-nun [John_i-i ywucoy-lako] caki_i-uy caypan-eyse
the prosecutor-Top -Nom guilty-Comp self-Gen trial-at

cungmyenghayssta

demonstrated

'The prosecutor demonstrated that John was guilty in his trial'

- b. *Ku kemsanun caki_i-uy caypan-eyse John_i-ul pinanhayssta
 the prosecutor-Top self-Gen trial-at -Acc accused
 'The prosecutor accused John during his trial'

- c. *Ku kemsanun [John_i-ul ywucoy-lako] caki_i-uy caypan-eyse
 the prosecutor-Top -Acc guilty-Comp self-Gen trial-at
 cungmyenghayssta
 demonstrated

'The prosecutor demonstrated John to be guilty in his trial'

- (48) a. ?Mary-nun [ku_i-ka chencay-lako] John_i-uy emeni-pota kwutkey mitnunta
 -Top he-Nom genius-Comp -Gen mother-than firmly believe
 'Mary believes that he is a genius more firmly than John's mother does'
- b. ?Mary-nun ku_i-lul John_i-uy emeni-pota kwutkey mitnunta
 -Top he-Acc -Gen mother-than firmly believe
 'Mary believes him even more firmly than John's mother does'
- c. ?Mary-nun [ku_i-lul chencay-lako] John_i-uy emeni-pota kwutkey mitnunta
 -Top he-Acc genius-Comp -Gen mother-than firmly believe
 'Mary believes him to be a genius more firmly than John's mother does'

(a) examples show that the subject of an embedded tensed clause does not c-command a matrix adjunct phrase. Unlike in English, (b) and (c) examples show that the object of a clause and the subject of an embedded infinitival clause in Korean does not c-command certain types of adjunct phrases of the same clause. In other words, in

Korean, the subject of the embedded tensed clause, the matrix object, and the subject of the ECM clause results in the same grammaticality with respect to binding effects.

This state of affairs can be explained in two different ways. Under a minimalist assumption, let us first suppose that accusative NPs move to Spec of Agro in LF. Then, (47b, c) are predicted to be good, and (48b, c) are predicted to be bad, contrary to fact. In this light, S.-W. Kim (1994) concludes that there is no AgroP in Korean and that accusative NPs in Korean do not move in LF. Given this conclusion, accusative Case in Korean could be claimed to be inherent, which is checked off in a Head-Complement configuration by a verb. In short, under this account, AgroP does not have to be postulated.

Suppose, now, that there is AgroP in Korean and that Korean differs from English when accusative Case is licensed. If the relevant feature is weak, then a direct object and an ECM subject will move to Spec of AgroP in covert syntax. Given the theory of feature movement (cf. Chomsky 1995), this indicates that only formal features of direct objects or ECM subjects move in LF. Unlike Chomsky (1995), let us suppose that binding features are not formal features. Under this implementation, the facts in (47) and (48) still emerge since LF feature movement of the matrix object or the embedded subject of infinitival clauses would not create a new binding configuration.

To summarize, I have suggested that AgrsP exists in Korean, based on the overt agreement between a verb and its subject. Concerning AgroP, I argued that S.-W. Kim's (1994) argument against AgroP in Korean/Japanese is not strong enough and turns out to be neutral about the status of AgroP. Regarding this, all else being equal, I assume that AgroP exists in Korean/Japanese. Given the assumption that Agrs and Agro are the same category (Chomsky 1991, 1993), Lasnik (1995b, c) claims that the EPP feature in English Agrs and Agro is strong and thus both subject and object move

overtly in order to check off the strong EPP. Based on the difference between English and Korean with respect to ECM constructions, I suggest that the EPP feature in Korean Agrs and Agro is weak and thus both subject and object remain within VP in overt syntax and only their formal features move in covert syntax.

2.3.4 Pseudogapping in Focus Constructions

2.3.4.1 Single Pseudogapped Remnant

Now let us explore Korean Pseudogapping. Consider the following:

- (49) John-i sakwa-lul meke (kuliko) MARY-to [e] ya
 -Nom apple-Acc eats and -Foc is
 ‘John eats apples, and MARY does too’

In the second conjunct, the verb and the object are missing. Compare (50).

- (50) John-i sakwa-lul meke (kuliko) BANANA-to [e] ya
 -Nom apple-Acc eats and -Foc is
 ‘John eats apples and BANANAS too’

In the second conjunct, the verb and the subject are missing. (49) and (50) are similar to English Pseudogapping constructions in that they have a remnant and an expletive (Aux) verb.

In what follows, I will provide an analysis of Korean Pseudogapping constructions. Before doing so, let us investigate whether the constructions exhibit characteristics of VP ellipsis. In section 2.3.1, I discussed M.-K. Park's (1994) two arguments against the VP ellipsis analysis of Korean main-verb-only constructions. The first argument was that in Korean main-verb-only constructions, unlike in English VP ellipsis constructions, VP adverbials such as manner and reason adverbials cannot be recovered if the VP containing them is missing. The following contrast illustrates this point:

- (51) a. John runs fast, and Mary does ~~run fast~~ too
 b. John leaves for such a reason, and Mary does ~~leave for such a reason~~ too
- (52) a. John-i ppalli tali-ko Mary-to *(ppalli) tali-nta
 -Nom fast run-and -also fast run-Pres
 'John runs fast, and Mary runs fast too'
- b. John-i kulen iwu-lo ttena-ko Mary-to *(kulen iwu-lo) ttena-nta
 -Nom such reason-for leave-and -also such reason-for leave-Pres
 'John leaves for such a reason, and Mary leaves for such a reason too'

As shown in (51), in English VP ellipsis, even if VP-adverbs are missing in the second conjunct, both conjuncts can have the same meaning. In contrast, the examples in (52) show that both conjuncts cannot have the same reading if VP-adverbs in the second conjunct are deleted. If Korean Pseudogapping involves English type VP ellipsis, then they are predicted to pattern together with (51). This prediction is fulfilled:

- (53) a. John-i ppalli tali-ko MARY-to ~~ppalli-tali~~ ya
 -Nom fast run-and -also fast run is
 ‘John runs fast, and MARY runs fast too’
- b. John-i kulen iwu-lo ttena-ko MARY-to ~~kulen iwu-lo~~ ~~ttena~~ ya
 -Nom reason-for leave-and -also such reason-for leave is
 ‘John leaves for such a reason, and MARY leaves for such a reason too’

Unlike in (52), the missing VP-adverbs in (53) are recoverable.

The second argument against the VP ellipsis analysis of main-verb-only constructions was that null VPs in English cannot appear without linguistic antecedents, whereas the alleged null VPs in Korean can. Consider again the following contrast:

- (54) (watching someone making pizza)
 #I will [e] too
 ‘I will make pizza’
- (55) (watching someone making pizza)
 Na-to [e] mantul-keyss-e
 I-also make-will-Dec
 ‘I will make it too’

Regarding this, Korean Pseudogapping behaves like English VP ellipsis:

(56) (watching someone making pizza)

#Na-to [e] ya

I-also am

'I will make it too'

Example (56), an instance of Korean Pseudogapping, requires a linguistic antecedent just like the English example (54). Hence, we have good reasons to believe that Korean Pseudogapping constructions are instances of VP ellipsis.

However, there is one significant difference between English Pseudogapping and Korean Pseudogapping. In the latter, the good remnant must be focused by the focus marker *to* 'also'. Compare the following with (49) and (50):

(57) *John-i sakwa-lul meke (kuliko) Mary-ka [e] ya

-Nom apple-Acc eats and -Nom is

'John eats apples, and Mary does too'

(58) *... (kuliko) banana-lul [e] ya

and -Acc is

'John eats apples and bananas too'

As shown in (57) and (58), non-focused NPs cannot be good pseudogapped remnants.

Based on the above contrast, I propose that the prior movement in Korean Pseudogapping is syntactic focus movement (cf. Choe 1988, 1994, 1995, Sohn 1994b). Specifically, I propose that there is a focus phrase projection (FocP) above TP in Korean and that the focused phrase with the strong [+focus] must move to Spec of

FocP to check its strong [+focus] against the strong [+focus] in the head Foc.¹⁹ I define [+focus] as a formal feature which represents accented new information.²⁰ [+focus] has semantic import, hence it is an interpretable feature at the LF interface. It also has phonological/phonetic import, thus it is an interpretable feature at the PF interface too.²¹

Within the framework of Chomsky (1993, 1995), it is assumed that strong features force the relevant movement to be overt. If [+focus] is strong, then focus movement must be overt. Compare (59) with (60), (61), and (62).

(59) John-i [_{CP} Mary-ka Bill-ul salanghanta-ko] sayngkakhanta (kuliko)

-Nom -Nom -Acc loves-Comp thinks and

TOM_i-to [_{VP} ~~John-i~~ [_{CP} ~~Mary-ka~~ ~~t_i-salanghanta-ko~~] ~~sayngkakha~~] ya

-Foc -Nom -Nom loves-Comp think is

‘John thinks that Mary loves Bill, and that Mary loves TOM too’

(60) ??John-i [_{NP} [_{CP} [_{IP} Mary-ka piano-lul yencwuhanta] nun] somwun]-ul tulessta

-Nom -Nom -Acc play Comp rumor-Acc heard

(kuliko) VIOLIN_i-to [_{VP} ~~John-i~~ [_{NP} [_{CP} [_{IP} ~~Mary-ka~~ ~~t_i-yencwuhanta~~] ~~nun~~]

and -Foc -Nom -Nom play Comp

~~somwun]-ul-tul~~] ya

rumor-Acc hear is

‘John heard the rumor that Mary plays the piano, and that Mary plays the VIOLIN too’

(61) ??John-i [Mary-ka pizza-lul cohahanun ci] alko-siphehanta (kuliko)

-Nom -Nom -Acc like whether know-want and

ICE CREAM₁-to John-i [~~Mary-ka-t₁-cohanun-ci~~]—~~alke-sipheha~~ ya
 -Foc -Nom -Nom like whether know-want is
 ‘John wants to know whether Mary likes pizza, and whether Mary likes ICE
 CREAM too’

- (62) ??John-i [chayk-ul san hwue] pap-ul mekessta (kuliko)
 -Nom book-Acc buy after rice-Acc ate and
 NOTHU₁-to John-i [~~t₁-san hwue~~] pap-ul—~~mek~~ ya
 notebook-Foc -Nom buy after rice-Acc eat is
 ‘John ate rice after he bought a book, and after he bought a NOTEBOOK
 too’

The difference between (59) and the others is the familiar island constraints, whatever they may be, which govern how far a phrase may move. In (59) the focused remnant did not cross any islands, so the sentence is grammatical. On the other hand, in (60), the focused remnant crossed over a complex NP; in (61) it crossed over a wh-island; and in (62) it crossed over an adjunct island, causing the sentences to be marginal. In short, I conclude that focus movement takes place overtly since it is sensitive to syntactic islands.

In the previous section, I assumed that Agrs and Agro are featurally identical (cf. Chomsky 1991, 1993) and that the EPP feature in Korean Agr is weak (cf. Lasnik 1995b, c, 1997a: the EPP feature in English Agr is strong). Given Chomsky’s (1995) Move-F, this indicates that both subject and object in Korean remain within VP overtly and only their formal features move covertly. Below, I will provide evidence that the subject in Korean remains in situ within a VP-internal position.

The first evidence is that Neg *ani* in the Infl area takes wide scope over a quantifier in subject or object position. Consider the following contrast:

- (63) a. Motun sensayng-tul-i John-ul ani manna-essta
 every teacher-P1-Nom -Acc not meet-Past
 ‘All of the teachers didn’t meet John’
- b. John-i motun haksayng-tul-ul ani manna-essta
 -Nom every student-P1-Acc not meet-Past
 ‘All the students, John didn’t meet’
- (64) a. Motun sensayng-tul-i John-ul manna-ci ani ha-essta
 every teacher-P1-Nom -Acc meet-Nm Neg do-Past
 ‘Not all of the teachers met John’
- b. John-i motun haksayng-tul-ul manna-ci ani ha-essta
 -Nom every student-P1-Acc meet-Nm Neg do-Past
 ‘John didn’t meet all the students’

As shown in (63), the main verb negator *ani*, a negative adverbial cliticized to the main verb (M.-K. Park 1994), takes narrow scope with respect to both the quantified subject in (63a) and the quantified object in (63b). On the other hand, in (64) which are instances of the so-called *long form negation* or *Ha negation*, Neg *ani* takes wide scope over both the quantified subject in (64a) and the quantified object in (64b).²² Based on these facts, E. Lee (1992) argues that the subject originates in a VP internal position, under the Internal Subject Hypothesis (Kuroda 1988, Huang 1993, among others) and stays in situ overtly in Korean. Reinterpreting her proposal in a split VP hypothesis, I propose that the subject, which is generated in Spec of the highest VP,

remains in situ overtly in Korean. Under this proposal, we can offer a c-command account for narrow scope interpretation of a quantifier in subject or object position below Neg in the Infl area. That is, *ani* ‘not’ (the head of NegP) has wide scope over the quantified subject or object since the former c-commands the latter in overt syntax.

Previously, I argued, following M.-K. Park (1994), that verbal inflections (e.g., tense morpheme) in Korean are XP-inflections and that they distribute over the entire conjunct in a coordinate structure unless a specific verbal inflection appears in the preceding conjunct (refer back to the discussion of 34). The following example also confirms that this observation is correct:

- (65) a. [_{IP} [_{VP} John-i chwum-ul chwu]-kena
 -Nom dance-Acc dance-or
 [_{VP} Mary-ka nolay-lul ani-pwulu]-essta]
 -Nom song-Acc not-sing-Past
 i. ‘John danced or Mary didn’t sing a song’
 ii. *‘John dances or Mary didn’t sing a song’
 iii. *‘John didn’t dance or Mary didn’t sing a song’
- b. [_{VP} John-i chwum-ul chwu]-kena
 -Nom dance-Acc dance-or
 [_{VP} Mary-ka nolay-lul pwulu-ci] ani ha-essta
 -Nom song-Acc sing-Nm Neg do-Past
 i. ‘John didn’t dance or Mary didn’t sing a song’
- c. [John-i chwum-ul chwu-ess]-kena
 -Nom dance-Acc dance-Past-or

[Mary-ka nolay-lul pwulu-*(ess)]ta
 -Nom song-Acc sing-*(Past)

i. 'John danced or Mary didn't sing a song'

In (65a) the negator (arguably, a negative adverbial according to M.-K. Park 1994) was cliticized to the main verb in the second conjunct. Hence, it cannot negate the first conjunct (see 65aiii). On the other hand, in (65b) which illustrates *Ha-negation*, *Neg ani* scopes over both conjuncts.

As J.-M. Yoon (1990) and M.-K. Park (1994) point out, there are a couple of advantages for the hypothesis that both conjuncts in (65b) are VPs. First, distribution of Infl markers over the entire conjunct can be captured in terms of c-command. Second, we can provide an answer for why Infl markers only distribute from the final conjunct to the preceding conjunct (see 65aii vs. 65ci). This is the only option since Korean is a head-final language.

The second evidence that the subject in Korean/Japanese remains in situ within a VP-internal position comes from the fact that there are no subject condition effects in these languages (Saito 1985). Consider the following:

- (66) a. [_{IP} John-i [_{NP} [_{IP} Mary-ka mwuess-ul sassta-nun] sasil]-ul mwunce-lo
 -Nom -Nom what-Acc bought fact-Acc problem-into
 mantulkoiss] ni
 making Q
 'John is making an issue out of the fact that Mary bought what'
- b. ?[_{IP} Mwuess-ul_i [_{IP} John-i [_{NP} [_{IP} Mary-ka t_i sassta-nun] sasil]-ul
 what-Acc -Nom -Nom bought fact-Acc

mwunce-lo mantulkoiss] ni

problem-into making Q

‘What, John is making an issue out of the fact that Mary bought t’

- (67) a. [_{IP} John-i [_{CP} [_{NP} [_{IP} Mary-ka mwuess-ul sassta-nun] sasil]-i

-Nom -Nom what-Acc bought fact-Nom

mwunce-ita] ko] sayngkakha] ni

problem-be Comp think Q

‘John thinks that the fact that Mary bought what is a problem’

- b. ?[_{IP} Mwuess_i-ul [_{IP} John-i [_{CP} [_{NP} [_{IP} Mary-ka t_i sassta-nun] sasil]-i

what-Acc -Nom -Nom bought fact-Nom

mwunce-ita] ko] sayngkakha] ni

problem-be Comp think Q

‘What, John thinks that the fact that Mary bought t is a problem’

(66b) involves scrambling out of a complex NP in object position. The example is marginal since the IP modifier in the complex NP is an adjunct, and hence a blocking category in the sense of Chomsky (1986b). (67b), which involves scrambling out of a complex NP in subject position, is marginal for the same reason, but it is not worse than (66b). This fact suggests that the subject complex NP in (67b) does not function as an extra barrier. Under the standard Internal Subject Hypothesis, Spec of VP is a θ -position while Spec of IP is a non- θ -position. The same status of (66b) and (67b) implies that extraction domains in both examples have the same status with respect to CED effects. I propose that the subject in Korean remains in Spec of VP (i.e., θ -position) in overt syntax so that extraction out of the subject domain is allowed (cf. Lasnik & Saito 1992, Takahashi 1994b).

Considering word order, there is no evidence that the main verb in Korean raises in overt syntax since Korean is head-final. In fact, previously, I argued, following M.-K. Park (1994), that the main verb in Korean which is inserted into syntactic structures bare combines with verbal inflections not by syntactic head movement but by PF merger, hence no verb movement occurs in overt syntax. However, in a split VP structure, the notion of verb movement needs to be articulated. Since VPs are recursive, at least one shell V position other than the main V position is available. For example, given a split VP structure, there must be two V positions in a simple transitive verb construction. More precisely, one (shell V) resides in the higher VP and the other (main V), in the lower VP. Koizumi (1993, 1995) and Lasnik (1995b, c) claim that the main verb in English raises to a higher shell V position in overt syntax. Then, a question arises as to whether the main verb in Korean/Japanese moves to a higher V position in overt syntax or not. The verb in Korean must not have raised to a higher position than a higher V position since VP deletion, if it exists in Korean as claimed in this chapter, would not result in the elimination of that verb. Below, I will first introduce Lasnik's (1995c) relevant discussions on this matter.

In a split VP structure, the surface subject position (i.e., Spec of Agrs) is not a θ -marked position, whereas the surface object position (i.e., Spec of Agro) becomes a θ -position since the main verb passes through Agro on its way to the higher V position in overt syntax (cf. Lasnik 1995c). Consider first the following:

(68) ??Who_i did you believe [a picture of t_i to have been selected]

In the above ECM construction, even after the raising of V and NP, Spec of Agro is not a θ -position since *believe* does not θ -mark the ECM subject. Hence, (68) shows

CED effects. With this point in mind, consider the following Pseudogapping example where the raised direct object is not in a θ -position in overt syntax since the verb hasn't raised yet in overt syntax:

- (69) Bill selected a portrait of John, and Susan should a picture of Mary

Consider now the following:

- (70) a. Who_i did you select [a picture of t_i]
 b. ?*Who will Bill select a portrait of, and who_i will Susan [a picture of t_i]

While extraction in (70a) conforms with the CED, extraction in the second conjunct of (70b) does not, by the hypothesis that the verb remains in the lower VP. Compare (70b) with the following:

- (71) Who will Bill select a portrait of, and who_i will Susan select [a picture of t_i]

In the second conjunct of (71), *wh*-extraction is allowed since Spec of Agro becomes a θ -position in overt syntax.

Let us turn to Korean cases. As mentioned before, in Spec-initial and head-final languages, it is not easy to determine whether there is verb raising or not. Regarding this, I suggest that the main verb in Korean raises to a higher verb position overtly. My speculation is based on grounds that there is no subject condition in Korean/Japanese. Consider (66) and (67) again. Previously, I argued that the subject in Korean remains in Spec of (the higher) VP in overt syntax. The fact that extraction

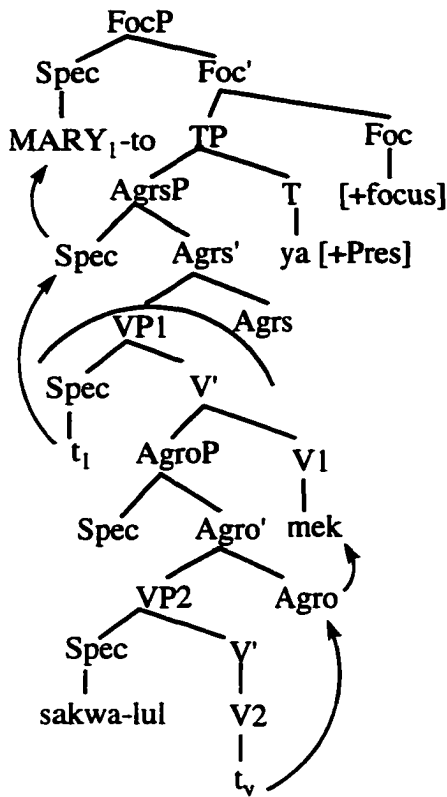
out of the subject domain in Korean is possible suggests that the domain must become a θ -position in overt syntax just like the object position. I claim that this is what happens in Korean since subject and object are both placed in θ -positions overtly. That is, in order to make Spec of (the higher) VP a θ -position, the main verb in Korean must raise to its higher V landing site in overt syntax. Correspondingly, I assume that θ -features of the verb in Korean are strong and must be checked off overtly.²³

Let us now analyze the Pseudogapping data. The structures of (72) and (73) are represented in (74) and (75), respectively.²⁴

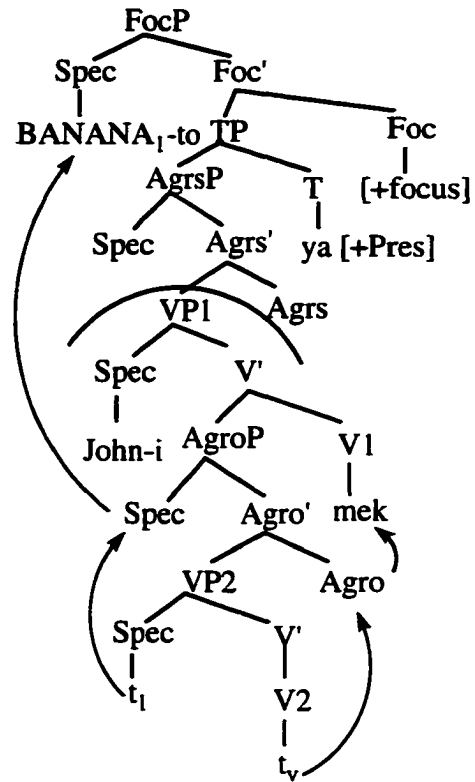
- (72) John-i sakwa-lul meke (kuliko) MARY-to [e] ya
 -Nom apple-Acc eats and -Foc is
 ‘John eats apples, and MARY does too’

- (73) John-i sakwa-lul meke (kuliko) BANANA-to [e] ya
 -Nom apple-Acc eats and -Foc is
 ‘John eats apples and BANANAS too’

(74)



(75)



In this split VP structure, there might not be any difference between specifiers and complements since each VP contains only one argument. I assume that even complements originate in Spec positions (i.e., Spec of the lower VP). In (74) the focused subject has moved overtly out of the higher VP to Spec of FocP in order to check its strong [+focus] against the strong [+focus] in the head Foc, and in (75) the focused object has moved to Spec of FocP. If VP1 is deleted, then the stranded tense triggers $y(a)$ -support. Consequently, (49) and (50) are derived. As mentioned above, the EPP feature residing in Korean Agr is weak and θ -features of the verb are strong. To put it another way, in normal circumstances, there is no overt NP-movement

(subject NP or object NP) out of VP to Spec of Agr and the main verb down below moves to a higher V landing site.²⁵

Let us move on to intransitive verb constructions:

- (76) John-i secem-ey kanta (kuliko) MARY₁-to {_{VP}t₁secem-ey—ka} ya
 -Nom bookstore-to go and -Foc bookstore-to go is
 ‘John goes to the bookstore, and MARY does too’
- (77) John-i secem-ey kanta (kuliko) SUPER-EY₁-to {_{VP}John-i-t₁-ka} ya
 -Nom bookstore-to go and supermarket-to-Foc -Nom go is
 ‘John goes to the bookstore, and to the SUPERMARKET too’

In the second conjunct of (76) and (77), the subject and the PP complement have been focused, respectively. Their status will be explained in the same way as (72) and (73). One difference between (76) and (77) is that in (76) the PP complement is deleted by a PF deletion operation since it is not focused, and in (77) it is phonetically realized after VP deletion because it is focused.

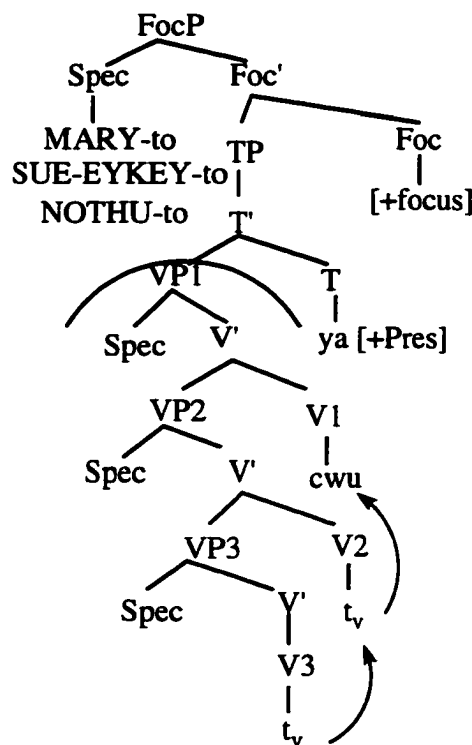
Consider next Pseudogapping in dative constructions:

- (78) a. John-i Bill-eykey chayk-ul cwunta (kuliko) MARY-to/*ka [e] ya
 -Nom -Dat book-Acc give and -Foc/*Nom is
 ‘John gives Bill a book, and MARY does too’
- b. ... (kuliko) SUE-EYKEY-*(to) [e] ya
 and -Dat-*(Foc) is
 ‘John gives Bill a book, and gives SUE a book too’

- c. ... (kuliko) NOTHU-to/*lul [e] ya
 and notebook-Foc/*Acc is
 ‘John gives Bill a book, and gives Bill a NOTEBOOK too’

In (78) the good remnants are marked by the focus marker *to* ‘also’. Abstracting away from the split VP structure, the structures of the second conjuncts in (78) are the following:

(79)



I assume that there is one VP (and one AgrP) for each argument of the verb. Then, there would be three split VPs (and three split AgrPs) in (79) since *cwu* ‘give’ takes

three θ -roles. In (79) the focused remnant NPs have moved to Spec of FocP out of the highest VP overtly. If VP1 is deleted in PF, the strings in (78) are derived.

The proposed analysis has some consequences. First, it predicts that there is no double object construction in Korean/Japanese in the sense of the double object construction in English. Consider again (78), which is slightly modified and reintroduced as (80).

- (80) a. John-i Bill-eykey chayk-ul cwunta (kuliko) MARY-(*ka)-*(to) [e] ya
 -Nom -Dat book-Acc give and -(*Nom)-*(Foc) is
 ‘John gives Bill a book, and MARY gives Bill a book too’
- b. ... (kuliko) SUE-*(EYKEY)-*(to) [e] ya
 and -*(Dat)-*(Foc) is
 ‘John gives Bill a book, and gives SUE a book too’
- c. ... (kuliko) NOTHU-(*lul)-*(to) [e] ya
 and notebook-(*Acc)-*(Foc) is
 ‘John gives Bill a book, and gives Bill a NOTEBOOK too’

As shown in the second conjuncts of (80), there is a contrast between the subject/direct object remnants and the dative object remnant in VP ellipsis contexts. The former cannot have a Case marker such as *ka* (nominative Case marker) or *lul* (accusative Case marker), while the latter must have a (Case) marker *eykey* ‘to’. I propose that focused NPs cannot have Case markers in general and can be only realized by a focus marker such as *to* ‘also’. Then, a question is why the dative object remnant in the second conjunct of (80b) must have both a dative marker and a focus marker. The following example provides an answer to this question:

- (81) John-i Mary-eytayhayse malhanta (kuliko)
 -Nom -about talks and
 [_{PP} SUE-*(EYTAYHAYSE)]-*(to) [e] ya
 -*(about)-*(Foc) is
 ‘John talks about Mary, and about SUE too’

(81) shows that the focus marker attaches to the PP *SUE-EYTAYHAYSE*, not to the NP *SUE*, and that postpositions cannot be omitted. The parallelism between the focused PP in (81) and the focused XP in (80b) shows that the latter is a PP and that the dative Case marker *eykey* is in fact a postposition in Korean. Thus, the term *double object construction* in Korean/Japanese is a misnomer: the examples in (80) illustrate instances of dative constructions.

Second, consider the implication of the proposed analysis on the light verb construction in Korean:

- (82) a. John-i ku saken-ul cosa-lul hanta (kuliko)
 -Nom that case-Acc investigate-Acc LV-Pres and
 MARY-to_i [_{VP} t_i ~~ku saken-ul cosa-lul~~ ~~ha~~] ya
 -Foc that case-Acc investigate-Acc LV is
 ‘John investigates that case, and MARY does too’
- b. ... (kuliko) I SAKEN-to_i [_{VP} John-i t_i ~~cosa-lul~~ ~~ha~~] ya
 and this case-Foc -Nom investigate-Acc LV is
 ‘John investigates that case and THIS CASE too’

The focused subject and the focused object in (82) can be good remnants in Pseudogapping. However, the verbal noun with a focus marker becomes a poor remnant, as shown in (83).

- (83) *John-i ku saken-ul cosa-lul hanta (kuliko)
 -Nom that case-Acc investigate-Acc LV-Pres and
 WANSENG-to_i [_{VP} ~~John-i ku saken-ul t_i ha~~] ya
 complete-Foc -Nom that case-Acc LV is
 ‘John investigates that case, and **COMPLETES** that case too’

In J.-S. Kim (1995, 1997d), I offered several arguments against the analyses in which verbal nouns are XP predicates (e.g., NPs), and argued that they are lexical categories, more precisely, defective verbs [u(nspecified)V, -N]. (83) further confirms that verbal nouns are X⁰ categories. If the verbal noun *wanseng* ‘complete’ were an XP, in (83), it could have moved to Spec of Foc when it was focused. The fact that the sentence is bad indicates that it is not an XP. In addition, in J.-S. Kim (1995, 1997d), I argued that light *ha* is just like a main verb except for the lack of a θ -grid, and that it is not an Aux verb, which is generated in the Infl area. With this point in mind, compare (82) with the following:

- (84) a. *John-i ku saken-ul cosa-lul hanta (kuliko)
 -Nom that case-Acc investigate-Acc LV-Pres and
 MARY-to_i [_{VP} ~~t_i ku saken-ul cosa-lul~~ ha] ya
 -Foc that case-Acc investigate-Acc LV is
 ‘John investigates that case, and **MARY** does too’

- b. *... (kuliko) I SAKEN-to₁ [_{VP} John-i t₁-cosa-lul ha] ya
 and this case-Foc -Nom investigate-Acc LV is
 ‘John investigates that case and THIS CASE too’

If light *ha* is an Aux verb, it could be a good remnant after VP deletion since it is placed outside VP. The degradedness of (84) shows that it positions within VP so that it must be eliminated by VP deletion.

2.3.4.2 Multiple Pseudogapped Remnants

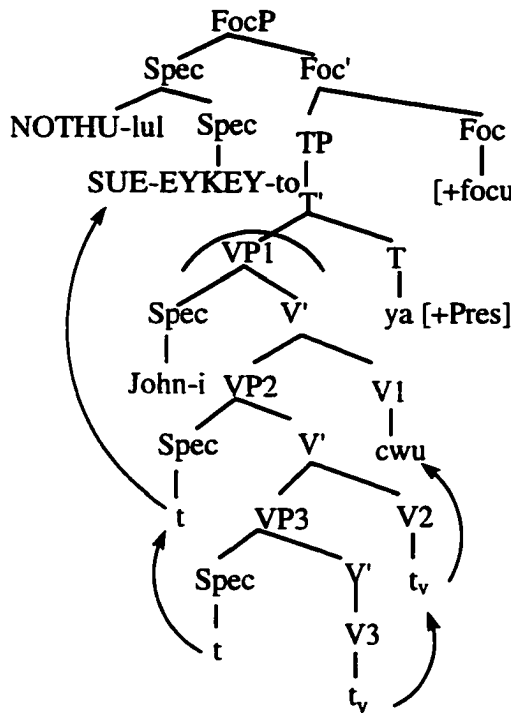
Interestingly, multiple remnants are allowed in Korean Pseudogapping:

- (85) a. ?John-i Bill-eykey chayk-ul cwunta (kuliko)
 -Nom -Dat book-Acc give and
 NOTHU-lul SUE-EYKEY-to [e] ya
 notebook-Acc -Dat-Foc is
 ‘John gives Bill a book, and gives SUE a NOTEBOOK too’
- b. ? ... (kuliko) SUE-EYKEY NOTHU-to [e] ya
 and -Dat notebook-Foc is

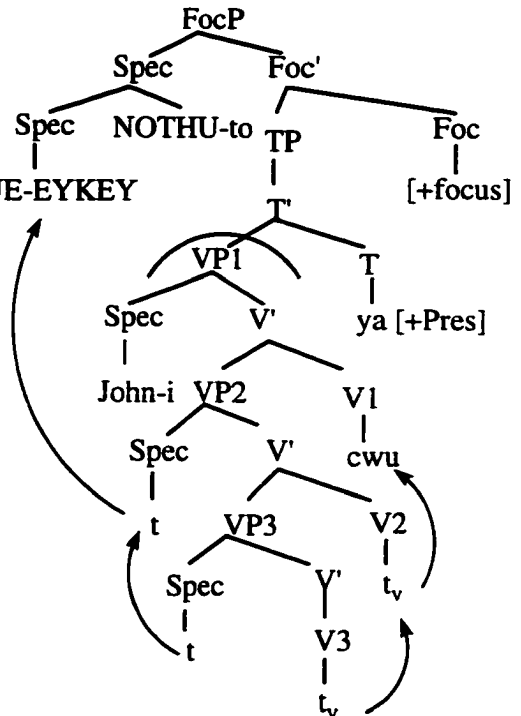
Although the first remnants in the second conjuncts of (85) are not marked by an overt focus marker, they are focused in the sentence-initial position. Since all focused phrases must move to Spec of FocP, it seems that this movement should be driven by a formal inadequacy, i.e., a strong feature, of the moved items, rather than the head Foc. If the latter were the case, it would suffice to front only one focused phrase in

(85), checking the strong $[+focus]$ of the head Foc (cf. Bošković 1997b). Regarding multiple pseudogapped remnants, I assume that the strong $[+focus]$ resides both in the moved items and the head Foc. I propose that in (85) the lower focused phrase adjoins to the higher focused phrase in order to check its strong $[+focus]$ against the strong $[+focus]$ of the latter. But the complex of two focused phrases must move to Spec of FocP to check the strong $[+focus]$ in the head Foc.²⁶ I assume that $[+focus]$, an interpretable feature, does not erase after feature checking (cf. Chomsky 1995) and that only the strength of $[+focus]$ is stripped away via feature checking. (85) is analyzed as follows:²⁷

(86) a.



b.



Following Fukui (1993) and others, I assume that adjunction to Spec is allowed in either direction; leftward or rightward. In (86a) the focalized accusative object remnant adjoins overtly to the *left* of the focalized dative object remnant in order to check its strong [+focus] against the strong [+focus] of the latter. In the next stage, the complex of *NOTHU-lul SUE-EYKEY-to* moves to Spec of FocP in order to check the strong [+focus] in the head Foc. If VP1 is deleted in PF, (85a) is derived. In (86b) the focalized accusative object remnant adjoins overtly to the *right* of the focalized dative object remnant for the benefit of both. In the next stage, the complex of *SUE-EYKEY NOTHU-to* moves to Spec of FocP for the interest of the head Foc. If VP1 is deleted in PF, (85b) is derived.

If multiple remnants are allowed in Korean Pseudogapping, a question arises as to why the following examples are bad with two or more focused remnants:

- (87) a. *John-i Bill-eykey chayk-ul cwunta (kuliko)
 -Nom -Dat book-Acc give and
 MARY-to SUE-EYKEY-to [e] ya
 -Foc -Dat-Foc is
 ‘John gives Bill a book, and MARY gives SUE a book too’
- b. * ... (kuliko) MARY-to NOTHU-to [e] ya
 and -Foc notebook-Foc is
 ‘..., and MARY gives Bill a NOTEBOOK too’
- c. * ... (kuliko) SUE-EYKEY-to NOTHU-to [e] ya
 and -Dat-Foc notebook-Foc is
 ‘..., and John gives SUE a NOTEBOOK too’

- d. * ... (kuliko) MARY-to SUE-EYKEY-to NOTHU-to [e] ya
 and -Foc -Dat-Foc notebook-Foc is
 ‘..., and MARY gives SUE a NOTEBOOK too’

The apparent paradox is as follows: while (85) shows that multiple pseudogapped remnants are allowed, the contrast between (78) and (87) shows that Pseudogapping tolerates only one remnant.

Regarding these seemingly conflicting facts, I suggest that multiple remnants in Korean Pseudogapping are generally permitted, hence the ill-formedness of (87) resides elsewhere. The following supports this suggestion:

- (88) a. *John-i Bill-eykey chayk-ul cwunta (kuliko)
 -Nom -Dat book-Acc give and
 MARY-to SUE-EYKEY-to chayk-ul cwunta
 -Foc -Dat-Foc book-Acc give
 ‘John gives Bill a book, and MARY-also gives SUE-also a book’
- b. * ... (kuliko) MARY-to NOTHU-to Bill-eykey cwunta
 and -Foc notebook-Foc -Dat give
 ‘..., and MARY-also gives Bill a NOTEBOOK-also’
- c. * ... (kuliko) SUE-EYKEY-to NOTHU-to John-i cwunta
 and -Dat-Foc notebook-Foc -Nom give
 ‘..., and John gives SUE-also a NOTEBOOK-also’
- d. * ... (kuliko) MARY-to SUE-EYKEY-to NOTHU-to cwunta
 and -Foc -Dat-Foc notebook-Foc give
 ‘..., and MARY-also gives SUE-also a NOTEBOOK-also’

The examples in (88) are non-elliptic counterparts of the examples in (87). The fact that the source of (87) is bad indicates that the ungrammaticality of (87) has nothing to do with ellipsis per se. I suggest that (87) and (88) are semantically deviant, which results from the lexical meaning of the overt focus marker *to* ‘also’. Descriptively speaking, there is a constraint on the realization of an overt focus marker with lexical meaning, e.g., *to* ‘also’, and *man* ‘only’:

- (89) Clauses do not tolerate multiple occurrences of overt focus markers with the same lexical meaning.

Compare (88) with the following:

- (90) a. MARY-man Sue-eykey nothu-lul cwunta
 -Foc (only) -Dat -Acc gives
 ‘Only MARY gives Sue a notebook’
- b. *MARY-man SUE-EYKEY-man nothu-lul cwunta
 -Foc (only) -Dat-Foc (only) -Acc gives
 ‘Only MARY gives only SUE a notebook’
- c. *MARY-man NOTHU-man Sue-eykey cwunta
 -Foc (only) -Foc (only) -Dat gives
 ‘Only MARY gives Sue only a NOTEBOOK’
- d. *MARY-man SUE-EYKEY-man NOTHU-man cwunta
 -Foc (only) -Dat-Foc (only) -Foc (only) gives
 ‘Only MARY gives only SUE only a NOTEBOOK’

(90) shows that clauses permit only one occurrence of overt focus markers with the same lexical meaning. I suggest that the scope of an overt focus marker with lexical meaning is confined to the host XP to which it is attached. As shown in glosses, (88) and (90) are semantically odd.

Regarding multiple focused remnants in Korean Pseudogapping, I previously suggested *Checking-through-Adjunction* by which a lower focalized phrase adjoins to a higher focalized phrase for feature-checking purposes. When this checking operation is taking place, I suggest that the string containing the two overt focus markers with the same lexical meaning is filtered out by (89). If the condition in (89) is well-motivated, one prediction is that a combination of two distinct overt focus markers with different lexical meanings should be allowed in both elliptic and non-elliptic contexts. The prediction seems to be fulfilled:

- (91)
- | | | | | |
|----|---------|---------------|----------|--------|
| a. | John-i | Bill-eykey | chayk-ul | cwunta |
| | -Nom | -Dat | book-Acc | give |
| b. | MARY-to | SUE-EYKEY-man | chayk-ul | cwunta |
| | -Foc | -Dat-Foc | book-Acc | give |
| c. | MARY-to | SUE-EYKEY-man | iya | |
| | -Foc | -Dat-Foc | is | |
- ‘John gives Bill a book, and MARY gives only SUE a book too’
- (92)
- | | | | | |
|----|---------|--------------|------------|--------|
| a. | John-i | Bill-eykey | chayk-ul | cwunta |
| | -Nom | -Dat | book-Acc | give |
| b. | MARY-to | NOTHU-man | Bill-eykey | cwunta |
| | -Foc | notebook-Foc | -Dat | give |

- c. MARY-to NOTHU-man iya
 -Foc notebook-Foc is

‘John gives Bill a book, and MARY gives Bill only a NOTEBOOK too’

- (93) a. John-i Bill-eykey chayk-ul cwunta
 -Nom -Dat book-Acc give
 b. SUE-EYKEY-to NOTHU-man John-i cwunta
 -Dat-Foc notebook-Foc -Nom give
 c. SUE-EYKEY-to NOTHU-man iya
 -Dat-Foc notebook-Foc is

‘John gives Bill a book, and gives SUE only a NOTEBOOK too’

- (94) a. John-i Bill-eykey chayk-ul cwunta
 -Nom -Dat book-Acc give
 b. MARY-to SUE-EYKEY NOTHU-man cwunta
 -Foc -Dat notebook-Foc give
 c. MARY-to SUE-EYKEY NOTHU-man iya
 -Foc -Dat notebook-Foc is

‘John gives Bill a book, and MARY gives SUE only a NOTEBOOK too’

The (b) and (c) examples in (91), (92), and (93) contain two focalized items, marked by different overt focus makers with substantive content. They are good elliptic or non-elliptic sentences. Moreover, the (b) and (c) examples in (94) are fairly acceptable even though they contain three focalized items. Note that the medial focalized item is not marked by an overt focus marker. Once it is marked by either *to* ‘also’ or *man* ‘only’, it causes ungrammaticality, violating (89):

- (95) a. John-i Bill-eykey chayk-ul cwunta
 -Nom -Dat book-Acc give
 b. *MARY-to SUE-EYKEY-to/man NOTHU-man cwunta
 -Foc -Dat-Foc/Foc notebook-Foc give
 c. *MARY-to SUE-EYKEY-to/man NOTHU-man iya
 -Foc -Dat-Foc/Foc notebook-Foc is

Consider next the case of multiple scrambling. As shown in (96), multiple scrambling is possible in Korean/Japanese:

- (96) a. John-i Bill-eykey chayk-ul cwuesse
 -Nom -Dat book-Acc gave
 ‘John gave Bill a book’
 b. [_S Chayk-ul₂ [_S Bill-eykey₁ [_S John-i t₁ t₂ cwuesse]]
 book-Acc -Dat -Nom gave
 c. [_S Bill-eykey₂ [_S chayk-ul₁ [_S John-i t₂ t₁ cwuesse]]
 -Dat book-Acc -Nom gave

With this in mind, let us proceed to consider the following:

- (97) a. *John-i Bill-eykey chayk-ul cwunta (kuliko)
 -Nom -Dat book-Acc give and
 Sue-eykey₁ nothu-lul₂ [_{VP} ~~John-i~~ t₁ t₂ e] ya
 -Dat notebook-Acc -Nom is
 ‘John gives Bill a book, and Sue, a notebook, John gives t t too’

- b. * ... (kuliko) nothu-lul₁ Sue-eykey₂ [~~VP John-i-t₂-t₁-e~~] ya
 and notebook-Acc -Dat -Nom is
 ‘John gives Bill a book, and a notebook, Sue, John gives t t too’

I suggest that *y(a)* ‘be’ is not a normal auxiliary verb but a focus auxiliary with an abstract V-feature, which originates in the tense head and moves to the focus head in order to check off its abstract V-feature against the matching feature of the latter. The appearance of *y(a)* indicates that FocP is projected. Both examples in (97) are bad since the remnants are non-focused, hence they cannot check off the strong focus feature in the head Foc.

The above account could be extended to the important question of why *ha*-support cannot salvage the stranded tense in VP ellipsis contexts. Consider the following contrast:

- (98) a. John-i sakwa-lul meke (kuliko)
 -Nom apples-Acc eats and
 [_{FocP} MARY₁-to [_{TP} [~~VP t₁-sakwa-lul-mek_V~~] ya_T/*ha-nta_T] [+focus]]
 -Foc apple-Acc eat be/do-Pres
 ‘John eats apples, and MARY does too’
- b. John-i sakwa-lul mek-esse (kuliko)
 -Nom apples-Acc eat-Past and
 [_{FocP} MARY₁-to [_{TP} [~~VP t₁-sakwa-lul-mek_V~~] y-esse_T/*ha-esse_T] [+focus]]
 -Foc apple-Acc eat be-Past/do-Past
 ‘John ate apples, and MARY did too’

In (98) the focused remnant NP has moved out of the VP overtly to Spec of FocP in order to check the strong N-feature (i.e., the focus feature) of the head Foc and then, the VP is deleted under identity. VP deletion would strand the tense in T if it is not supported by Aux *y(a)* ‘be’. Just above, I proposed that Aux *y(a)*, which is generated in T with inflectional features, is a focus auxiliary verb in the sense that it raises and adjoins to Foc in order to check its inflectional feature against the abstract V-feature of Foc. I suggest that Aux *ha* ‘do’ is a normal auxiliary verb which cannot check the abstract V-features of Foc. That is why (98) is bad with *ha*-support.²⁸

To summarize, I argued that Korean Pseudogapping is focus movement followed by VP deletion.

2.3.5 Ellipsis more than VP

2.3.5.1 NegP Deletion

While in many instances, it appears that the process in Korean ellipsis is simply elision of VP, there is evidence suggesting that more is involved. For one thing, there are clear instances in which far more than just the VP is elided:

- (99) a. John-i sakwa-lul mek-ci ani-ha-nta (kuliko)
 -Nom apple-Acc eat-Nm Neg-do-Pres and
 MARY₁-to [_{NegP} [_{VP} ~~t₁ sakwa-lul mek-ci~~] ani] ya
 -Foc apple-Acc eat-Nm Neg is
 b. John-i sakwa-lul mek-ci ani-ha-nta (kuliko)
 -Nom apple -Acc eat-Nm Neg-do-Pres and

MARY_I-to [_{NegP} [_{VP} ~~t_I sakwa lul mek ci~~] ~~ani~~] ya
 -Foc apple -Acc eat-Nm Neg is
 ‘John does not eat apples, and MARY does not either’

Descriptively put, the examples in (99) have the same meaning. As extensively argued before, the second conjunct of (99a) may be reduced to VP ellipsis with a good focused remnant *MARY-to*. Now the question is how to treat (99b). I suggest that (99b) is an instance of NegP deletion in Korean. That is, I argue that (99a) and (99b) are derived through the same procedure. If VP is deleted, then (99a) is derived. If NegP is deleted, then (99b) is derived.

2.3.5.2 Stripping

Stripping is a rule that deletes everything in a clause under identity with corresponding parts of a preceding clause, except for one constituent (cf. Hankamer & Sag 1976):

- (100) a. John eats/ate apples, and Mary *(too)
 b. John eats/ate apples, but *(not) Mary

(100) shows that the remnant in English Stripping requires an adverb or negative clause-finally or clause-initially.

Korean also has a potential candidate for Stripping. The following examples illustrate Stripping in Korean:

- (101) a. John-i sakwa-lul meknunta/mekessta (kuliko)
 -Nom apple-Acc eats/ate and
 MARY₁-to/*ka [_{TP} [_{VP} ~~t₁ sakwa-lul mek~~] nunta/essta]
 -Foc/*Nom apple-Acc eat Pres/Past
 ‘John eats/ate apples and MARY too’
- b. John-i sakwa-lul mek-ci ani-ha-nta/essta (kuliko)
 -Nom apple-Acc eat-Nm Neg-do-Pres/Past and
 MARY₁-to/*ka [_{TP} [_{Neg} [_{VP} ~~t₁ sakwa-lul mek-ci~~] ani] ha nunta/essta]
 -Foc/*Nom apple-Acc eat-Nm Neg do-Pres/Past
 ‘John does/did not eat apples, and MARY does/did not either’

(101) shows that in Korean Stripping, only one focused remnant is sufficient since the focus marker *to* attached to the remnant inherently means ‘too or either’. Note that if we add *ya* ‘be’ at the end of (101a) and *ani ya* ‘not-be’ at the end of (101b), we obtain Pseudogapping, as shown below:

- (102) a. John-i sakwa-lul meknunta/mekessta (kuliko)
 -Nom apple-Acc eats/ate and
 MARY₁-to/*ka ya/yesse
 -Foc/*Nom is/was
 ‘John eats/ate apples and MARY does/did too’
- b. John-i sakwa-lul mek-ci ani-ha-nta/essta (kuliko)
 -Nom apple-Acc eat-Nm Neg-do-Pres/Past and
 MARY₁-to/*ka ani ya/yesse
 -Foc/*Nom Neg is/was

‘John does/did not eat apples, and MARY does/did not either’

I propose that Stripping in (101) and Pseudogapping in (102) result from the same procedure. Whether the result is Pseudogapping or Stripping depends on how much of the second conjunct is deleted. In both constructions, the focused phrase moves to Spec of FocP overtly. If VP is deleted, we have the stranded tense and this triggers *ya*-support. If TP is deleted, there is nothing requiring *ya*-support and all we have at the surface is the focused phrase, resulting in a Stripping construction.

Now that I have argued that Pseudogapping and Stripping are derived through the same procedure, it is expected that they have other properties in common. This expectation is fulfilled in that just like Pseudogapping, Stripping in Korean allows multiple remnants (cf. 85):

- (103) a. ?John-i Bill-eykey chayk-ul cwunta (kuliko)
 -Nom -Dat book-Acc give and
 NOTHU-lul SUE-EYKEY-to
 notebook-Acc -Dat-Foc
 ‘John gives Bill a book, and gives SUE a NOTEBOOK too’
- b. ? ... (kuliko) SUE-EYKEY NOTHU-to
 and -Dat notebook-Foc

In short, I argue that Korean Stripping is PF deletion of TP, preceded by focus movement of remnants to Spec of FocP before Spell-Out.

2.3.5.3 Pseudostripping

The following examples also suggest that there is ellipsis in which more than VP is involved:

- (104) a. ?John-i Bill-eykey chayk-ul cwu-esse (kuliko)
 -Nom -Dat book-Acc give-Past and
 MARY₁-to [_{TP} [_{VP} ~~t₁ Bill-eykey chayk-ul cwu~~] yesse]
 -Foc -Dat book-Acc give was
 b. John-i Bill-eykey chayk-ul cwu-esse (kuliko)
 -Nom -Dat book-Acc give-Past and
 MARY₁-to [_{TP} [_{VP} ~~t₁ Bill-eykey chayk-ul cwu~~] ~~ess~~] ya
 -Foc -Dat book-Acc give Past is
 ‘John gave Bill a book, and MARY gave Bill a book too’

Once again, both examples in (104) have the same meaning. Note that the first conjunct in (104) denotes past tense. In (104a), an instance of Korean Pseudogapping, focus Aux *y(a)* ‘be’ in the second conjunct is amalgamated with the stranded verbal affix *ess* ‘past tense morpheme’ at PF via affix-hopping, and the amalgamation is phonetically realized by *y(a)ess* ‘was or were’; that is, ‘... (kuliko) MARY-to yesse’. The judgment of (104a) may be subtle to some speakers but this seems to be an instance of VP ellipsis.

Let us turn to (104b). The full conjunct denotes past tense. What is curious is that the elliptic conjunct denotes only past tense, although the tense morpheme *ess* is not realized overtly. Interestingly enough, (104b) sounds more natural, compared to

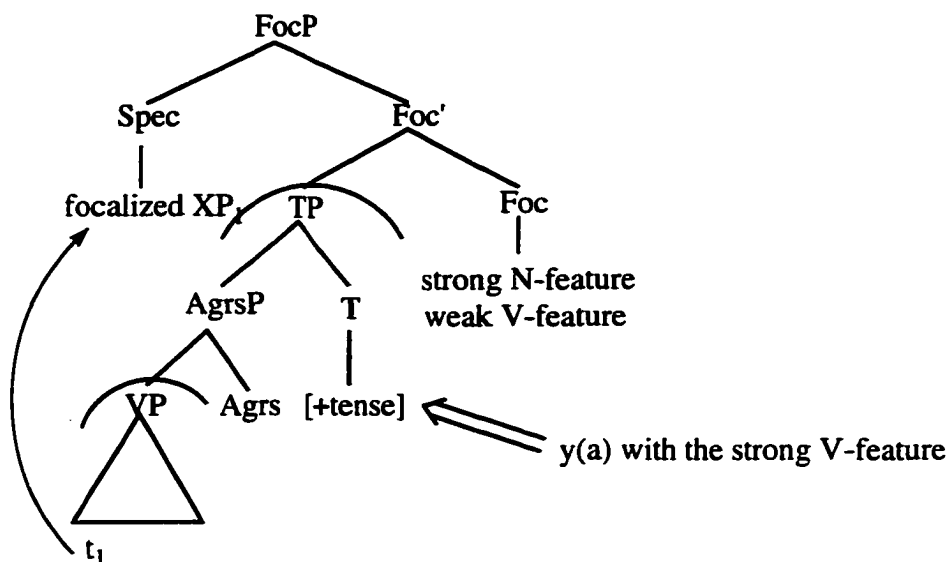
(104a). The initial hypothesis is that if there is an elliptic category in (104b), it could plausibly be TP since the tense morpheme seems to disappear. Suppose that (104b) is an instance of TP ellipsis. Then, the apparent paradox is how to derive Korean Stripping. Compare the following:

- (105) a. John-i Bill-eykey chayk-ul cwu-esse (kuliko) MARY-to
 -Nom -Dat book-Acc give-Past and , -Foc
 ‘John gave Bill a book, and MARY gave Bill a book too’
- b. ... (kuliko) MARY-to ya
 and -Foc is

For the purpose of exposition, I will call (105a) *Stripping* and (105b) *Pseudostripping*. Below, I will explore two possibilities to derive Stripping and Pseudostripping.

First, I suggest that Lasnik’s (1995c, 1997a) argument for a PF crash theory of strong features may provide a way out of this dilemma. Consider the following tree structure:

(106)

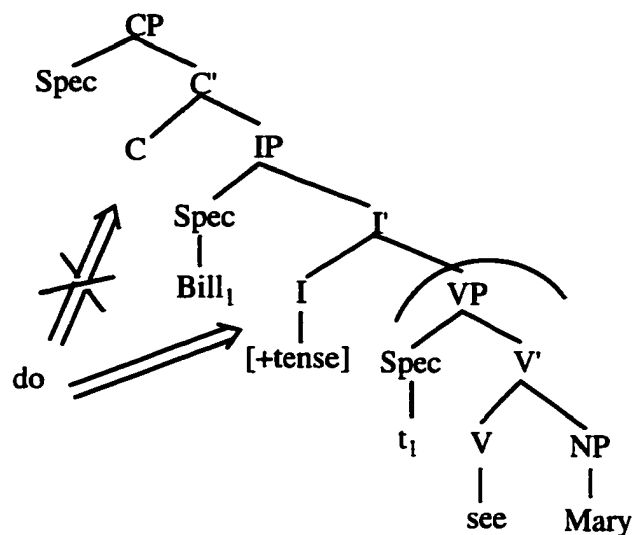


Suppose that the focus head has the strong N-feature (= [+focus]) and the weak V-feature. The strong focus feature in the head Foc will be checked off once focalized XPs move to Spec of FocP. In section 2.3.4.2, I proposed that Aux *y(a)* originates in T with an abstract V-feature. Suppose that the V-feature of Aux *y(a)* is strong.²⁹ Following Lasnik (1995c, 1997a, b), I propose that movement or ellipsis can rescue a derivation with a strong feature. Suppose first that *y(a)* has moved to the head Foc in order to check off its strong V-feature against the matching V-feature of the latter.³⁰ In this case, if TP is deleted, Pseudostripping in (105b) is derived since *y(a)* is outside of the ellipsis site. Suppose next that *y(a)* resides in the ellipsis site, TP. In this case, if TP is deleted, Stripping in (105a) is derived. Notice that the unchecked strong V-feature of *y(a)* could be eliminated by a PF deletion operation.³¹

Alternatively, I suggest that Aux *ya* 'be' is freely inserted into a head position as long as it is close enough to the stranded tense affix. Let us first consider an English VP ellipsis case:

(107) a. John saw Mary, and Bill did too

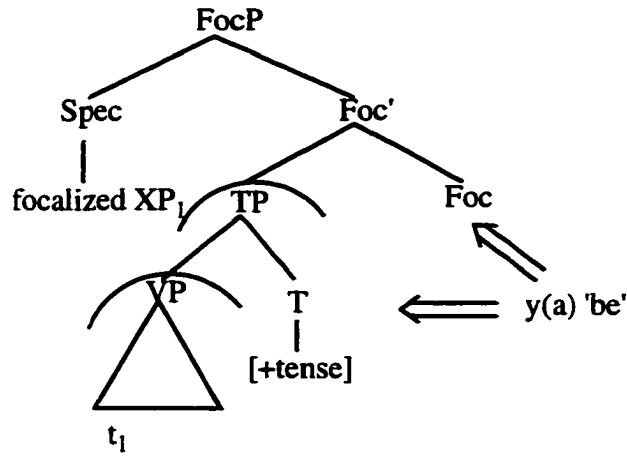
b.



In English, Aux *do* is forced to be inserted into I. It cannot be inserted into C since it is not adjacent to the stranded tense due to the intervening surface subject.

Let us turn to Korean VP ellipsis:

(108)



Korean is Spec-initial and head-final. Hence, Aux *ya* 'be' could be inserted into Foc as well as T in relation to the stranded tense in the sense that Aux *ya* in Foc is adjacent to [+tense] in T. Suppose that *ya* is inserted in Foc. If VP is deleted, Pseudogapping in (104a) will be derived. If TP is deleted, Pseudostripping in (104b) will be derived.

2.3.5.4 The Upper Bound of Elliptic Categories

So far, I have shown that there is significant evidence that the process under discussion involves elision of more than VP. More precisely, I suggest that NegP deletion and TP deletion as well as VP deletion are allowed in Korean focus constructions. We may generalize that the elided constituent is at most as large as TP, assuming that NegP is placed below TP in Korean. This is clearly not so in English VP ellipsis, where the elided constituent is smaller than TP. One important observation is that all else being equal, when there are options, deletion of the higher projection is preferred:

- (109) a. NegP ellipsis in (99b) is preferred to Pseudogapping (= VP ellipsis) in (99a).
 b. Stripping (= TP ellipsis) in (101b) is preferred to NegP ellipsis in (99b).
 c. Stripping (= TP ellipsis) in (101) is preferred to Pseudogapping (= VP ellipsis).
 d. Pseudostripping (= TP ellipsis) in (104b) is preferred to Pseudogapping (= VP ellipsis) in (104a).

With respect to the elliptic facts in (109), one might wonder why ellipsis of a higher node is preferred to that of a lower node. Although I do not have a satisfactory answer, I would like to point out the following facts:

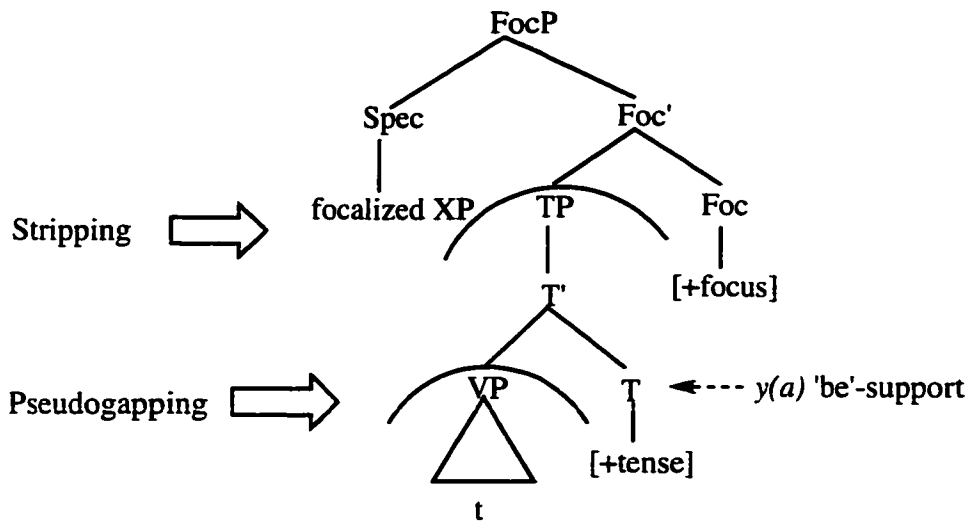
- (110) a. ?John-i seykwon-uy chayk-tul-ul sassta
 -Nom three-Gen book-Pl-Acc bought
 b. John-i seykwon-uy chayk-ul sassta
 -Nom three-Gen book-Acc bought
 ‘John bought three books’
- (111) a. (?)Chinkwu-(tul)-i/ka seymyeong-i talye-tul oassta
 friend-(Pl)-Nom three-Nom run-Pl came
 b. Chinkwu-(tul)-i/ka seymyeong-i talye oassta
 friend-(Pl)-Nom three-Nom run came
 ‘Three friends came’

As illustrated above, with respect to the status of the agreement plural morpheme *tul*, (b) examples are preferred. Simply put, I suggest that Korean is a language which favors elision of redundant information if it is recoverable from a linguistic context.

2.4 Conclusion

In this chapter, I have discussed various ellipsis phenomena in Korean/Japanese focus constructions. Particularly, I focused on the discussion of Pseudogapping and Stripping in Korean, as illustrated below:

(112)



I argued that Korean Pseudogapping is focus movement followed by VP ellipsis and that the stranded tense is supported by focus Aux *y(a)* 'be'. I also argued that Korean Stripping is focus movement followed by TP ellipsis.

One important question to be answered is what licenses ellipsis. I propose that VP ellipsis is licensed by a tense-carrying Aux verb (i.e., *y(a)* ‘be’ in Korean or *da* in Japanese), and that TP ellipsis is licensed by a [+focus] head

In sum, extending Lasnik’s (1995c, 1997a) analysis of English Pseudogapping to Korean/Japanese ellipsis in focus constructions, I argued that the good remnant in ellipsis has to undergo focus movement out of the (highest) VP in overt syntax.

Notes to Chapter II

¹ This chapter is a revised and expanded version of J.-S. Kim (1997b, c). The portions of this chapter were presented at the 5th Conference of the Student Organization of Linguistics in Europe (J.-S. Kim 1997a), the 7th International Symposium on Korean Linguistics (J.-S. Kim 1997e), and the 8th Japanese/Korean Linguistics (Kim & Sohn 1997).

² *y* as in *y(a)* is a morphological realization of the expletive verb 'be' and *a* as in *y(a)* is a sentential-ending marker.

³ The capitalization of full words indicates that they are focused.

⁴ I deal mainly with Korean data, but I claim that Japanese and Korean pattern together in relevant respects.

⁵ In Koizumi (1995), the overt raising of the subject NP and the object NP is necessary for each NP to have its strong Case feature checked off. What is curious in his analysis is that the strong Case feature of each NP is not checked off in overt syntax since he believes that Case checking is an LF phenomenon (Chomsky 1993). I will not elaborate on his three-layered Case checking theory (cf. Watanabe 1993) here. But I would like to point out that what Koizumi (1995) has in mind is that the strong Case feature of each NP, which is in Spec of Agr (i.e., Agrs and Agro) in overt syntax, becomes weak once it is copied onto Agr for later LF Case checking. It is not clear to me why some strong formal features, which drive the overt movement of an entire constituent, are not checked off overtly but have to lose their strength overtly. For this reason, I reject Koizumi's (1995) motivation for overt NP raising and adopt Lasnik's (1995b, c) alternative proposal.

⁶ In Koizumi's (1993, 1995) split VP hypothesis, it was assumed that the higher shell V has a strong V-feature, which must check against a feature of a lexical verb prior to Spell-Out.

⁷ Chomsky (1995) suggests that a strong feature resides only in the target. On the contrary, Lasnik (1995c, 1997a) and Bošković (1997b) argue that a strong feature may be located in the moved items.

⁸ See Lasnik (1997b) for a possible alternative analysis of Pseudogapping, based on Chomsky's (1995) theory of pied-piping, particularly as explicated by Ochi (1997).

⁹ Koizumi (1995: 125-129) explores this possibility as well and rejects it for some reason. But it seems to me that he still leaves this possibility open. In Koizumi's (1995) original proposal of a split VP structure, it was argued that ditransitive verbs have two VPs (i.e., the higher VP for the subject and the lower VP for the complements), just as simple transitive verbs do. See Koizumi (1995, chapter 5) for details. In this thesis, I adopt Lasnik's (1995c, 1997a) split VP structure.

¹⁰ Y. Jang (1996) also argues that PP complements must raise to Spec of Agr to check off the EPP feature in Agr through the analysis of locative inversions in English and Chichewa.

¹¹ As noted in Lasnik (1997a), another important question is how to restate the VP licensing condition in a minimalist framework.

¹² The sloppy reading may also be available to some speakers in (26b) although there seems to be some contrast for the relevant reading available between (25b) and (26b). See Hoji (1994) for a wider range of examples.

¹³ In Hankamer & Sag (1976), the cross-hatch (#) indicates that a sentence with # is inappropriate in the indicated context (assuming the lack of any previous significant linguistic context).

¹⁴ As is well known, Korean is a pro-drop language (Kuroda 1965, Hoji 1994 for Japanese).

¹⁵ At this point, one question is why *sloppy-like readings* are available at least in some instances of the main-verb-only construction in Korean. See Hoji (1994).

¹⁶ Following J.-M. Yoon (1990) and M.-K. Park (1994), among others, I will argue that the XP in (34) is VP, that is, both subject and object in Korean remain within VP in overt syntax.

¹⁷ H. S. Choe (1988) claims, in a somewhat different framework, that Korean main verb is restructured with Infl and Comp without head movement. H. S. Choe's (1988) notion of restructuring is compatible with PF merger, as observed in M.-K. Park (1994).

¹⁸ This evidence is not relevant to Japanese where the number agreement between a verb and its subject is not realized overtly.

¹⁹ Contra Chomsky (1995), I assume here that the strong [+focus] in Korean resides both in the head Foc and in the moved items.

²⁰ *Accent* is instantiated as *stress* in English and *pitch* in Korean/Japanese.

²¹ Chomsky (1993) assumes that weak features are invisible in PF, or visible but deleted in the PF component. I interpret that what Chomsky (1993) has in mind by weak features is weak *uninterpretable* features. PF *interpretable* features such as categorial D-feature or focus feature can be visible or can not be deleted in the PF component.

²² However, putting a pause (#) after a subject QP as in (ia) or an object QP as in (ib) makes it possible for the QP to have wide scope over *Neg* (M.-K. Park 1994):

- (i) a. Motun sensayng-tul-i # John-ul manna-ci ani ha-essta
 every teacher-P1-Nom -Acc meet-Nm Neg do-Past
 Wide Scope = Neg 'Not all of the teachers met John'
 Wide Scope = QP 'It is not all the teachers who didn't meet John'
- b. John-i motun haksayng-tul-ul # manna-ci ani ha-essta
 -Nom every student-P1-Acc meet-Nm Neg do-Past
 Wide Scope = Neg 'John didn't meet all the students'
 Wide Scope = QP 'All the students, John didn't meet'

Similar effects seem to obtain in English. Compare the following:

- (ii) I couldn't solve [many of the problems]
 a. Wide Scope = Neg 'I was able to solve few of the problems'
 b. Wide Scope = QP 'There are many problems that I couldn't solve'

As Lasnik (1972) notes, depending on intonation, the quantifier in object position in (ii) can be either inside or outside the scope of *n't*. When *many* is within the same main intonational phrase as *n't*, it is usually negated, resulting in the interpretation (iia). On the other hand, when (ii) is given an abnormal intonation such that *I couldn't solve* has the contour of an independent sentence, *many* will not be negated, giving the interpretation (iib). Lasnik (1975) further claims that the abnormal intonation contour is similar to the syntactic rule of topicalization. In other words, when sentence (ii) has the unusual intonation contour, the object NP behaves as if it is topicalized. See also Huang's (1982) extraposition analysis of the phenomenon under discussion.

²³ In Bošković & Takahashi (1995), it was argued that θ -features in Japanese/Korean are weak.

²⁴ I assume that in Korean, FocP is higher than TP, which is higher than AgrsP; FocP > TP > AgrsP. Refer back to section 2.3.3.1.

²⁵ The proposed analysis of Korean Pseudogapping still holds even if AgrsP rather than the higher VP, VP1 in (74) and (75), is deleted. Previously, I argued that the VP-internal subject does not move overtly. If the subject moves to Spec of AgrsP overtly, then Korean Pseudogapping must be formulated as focus movement followed by deletion of AgrsP. See Kim and Sohn (1997) for this possibility.

²⁶ This line of reasoning is initiated by Saito (1994) and further developed by Sohn (1994a); roughly put, the adjunction of α to β is allowed only if (i) α and β are clausemates and (ii) β is in an A-position. See chapter 3 (also J.-S. Kim 1997h) for the motivation behind this claim.

²⁷ One might wonder why the examples in (85) are slightly marginal. See J.-S. Kim (1997a, b, c) for an attempt to answer to this question.

²⁸ One might suggest that the stranded tense in Korean lexically chooses *ya* 'be'-support rather than *ha* 'do'-support. However, there is evidence that in other contexts, the stranded tense chooses *ha*-support. Refer back to the examples in (23).

²⁹ Under this option, we must assume that the PF insertion of a lexical category with a strong feature is allowed unless it has semantic features. But it is not clear that this insertion can be allowed in Chomsky's (1993, 1995) theory of strong features.

³⁰ However, it is not clear that the operation Move is able to apply in PF.

³¹ If *ya*-support is a last resort, then *ya*-insertion is allowed only if VP is deleted in PF. Suppose that Pseudostripping in (105b) is the result of TP deletion. Then, we have to assume that a deletion operation operates from the bottom up; VP deletion → *ya*-support → TP deletion. It is not clear, however, why TP deletion first targets the VP node and triggers *ya*-insertion, and then finally deletes TP, rather than targets the TP node directly.

Chapter III

What does [+focus] do in Sluicing?

3.1 Introduction

Sluicing is a certain IP ellipsis phenomenon, which was first investigated by Ross (1969).¹ The following illustrates Sluicing:

- (1) a. Somebody just left. Guess who ~~t_{just left}~~
b. Mary bought something. I wonder for who ~~she bought it t~~

Roughly put, it is possible to delete everything in an embedded question except the question word (and a preposition) if there is a sentence earlier in the discourse that duplicates the meaning of the question. More precisely, Sluicing is standardly analyzed either as WH-movement followed by IP deletion (Ross 1969, Rosen 1976, Takahashi 1994a) or as a base-generated null IP which is licensed by a [+WH] Comp agreeing with its specifier (Lobeck 1990, 1993, 1995, 1997, and Saito & Murasugi 1990).

Given these analyses, we would expect Sluicing in relative clauses to be possible, but in fact it turns out to be impossible (Riemsdijk 1978):

- (2) *Someone has done the dishes, but I don't know the person who ~~t has done the dishes~~

Another interesting fact in Sluicing, but so far largely ignored since Ross (1969), Rosen (1976), and Riemsdijk (1978), is that prepositions can be stranded:

- (3) Mary bought something. I wonder who ~~she bought it for~~ *t*

In (3) the ellipsis site does not form a constituent.² Hence, this example poses a problem for both the interpretative approach and the deletion approach under the fairly standard assumptions that grammatical operations do not target non-constituents.

Takahashi (1994a) observes that Japanese has a similar construction to English Sluicing as in (4b).^{3,4}

- (4) a. John-ga nanika-o katta
 -Nom something-Acc bought
 'John bought something'
- b. Boku-wa [nani-o ka] wakaranai
 I-Top what-Acc Q not know
 'I don't know what'

Takahashi (1994a) argues that in (4b) the WH-phrase moves overtly to Spec of CP and agrees with the Q-marker *ka* [+WH] in Comp, which licenses the elliptic IP, as illustrated in (5).

- (5) Boku-wa [_{CP} nani_i-o [_{IP} ~~John-ga-t_i-katta~~] ka_C] wakaranai
 I-Top what-Acc -Nom bought Q not know
 'I don't know what'

But it is not clear what motivates the movement of the sluiced remnant-WH in (5). Since WH-in situ is also allowed in Japanese as in (6), Takahashi assumes that syntactic WH-movement in Japanese is optional.

- (6) Boku-wa [John-ga nani-o katta ka] wakaranai
 I-Top -Nom what-Acc bought Q not know
 'I don't know John bought what'

Clearly, this violates the basic tenet of the minimalist framework (Chomsky 1993, 1994, 1995) where every movement is a last resort.

Another question is why expletive *da* 'be' can appear in Sluicing as in (7), since it cannot in an embedded clause without ellipsis as in (8).⁵

- (7) ... Boku-wa [nani-o da/datta ka] wakaranai
 I-Top what-Acc is/was Q not know
 'I don't know what is/was'
- (8) Boku-wa [nani-o John-ga t katta (*da/*datta) ka] wakaranai
 I-Top what-Acc -Nom bought is/was Q not know
 'I don't know what John bought'

Next, multiple Sluicing is not possible in English as in (9), but it is in Japanese, as shown in (10) and (11).

- (9) *Someone bought something, but I don't know who what
 cf. Someone bought something, but I don't know who bought what
- (10) Dareka-ga nanika-o katta ga,
 someone-Nom something-Acc bought but
 boku-wa [dare-ga nani-o (da) ka] siranai
 I-Top who-Nom what-Acc is Q not know
 'Someone bought something, but I don't know who what (is)'
- (11) Mary-wa dareka-o dareka-ni syookaisita rasii ga,
 -Top someone-Acc someone-Dat introduced seem but
 boku-wa [dare-o soko-de dare-ni (da) ka] wakaranai
 I-Top who-Acc there-at who-Dat is Q not know
 'It seems that Mary introduced someone to someone there, but I don't know
 who, there, to whom (is)'

Takahashi (1994a) argues that both sluiced remnants in (10) occupy Spec of CP; more precisely, a lower WH-phrase adjoins to a higher one and the complex of the two WH-phrases moves to Spec of CP under certain conditions. Along this line of reasoning, it is predicted that all the remnants in (11) are in the embedded Spec of CP. But (11) must be analyzed as an instance of mixed agreement, since the first phrase and the third phrase in Spec of CP are [+WH] and the second is [-WH], as observed by Nishiyama, Whitman, & Yi (1996).

In this chapter, I will try to resolve the aforementioned problems in a principled way within a minimalist framework (Chomsky 1991, 1993, 1994, 1995 and Chomsky

& Lasnik 1993). More specifically, I will explore the nature of prior movement and the licensing condition on Sluicing.

In the first part of this chapter, I discuss Sluicing in Japanese. I examine two competing analyses, a deletion analysis (Takahashi 1994a) and a cleft analysis (Nishiyama, Whitman, & Yi 1996), and explore a new analysis in a minimalist framework. I argue that Japanese Sluicing is overt focus movement followed by TP deletion or VP deletion. I observe that there are two types of Sluicing (i.e., TP Sluicing and VP Sluicing) in Japanese. I argue that VP Sluicing is a byproduct of the fact that subjects and objects remain inside VP overtly and the stranded tense is supported by expletive *da* 'be'.

In the second part, I explore Sluicing in English. I first criticize two previous analyses; an agreement analysis (Lobeck 1990) and a copula analysis (Nishiyama, Whitman, Yi 1996). Then, I provide a new analysis of Sluicing. I discuss why Sluicing is allowed in interrogative WH-clauses, but not in relative clauses. I argue that Sluicing in English is overt focus movement plus WH-movement followed by TP deletion. I will also raise several issues regarding my proposal and try to solve some potential problems. Finally, I explore Matrix Sluicing in English and Japanese.

3.2 Sluicing in Japanese

3.2.1 Previous Analyses of Japanese Sluicing

In this section, I will examine two competing analyses of Japanese Sluicing. Takahashi (1994a) argues that Japanese Sluicing is IP ellipsis, preceded by the syntactic WH-movement of the sluiced remnant to Spec of CP, and that the IP ellipsis site is licensed by a [+WH] Comp. On the other hand, Nishiyama, Whitman, & Yi

(1996) argue that the apparent Sluicing in Japanese stems from *pro* drop plus copula drop, thus no movement (i.e., Scrambling of WH-phrases or syntactic WH-movement) is involved in Sluicing.

3.2.1.1 Sluicing with Overt WH-movement

Saito (1989) argues that Scrambling is semantically vacuous S-structure A'-movement, which does not construct an operator-variable relation, thus Scrambling can be freely undone in LF. Consider the following:

- (12) a. John-wa [Mary-ga *dare-ni* atta ka] siritagatteiru
 -Top -Nom who-Dat saw Q wants to know
 b. *Dare-ni* John-wa [Mary-ga t atta ka] siritagatteiru
 who-Dat -Top -Nom saw Q wants to know
 ‘John wants to know who Mary saw.’

In (12a) the WH-phrase remains in situ, while it is scrambled to the sentence-initial position in (12b). Despite their different surface positions, the WH-phrases in (12) have the embedded scope. According to Saito (1989), this is possible if the scrambled phrase moves back to its original position in LF.

Takahashi (1993) observes, however, that a particular instance of Scrambling does not exhibit such undoing effects:

- (13) a. John-wa [Mary-ga *dare-ni* atta ka] siritagatteiru no?
 -Top -Nom who-Dat saw Q wants to know Q

‘Does John want to know who Mary saw?’ or

‘Who does John want to know whether Mary saw?’

- b. *Dare-ni* John-wa [Mary-ga t atta ka] siritagatteiru no?
 who-Dat -Top -Nom saw Q wants to know Q
 ‘Who does John want to know whether Mary saw?’

As shown in (13b), when a WH-phrase undergoes A'-movement to the clause initial position headed by a [+WH] Comp, it cannot move any further in LF. That is, (13a) is ambiguous: it means either an embedded WH-question or a matrix WH-question. However, only the matrix WH-question reading is allowed in (13b). On the face of it, a plausible hypothesis is that the displaced phrase and its trace in (13b) construct an operator-variable relation, which should be maintained throughout the derivation. In this light, Takahashi (1993) regards (13b) as an instance of syntactic (i.e., overt) WH-movement in Japanese so that the scope of the displaced WH-phrase in (13b) is fixed in overt syntax.

Takahashi (1993, 1994a) argues that the WH-phrase undergoing syntactic WH-movement moves to Spec of CP rather than adjoins to IP, through the analysis of Sluicing in Japanese. Consider the following:⁶

- (14) a. John-ga nanika-o katta
 -Nom something-Acc bought
 ‘John bought something’
 b. Boku-wa [nani-o ka] wakaranai
 I-Top what-Acc Q not know
 ‘I don’t know what’

- (15) a. John bought something.
b. I don't know what.

Takahashi (1993, 1994a) suggests that (14b) is similar to (15b), an instance of Sluicing in English. Although the indirect question in (14b) contains only a WH-phrase and a Q-marker, its meaning is equivalent to the following full sentence:

- (16) Boku-wa [kare-ga nani-o katta ka] wakaranai
I-Top he-Nom what-Acc bought Q not know
'I don't know what he bought'

Additional data are given below:

- (17) John-ga dareka-o sagasiteiru mitaida ga,
-Nom someone-Acc is looking for seems but
boku-wa [dare-o ka] wakaranai
I-Top who-Acc Q not know
'It seems that John is looking for someone, but I don't know who'
- (18) John-wa [zibun-ga nanraka-no-riyuu-de sikarareta ka]
-Top self-Nom some-Gen-reason-for was scolded Q
wakattenai ga, Mary-wa [naze ka] wakatteiru
not knows but -Top why Q knows
'John doesn't know why he was scolded, but Mary knows why'

Takahashi (1993, 1994a) further observes that as in English, a Comp without agreement with its Spec in Japanese does not allow Sluicing either. Consider the following:

- (19) a. *John says that UConn will win the NCAA, but I don't know whether
 b. *John says that UConn will win the NCAA, but I don't know that
- (20) a. *John-ga [UConn-ga NCAA-ni katu to] itteru ga,
 -Nom -Nom -in win C says but
 boku-wa [[_{IP} e] kadooka] wakaranai
 I-Top whether not know
 'John says that UConn will win the NCAA, but I don't know whether'
- b. *... boku-wa [[_{IP} e] to] wakaranai
 I-Top that not know
 'John says that UConn will win the NCAA, but I don't know that'

Following Lobeck (1990) and Saito & Murasugi (1990), Takahashi (1993, 1994a) observes that Sluicing is possible only when a WH-phrase occurs in Spec of CP immediately dominating the empty IP. He argues that Sluicing in Japanese is licensed by an agreeing Comp. According to Takahashi, (14b) is derived in the following way:

- (21) Boku-wa [_{CP} nani_i-o [_{IP} ~~John-ga~~ _{t_i}-katta] ka_C] wakaranai
 I-Top what-Acc -Nom bought Q not know
 'I don't know what'

In (21) the WH-phrase undergoes syntactic WH-movement to Spec of CP and agrees with the Q marker *ka* [+WH] in Comp. If the embedded IP is deleted in PF, (14b) is derived.⁷

However, Takahashi's (1993, 1994a) analysis of Japanese Sluicing raises some questions. First, he argues that the remnant-WH in Sluicing is located in Spec of CP via overt WH-movement. The immediate question is then why Japanese lacks syntactic WH-movement in the non-elliptic counterpart of (21), as shown in (22).

- (22) Boku-wa [John-ga nani-o katta ka_C] wakaranai
 I-Top -Nom what-Acc bought Q not know
 'I don't know John bought what'

Takahashi (1994a) explores two possibilities. The first possibility is that syntactic WH-movement always takes place in Japanese. Watanabe (1992) proposes that Japanese WH-phrases have the complex structure of [_{DP} Op [_{D'} [_{NP} WH-phrase] D⁰]] and that the invisible operator in Spec of DP moves to Spec of CP (see 23a). Following Kuroda (1965) and Nishigauchi (1986, 1990), Watanabe (1992) argues that the visible part of a WH-phrase in Japanese is just indeterminate and acquires the quantificational force of a question word through the WH-operator in Spec of DP, proposing that the invisible operator undergoes syntactic movement to Spec of CP. Takahashi (1994a) speculates that to accommodate Sluicing data under Watanabe's analysis, it should be assumed that syntactic WH-movement pied-pipes the entire WH-phrase in Sluicing. Under this option, however, the original problem of optionality still remains. The following illustrates this point:

- (23) a. Mary-ga [_{CP} Op_i [_{IP} John-ga [_{DP} t_i nani]-o katta ka_C] siritagatteiru
 -Nom -Nom what-Acc bought Q wants to know
 'Mary wants to know what John bought'
- b. Boku-mo [_{CP} Op_i [_{IP} kare-ga [_{DP} t_i nani]-o katta ka_C] siritai
 I-also he-Nom what-Acc bought Q want to know
 'I want to know what, too'
- c. *Boku-mo [_{CP} Op_i [_{IP} e] ka_C] siritai
 I-also Q want to know
 'I want to know what, too'
- d. Boku-mo [_{CP} nani-o [_{IP} e] ka_C] siritai
 I-also what-Acc Q want to know
 'I want to know what, too'

(23a) provides a linguistic context. The embedded clause in (23b) is fully spelled out, and the null operator analysis assigns the indicated structure there; the null operator moves from Spec of DP to Spec of CP. Since the Q-marker agrees with the operator in Spec of CP, it is predicted that the embedded IP can be deleted in (23b). This prediction, however, is not borne out, as the ungrammaticality of (23c) shows. In short, under Watanabe's (1992) analysis, the problem is why in non-elliptic sentences, only the null operator moves to Spec of CP, while in elliptic sentences, the entire WH-phrase must move. The second possibility, which is adopted in Takahashi (1994a) following the idea of Kuroda (1988), is that agreement is not forced in Japanese so that syntactic WH-movement is optional in Japanese. In other words, Takahashi (1994a) suggests that syntactic WH-movement is not forced in non-elliptic constructions, but it is forced in ellipsis. However, optionality is not allowed by the

last resort condition, which “requires that movement is permitted only to satisfy some condition” (Chomsky & Lasnik 1993:523).

The second problem is related to multiple Sluicing. English Sluicing tolerates only one WH-remnant, as shown in (24). However, two sluiced WH-phrases are allowed in Japanese, as shown in (25).

(24) *Someone bought something, but I don’t know who what

(25) Dareka-ga nanika-o katta ga,
 someone-Nom something-Acc bought but
 boku-wa [dare-ga nani-o ka] siranai
 I-Top who-Nom what-Acc Q not know
 ‘Someone bought something, but I don’t know who what’

In order to account for this fact, following Kuroda (1988), Takahashi (1993) proposes that agreement can be many-to-one in Japanese. More precisely, in (25) *what* first moves to Spec of CP and then *who* adjoins to the CP. If the CP-adjoined position is reanalyzed as another specifier position of CP, both WH-phrases can have Spec-Head agreement relation with the [+WH] Comp. However, this multiple Spec analysis has a problem:

(26) a. Dareka-ga [John-ga nanika-o katta to] itteita
 someone-Nom -Nom something-Acc bought that said
 ‘Someone said John bought something’
 b. *Mary-wa [dare-ga nani-o ka] oboeteinai
 -Top who-Nom what-Acc C not remembers

‘Mary doesn’t remember who what’

In (26a) the two indefinite pronouns are not clausemates and multiple Sluicing in (26b) is degraded if its meaning is that ‘Mary does not remember who said John bought what.’ In this light, Takahashi (1994a) rejects the multiple Spec analysis of multiple Sluicing and explores another possibility. The issue is clear; that is, how to capture the locality requirement between the sluiced remnants.

In order to place Takahashi’s (1994a) new account for multiple Sluicing into perspective, I briefly review Saito’s (1994) discussion of LF additional-WH effects in Japanese. Saito (1994) observes that an adjunct WH-phrase can be extracted out of islands in LF when there is an argument WH-phrase in a higher position of the same clause, as shown in (27c).

- (27) a. *John-wa [_{NP} [_{IP} sono hon-o naze katta] hito]-o sagasiteiru no
 -Top that book-Acc why bought person-Acc looking-for Q
 ‘Q John is looking for [the person [that bought that book why]]’
 b. *John-wa [_{NP} [_{IP} naze nani-o katta] hito]-o sagasiteiru no
 -Top why what-Acc bought person-Acc looking-for Q
 ‘Q John is looking for [the person [that bought what why]]’
 c. ??John-wa [_{NP} [_{IP} nani-o naze katta] hito]-o sagasiteiru no
 -Top what-Acc why bought person-Acc looking-for Q
 ‘Q John is looking for [the person [that bought what why]]’

(27a) violates the ECP when an adjunct WH-phrase *naze* moves out of an island in LF. (27b) violates the ECP for the same reason. What is interesting is the status of (27c), which is far better than (27a) and (27b). On the basis of the contrast between

(27a, b) and (27c), Saito (1994) proposes that in LF an adjunct WH-phrase can adjoin to an argument WH-phrase in a higher position forming a WH-complex, and can move out of an island along with the WH-movement. Saito (1994) crucially notes that two WH-phrases must be clausemates for LF saving effects to show up. Compare (27c) with (28).

- (28) *Kimi-wa [_{NP} [_{IP} nani_i-o naze Mary-ni [_{CP} John-ga t_i katta tte]
 you-Top what-Acc why -to -Nom bought C
 itta] hito]-o sagasiteiru no
 said person-Acc looking-for Q
 ‘Q you are looking for [the person [that told Mary [that John bought what]
 why]]’

Although Saito (1994) did not address the implication of his theory for potential S-structure saving effects, the null hypothesis is that the same mechanism is also available in overt syntax (cf. Sohn 1994a). Multiple WH-phrases in Sluicing are likewise subject to the clausemate condition, as shown in (26). Drawing on this affinity between multiple Sluicing and LF saving effects of WH-phrases, Takahashi (1994a) suggests that in (25) the lower WH-phrase adjoins to the higher one and the complex of the two WH-phrases moves to Spec of CP, ultimately agreeing with the [+WH] Comp *ka*, as schematized below:

- (29) a. ... [_{CP} [_C [_{IP} ...WH₁...WH₂...] C]] ...
 b. ... [_{CP} [_C [_{IP} ...[WH₂-WH₁]...t₂...] C]] ...
 c. ... [_{CP} [WH₂-WH₁]₁ [_C [_{IP} ...t₁...t₂...] C]] ...

d. ... [_{CP} [WH₂-WH₁]₁ [_{C'} [_{IP} e] C]] ...

However, Takahashi's (1994a) analysis of multiple Sluicing raises a problem.

Consider the following:

- (30) Mary-wa dareka-o dareka-ni syookaisita rasii ga,
 -Top someone-Acc someone-Dat introduced seem but
 boku-wa [dare-o soko-de dare-ni ka] wakaranai
 I-Top who-Acc there-at who-Dat Q not know
 'It seems that Mary introduced someone to someone there, but I don't know
 who, there, to whom'

According to Takahashi, all the sluiced remnants in (30) must be in the embedded Spec of CP. But (30) is an instance of mixed agreement, since the first phrase and the third phrase in Spec of CP are [+WH] and the second is [-WH], as pointed out by Nishiyama, Whitman, & Yi (1996). This example poses a serious question to Takahashi's analysis of Sluicing. His whole analysis is based on the assumption that only an agreeing head with its specifier can license ellipsis. However, (30) shows that multiple Sluicing is possible in the environment that the head does not seemingly agree with its specifiers, the three remnants. That is, under Takahashi's analysis, despite the fact that there is apparently no agreement between the head and its specifiers, multiple Sluicing in (30) is allowed. Below, I will show that the head in fact agrees with the remnants.

In summary, Takahashi's (1993, 1994a) analysis of Japanese Sluicing does not support the hypothesis that Japanese has syntactic WH-movement to Spec of CP. The first problem was the optionality of overt WH-movement. The second was that the

agreement relation between the sluiced remnants in a certain instance of multiple Sluicing is not the [+WH] one.

3.2.1.2 Sluicing without (WH)-movement

In this section, I examine an alternative analysis of Japanese Sluicing. Nishiyama, Whitman, & Yi (1996, hereafter NWY) argue that Japanese Sluicing resembles cleft sentences in a certain way and that it results from null *pro* plus copula drop, hence no movement is involved in Sluicing.⁸

As mentioned before, Takahashi (1994a) argues that WH-remnants in Sluicing contexts occupy Spec of CP and agree with the interrogative Comp *ka*, which licenses the empty IP. On the other hand, NWY claim that Japanese Sluicing is an instance of cleft constructions. Their claims are summarized in (31).

- (31)
- a. The Q-marker *ka* might not be in Comp.
 - b. The copula can appear in Sluicing, which is not possible in normal embedded questions.
 - c. The distribution of overt Case-markers between Sluicing and cleft sentences patterns together.

I now go over their claims one by one.

First, NWY (1996) argue that the Q marker *ka* might not be in Comp, since for some verbs, it can co-occur with a canonical complementizer, *to*, in Japanese. Their point is that if *ka* is in Comp, it is not clear why *to* can appear:

- (32) a. Boku-wa [dare-ga kita ka to] kiita
 I-top who-Nom came Q C asked
 'I asked who came'
- b. Boku-wa [John-ga dare-o aisiteiru ka] wakaranakatta kara,
 I-Top -Nom who-Acc love Q didn't know since
 (Boku-wa) [dare ka to] kiita
 I-Top who Q C asked
 'Since I didn't know who John loves, I asked who'

Although they do not commit themselves to which position *ka* occupies, NWY claim that (32a) suggests that *ka* may not be in Comp. Indeed, as (32b) shows, this *ka to* pattern is seemingly allowed in Sluicing contexts. However, I claim that this is not strong enough evidence against Takahashi's (1994a) analysis. One way out for Takahashi is to say that both *ka* and *to* occupy Comp as one morphologically complex form *kato*, which is selected by *ask*-type verbs, since *ka* and *to* cannot co-occur with *know*-type verbs:

- (33) a. John-ga dareka-o sagasiteiru mitaida
 -Nom someone-Acc is looking for seems
 'It seems that John is looking for someone'
- b. Mary-wa [dare-o ka (*to)] wakatteiru
 -Top who-Acc Q C knows
 'Mary knows who'

(33) confirms that there is some selectional property between the matrix verb and the embedded Comp. Another plausible possibility is that Q-markers may occupy the head

position of another functional projection below CP and the abstract [+WH] resides in Comp. I will return to this later.

NWY's (1996) second argument for a copula analysis of Japanese Sluicing is that the copula *da* 'be' can appear in Sluicing contexts as in (34b) but it cannot in embedded questions without ellipsis as in (34c).

- (34) a. John-ga nanika-o katta
 -Nom something-Acc bought
 'John bought something'
- b. Boku-wa [nani-o (da/datta) ka] wakaranai
 I-Top what-Acc is/was Q not know
 'I don't know what is/was'
- c. Boku-wa [nani-o John-ga t katta (*da/*datta) ka] wakaranai
 I-Top what-Acc -Nom bought is/was Q not know
 'I don't know what John bought'

They claim that if (34b) is derived by IP ellipsis from (34c), the copula should not be allowed in (34b) since the hypothetical source in (34c) is not able to contain the copula. In this light, they claim that the grammaticality of (34b) with the copula shows that the so-called Sluicing actually involves copula drop. Even if there is a copula, however, there is still a possibility that the initial WH-phrase occupies Spec of CP. NWY tries to exclude this possibility. Below, I will summarize their discussion. Consider the following:

- (35) a. John-ga rainen nihon ni kuru
 -Nom next year Japan to come
 'John is coming to Japan next year'
- b. Boku-wa [itu (da) ka] wakaranai
 I-Top when is Q not know
 'I don't know when (is)'

The subject in (35b) is null so that the example does not show the relative position of the WH-phrase to the subject. That is, there is a possibility that the *pro* subject may occur either before or after WH-phrases. In order to clarify this point, they bring up the following examples:

- (36) a. ... Boku-wa [sore-ga itu da ka] wakaranai
 I-Top it-Nom when is Q not know
 'I don't know when it is'
- b. ... *Boku-wa itu_i sore-ga t_i da ka wakaranai
 I-Top when it-Nom is Q not know
 'I don't know when it is'

The contrast between (36a) and (36b) shows that if the pronominal subject is overt, the WH-phrase is in situ. Assuming that overt subjects and null subjects are in the same position, they argue that the WH-phrase in copula Sluicing is not in Spec of CP but in situ. They further claim that if their copula analysis is correct, there is no overt WH-movement or scrambling in *Sluicing without a copula* in Japanese. Note that the subject and the copula in (36a) are discontinuous. They argue that if this is the order for Sluicing with a null subject, this pattern cannot be derived by IP ellipsis, because

the subject and the copula do not form a constituent in (36a). NWY propose that the hidden structure of (37b) is (37d), based on the structural similarity between (37c) and (37d).

- (37) a. Mary-ga nanika-o katta
 -Nom something-Acc bought
 ‘Mary bought something’
- b. Boku-wa [nani-o (da) ka] wakaranai
 I-Top what-Acc be Q not know
 ‘I don’t know what’
- c. ??Boku-wa [sore-ga nani-o (da) ka] wakaranai
 I-Top it-Nom what-Acc be Q not know
 ‘I don’t know what it is’
- d. Boku-wa [pro nani-o (da) ka] wakaranai
 I-Top what-Acc be Q not know
 ‘I don’t know what’

In short, their basic proposal is that (i) Japanese has a null *pro* subject and that (ii) Japanese has *copula drop*.

NWY’s third argument for a copula analysis of Japanese Sluicing is that the constraints on overt Case-markers in Sluicing are parallel to the constraints on overt Case-markers in cleft constructions. Since cleft constructions involve a copula, they claim that this supports their analysis that Sluicing involves copula drop. However, I will show that the Case-marking phenomena between Sluicing and cleft constructions are not entirely the same. If this is the case, this evidence weakens the force of NWY’s argument. First, I report NWY’s judgement and their discussion of cleft constructions:

- (38) a. John-ga aisiteiru no wa Mary-(*o) da
 -Nom love NO Top -Acc is
 'It is Mary that John loves'
- b. Mary-o aisiteiru no wa John-(*ga) da
 -Acc love NO Top -Nom is
 'It is John that loves Mary'
- c. John-ga kane-o yatta no wa Mary-(?ni) da
 -Nom money-Acc gave NO Top -Dat is
 'It was to Mary that John gave money'
- d. John-ga Mary-ni atta no wa Ithaca-(de) da
 -Nom -Dat met NO Top in is
 'It is in Ithaca that John met Mary'
- e. *John-ga okutta no wa present-o Mary-ni da
 -Nom sent NO Top -Acc -Dat is
 'It is a present to Mary that John sent'

Although judgements on these constructions vary among speakers, there is some general consensus which is correctly reported in NWY. The judgement pattern in cleft constructions is the following. As shown in (38a) and (38b), the cleft phrase with accusative or nominative Case-markers is quite degraded, while as in (38c) the cleft phrase with a dative marker is just slightly awkward or fully acceptable.⁹ Interestingly, as in (38c, d), a dative marker and a postposition pattern together in cleft constructions. Drawing on this affinity, we may conclude that a dative marker in Japanese is in fact a postposition. Finally, regarding (38e), they, according to my informants, correctly report that only one cleft phrase is allowed in cleft constructions.

Now consider the Case-marking possibility in Sluicing. The judgements are from NWY:

- (39) a. Minna-wa [John-ga dareka-o aisiteiru to] itta ga,
 everyone-Top -Nom someone-Acc love C said but
 boku-wa [dare(*o) (da) ka] wakaranai
 I-Top who-Acc be Q not know
 ‘Everyone said John loves someone, but I don’t know who (it) is’
- b. Minna-wa [dareka-ga Mary-o aisiteiru to] itta ga,
 everyone-Top someone-Nom -Acc love C said but
 boku-wa [dare(*ga) (da) ka] wakaranai
 I-Top who-Nom be Q not know
 ‘Everyone said someone loves Mary, but I don’t know who (it) is’
- c. Minna-wa [John-ga dareka-ni atta to] itta ga,
 everyone-Top -Nom someone-Dat met C said but
 boku-wa [dare(?ni) (da) ka] wakaranai
 I-Top who-Dat be Q not know
 ‘Everyone said John met someone, but I don’t know who (it) is’
- d. Minna-wa [John-ga Mary-ni dokoka-de atta to] iwu ga,
 everyone-Top -Nom -Dat somewhere-in met C says but
 boku-wa [doko (de) (da) ka] wakaranai
 I-Top where in be Q not know
 ‘Everyone says John met Mary somewhere, but I don’t know where (it) is’
- e. *Minna-wa [John-ga dareka-ni nanika-o okutta to] iwu ga,
 everyone-Top -Nom someone-Dat something-Acc sent C says but

boku-wa [dare-ni nani-o (da) ka] wakaranai

I-Top who-Dat what-Acc be Q not know

'Everyone says John sent something to someone, but I don't know what to whom (it) is'

NWY claim that the judgement parallelism between (38) and (39) confirms that Sluicing involves a covert copular structure. Further, they hypothesize that "both the English and Japanese patterns under discussion involve ellipsis in a copular structure."¹⁰ They suggest that since English does not allow null pronouns, and the subject and the copula form a constituent (i.e., IP) after syntactic movement of the predicate WH-phrase, there may still be a possibility of IP ellipsis, applying to [_{IP} it is t_{WH}]. In Japanese, on the other hand, the subject and the copula are seemingly discontinuous as in (37d), so that a predicate WH-phrase must be in situ. In short, they claim that Sluicing cannot be derived by IP ellipsis, but rather must involve a combination of a null subject and copula drop.

However, NWY's conclusion seems faulty. Let us consider the discrepancies of the Case-marking possibility in cleft constructions in (38) and Sluicing constructions in (39). NWY's judgements on (39b, c, d) are fairly standard. The sluiced remnant with nominative Case is quite degraded as in (39b). As shown in (39c) and (39d), the sluiced remnant with dative markers or postpositions is acceptable, which confirms again that Japanese dative markers are actually postpositions. But, unlike the judgement reported in NWY, (39a) with accusative Case is acceptable, according to my informants. In fact, this is an instance of Takahashi's (1994a) baseline data. To my knowledge, most of the Japanese native speakers agree that there is a clear contrast between cleft constructions with an accusative Case-marked cleft phrase and Sluicing with an accusative Case-marked sluiced remnant. This discrepancy weakens the force

of NWY's claim that Sluicing involves a covert or overt copula structure. (39a) with an accusative Case-marked sluiced remnant is at worst slightly marginal, as shown below:

- (40) Minna-wa [John-ga dareka-o aisiteiru to] itta ga,
 everyone-Top -Nom someone-Acc love C said but
 boku-wa [dare(?o) (da) ka] wakaranai
 I-Top who-Acc be Q not know
 'Everyone said John loves someone, but I don't know who (is)'

Next, let us examine NWY's judgement on multiple Sluicing. Unlike NWY (1996), Takahashi (1994a) claims that Japanese Sluicing may have sluiced remnants multiply.¹¹ He, according to my informants, correctly reports that (39e) is acceptable (cf. NWY's judgement on 39e), as shown below:

- (41) Minna-wa [John-ga dareka-ni nanika-o okutta to] iwu ga,
 everyone-Top -Nom someone-Dat something-Acc sent C says but
 boku-wa [dare-ni nani-o (da) ka] wakaranai
 I-Top who-Dat what-Acc be Q not know
 'Everyone says John sent something to someone, but I don't know what to whom (is)'

An additional example from Takahashi (1994a) is given below:

- (42) John-ga [dareka-ga ituka kuru to] itteita ga,
 -Nom someone-Nom sometime come that said but
 Mary-wa [dare-ga itu (da) ka] oboeteinai
 -Top who-Nom when (be) C not remembers
 ‘John said that someone would come sometime, but Mary doesn’t
 remember who when (is)’

Furthermore, it seems that NWY regard a certain instance of multiple Sluicing as being acceptable. Refer back to NWY’s example (30) and their judgement. In sum, I note that Sluicing with multiple remnants is acceptable (see 41), while cleft constructions with multiple cleft phrases are not (see 38e).

To sum up, NWY (1996) argued that the so-called Sluicing actually involves a covert copular structure, and is not derived from embedded questions by IP ellipsis. However, I showed that their analysis is not quite satisfactory.

3.2.2 Proposals

In the following, I explore a minimalist account of Sluicing in Japanese.

3.2.2.1 Sluicing with Focus Movement

Previously, I showed that the prior movement in Japanese Sluicing is not syntactic WH-movement, contra Takahashi (1994a). His analysis was problematic in the following sense:

- (43) a. Syntactic WH-movement is obligatory in Japanese Sluicing, but is optional in non-elliptic constructions.
- b. A certain instance of multiple Sluicing in Japanese shows that a non-WH phrase can be a good Sluicing remnant.

I also showed that NWY's (1996) cleft analysis of Japanese Sluicing is dubious too. They claim that Sluicing is derived from the corresponding cleft constructions. The potential problems of their analysis are summarized as follows:

- (44) a. What is the nature or the licensing condition of *copula drop*?
- b. Why does the copula *optionally* drop in Sluicing?
- c. A cleft phrase with an accusative Case marker is a poor object, while a sluiced remnant with an accusative Case marker is a good object.
- d. Cleft constructions with two or more cleft phrases are not acceptable, but Sluicing allows multiple remnants.

Below, I explore a new analysis of Sluicing in Japanese.

Given Chomsky's (1995) Move-F, the movement of the sluiced remnant must be motivated by strong feature checking since in LF only formal features move so that the sluiced site could not be created by weak feature checking. Previously, I argued against Takahashi's (1994a) claim that the sluiced remnant in Japanese undergoes syntactic WH-movement to Spec of CP, on conceptual grounds that every movement must be driven by morphological requirements (cf. Chomsky 1993, 1995). On empirical grounds, too, Takahashi's (1994a) analysis must be rejected. Consider again the following:

- (45) a. Mary-wa dareka-o dareka-ni syookaisita rasii
 -Top someone-Acc someone-Dat introduced seem
 'It seems that Mary introduced someone to someone'
- b. Boku-wa [dare-o soko-de dare-ni ka] wakaranai
 I-Top who-Acc there-at who-Dat Q not know
 'I don't know who there to whom'
- c. Boku-wa [_{CP} dare-o₁ soko-de₂ dare-ni₃ [_{IP} ~~Mary-ga~~ t₁-t₂-t₃
 I-Top who-Acc there-at who-Dat -Nom
 syookaisita] ka] wakaranai
 introduced Q not know
 'I don't know who there to whom Mary introduced t t t'

(45b) is a good instance of multiple Sluicing in Japanese. Under Takahashi's analysis, the feeding source of (45b) must be represented as in (45c). The crucial assumption in Takahashi is that there is Spec-Head agreement between Spec of CP and the Q-marker *ka* in Comp and that agreement is forced in Sluicing contexts. Along the lines of Takahashi (1993, 1994a), suppose that every remnant in (45c) moves to Spec of CP. (45c) clearly shows mixed agreement since the first remnant and the third remnant are [+WH] and the second is [-WH]. In sum, on both conceptual and empirical grounds, it is evident that the prior remnant in Japanese Sluicing is not syntactic WH-movement.

Before identifying the prior movement at issue, let us re-examine Takahashi's (1993) claim that there is syntactic WH-movement in Japanese. His claim is based on the observation that a certain instance of WH-scrambling does not exhibit undoing effects:

- (46) a. John-wa [Mary-ga dare-ni atta ka] siritagatteiru
 -Top -Nom who-Dat saw Q wants to know
 b. Dare-ni John-wa [Mary-ga t atta ka] siritagatteiru
 who-Dat -Top -Nom saw Q wants to know
 ‘John wants to know who Mary saw.’
- (47) a. John-wa [Mary-ga dare-ni atta ka] siritagatteiru no?
 -Top -Nom who-Dat saw Q wants to know Q
 ‘Does John want to know who Mary saw?’ or
 ‘Who does John want to know whether Mary saw?’
 b. Dare-ni John-wa [Mary-ga t atta ka] siritagatteiru no?
 who-Dat -Top -Nom saw Q wants to know Q
 ‘Who does John want to know whether Mary saw?’

First, consider (46). Although the WH-phrase in (46b) has undergone long-distance scrambling to the sentence-initial position, it can have the embedded scope. According to Saito (1989), this is possible if the scrambled phrase, which is adjoined to the matrix IP in (46b), moves back to its original position in LF. Recall that quite generally, scrambling can be undone.

Next, consider (47). (47a) is ambiguous; the WH-phrase in situ may have either the embedded or the matrix scope. (47b) shows that when a WH-phrase undergoes long-distance movement to the clause initial position headed by the Q-marker, the sentence is not ambiguous; only the matrix WH-question reading is possible: i.e., there is no undoing, hence this movement cannot be Scrambling. More precisely, Takahashi (1993) argues that in (47b) the fronted-WH has undergone WH-movement

to Spec of CP which agrees with the [+WH] feature in C. Consequently, the scope of the fronted-WH in (47b) is fixed in overt syntax.

In sum, Takahashi's argument that a certain case of WH-scrambling is overt WH-movement to Spec of CP was firmly established on the observation that there are no undoing effects of the moved WH-phrase in LF as in (47b). I interpret that what Takahashi (1993) has in mind is that the dislocated WH-phrase and its trace in (47b) construct an operator-variable relation, which should be maintained throughout the derivation. If this is the case, Takahashi's claim that (47b) is an instance of syntactic WH-movement in Japanese is too strong. His observation regarding (47a, b) at best shows that a certain case of WH-fronting constructs an operator-variable relation in overt syntax. Suppose that the movement in (47b) is an operator movement to the specifier position of a functional head. That functional head does not have to be Comp.

In this regard, I propose that the functional head is Foc(us) where a Q-marker is generated with [+focus]. I assume that FocP is placed above TP in Japanese, and propose that in (47b) the dislocated WH-phrase moves overtly to Spec of FocP in order to check off the strong [+focus] feature in the head Foc. In the framework of Chomsky (1993), it is assumed that WH-words are drawn from the lexicon with the [+WH] feature. I assume that the [+WH] feature of both the head C and WH-words in Japanese is weak. Then, the prediction can be made that there is no overt WH-movement in Japanese. I claim that the apparent overt movement of WH-words in Sluicing contexts is not driven by [+WH] but by [+focus]. I assume that WH-words in Japanese are drawn from the lexicon with the [+WH] feature and optionally with the strong [+focus] feature. Since the sluiced remnants necessarily show new information with a pitch accent, I assume that WH-words in Sluicing are drawn from the lexicon with the weak [+WH] feature and the strong [+focus] feature. [+focus] is an optional feature; otherwise, we derive focus constructions only. In the literature, it has often

been claimed that WH-words are inherently focused, hence picking out [+focus] from the lexicon; see, for examples, Horvath (1986), Rochemont (1986), and Stjepanović (1995) for the claim that Hungarian, Basque, Aghem, and Serbo-Croatian WH-words are inherently focused. I assume that WH-words in Japanese are not inherently focused. If they were inherently focused, they would always be fronted.

In sum, I assume that the focalized WH-words, the WH-words with the weak [+WH] and the strong [+focus], must move to Spec of FocP overtly in order to check off its strong focus feature against the strong focus feature of the head Foc.

Let us consider the following examples:

- (48) a. John-wa [zibun-ga nanraka-no-riyuu-de sikarareta ka]
 -Top self-Nom some-Gen-reason-for was scolded Q
 wakattenai ga,
 not knows but
 ‘John doesn’t know why he was scolded, but’
- b. Mary-wa [naze (da) ka] wakatteiru
 -Top why is Q knows
 ‘Mary knows why’
- c. Mary-wa [sore-ga naze (da) ka] wakatteiru
 -Top it-Nom why is Q knows
 ‘Mary knows why it is’
- d. Mary-wa [pro naze (da) ka] wakatteiru
 -Top why is Q knows

NWY (1996) propose that the hidden structure of (48b) is (48d), based on the structural similarity between (48c) and (48d). In opposition to NWY, Takahashi (1994a) argues that (48b) and (48c) are structurally independent since the former allows a sloppy reading but the latter does not. Another distinction I would like to make is that in (48b) the sluiced remnant-WH is necessarily pitch-accented new information, but in the non-elliptic sentence (48c), the clause-medial WH-phrase does not show a distinctive pitch accent. The pitch accent, if it exists, falls on the overt subject pronoun *sore* 'it'. Consequently, I confirm Takahashi's argument that (48b) and (48c) are structurally independent.

Now I provide an account for Sluicing in Japanese. Consider again our baseline data, as shown in (49).

- (49) a. John-ga nanika-o katta
 -Nom something-Acc bought
 'John bought something'
- b. Boku-wa [NANI-o ka] wakaranai
 I-Top what-Acc Q not know
 'I don't know what'
- c. Boku-wa [NANI-o John-ga t katta ka] wakaranai
 I-Top what-Acc -Nom bought Q not know
 'I don't know what John bought'
- d. Boku-wa [John-ga nani-o katta ka] wakaranai
 I-Top -Nom what-Acc bought Q not know
 'I don't know what John bought'

In (49b) the sluiced remnant *NANI-o* is necessarily focused, showing a pitch accent. The WH-word in (49c), which is the source of (49b), is also focused in the sentence-initial position. However, the clause-medial WH-word in (49d) does not show a pitch accent, although it may be new information.

I propose that Japanese Sluicing is overt focus movement of the sluiced remnants followed by TP deletion, abstracting away from AgrP projections, and that the licensing feature on Japanese Sluicing is [+focus] which agrees with its Spec. I argue that (49b) is derived as follows:

- (50) Boku-wa [_{CP} [_{FocP} NANI_i-o [_{TP} [_{VP} ~~John-ga-t_i-katta~~] ka_{Foc}] [+WH]] wakaranai
 I-Top what-Acc -Nom bought Q C not know

Previously, when I reviewed NWY's argument against Takahashi, I left open the possibility that Q-markers may occupy some functional head below Comp. (Refer back to the discussion of 32, 33). I assume that the Q-marker *ka* originates in the Foc position with [+focus]. As in chapter 2, I propose that the strong focus feature in Japanese resides in both the head Foc and the focused phrases. I will provide evidence for this proposal later on. In (50) the focused WH-phrase moves overtly to Spec of FocP to check off its strong [+focus] against the strong [+focus] in the Foc head. If TP is deleted in PF, (49b) is derived.

In sum, I argue that the licensing feature on Japanese Sluicing is not [+WH] but [+focus], and assume that [+WH] in Japanese is weak.

3.2.2.2 Two Types of Sluicing and *Da* ‘be’-support in Japanese

One major problem of the previous analyses of Japanese Sluicing is why two types of Sluicing are seemingly allowed:

- (51) a. John-ga nanika-o katta
 -Nom something-Acc bought
 ‘John bought something’
 b. Boku-wa [NANI-o ka] wakaranai
 I-Top what-Acc Q not know
 ‘I don’t know what’
 c. Boku-wa [NANI-o da/datta ka] wakaranai
 I-Top what-Acc is/was Q not know
 ‘I don’t know what is/was’

Takahashi’s (1994a) discussion was confined to *Sluicing without a copula*, which I call *TP Sluicing*, such as (51b). The immediate question is then why expletive *da* ‘be’ can appear in Sluicing contexts as in (51c), since it cannot in an embedded clause without ellipsis as in (52).

- (52) Boku-wa [nani-o [John-ga t katta (*da/*datta)] ka] wakaranai
 I-Top what-Acc -Nom bought is/was Q not know
 ‘I don’t know what John bought’

If the source of Sluicing is (52), Takahashi’s (1994a) theory predicts that only (51b) is a well-formed instance of Sluicing. The puzzle is how to generate (51c) under deletion

analyses of Sluicing. This was the major argument of NWY (1996) against Takahashi (1994a). However, it is not clear even in NWY's cleft analysis of Sluicing how to generate two types of Sluicing. Under the cleft analysis, we are forced to say that *copula drop* is optional, i.e., (51c) is derived from (51b) via an optional process of copular drop. Below, I will provide an answer to this puzzling question.

In chapter 2, I argued that AgrsP exists in Japanese/Korean, and assumed that AgroP exists in Japanese/Korean. I further argued that the Japanese [+EPP] feature in Agrs and Agro is weak. Thus, both subject and object remain within each VP overtly, given a split VP structure, and only their formal features move covertly. Abstracting away from a split VP structure, in my analysis, (51c) is derived as follows:

- (53) Boku-wa [_{CP} [_{FocP} NANI_i-o [_{TP} [_{VP} ~~John-ga-t_i-kau~~] da/datta]
 I-Top what-Acc -Nom buy is/was
 ka_{Foc}] [+WH]] wakaranai
 Q C not know

In (53) the focused remnant-WH has moved out of the VP overtly to Spec of FocP in order to check off its strong focus feature against the strong focus feature of Foc and then, in PF, the VP is deleted. VP deletion would strand the tense in T if it is not supported by Aux *da* 'be'. In this light, I call (53) an instance of *VP Sluicing*.

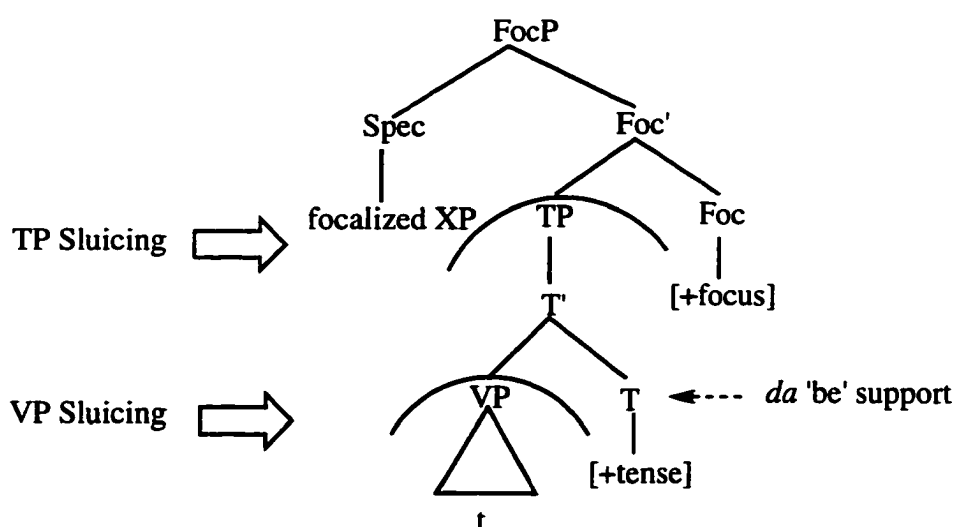
I propose that Aux *da*, which is generated in T with inflectional features, is a focus auxiliary verb in that it raises and adjoins to Foc in order to check off its inflectional features against abstract V-features of Foc. I suggest that Aux *su* 'do' is a normal auxiliary verb which cannot check off the abstract V-features of Foc. This is why (54) is bad with *su*-support.

- (54) *Boku-wa [_{CP} [_{FocP} NANI_i-o [_{TP} [_{VP} ~~John-ga-t_i-kau~~] suru/sita]
 I-Top what-Acc -Nom buy does/did
 ka_{Foc}] [+WH]] wakaranai
 Q C not know
 'I don't know what does/did'

Let us return to (52). My proposal of *da* 'be'-support in Sluicing explains why *da* is not allowed to appear in non-elliptic constructions. That is, in (52), *da* is not able to appear in an embedded clause without ellipsis since *da*-support is a last resort operation, which is triggered by a stranded tense.

In summary, I argued that Japanese Sluicing is syntactic focus movement followed by TP deletion or VP deletion, consequently there being two types of Sluicing; TP Sluicing and VP Sluicing, as illustrated below:

(55)



3.2.2.3 Multiple Sluicing and Overt Saving Effects

Above, as an alternative to Takahashi's (1993, 1994a) claim that a certain long-distance Scrambling of WH-phrases is the manifestation of syntactic WH-movement in Japanese, I argued that the movement is in fact focus movement of WH-phrases and that the relevant feature is not [+WH] but [+focus]. Since focus movement is overt, the focus feature checked by the movement must be strong. A question can be raised as to where the strength of [+focus] is located. Regarding this, there are three possibilities; (i) in the head Foc, (ii) in the moved item(s), or (iii) in both. If (i) is the case, focus movement would take place to overcome a formal inadequacy of the head Foc. If (ii) is the case, it would take place to overcome a formal inadequacy of focused phrases. If (iii) is the case, it would take place to overcome a formal inadequacy of both the head Foc and the focused phrases. Chomsky (1995) claims that the strength of formal features is solely a property of functional but not lexical heads. However, this strict view of strong features encounters a certain problem in the case of multiple WH-fronting languages like Serbo-Croatian, as pointed out by Bošković (1997b). Consider the following examples:

- (56) a. Ko šta gdje kupuje?
 who what where buys
 'Who buys what where?'
 b. *Ko kupuje šta gdje?
 who buys what where

- c. *Ko šta kupuje gdje?
 who what buys where
- d. *Ko gdje kupuje šta?
 who where buys what

In Serbo-Croatian multiple WH-questions, all WH-phrases must be fronted, as shown in (56). Since all WH-phrases must overtly move to the Spec position of some functional head, Bošković (1997b) argues that this movement is driven by an inadequacy, i.e., a strong feature, of the WH-phrases, rather than the functional head itself. If the latter were the case, it would suffice to front only one WH-phrase in (56), checking the strong feature of the functional head. Bošković (1997b) concludes that the strong feature which is responsible for multiple WH-fronting in Serbo-Croatian resides in the moved WH-phrases.

Now, let us turn to multiple Sluicing in Japanese:

- (57) Dareka-ga nanika-o katta ga,
 someone-Nom something-Acc bought but
 boku-wa [dare-ga nani-o ka] siranai
 I-Top who-Nom what-Acc Q not know
 ‘Someone bought something, but I don’t know who what’

Regarding single Sluicing, I argued that the sluiced remnant in Japanese moves out of the ellipsis site via focus movement. By analogy, my theory predicts that (57) is a case of multiple focus fronting. If this is the case, it seems that the strong focus feature in

Japanese must be located in the moved WH-phrases or in both places. Under this view of strong features, (57) is derived as follows:

- (58) ... boku-wa [_{FocP} DARE-ga [_{FocP} NANI-o [_{TP} ~~tt~~katta] ka]] siranai
 I-Top who-Nom what-Acc bought Q not know

In (58) *NANI-o* with the strong [+focus] moves first to Spec of FocP and then *DARE-ga* with the strong [+focus] moves and adjoins to FocP. If this adjoined position is reanalyzed as another Spec of FocP under the multiple Spec hypothesis (cf. Kuroda 1988, Chomsky 1995, Ura 1996), the strong [+focus] of both focused WH-phrases can fall into a checking relation with the Foc head. If TP is deleted, (57) is derived. As in chapter 2, I assume that [+focus] itself, an interpretable feature, does not erase after checking and the operation *checking* checks off only the strength of [+focus] (cf. Chomsky 1995).

Next, consider the following problematic example for Takahashi (1994a):

- (59) a. Mary-wa dareka-o dareka-ni syookaisita rasii
 -Top someone-Acc someone-Dat introduced seem
 'It seems that Mary introduced someone to someone'
- b. Boku-wa [DARE-o SOKO-de DARE-ni ka] wakaranai
 I-Top who-Acc there-at who-Dat Q not know
 'I don't know who there to whom'
- c. Boku-wa [_{FocP} DARE-o₁ [_{FocP} SOKO-de₂ [_{FocP} DARE-ni₃ [_{TP} Mary-ga-t_L]]]]
 I-Top who-Acc there-at who-Dat -Nom

t_2 - t_3 -syookaissita] ka]]] wakaranai

introduced Q not know

'I don't know who there to whom Mary introduced t t t'

My analysis provides a straightforward account for (59). In (59b) all the sluiced remnants, two interrogative WH-phrases and one intervening adverbial, are focused. In my analysis, the three remnants have moved to Spec of Foc in order to check off each of their strong [+focus] against the strong [+focus] in the Foc head, and then TP is deleted in PF, as illustrated in (59c). Hence, I maintain that Sluicing in (59b) is an instance of a pure agreement, [+focus].

However, this multiple Spec analysis is not entirely impeccable. As shown in (60), there is a certain locality requirement: the sluiced remnants must be generated in the same clause:

(60) a. Dareka-ga nanika-o katta ga,

someone-Nom something-Acc bought but

boku-wa [dare-ga nani-o ka] siranai

I-Top who-Nom what-Acc Q not know

'Someone bought something, but I don't know who what'

b. Dareka-ga [John-ga nanika-o katta to] itteita ga,

someone-Nom -Nom something-Acc bought that said but

*Mary-wa [dare-ga nani-o ka] oboeteinai

-Top who-Nom what-Acc C not remembers

'Someone said John bought something, but Mary doesn't remember who what'

In (60a) the quantifiers corresponding to sluiced remnants are generated as clausemates. On the other hand, in (60b) the quantifiers corresponding to sluiced remnants are not clausemates. The second conjunct in (60b) is ungrammatical if its meaning is ‘Mary doesn’t remember who said John bought what.’ Consider the following schematic derivations of (60b):

- (61) a. $[_{CP} [_{TP} \dots WH_1 \dots [_{CP} [_{TP} \dots WH_2 \dots]]]]$
 b. $[_{CP} WH_2 [_{TP} \dots WH_1 \dots [_{CP} t'_2 [_{TP} \dots t_2 \dots]]]]$
 c. $[_{CP} WH_1 [_{CP} WH_2 [_{TP} \dots t_1 \dots [_{CP} t'_2 [_{TP} \dots t_2 \dots]]]]]]$
 d. $[_{CP} WH_1 [_{CP} WH_2 [_{TP} e] C]]]$

In (61a) the two WH-phrases are generated in different clauses. In (61b) the lower-WH undergoes long-distance WH-movement to the inner Spec of CP in the matrix. In (61c) the higher-WH moves to the outer Spec of CP of the matrix clause. If TP is deleted, (61d) is derived. Nothing seems to be wrong with (61). Hence, the ungrammaticality of (60b) suggests that the multiple Spec analysis should be rejected. In sum, it is not clear how to capture this locality requirement under the multiple Spec analysis. Along the line of Takahashi (1994a), but contra Takahashi (1993), I will below explore an alternative analysis. In order to place the following discussion into perspective, I briefly review Sohn’s (1994a) discussion in relation to this phenomenon.

Saito (1994) shows that an adjunct-WH inside an island avoids an ECP violation in LF when there is an argument-WH in a higher position of the same clause (see section 3.2.1.1). Sohn (1994a) further shows that certain saving effects similar to the LF saving effects also appear at S-structure:

- (62) a. *Naze₁ John-wa [_{NP} [_{CP} Mary-ga t₁ sono hito-o uttaeta
 why -Top -Nom that man-Acc sued
 to iu] uwasa]-o kiita no
 Comp rumor-Acc heard Q
 ‘Q John heard [the rumor [that Mary sued the man why]]’
- b. ??Dare₁-o John-wa [_{NP} [_{CP} Mary-ga t₁ uttaeta to iu]
 who-Acc -Top -Nom sued Comp
 uwasa]-o kiita no
 rumor-Acc heard Q
 ‘Q John heard [the rumor [that Mary sued who]]’
- c. ??Dare₁-o naze₂ John-wa [_{NP} [_{CP} Mary-ga t₂ t₁ uttaeta to iu]
 who-Acc why -Top -Nom sued Comp
 uwasa]-o kiita no
 rumor-Acc heard Q
 ‘Q John heard [the rumor [that Mary sued who why]]’
- d. ??Naze₁ dare₂-o John-wa [_{NP} [_{CP} Mary-ga t₂ t₁ uttaeta to iu]
 why who-Acc -Top -Nom sued Comp
 uwasa]-o kiita no
 rumor-Acc heard Q
 ‘Q John heard [the rumor [that Mary sued who why]]’

Scrambling of an adjunct-WH out of an island yields an ECP violation as in (62a), while Scrambling of an argument-WH violates only Subjacency as in (62b). What is interesting is that (62c, d) where both an adjunct-WH and an argument-WH have moved out of an island pattern with (62b) and furthermore, the two WH-phrases are

freely ordered. If the two WHs are extracted separately, (62c, d) should be grouped with (62a), since the adjunct-WH extraction violates the ECP. Sohn (1994a) argues that the adjunct-WH scrambles and adjoins to the argument-WH either to the right as in (62c) or left as in (62d), and then the complex form is further scrambled. He observes that the saving effects pop up only when two WH-phrases are clausemates as evidenced in (62) vs. (63).

- (63) *Dare₁-o naze₂ kimi-wa [Mary-ga t₂ [John-ga t₁ sukida to]
 who-Acc why you-Top -Nom -Nom like Comp
 omotteiru to iu uwasa]-o kiita no
 think Comp rumor-Acc heard Q
 ‘Q you heard [the rumor that Mary thought [John liked whom] why]’

Given this state of affairs, Sohn (1994a) argues that formation of a complex WH-phrase is a local operation. The S-structure saving effects diverge from the LF saving effects in one important respect. In LF, the movement of an adjunct WH-phrase is saved from violating the ECP only when there is an argument WH-phrase in a higher position of the same clause (cf. 27). However, in overt syntax, a non-WH argument can also rescue an adjunct-WH, as shown in (64).

- (64) a. ??Sono hito₂-o naze₁ John-wa [[Mary-ga t₁ t₂ uttaeta
 that man-Acc why -Top -Nom sued
 to iu] uwasa]-o kiita no
 Comp rumor-Acc heard Q
 ‘Q John heard the rumor that Mary sued the man why’

- b. ??Naze_i sono hito₂-o John-wa [[Mary-ga t₁ t₂ uttaeta
 why that man-Acc -Top -Nom sued
 to iu] uwasa]-o kiita no
 Comp rumor-Acc heard Q

(64) shows that the feature triggering the adjunction process in overt syntax is not [+WH]. In the minimalist framework, however, the question is what triggers the adjunction process.

As in multiple Sluicing (see 57, 59), the displaced phrases in (62, 64) are focused in the sentence-initial position, suggesting that the triggering feature of the adjunction for the saving effects is [+focus]. Since all focused phrases must be fronted, it seems that this movement is driven by a formal inadequacy, i.e., a strong feature, of the moved items, rather than the Foc head. However, if a strong feature resides only in moved XPs, it is not clear what triggers the adjunction process for the saving effects. Suppose that the strong [+focus] resides in both the head Foc and the focused XPs. I argue that in (62c, d) and (64a, b) the focused adjunct *NAZE* adjoins to the focused argument *DARE-o* or *SONO HITO-o* to check off its strong [+focus] against the strong [+focus] of the latter. But the complex of two focused XPs must move to Spec of FocP to check off the strong [+focus] in Foc.

I assume with Saito (1994) that A'-positions are not possible adjunction sites (see Saito 1994, Sohn 1994a, Takahashi 1994a). Given this assumption, *Checking-through-Adjunction* is allowed only if the target is an A-position.¹² That is, the operation *Checking-through-Adjunction* is A-movement, which is clause-bounded. That is why (63) is ruled out.

Let us go back to multiple Sluicing in Japanese which is an instance of multiple focus fronting. The following shows similar saving effects in multiple Sluicing in Japanese.

- (65) a. John-wa [_{NP} [_{CP} Mary-ga nanraka-no-riyuu-de sono hito-o uttaeta
 -Top -Nom some-Gen-reason-for that man-Acc sued
 to iu] uwasa]-o kiita sooda ga, *boku-wa [NAZE ka] siranai
 Comp rumor-Acc heard I heard but I-Top why Q not-know
 ‘John heard the rumor that Mary sued the man for some reason, but I don’t
 know why’
- b. John-wa [_{NP} [_{CP} Mary-ga dareka-o nanraka-no-riyuu-de uttaeta to iu]
 -Top -Nom someone-Acc some-Gen-reason-for sued Comp
 uwasa]-o kiita sooda, ga ??boku-wa [DARE-o NAZE ka] siranai
 rumor-Acc heard I heard but I-Top who-Acc why Q not-know
 ‘John heard the rumor that Mary sued someone for some reason, but I
 don’t know who why’
- c. John-wa [_{NP} [_{CP} Mary-ga nanraka-no-riyuu-de dareka-o uttaeta
 -Top -Nom some-Gen-reason-for someone-Acc sued
 to iu] uwasa]-o kiita sooda ga, ??boku-wa [NAZE DARE-o ka] siranai
 Comp rumor-Acc heard I heard but I-Top why who-Acc Q not-know
 ‘John heard the rumor that Mary sued someone for some reason, but I
 don’t know why who’
- d. John-wa [_{NP} [_{CP} Mary-ga sono hito-o nanraka-no-riyuu-de uttaeta
 -Top -Nom that man-Acc some-Gen-reason-for sued

to iu] uwasa]-o kiita sooda ga, *boku-wa [sono hito-o

Comp rumor-Acc heard I heard but I-Top that man-Acc

NAZE ka] siranai

why Q not-know

‘John heard the rumor that Mary sued the man for some reason, but I don’t know the man why’

e. John-wa [_{NP} [_{CP} Mary-ga nanraka-no-riyuu-de sono hito-o uttaeta

-Top -Nom some-Gen-reason-for that man-Acc sued

to iu] uwasa]-o kiita sooda ga,

Comp rumor-Acc heard I heard but

*boku-wa [NAZE sono hito-o ka] siranai

I-Top why that man-Acc Q not-know

‘John heard the rumor that Mary sued the man for some reason, but I don’t know why the man’

(65a) shows that focus movement of an adjunct-WH out of an island in single Sluicing yields an ECP violation. (65b, c) show that strong focus feature checking of the focused WH-phrases through the adjunction process in multiple Sluicing is possible without violating the ECP in island contexts. What seems to be surprising is that (65d, e) do not show saving effects.

Kuwabara (1996) independently observes the paradigm in (65). He interprets the contrast between (65b, c) and (65d, e) as evidence that Sohn’s (1994a) S-structure saving effects do not obtain in multiple Sluicing (according to his interpretation, truncated clauses with multiple remnants). However, his conclusion overlooks one important property of Sluicing. Sluicing is surface anaphora which requires a linguistic

antecedent (Hankamer & Sag 1976). In general, Sluicing is bad when the linguistic antecedent is familiar:

- (66) a. *John said she talked to *the students*. Fred couldn't figure out *who*
 b. *He announced he had eaten *the asparagus*. We didn't know *what*

Sluicing in (66) is ruled out by “a pragmatic conflict between the familiarity of the inner antecedent [= the linguistic antecedent] and the novelty requirement associated with the displaced constituent [= the sluiced remnant]” (Chung, Ladusaw, & McCloskey 1995).

With this point in mind, consider again the data in (65). In (65d, e) the complex of the focused adjunct-WH *NAZE* and the non-WH argument *sono hito-o* cannot be formed since the latter is a non-focused constituent: it is old information. That is, *NAZE* cannot be moved out of the complex NP island via *Checking-through-Adjunction*. When it moves alone out of the island, the ECP violation is unavoidable. Hence, the proposed analysis of S-structure saving effects can be maintained.

In sum, I argued that Sluicing in Japanese is overt focus movement followed by TP deletion or VP deletion. Based on the overt saving effects in multiple focus fronting, I also argued that the strong focus feature resides in both the Foc head and the focused phrases.

3.3 Sluicing in English

I now explore Sluicing in English in a minimalist framework.

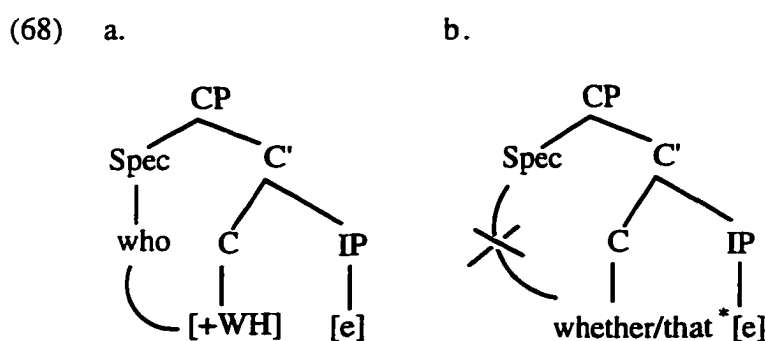
3.3.1 Previous Analyses

3.3.1.1 Lobeck's (1990) Agreement Analysis

Let us first examine previous analyses of Sluicing. Consider the following contrast:

- (67) a. They say that John loves someone, but I don't know who [_{IP} e]
 b. *Ralph knows that I went, but his wife doesn't know whether [_{IP} e]
 c. *Mary says that John will win the race, but I don't believe that [_{IP} e]

In (67) the WH-phrase *who* is a good Sluicing remnant, but *whether* or *that* is a poor remnant. Based on this observation, Lobeck (1990, 1993, 1995) and Saito & Murasugi (1990) claim that the sluiced IP is licensed by a [+WH] Comp agreeing with its Spec. Consider the following tree diagrams:



In (68) *who* in Spec of CP agrees with the null C with [+WH], thus rendering the following elided IP legitimate. Lobeck claims, however, that the overt complementizer *whether* or *that* does not have agreement features and that this is why (67b, c) are out.

3.3.1.2 Nishiyama, Whitman, & Yi's (1996) Copula Analysis

On the contrary, Nishiyama (1995) and Nishiyama, Whitman, & Yi (1996) contend that Sluicing is not licensed by an agreeing head. Their argument comes from WH-island effects. As is well known, *whether* induces WH-island effects:

(69) *How₁ do you wonder [whether John fixed the car t₁]?

They claim that (69) shows that Spec of CP is occupied either by *whether* (if this is the case, there would be a null C with [+WH]; cf. Kayne 1991: 665-666) or by a null operator (in this case, *whether* occupies C). Under their view, (69) indicates that there is something in Spec of CP, which agrees with the [+WH] C head. Then, there is no way to account for the ungrammaticality of (67b).

For this reason, they reject an agreement account of Sluicing and explore an alternative, which I will examine below. Consider the following contrast:

- (70) a. They say that John loves someone, but I don't know who
 b. *John knows that I went, but Mary doesn't know whether
- (71) a. They say that John loves someone, but I don't know who it is
 b. *John knows that I went, but Mary doesn't know whether it is

Nishiyama (1995) and Nishiyama, Whitman, & Yi (1996) claim that Sluicing is derived from a deletion rule deleting the subject *it* plus the copula *be*. If this were the case, at first glance, the ungrammaticality of (70b) might be related to that of (71b) since the latter is the source of the former under NWY's analysis.

However, their claim is easily falsified:

- (72) John is going to Paris. Guess when/how/why (*it is)

In (72) the source appears to be ungrammatical. Hence, we must reject another superficially plausible source for sluiced constituents (cf. Klein 1977).¹³

3.3.2 Data often ignored in the treatment of Sluicing

One might wonder whether Sluicing occurs only in questions or whether it applies generally in constructions introduced by WH-phrases. As pointed out by Riemsdijk (1978) and Lobeck (1995), Sluicing does not obtain in relative clauses, although it is quite feasible:

- (73) a. *Someone has done the dishes, but I don't know the person who [_{IP} e]
 cf. Someone has done the dishes, but I don't know who [_{IP} e]
 b. *John cooked something, but Mary didn't eat what [_{IP} e]
 cf. John cooked something, but Mary didn't know what [_{IP} e]
 c. *John read a book which Chomsky wrote, and Mary read an article which
 [_{IP} e]
 d. *John has left, but I won't disclose the identity of the person with whom
 [_{IP} e]
 e. *Although the place where [_{IP} e] is unclear, the time when the meeting is to
 be held is posted on the door.

Under the agreement approach, (73) should be good since the [+WH] Comp in (73) agrees with its specifier. Regarding this, Lobeck (1995: 61) claims that “although Comp in relatives is specified for Spec-Head agreement, agreement is not [+WH].” In other words, her claim is that Sluicing in (73) is blocked since the Comp has [-WH]. However, it is not clear why the Comp in (73) is marked as [-WH], given that some feature must have attracted the relative pronoun.

Another interesting fact in Sluicing, but so far largely ignored since Ross (1969), Rosen (1976), and Riemsdijk (1978), is that prepositions can be stranded:

- (74) a. The bell is tolling, but you shouldn't ask who ~~the bell is tolling~~ for t
 cf. The bell is tolling, but you shouldn't ask for who
 b. John left, but I don't know who with
 c. The neighbors have been complaining. Guess what about
 d. John went to Boston, but nobody knows what for
 e. Mary took some pictures, but we aren't sure what of

In (74) the ellipsis site does not seem to form a constituent. Ross (1969: 267) claims that Sluicing is able to elide the non-constituent variable that separates targets of a structural description. However, this claim is not attractive under the fairly standard assumption that grammatical operations target only constituents.

3.3.3 Driving Sluiced Remnant(s)

In this section, I will try to resolve the aforementioned problems in a principled way within a minimalist framework.

3.3.3.1 Why is Sluicing allowed only in Interrogative WH-clauses?

Descriptively speaking, Sluicing is allowed only in interrogative WH-clauses. I propose that this is because English interrogative-WHs are inherently focused. Consequently, I assume that English interrogative WH-words are drawn from the lexicon with [+focus] and [+WH].

Let us consider again the following paradigm:

- (75)
- a. They say that John loves someone, but I don't know WHO
 - b. Mary bought something. I wonder for WHO
 - c. Mary bought something. I wonder who FOR
 - d. *Ralph knows that I went, but his wife doesn't know whether
 - e. *Mary says that John will win the race, but I don't believe that
 - f. *Someone has done the dishes, but I don't know the person who

One might suggest that Lobeck's (strong) agreement analysis may account for the difference between interrogative-WHs on one hand and *that*, *whether*, relative-WHs on the other hand, with respect to licensing Sluicing. However, I will show below that her theory requires unnecessary and unappealing assumptions in order to explain the full paradigm, given in (75).

According to Lobeck, a functional head has strong agreement only if it has an agreement feature and it agrees with its specifier. Consider the following:

(76)	inherent agreement feature	agreeing with its Spec
a. interrogative C	yes	yes
b. <i>that</i>	no	no
c. <i>whether</i>	no (or yes)	no
d. relative C	yes	no

Lobeck's theory successfully accounts for why interrogative complementizers license Sluicing but the lexical complementizer *that* does not. As mentioned in section 3.3.1.2, however, (76c) is problematic under her analysis. She assumes that *whether*, being generated as a complementizer, does not agree with its Spec. However, we have good reasons to believe that if *whether* is generated in C, it agrees with its Spec (refer back to the discussion of 69. Also see Kayne 1991). (76d) causes a problem too, as mentioned in section 3.3.2.

I agree with Lobeck (1990, 1993, 1995) that some agreement feature licenses Sluicing regardless of whether Sluicing is analyzed as deletion or copying or null anaphora. What I am proposing is that the agreement feature is both [+WH] and [+focus].

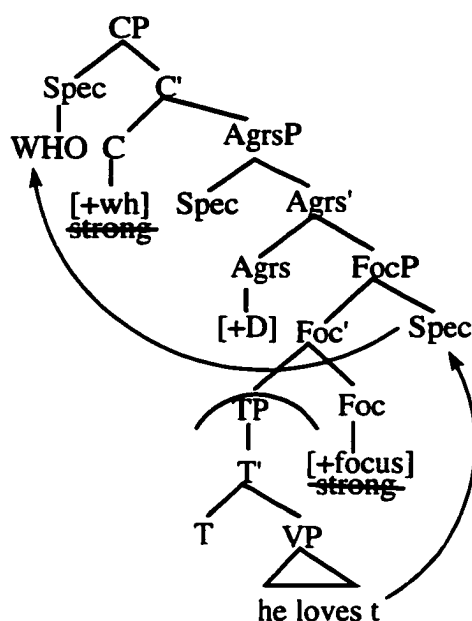
Let us reconsider (75). In Sluicing configurations, the interrogative-WH *who* in (75a, b, c) is necessarily focused; it is new information.¹⁴ But *whether* in (75d), the overt complementizer *that* in (75e), and the relative WH-pronoun *who* in (75f) are not focused. More precisely, they are not drawn from the lexicon with the [+focus] feature since they do not show/trigger new information. This observation can be generalized as follows:

(77) The sluiced remnant must be focused.

In this light, I propose that there is Foc(us)P above TP in English and that Sluicing is PF deletion of TP, with the remnant having moved to Spec of FocP in order to check the strong [+focus] in the head Foc. The WH-feature in C is strong in English. Hence, the sluiced remnant-WH will overtly move up to Spec of CP.¹⁵

Under the proposed analysis, (75a) is derived as in (78).

(78)



Suppose that Spec of FocP is final. I will provide evidence for the assumption later. In the first stage, the focused-WH *who* moves rightward to Spec of FocP to check the strong [+focus] in the head Foc. In the second stage, *who* moves leftward to Spec of CP to check the strong [+WH] in the head C. If TP is deleted in PF, (75a) is derived.

Under the current proposal, the partial structure of (75b), which I call *Pied-piping Sluicing*, is the following:

(79) ... I wonder [_{CP} for WHO_i [_{FocP} [_{TP} [_{VP} ~~John bought something t_i~~]] t'_i]]

The focalized PP *for WHO* first moves rightward to Spec of FocP to check the strong [+focus] in the head Foc, and, then, moves leftward to Spec of CP to check the strong [+WH] in the head C. If TP is deleted in PF, (75b) is derived.^{16 17}

3.3.3.2 Spill-over Sluicing

3.3.3.2.1 Previous Analyses

Ross (1969) argued that Sluicing is derived from complete constituent questions by a deletion transformation. In order to derive *Sluicing with a stranded preposition* as in (75c), which I call *Spill-over Sluicing*, he proposed that the sluiced material may be non-constituent, as illustrated below:

(80) Mary bought something. I wonder who ~~she bought something~~ for t

Certainly, this option is not desirable, considering the restrictiveness of grammar.

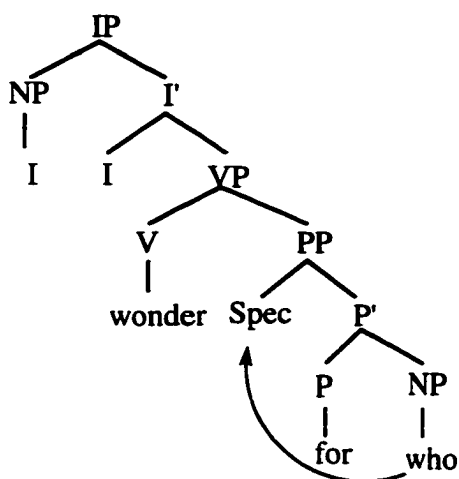
As an alternative, Riemsdijk (1978, chapter 6) argues that (81b) is derived from (81a).

(81) a. Mary bought something. I wonder for who

b. Mary bought something. I wonder who for

He argues that Sluicing is neither deletion nor copying and that it is best accounted for by a phrase structure rule approach. Roughly put, in his theory, the PP in (81a) is generated as the complement of V by the phrase structure rules. In order to derive (81b) from (81a), he assumes that the prepositional object may optionally front to Spec of PP, stranding P. The partial structure of (81a, b) is the following:¹⁸

(82)



However, Riemsdijk's proposal raises a problem in the case of prepositional non-WH objects. Consider the following:

(83) a. John bought a book [_{PP} for Mary]

b. *John bought a book [_{PP} Mary_i [_{P'} for t_i]]

In order to rule out the derivation in (83b), a stipulation is in order that prepositional WH-objects may optionally front to Spec of PP, stranding P but prepositional non-WH objects cannot.

In Chung, Laudusaw, & McCloskey's (1995) (hereafter CLM) LF copying analysis, Spill-over Sluicing may cause a problem. I first outline their basic proposal. Adopting X'-theory, they assume that Sluicing consists of an interrogative CP whose specifier is occupied by the displaced constituent, but whose C and IP constituents are null. The task of interpreting Sluicing then becomes the task of deriving a question type meaning for the defective structure. Consider the following examples:

(84) Mary bought something. I don't know what

Without an internally articulated IP, the LF of the complement CP in (84) would be defective in two ways. First, the displaced constituent would not syntactically bind any position in the IP, and consequently would have no way to contribute to the interpretation of the sentence, causing a violation of Full Interpretation. Second, the empty IP would provide no content for the nuclear scope of the Q-operator in C, thereby violating the ban on vacuous variable binding.

Specifically, following the tradition of interpretive approaches to ellipsis (Wasow 1972, Williams 1977, Chao 1987), CLM propose to remedy the defects of (84) by supplying the empty IP with a more articulated internal structure. They do this by reusing the content of some discourse-available antecedent IP, via a process called *IP Recycling*, as shown in (85).

(85) ... I don't know [_{CP} what [+Q]_C [_{IP} Mary bought something]]

IP recycling can be thought of as copying the LF of some discourse-available IP into the empty IP position. However, simply filling the empty IP with content is not enough. The displaced constituent must be syntactically coindexed with an appropriate position inside the IP, in such a way that the IP can be interpreted as a nuclear scope for the interrogative operator.

Under the theory of indefinites developed by Heim (1982), an indefinite like *something* is interpretable not as a referential expression, but rather as a referential parameter whose domain of values is restricted by the content of the term. That is, indefinites are interpreted as ‘restricted free variable’, available for discourse-level assignment of a referent or for binding by some other operator. Following Chomsky (1963), Nishigauchi (1986, 1990) and, Berman (1991), CLM assume that WH-pronouns and all weak DP’s can be interpreted in this way.

CLM use the term *merger* for the process whereby the restriction on the semantic variable bound by the Q-operator comes to be defined by the content of two phrases, the WH-indefinite and the inner antecedent-indefinite. They claim that in (85) the merger works because the interpretive procedure does not distinguish between the parameters which interpret indefinites. Parameters with unspecified referents can be united, inheriting the content of both indefinites.

Consider now a case of Pied-piping Sluicing:

- (86) a. Mary bought a book. I don’t know for who
 b. ... I don’t know [_{CP} for who [+Q] [_{IP} Mary bought a book]]
 c. ... I don’t know [_{CP} for who [+Q] [_{IP} Mary [_{VP} [_{VP} bought a book] [_{PP} e]]]]

(86a) contains only one internally articulated IP whose LF can be recycled into the IP of the sluice: namely, LF of *Mary bought a book*. However, as shown (86b), the recycled IP does not provide a syntactic position for the displaced constituent to bind. When such a position does not already exist, it must be created, by an additional part of the recycling process called *sprouting*. This operation sprouts an extra PP position, as shown in (86c), hence it provides the syntactic means by which the displaced constituent is integrated into the interpretation of the sluice.

With sprouting and subsequent syntactic binding of the empty PP by the displaced constituent, the defects of the LF are remedied. The displaced constituent can now be interpreted as if it occupies the position of the syntactic category it binds.

Finally, let us explore Spill-over Sluicing:

- (87) a. Mary bought a book. I don't know who for
 b. ... I don't know [_{CP} who for [+Q] [_{IP} Mary bought a book]]
 c. ... I don't know [_{CP} who for [+Q] [_{IP} Mary [_{VP} [_{VP} bought a book] [_{PP} e]]]]

CLM seems to suggest that Spill-over Sluicing is derived in the same way as Pied-piping Sluicing. Crucially, they assume that *who for* in (87) (see their example 106) is able to be base-generated in Spec of CP. But there is no evidence that the [NP P] string is base-generated when the NP is the complement of the P.

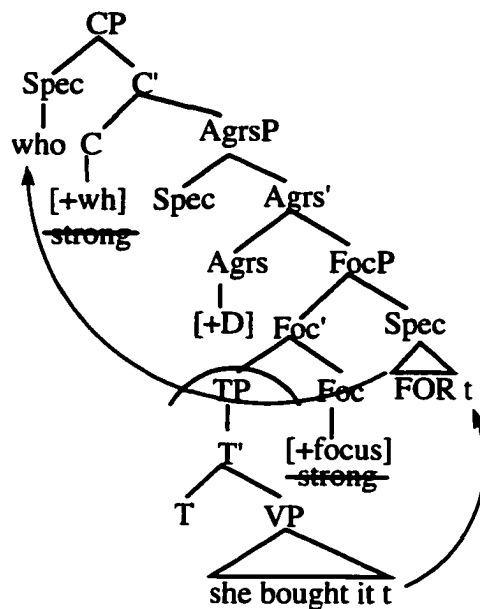
3.3.3.2.2 Proposals

Previously, I assumed that FocP is placed above TP and below AgrsP, and that its specifier position is final. Evidence is that *Spill-over Sluicing* is possible as in (75c), which is reintroduced as (88c).

- (88) a. Mary bought something
 b. *I wonder who FOR she bought it
 c. I wonder who FOR

I proposed that (88c) is derived in the way illustrated in (89):

(89)



In the first stage, the focused PP *FOR who* first undergoes rightward movement to Spec of FocP in order to check the strong [+focus] in Foc. In the second stage, only the WH-element undergoes leftward movement to Spec of CP in order to check the strong [+WH] in C.¹⁹ If the embedded TP is deleted in PF, (88c) is derived.

If Spec of FocP is initial, the hypothetical source in (88b) is predicted to be grammatical, contrary to fact. The status of (88b, c) indicates that Spec of FocP is final.

In conclusion, I argue that Spill-over Sluicing, which was a concern of Ross (1969: 267) as being an instance of non-constituent deletion, is actually a case of constituent deletion.²⁰

Additional evidence that English Spec of FocP is final and that focus movement is rightward is the following:

- (90) a. John thinks Mary likes someone
 b. Bill wonders who
 c. Bill wonders who ~~John thinks Mary likes~~
 d. Bill wonders who ~~Mary likes~~

In Sluicing contexts, (90b) is ambiguous. It has either a long-distance reading as in (90c) or a short-distance reading as in (90d). However, a long-distance reading is hard to obtain in (91).

- (91) a. Mary claims that the opera was written in the 19th Century, but
 we are not sure who by
 i. ‘*... but we are not sure who ~~Mary claims that the opera was written~~
 by’
 ii. ‘... but we are not sure who ~~the opera was written by~~’
 b. It is fortunate that Mary danced, but who with?
 i. ‘*... but who is it fortunate that ~~Mary danced~~ with?’

- ii. ‘... but who ~~did Mary dance~~ with?’
- c. It is apparent that Mary was talking. Bill wonders who to
 - i. ‘... *Bill wonders who ~~it is apparent that Mary was talking to~~’
 - ii. ‘... Bill wonders who ~~Mary was talking to~~’

(91) shows that there is a locality constraint on the movement of the PP. That is, the PP (P + WH-pronoun) is not able to move out of the next higher node S. Suppose that the PP first undergoes rightward movement and then leftward movement. The upward boundness effects could follow from Ross’s (1967) right roof constraint; no element that is moved rightward by a transformation may be moved out of the next higher node S.

The examples in (91) could be empirical evidence against Ross’s (1969) non-constituent deletion analysis of Sluicing. Under Ross’s analysis, both long-distance and short-distance readings must be allowed since the sluiced materials in (i) and (ii) examples in (91) are non-constituents.

Spill-over Sluicing raises another interesting question. Let us move on to the paradigm in (92) and (93).

- (92) a. I’m getting involved, and I don’t know exactly what *(in)
- b. Peter went to the cinema. I wonder who *(with)
- c. The bell is tolling, but you shouldn’t ask who *(for)
- d. Mary took some pictures, but we aren’t sure what *(of)
- e. The neighbors have been complaining. Guess what *(about)
- (93) a. I’m getting involved in something, and I don’t know exactly what (*in)
- b. Peter went to the cinema with somebody. I wonder who (*with)

- c. The bell is tolling for somebody, but you shouldn't ask who (*for)
- d. Mary took some pictures of somebody, but we aren't sure what (*of)
- e. The neighbors have been complaining about something.

Guess what (*about)

As shown in (92), the stranded preposition sometimes remains intact under Sluicing, but as shown in (93), it must sometimes disappear. Regarding this variation of outputs, Rosen (1976) suggests that a stranded preposition survives Sluicing in exactly those cases where there is no antecedent for its deletion. This suggestion is composed of the two parts in (94).

- (94) a. [P new in the question] implies [Sluicing leaves P]
 b. [P present in the trigger] implies [Sluicing deletes P]

(94a) is obvious under a deletion account. Suppose that the PP is generated only in the sluiced question and has no counterpart in the antecedent sentence. In this case, there is no antecedent for the deletion of the stranded P. (94b) also follows from the current account. Suppose now that the PP is generated both in the antecedent sentence and in the sluiced question. In the sluiced question, the sluiced WH-phrase, which corresponds to an existential quantifier in the antecedent sentence, is necessarily focused. However, the preposition in the sluiced question cannot be focused since it is old information already supplied by context.²¹

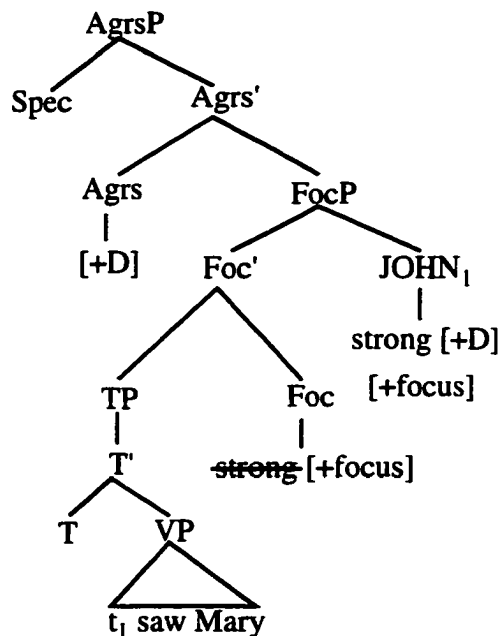
3.3.3.3 On the Position of Strong Categorical D-features

Horvath (1986) formulates a focus parameter to account for the landing site of focused WH-phrases and focused non-WH phrases across languages. She claims that the focus position is fixed for each language and the focused constituent will move to that position overtly. As argued above, Spill-over Sluicing shows that English chooses the Spec-final focus parameter.²²

If Spec of FocP is final, one potential problem is how to rule out (95a).

(95) a. *saw Mary JOHN 'JOHN saw Mary'

b.



Suppose that the strong feature forcing subject raising to Agrs resides in the moved NP (cf. Koizumi 1995) rather than the target (cf. Lasnik 1995b, c).²³ (95a) is out since

the strong [+D] feature of *John* has not been checked against [+D] in Agrs, as illustrated in (95b). In short, (95) suggests that FocP is placed below AgrsP.

If AgrsP is higher than FocP, then an immediate question arises as to how Sluicing is derived. Let us return to (78) and (89). Suppose that the strong D-feature resides in the target, Agrs. Then, the subject will move overtly to Spec of AgrsP. If Sluicing is deletion of TP, the subject could be a good remnant in Sluicing (see 97), contrary to fact, since it is outside of the ellipsis site, TP. Suppose now that the strong D-feature resides in the moved NP, the VP-internal subject, and that there is a derivational stage where the subject has not raised. The offending feature, i.e., the strong [+D], of the subject in situ will be eliminated by a PF deletion operation even if it is not checked by overt raising to Spec of Agrs. That is, I argue that there are two ways to eliminate a formal inadequacy, a strong feature, of the VP-internal subject NP. One is the raising of the subject NP to Spec of Agrs for feature checking. The other is to be contained in an ellipsis site. PF deletion could then eliminate the unchecked strong feature (see Lasnik 1995c, 1997a, b, c for the original proposal in analyses of Pseudogapping and Sluicing).

Before closing this section, I would like to discuss the licensing condition on English Sluicing. I have assumed that there is a derivational stage in which ellipsis targets TP, containing the VP internal subject with the strong [+D] feature, in order to derive good Sluicing outputs like (96).

- (96) a. Mary bought something. I wonder who for
 b. Mary bought something. I wonder what

A question can be raised as to how to rule out the derivation in which the subject has overtly raised to Spec of AgrsP and then TP is elided as follows:

- (97) a. Mary bought something. *I wonder who she [_{TP} e] for
 b. Mary bought something. *I wonder what she [_{TP} e]

In English, the [+WH] in C and the [+focus] in Foc are both strong, hence the sluiced remnant-WH induces two kinds of agreement, [+WH] and [+focus], in overt syntax when it moves out of the ellipsis site, TP. I suggest that the derivations in (97) are ruled out by the licensing condition on Sluicing: the sluiced site must be licensed by both [+WH] and [+focus] features agreeing with their specifiers, and the sluiced remnant must be licensed by participating in these agreements.²⁴

3.3.3.4 Island Effects: A Speculation

Let us turn to island effects. In (98)-(102), (a) examples show that embedded questions obey island constraints.

- (98) a. *Irv and someone were dancing together, but
 I don't know who Irv and were dancing together
 b. ??Irv and someone were dancing together, but I don't know who
- (99) a. *She kissed a man who bit one of my friends, but
 Tom doesn't realize which one of my friends she kissed a man who bit
 b. ?She kissed a man who bit one of my friends, but
 Tom doesn't realize which one of my friends
- (100) a. *They asked where we bought one of our cars, but
 I don't remember which one they asked where we bought

- b. They asked where we bought one of our cars, but
I don't remember which one
- (101) a. *That he'll hire someone is possible, but
I won't divulge who that he'll fire is possible
- b. ??That he'll hire someone is possible, but I won't divulge who
- (102) a. I resigned because Mary hired someone. ?*Tell me who you resigned
because Mary hired.
- b. I resigned because Mary hired someone. ?Tell me who.

(98) shows the Coordinate Structure Constraint, (99) the Complex NP Constraint, (100) the WH-island Constraint, (101) the Sentential Subject Constraint, and (102) the Adjunct Condition. If Sluicing is derived from embedded questions by overt movement followed by TP deletion, the question is why there is a contrast between (a) examples and (b) examples, as pointed out by Levin (1982) and CLM (1995).

In fact, Ross (1969: 276-277) was concerned with this fact. He noted that "If a node is moved out of its island, an ungrammatical sentence will result. If the island-forming node does not appear in surface structure, violation of lesser severity will (in general) ensue." Lasnik (1997c) pursues this possibility further and suggests the following: When a long-distance movement crosses a barrier, suppose that the derivation puts a star on the barrier as well as a star on the trace. The star on the trace causes an ECP violation and the star on the barrier a Subjacency violation. For both ECP and Subjacency, a derivational violation can be improved by a later operation that results in a change in the ultimate representation, LF in the first case (cf. Chomsky & Lasnik 1993), PF in the second. In Sluicing cases, the Subjacency violation, which occurred during the derivation, will be improved by a PF deletion operation which eliminates the starred barrier before the derivation reaches the PF output.

-

Crucially, VP ellipsis contrasts with Sluicing in just this respect. The following is an instance of VP ellipsis involving WH-movement:

- (103) I know how many homeworks I've graded, but I don't know how many Bill has.

When the WH-trace is contained within an island, however, we do not find the kind of amelioration we observed in Sluicing:

- (104) We left before they started playing party-games. *What did you leave before they did?

The source for (104) is the ungrammatical (105):

- (105) ... ?*What did you leave [_{XP} before they (did) [_{VP} start(ed) playing t]]?

Notice that application of VP ellipsis does not improve (105). CLM notes that the principal motivation for deletion analyses of ellipsis is that the syntactic and interpretive properties of ellipsis structures exactly parallel those of their unelided counterparts (Chomsky 1993: 35). Given this, CLM claims that it makes sense to treat VP ellipsis as resulting from a deletion rule which applies on the way to PF but that it does not make sense to treat Sluicing as a deletion phenomenon. In short, they claim that Sluicing involves recycling of the linguistic material necessary to ensure interpretation at LF rather than deletion on the phonological side of the derivation.

However, there is a way to explain the contrast of island effects between VP ellipsis and Sluicing under a deletion account. When the WH-pronoun in (105) crosses

a barrier, suppose that the derivation puts a star on the trace as well as a star on the barrier, here, XP (i.e., CP or PP). This time, the Subjacency violation cannot be improved since the starred barrier is not contained in the ellipsis site, VP.

3.3.4 A Note on Matrix Sluicing

3.3.4.1 Matrix Sluicing in English

Under Chomsky's (1995) theory of feature movement, in LF only formal features move, by economy. In order for a movement to take place overtly, it must be motivated by the checking of some formal inadequacy of features, which Chomsky (1993, 1994, 1995) calls *strong features*.

Several different views have been advanced on the technical aspects of strong feature checking. Chomsky (1993) proposes that a strong feature that is not checked overtly causes a derivation to crash at PF. Unlike Chomsky (1993), Chomsky (1994) argues that failure to check a strong feature before Spell-Out leads to an LF crash. Instead of regarding a strong feature as an ill-formed object at the interface levels, Chomsky (1995) defines strong features derivationally. More precisely, he defines strong features as objects that are not tolerated by the derivation and thus must be checked off upon insertion into the derivation.

In this thesis, I have adopted Chomsky's (1993) PF crash theory of strong features. Lasnik (1995c, 1997a) argues that ellipsis provides potential evidence for Chomsky's (1993) approach to feature strength, if it is a PF deletion process, as suggested by Chomsky & Lasnik (1993). Next, I will introduce Lasnik's (1997a) argument that Sluicing supports Chomsky's (1993) PF crash theory of strong features.

Following Rosen (1976), Lasnik (1997b) observes that Sluicing is not confined to the embedded clause. As shown in (106b), it is possible in the matrix too.

- (106) a. John will buy something
 b. WHAT?
 c. *WHAT₁ will₂ [_{FocP} [_{TP} ~~he t₂ buy t₁~~] t'₁]?
 d. [_{CP} WHAT₁ [_{C'} will₂ [_{FocP} [_{TP} ~~he t₂ buy t₁~~] t'₁]]]
 e. *WHAT [_{FocP} [_{TP} he will buy t] t']?

Suppose that the source for (106b) is (106d). Then, the identity scan in matrix Sluicing must disregard Subject-Aux Inversion. A more serious problem is that what is deleted is not TP but an intermediate projection, C', since T has raised to C. This is problematic under the standard assumption that operations do not target intermediate projections (Chomsky 1994). If T has not raised, the problem is why the hypothetical source in (106e) is unacceptable.

It is assumed that there is a strong feature forcing the raising of T to C in matrix questions. Suppose that the strong feature resides in T rather than in C. Then two options are available which eliminate the strong feature in T. One is the raising of T to C. The other is to stay in the ellipsis site (here, TP). PF deletion could eliminate the unchecked strong feature (Lasnik 1997a). Hence, matrix Sluicing supports Chomsky's (1993) PF crash theory of strong features.²⁵

3.3.4.2 Matrix Sluicing in Japanese

Such matrix Sluicing instances raise an interesting question in Japanese:

- (107) a. John-ga nanika-o kau-daroo
 -Nom something-Acc buy-will
 ‘John will buy something’
- b. NANI-o?
 what-Acc
 ‘What?’
- c. *NANI-o ka?
 what-Acc Q
 ‘What?’
- d. John-ga nani-o kau-daroo ka?
 -Nom what-Acc buy-will Q
 ‘What will John buy?’

(107b) without a Q-marker is a good instance of matrix Sluicing in Japanese, but (107c) with a Q-marker is not. If the sluiced remnant in Japanese undergoes syntactic focus movement and agrees with (some features of) a Q-marker, the contrast between (107b) and (107c) is unexpected since Japanese WH-questions require an overt Q marker in embedded WH-questions as in (108) and seemingly in matrix WH-questions as in (107d).

- (108) Boku-wa [_{FocP} nani_i-o [_{TP} John-ga t_i katta] *(ka)] wakaranai
 I-Top what-Acc -Nom bought Q not know
 ‘I don’t know what John bought’

However, consider the following:

- (109) John-ga nani-o kau-daroo?
 -Nom what-Acc buy-will
 ‘What will John buy?’

As shown in (109) and (107d), the Q-marker is optional in the matrix in (informal) Japanese but as shown in (108), it is obligatory in the embedded. If the hypothetical source of matrix Sluicing is (109), (107b) can be derived. The problem is to how to rule out (107c). At this point, I do not have an answer for this so I must leave this question open for further research.²⁶

3.4 Conclusion

In chapter 2, I argued that Korean/Japanese Pseudogapping is focus movement followed by VP ellipsis and the stranded tense is supported by focus Aux *ya* or *da* ‘be’. I also argued that Korean Stripping is focus movement followed by TP ellipsis. It seems that Korean Pseudogapping and Stripping nicely fit with Japanese/Korean Sluicing.

In this chapter, I argued that there are two types of Sluicing in Japanese: the remnant is moved out of the sluiced site via syntactic focus movement. If TP is deleted, English-type Sluicing (TP Sluicing) is derived. If VP is deleted, the stranded tense triggers *da* ‘be’-support. As a result, VP Sluicing is derived. In addition, I argued that Sluicing in English is focus movement plus WH-movement of the sluiced remnant followed by TP ellipsis. The licensing features on English Sluicing are both [+WH] and [+focus]. TP Sluicing in Japanese is focus movement of the sluiced

remnants followed by TP ellipsis. The licensing features on Japanese TP Sluicing is [+focus]. Hence, it is predicted that the non-WH focalized remnant is not licensed in English Sluicing, but it is in Japanese Sluicing.

Given Chomsky's (1995) Move-F, the movement of the sluiced remnant must be motivated by strong feature checking. Rejecting Chomsky's (1995) suggestion that feature strength is solely a formal property of functional heads, Lasnik (1995c, 1997a, b, c) and Bošković (1997b) argue that in some configurations, a strong feature resides in the moved phrases rather than the target. In this case, two options are available to eliminate the strong feature. One is to be checked by overt raising to the target. The other is to stay in an ellipsis site, consequently being eliminated by PF deletion (Lasnik 1995c, 1997a, b, c). Assuming that ellipsis is a PF deletion process, I have shown that Sluicing provides potential evidence for Chomsky's (1993) PF crash theory of strong features.

Regarding multiple Sluicing, which is possible in Japanese, but not in English, I proposed that the difference between these languages results from the locus of a strong feature. I argued that English does not tolerate multiple Sluicing since the strong focus feature resides only in the target, while Japanese allows multiple Sluicing since the strong focus feature resides in the moved items. In order to derive the overt saving effects in multiple Sluicing (in general, multiple focus fronting), I proposed that in Japanese, the strong focus feature resides in both the head Foc and the moved phrases. I suggested a new checking mechanism, *Checking-through-Adjunction*. Roughly put, a lower phrase moves to a higher phrase in order to check off its strong feature against the matching strong feature of the latter, through adjunction. Although the two phrases successfully checked off their formal inadequacy, their complex must raise higher to check off the strong feature of the target. This checking mechanism is independently

supported by Pseudogapping, Gapping, and multiple subject constructions in Japanese/Korean. In chapter 2, I showed that Korean/Japanese Pseudogapping allows multiple remnants. In chapter 4, I will show that Japanese/Korean allow gapped remnants multiply. Japanese/Korean also permit multiple subjects. Putting aside the issue of which feature is responsible for multiple remnants/subjects, some differences between Japanese/Korean and English can be reduced to a locus of strong features.

Notes to Chapter III

¹ The portions of this chapter were presented at the 4th Seoul International Conference on Linguistics (J.-S. Kim 1997f), the 14th Eastern States Conference on Linguistics (J.-S. Kim 1997h), and the 8th Japanese/Korean Linguistics (Kim & Sohn 1997). The second part of this chapter will appear in J.-S. Kim (1997g).

² This is not true for Riemsdijk (1978) who argues that Sluicing is not an ellipsis phenomenon. I will examine his analysis later.

³ Examples like (4) were originally noticed by Inoue (1976).

⁴ With respect to Sluicing, Korean patterns with Japanese in relevant respects.

⁵ Contra Takahashi (1994a), I regard (7) as an instance of Sluicing in Japanese since it behaves like (4b) in relevant respects; (i) it requires a linguistic antecedent, (ii) it allows sloppy reading, and (iii) it allows multiple remnants. In sum, the only difference between (4b) and (7) is whether a copula appears or not.

⁶ In the text, my discussion of syntactic WH-movement in Japanese was explicitly limited to long-distance movement. Takahashi (1993) argues that A'-movement of a WH-phrase to the initial position of a clause headed by a [+WH] Comp counts as WH-movement in Japanese. If Mahajan (1990) is correct that while long-distance Scrambling is uniformly A'-movement, local Scrambling may be A- or A'-movement, then even short-distance WH-fronting to the initial position of a clause headed by a [+WH] Comp may be counted as syntactic WH-movement in Japanese. Takahashi (1993) suggests that the WH-word in (14b) undergoes syntactic WH-movement.

⁷ Takahashi (1994a) shows that Japanese Sluicing exhibits island effects:

- (i) a. Mary-ga [_{NP} [_{IP} John-ni nanika-o ageta] onna]-ni atta sooda
 -Nom -to something-Acc gave woman-to met I heard
 'I heard that Mary met a woman who had given something to John'
 b. Boku-wa [_{CP} kanojo-ga [_{NP} [_{IP} John-ni nani-o ageta] onna]-ni
 I-Top she-Nom -to what-Acc gave woman-to
 atta ka] siritai naa
 met Q want to know
 'I want to know what she met a woman who had given to John'
 c. ?*Boku-wa [_{CP} nani-o ka] sirita naa
 I-Top what-Acc Q want to know
 'I want to know what'
- (ii) a. Mary-ga [_{PP} dareka-ga kubi-ni natta kara] okotteru sooda
 -Nom someone-Nom was fired because is angry I heard
 'I heard Mary is angry because someone was fired'
 b. Boku-wa [_{CP} kanojo-ga [_{PP} dare-ga kubi-ni natta kara]
 I-Top she-Nom who-Nom was fired because
 okotteru ka] sitteru yo
 is angry Q know

- 'I know who she is angry because he was fired'
- c. ?*Boku-wa [_{CP} dare-ga ka] sitteru yo
 I-Top who-Nom C know
 'I know who'
- (iii) a. Mary-ga Bill-ni [_{CP} John-ga nanika-o katta kadooka] kiita sooda
 -Nom -to -Nom something-Acc bought whether asked I heard
 'I heard Mary asked Bill whether John bought something'
- b. Boku-wa [_{CP} kanojo-ga [_{CP} John-ga nani-o katta kadooka]
 I-Top she-Nom -Nom what-Acc bought whether
 kiita ka] siritai naa
 asked C want to know
 'I want to know what she asked whether John bought'
- c. ??Boku-wa [_{CP} nani-o ka] siritai naa
 I-Top what-Acc Q want to know
 'I want to know what'

(b) examples are all fine with respect to the island constraints since they employ the WH-in situ strategy. (c) examples are in contrast to (b) examples, showing a Subjacency violation. The contrast indicates that Sluicing in Japanese involves overt movement of WH-phrases. Regarding island effects in Sluicing, Korean patterns with Japanese.

I will postpone a discussion of island effects in English Sluicing until section 3.3.3.4 (cf. Ross 1969, Levin 1982, Chung, Laudusaw, & McCloskey 1995).

⁸ For similar cleft analyses of Sluicing in Japanese, see Nishiyama (1995), Kuwabara (1995a, 1995b, 1996), and Kizu (1997).

⁹ My informants report that NWY's judgement on (38a) with an accusative-marked cleft phrase is too strong. Instead of *, they gave judgements for (38a) ranging from ?? to ?*.

¹⁰ I will discuss NWY's copula analysis of English Sluicing in section 3.3.1.2.

¹¹ Kuwabara (1996) and Kizu (1997) agree with Takahashi's (1994a) judgement on multiple Sluicing.

¹² Following Chomsky & Lasnik (1993), I assume that adjunction to an element in α -position is α -movement where α ranges over {A, A', head}.

¹³ Another potential problem of the copula analysis is found below:

- (i) They talked, but I can't remember what about
 (ii) They talked, but I can't remember what it was about

The hypothetical source (ii) for (i) appears to be grammatical, but there is a meaning difference between (i) and (ii) (Riemsdijk 1978: chapter 6); roughly put, the focus of (i) is on the conversation in general, while the focus of (ii) is on the specific topic of the conversation.

¹⁴ Crucially, the constituent in focus can be larger than the constituent actually carrying focal stress (cf. Chomsky 1972, Rochemont 1986). For instance, in (75b) the focused part is *for WHO*. We say that focus can be projected to a larger constituent.

¹⁵ Multiple Sluicing is not allowed in English (Ross 1969, Takahashi 1994a):

(i) Somebody bought something. *I don't know who what

This is related to the fact that in English, only one WH-phrase is allowed to be fronted:

- (ii) a. Who bought what?
b. *Who what bought?

Under the standard assumption, the strong WH-feature in English is located in C. I assume that the strong focus feature in English is located in the head Foc. Multiple Sluicing is bad since the strong feature in the target requires only one remnant-WH for the purpose of feature checking.

¹⁶ With respect to (75b), let us consider the following:

- (i) a. To whom did you talk?
b. Who did you talk to?

In (ia) the preposition moves to the front of the clause along with its object-WH. In (ib) it is left behind. Within classical generative grammar, Chomsky (1973) and Riemsdijk (1978) claimed that [+WH] can be optionally percolated up to the PP. It is not clear how to state optional pied-piping in the minimalist framework.

¹⁷ Alternatively, I suggest that the strong [+focus] can be generated either in Foc or in C. Suppose that the strong [+focus] originates in C. In this derivation, the sluiced-WH moves to Spec of CP in order to check off the strong [+focus, +WH] in C.

¹⁸ Lobeck (1995: 60-62) follows Riemsdijk's (1978) idea to derive Spill-over Sluicing.

¹⁹ One immediate question of this account is the following: Ross (1967) was the first to claim that extraposition creates islands, i.e., constituents out of which no extraction is possible, as shown in (ia).

- (i) a. *What₂ did [a book t₁] come out yesterday [on t₂]₁?
b. ... I wonder [_{CP} who₂ [_{FocP} [_{TP} ~~she bought it~~ t₁] [_{FOR} t₂]₁]]

If this is so, then the question is how it is possible that in (ib) the WH-phrase *who* can be extracted out of the rightward moved phrase *FOR who*. I speculate that the contrast between (ia) and (ib) comes from parsing effects. In (ia) the rightward movement is not string-adjacent; the extraposed PP moved across some intervening constituents, *came out yesterday*. In (ib) the rightward movement is string-adjacent; the focused PP performed a string vacuous rightward movement. That is, I speculate that the frozen effect (i.e., A rightward moved element cannot move further. It becomes frozen in the displaced position.) does not show up in string-adjacent rightward movement.

²⁰ One puzzling question, which remains unexplained under any existing analyses of Sluicing, is that a preposition cannot be stranded in Sluicing if the WH-word modifies a noun, as shown in (iib).

- (i) a. John left, but I don't know who he left with
- b. John left, but I don't know which people he left with
- (ii) a. John left, but I don't know who with
- b. *John left, but I don't know which people with

Additional examples are below:

- (iii) a. *Pam deposited the money, but nobody knows which bank in
- b. *My cat has fallen in love, and I bet I know which cat with

Riemsdijk (1978: 249) suggests the following filter to rule out (iib, iiia, iiib):

- (iv) *_[Comp] [WH-word - X]_i] P [e]_i Y, where X ≠ ∅

(iv) simply indicates that when a sluiced-WH is followed by a preposition, it should be a simple interrogative pronoun.

²¹ Rosen (1976) points out that there are counterexamples like (i) to (94b).

- (I) *Howard shares the apartment* with someone, but I have no idea who with

Regarding this, she speculates as follows: "when Sluicing applies in real time, the deletion is controlled not by the actual preceding sentence - which is already lost - but by what the speaker remembers of it." Her idea is that in principle the rule operates as stated in (94b), but in practice there is room for error. In (i) the italicized words can serve as the grammatical controller for Sluicing, giving the output *who with*. In (ii) the italicized words cannot serve as the grammatical controller for Sluicing:

- (ii) a. *We were* with somebody. I forget who (*with)
- b. *Bill intends to do away* with someone. Find out who (*with)
- c. *Something has been tampered* with, but
 it won't easy to figure out what (*with)

However, this speculation is problematic, since although the italicized word in (iii) is a grammatical controller for Sluicing (see 92a), the output *what in* is not allowed.

- (iii) *I'm getting involved* in something sinister, and I don't know exactly what (*in)

Notice that the output *who with* in (i) is not acceptable by some native speakers. I assume that (i) is not grammatical.

²² Heavy NP Shift and Right-Node-Raising, which have a sentential focus aspect (Bošković 1996b), could be additional evidence that English chooses the Spec-final focus parameter.

²³ This assumption makes a prediction that all NPs have to move overtly. For subjects and objects, this assumption will probably be fine. However, the objects of prepositions could be another matter:

(i) John put the book on the table yesterday

Under the assumption that the strong [+D] feature is located in NPs, the object of prepositions will be predicted to move overtly to Spec of some functional projection, let us say, AgrpP. Furthermore, the preposition is also predicted to move overtly to a functional head higher than Agrp in order to derive English word order. Also, if the category of the adverb *yesterday* in (i) is NP, then it will be predicted to move overtly. However, it seems that there is no independence evidence for the overt movement of P's objects and adverbial NPs.

²⁴ Alternatively, one might suggest that the matrix predicate in embedded Sluicing selects focalized WH-remnants.

²⁵ Even under Chomsky's (1995) theory of strong features, there is a way to capture the fact in (106), as explored in Lasnik (1997b). The alternative account preserves the idea of deletion avoiding a PF crash, but the potential crash has a different cause. Suppose that the strong feature driving overt T raising in matrix interrogatives resides in C rather than in T. In normal matrix interrogatives, the matching feature of T raises overtly to check the strong feature of C. This leaves behind a phonologically defective T, which will cause a PF crash unless either pied-piping (i.e., overt raising of T) or deletion of a category containing that T takes place. That is, the essence of the PF account of the ellipsis facts based on the PF theory of strong features evidently can be captured under Chomsky's theory of strong features as well.

In sum, Lasnik (1997b) argues that movement or ellipsis can rescue a derivation with a strong feature, and he concludes that PF crash is relevant either directly, as in Chomsky (1993), or indirectly, as in Chomsky (1995).

²⁶ One promising answer for this question is the following. Previously, in an effort to incorporate Takahashi's (1993) observation that there is agreement between a long-distance moved-WH and a Q-marker, I assumed that the Q-marker *ka* with [+focus] in Japanese may occupy the head Foc rather than C. Contra this assumption, suppose that the Q-marker originates in C with [+WH] and that there is an abstract syntactic [+focus] feature in Foc. Under this assumption, the contrast between (107b) and (107c) is not surprising:

(i) [_{FocP} NANI-o [_{TP} John-ga t — kau-daroo] [+focus]]
 what-Acc -Nom buy-will
 'What?'

Suppose that [+WH] is a weak interpretable feature. In this case, the lexical insertion of a Q-marker with the weak interpretable [+WH] into C is not necessary. That is, I claim that the presence of a Q-marker is not a necessary condition for making a sentence interrogative. Instead, the interrogative property of example (i) may come from something else; presumably, a rising intonation.

Chapter IV

The Role of Contrastive Focus in Gapping

4.1 Introduction

In this chapter, I take a closer look at Gapping constructions. For example, the second occurrence of the verb *bought* can be gapped in a sentence such as (1):¹

(1) JOHN bought APPLES, and MARY ~~bought~~ BANANAS

In (1) the materials left in the gapped conjunct, which I call *remnants*, are in a contrastive focus relation to the *correspondents* in the full conjunct. This is reflected in the intonation aspect of Gapping, which requires that both remnants and the correspondents they are contrasted with be stressed (cf. Sag 1976: 192ff). This fact, whatever its source, places significant limitations on the construction. First of all, the following examples, where one of the remnants is not contrastively focused, are bad:

(2) a. *John bought APPLES, and John BANANAS

cf. John bought apples, and John bought bananas

- b. *JOHN bought apples, and MARY apples
- cf. John bought apples, and Mary bought apples

Second, a certain parallelism on the conjuncts is enforced, illustrated by the oddness of the following:

- (3) a. *JOHN went to CHICAGO, and MARY ~~went~~ CRAZY
- b. *JOHN talked to MARY, and BILL ~~talked~~ about SUSAN
- c. *JOHN remembered stories about MARY, and BILL ~~remembered~~ SUSAN
- d. *JOHN explained that Mary understands PARTICLE THEORY, and BILL ~~explained~~ WAVE THEORY

In this chapter, only considering cases that meet these requirements. I explore the Gapping construction in English vs. Korean/Japanese within a minimalist framework (Chomsky 1991, 1993, 1994, 1995, Chomsky & Lasnik 1993).

Consider first the following contrast in English Gapping:²

- (4) a. JOHN talked about BILL, and MARY about SUSAN
- b. *JOHN talked about BILL, and MARY SUSAN

In (4a) the subject and the PP complement are good remnants, whereas in (4b) the complement of a preposition is a poor remnant. Interestingly, Korean counterparts of (4) are both allowed:³

- (5) a. JOHN-i BILL-eytayhay kuliko MARY-ka SUSAN-eytayhay malhayssta
 -Nom -about and -Nom -about talked
 ‘JOHN (talked) about BILL, and MARY talked about SUSAN’
- b. JOHN-i BILL kuliko MARY-ka SUSAN-eytayhay malhayssta
 -Nom and -Nom -about talked
 ‘JOHN (talked about) BILL, and MARY talked about SUSAN’

The question is then where this difference between English and Korean Gapping comes from.

Next, there is a restriction on the number of remnants in English Gapping:

- (6) a. *JOHN gave MARY a FLOWER, and BILL SUE a BOOK
 b. *JOHN put a FLOWER on the TABLE, and BILL a BOOK on the SOFA
 c. *JOHN built the HOUSE with the HAMMER, and
 MARY the GARAGE with a SAW

As shown in (1) and (6), a typical Gapping construction in English has just two remnants.⁴ Unlike in English Gapping, more than two remnants are allowed in Korean Gapping:

- (7) a. JOHN-i MARY-eykey KKOCH-ul kuliko
 -Nom -Dat flower-Acc and
 BILL-i SUE-eykey CHAYK-ul cwuessta
 -Nom -Dat book-Acc gave
 ‘JOHN (gave) MARY a FLOWER, and BILL gave SUE a BOOK’

b. JOHN-i KKOCH-ul THAKCA-ey kuliko

-Nom flower-Acc table-on and

BILL-i CHAYK-ul SOPHA-ey nohassta

-Nom book-Acc sofa-on put

‘JOHN (put) a FLOWER on the TABLE, and BILL put a BOOK on the SOFA’

c. JOHN-i MANGCHI-lo CIP-ul kuliko BILL-i THOP-ulo CHAGO-lul ciessta

-Nom hammer-with house-Acc and -Nom saw-with garage-Acc built

‘JOHN (built) the HOUSE with the HAMMER, and BILL built the GARAGE with a SAW’

This is the second issue to be explored in this chapter.

The next property of Gapping to be examined is its apparent ability to target non-constituents:

(8) JOHN will read BOOKS, and MARY ~~will read~~ MAGAZINES

(9) a. JOHN gave ALBUMS to his spouse, and BILL ~~gave~~ TAPES ~~to his spouse~~

b. JOHN worded the LETTER carefully, and MARY ~~worded~~ the MEMO
~~carefully~~

c. JOHN paints BARNS red, and BILL ~~ainted~~ HOUSES ~~red~~

In (8) the main verb has elided along with the Aux verb. In (9) the verb has elided along with the rest of the material within VP, except the verb’s object. Under the classic accounts (cf. Ross 1970, Hankamer 1973, 1979, Neijt 1979, among others), these data were taken to show that Gapping is not restricted to affecting constituents: there is not any constituent which includes the main verb and the Aux verb, but not the object NP. Similarly, there is not any constituent which includes both the verb and the

constituent right next to the object NP but not the object NP. However, this classical approach is not attractive since under the standard assumption, grammatical operations do not target non-constituents. I will demonstrate that under a plausible view of structures, the apparently non-constituent gaps are actually constituents.

This chapter is organized as follows. In the first part, I explore the Gapping construction in Korean/Japanese. As for previous research, I examine Saito's (1987) Right Node Raising analysis and Abe & Hoshi's (1993, 1995) LF copying analysis. I extend Sohn's (1994b) deletion analysis within a minimalist framework I argue that Gapping in Korean/Japanese is (leftward) focus movement followed by TP deletion. In the second part, I investigate the Gapping construction in English. I will not attempt to exhaust the range of Gapping and its properties. Instead, I focus on the apparent non-constituency in Gapping. As for previous research, I examine Larson's (1990) analysis and Johnson's (1994) analysis. I argue that Gapping in English is (rightward) focus movement followed by TP deletion. As a comparative study, I discuss why multiple remnants are allowed only in Korean/Japanese Gapping, but not in English Gapping.

4.2 Gapping in Korean/Japanese

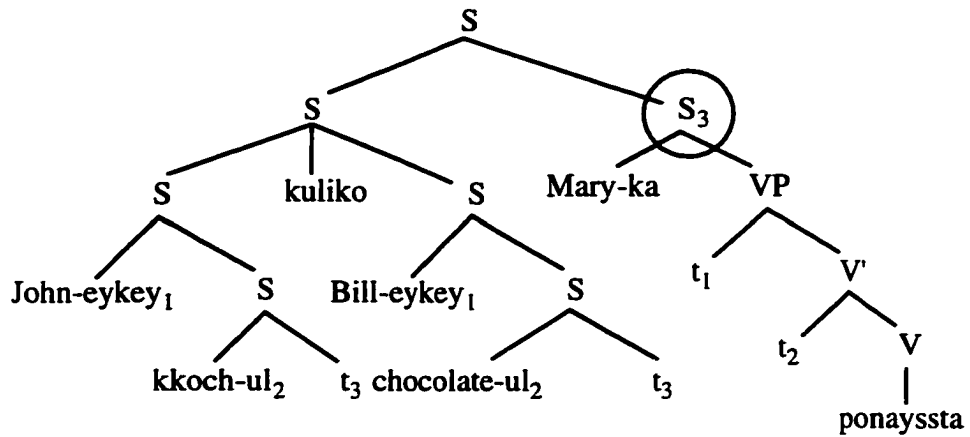
4.2.1 Saito's (1987) Right Node Raising Analysis

A number of authors argued that an example like (5) involves rightward movement (see. e.g., Maling 1972, Kuno 1973, 1978, and Saito 1987). In this section, I will briefly review Saito's (1987) Right Node Raising analysis of Korean Gapping since it is the most recent one among the Right Node Raising analyses.⁵

Saito (1987) argues that (5a), reintroduced again as (10), involves a Right Node Raising which is a stylistic rule in PF.

- (10) a. JOHN-i BILL-eytayhay kuliko MARY-ka SUSAN-eytayhay malhayssta
 -Nom -about and -Nom -about talked
 'JOHN (talked) about BILL, and MARY talked about SUSAN'

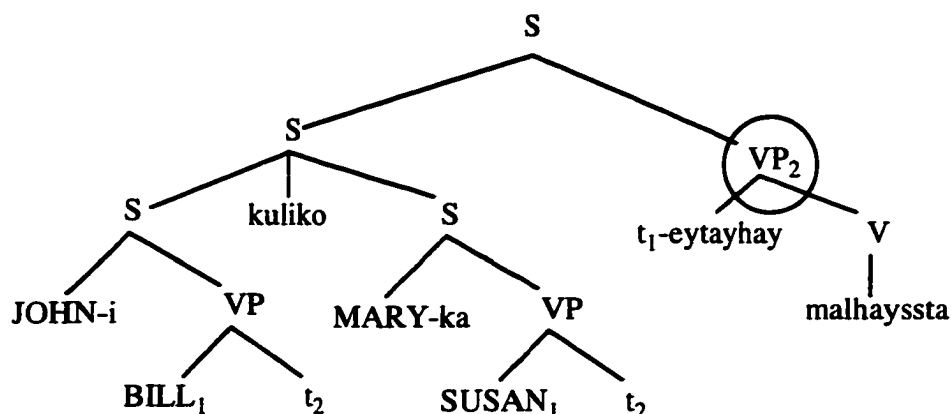
b.



According to Saito (1987), in (10), the shared constituent *malhayssta* 'talked' in both conjuncts is right-node-raised (i.e., across-the-board rightward verb movement) and is adjoined to S. The following example seems to require right-node-raising of more than a verb:

- (11) a. JOHN-eykey KKOCH-ul kuliko
 -to flower-Acc and
 BILL-eykey CHOCOLATE-ul Mary-ka ponayssta
 -to -Acc -Nom sent
 '(Mary sent) FLOWERS to JOHN, and Mary sent CHOCOLATE to BILL'

b.



In (12) right-node-raised elements do not seem to form a constituent.⁷ Note that right-node-elements must be a constituent, according to Hankamer (1971), Bresnan (1974), and Postal (1974):⁸

- (13) a. *He tried to persuade, but he couldn't convince, them that he was right
from Abe & Hoshi (1995: fn. 1)
- b. *John told, and Harry showed, Seymour that Sally was a virgin
from Hankamer (1971: chapter 1, example 86c)

In sum, Saito's (1987) Right Node Raising analysis cannot account for all the data.

4.2.2 Abe & Hoshi's (1993, 1995) LF Copying Analysis

Given the assumption that Gapping is an LF copying process, Abe & Hoshi (1993, 1995) suggest that in English Gapping, the correspondent of the right side remnant moves rightward by Heavy NP Shift in order to create a copying site (see also

Jayaseelan 1990). Then, as shown in (14), (4a) is ruled in but (4b) is ruled out as a violation on P-stranding since while the complement of a P may undergo leftward movement as in (15b), it in general cannot undergo rightward movement such as Heavy NP Shift as in (15a).

- (14) a. John [_r [_r talked t_i] about Bill_i] and Mary [_r [_r e] about Susan]
 b. *John [_r [_r talked about t_i] Bill_i] and Mary [_r [_r e] Susan]
- (15) a. *I talked about t_i yesterday [the man I recently met]_i
 cf. I talked t_i yesterday [about the man I recently met]_i
 b. [The man I recently met]_i I talked about t_i yesterday

Let us move on to examine Abe & Hoshi's (1993, 1995) account for Korean Gapping. Consider again the following:

- (16) a. JOHN-i BILL-eytayhay kuliko MARY-ka SUSAN-eytayhay malhayssta
 -Nom -about and -Nom -about talked
 'JOHN (talked) about BILL, and MARY talked about SUSAN'
- b. JOHN-i BILL kuliko MARY-ka SUSAN-eytayhay malhayssta
 -Nom and -Nom -about talked
 'JOHN (talked about) BILL, and MARY talked about SUSAN'

In order to explain the grammaticality of (16), Abe & Hoshi assume that Korean Gapping involves leftward movement and that P-stranding is universally allowed for leftward movement in LF (cf. Huang 1982). The structures they provide for (16) are the following:

- (17) a. [_{IP} JOHN-i [_{I'} BILL-eytayhay [_{I'} e]]] kuliko
 -Nom -about and
 [_{IP} MARY-ka [_{I'} SUSAN-eytayhay₁ [_{I'} t₁ malhayssta]]] talked
 -Nom -about
 b. [_{IP} JOHN-i [_{I'} BILL [_{I'} e]]] kuliko
 -Nom and
 [_{IP} MARY-ka [_{I'} SUSAN₁ [_{I'} t₁-eytayhay malhayssta]]] talked
 -Nom -about

In (17a), in the full conjunct, the subject *MARY-ka* is already outside I' and the PP *SUSAN-eytayhay* undergoes leftward movement by some LF operation and adjoins to I', thus making a lower I' a copying site for the elliptic conjunct.⁹ In (17b), in the full conjunct, the subject *MARY-ka* is outside I' and the complement *SUSAN* of P *eytayhay* 'about' adjoins to I' for making the lower I' a copying site, leaving the P behind. The crucial assumption here is that P-stranding is allowed at LF. As is well known, P-stranding is not allowed overtly in Korean:

- (18) *Mary_i, John-i t_i-eytayhay malhayssta
-Nom -about talked
'Mary_i, John talked about t_i'

In sum, Abe & Hoshi's main goal is to explain why P-stranding is allowed in Korean Gapping, but not in English Gapping. In fact, their proposal cannot explain the P-stranding fact, though. Consider the following:

- (19) a. JOHN-i BILL-(eytayhay) kuliko MARY-ka SUSAN-eytayhay malhayssta
 -Nom -about and -Nom -about talked
 b. BILL-*(eytayhay) JOHN-i kuliko MARY-ka SUSAN-eytayhay malhayssta
 -about -Nom and -Nom -about talked
 ‘JOHN ((talked) about) BILL, and MARY talked about SUSAN’
- (20) a. JOHN-i MARY-(wa) kuliko BILL-i SUE-wa mannassta
 -Nom -with and -Nom -with met
 b. MARY-*(wa) JOHN-i kuliko BILL-i SUE-wa mannassta
 -with -Nom and -Nom -with met
 ‘JOHN (met) MARY, and BILL met SUE’
- (21) a. JOHN-i MARY-*(wa) HAKKYO-(eyse) kuliko
 -Nom -with school-at and
 BILL-i SUE-wa CIP-eyse mannassta
 -Nom -with house-at met
 b. HAKKYO-*(eyse) MARY-*(wa) JOHN-i kuliko
 school-at -with -Nom and
 BILL-i SUE-wa CIP-eyse mannassta
 -Nom -with house-at met
 ‘JOHN (met) MARY at SCHOOL, and BILL met SUE at HOME’

If we change the order of the remnants in (19, 20, 21), as shown in (b) examples, the P-stranding effect disappears. Let us examine (20) as an illustration. The relevant structure of (20b) would be as follows:

BILL-i GUITAR-ul [Mary-ka cal chintanun sasil]-ul anta
 -Nom -Acc -Nom well plays-Comp fact-Acc knows
 'JOHN (knows the fact that Mary plays) the PIANO (well), and BILL
 knows the fact that Mary plays the GUITAR well'

(25) ?JOHN-i PHOTO-lul kuliko

-Nom grape-Acc and

BILL-i SAKWA-lul [Mary-ka cohahanun-ci] alkociphehanta

-Nom apple-Acc -Nom likes-whether want to know

'JOHN (wants to know whether Mary likes) GRAPES, and BILL wants to
 know whether Mary likes APPLES'

(26) ??JOHN-i CHAYK-ul kuliko MARY-ka NOTHU-lul [san hwue] mekessta

-Nom book-Acc and -Nom notebook-Acc bought after ate

'JOHN (had a meal after buying) a BOOK, and BILL had a meal after
 buying a NOTEBOOK'

In (23), which is a good Gapping example, the second contrastive element moved out of the embedded clause without crossing any islands. However, the second remnant in the other examples moved across islands; a complex NP clause in (24), a *wh*-island in (25), and an adjunct clause in (26). Under the standard analysis, the island effect suggests that the movement involved takes place overtly.¹⁰ Notice that if the movement of remnants in Gapping is overt, Gapping could be a PF phenomenon.

In summary, I have shown that the remnants in Gapping seem to move covertly in examples like (19a, 20a, 21a), while they seem to move overtly in examples like (19b, 20b, 21b).

4.2.3 Proposals: Leftward Focus Movement plus PF Deletion of TP

4.2.3.1 Multiple Gapped Remnants

In this section, I examine Sohn's (1994b) analysis of Korean Gapping. I will argue that his proposal is essentially correct and try to modify certain details within Chomsky's (1995) Move-F theory. I first investigate Jayaseelan's (1990) analysis of English Gapping, and, then, turn to Korean Gapping.

Jayaseelan (1990) analyzes English Gapping as a (PF) deletion phenomenon with a prior movement of remnants. His idea is that in the Gapping construction, the remnants necessarily receive contrastive focus and that they undergo leftward or rightward movement in overt syntax before the deletion process takes place. As an illustration, consider the following:

(27) JOHN loves MARY, and BILL ~~loves~~ SUE

Jayaseelan (1990) proposes that in (27) the object adjoins rightward to S and the subject adjoins leftward to S before deletion of S. The input structure of (27) before the deletion operation takes place is as follows:

(28) [_S JOHN_i [_S [_S t_i loves t_j] MARY_{2j}]] and [_S BILL_i [_S [_S ~~t_i~~ ~~loves~~ t_j] SUE_{2j}]]

If the lowest S in the second conjunct is deleted under identity with that in the first conjunct, then (27) derives.

Jayaseelan (1990) claims that the movement of the right side remnant of a verb in Gapping is Heavy NP Shift. He provides two evidence for the similarity between the right side remnant movement in Gapping and Heavy NP Shift. First, the complement of a P cannot undergo Heavy NP Shift as in (29). Similarly, the complement of a P cannot be a good remnant in Gapping as in (30).

- (29) a. *I talked about t_1 yesterday [the man I recently met]_i
 b. I talked t_1 yesterday [about the man I recently met]_i
- (30) a. *JOHN depends on his WIFE, and Bill ~~depends on~~ his SECRETARY
 b. JOHN depends on his WIFE, and Bill ~~depends~~ on his SECRETARY

Second, if the movement of the right side remnant is Heavy NP Shift, it follows why three remnants are not allowed in English Gapping, as shown in (31), since Heavy NP Shift does not take place twice in a sentence, as shown in (32).

- (31) *JOHN built the HOUSE with the HAMMER, and
 MARY the GARAGE with a SAW
- (32) a. *John built t_1 t_2 yesterday [with a hammer]₂ [the house that he will live in]₁
 b. *John built t_1 t_2 yesterday [the house that he will live in]₁ [with a hammer]₂

One theory-internal problem of Jayaseelan's analysis is the following: he assumes that the trace of remnants is subject to the ECP. According to him, in the gapped conjunct, the ECP requirement of the object trace is satisfied since it is lexically governed by the verb (Chomsky 1981, 1986b). A potential problem is how the subject trace is properly governed. Jayaseelan (1990) proposes that although in (28) there are two intervening S nodes between the subject and its trace, they do not constitute

barrierhood for the antecedent government of the subject trace since they are segments of the whole S. Thus, he crucially assumes the segment theory of adjunction by May (1985) and Chomsky (1986b). Then a question is how the lowest S in the gapped conjunct can be deleted under identity with the counterpart in the full conjunct since every occurrence of S in (28) is a segment of the whole category S. In short, it is not clear how a deletion operation can pick out the segments.

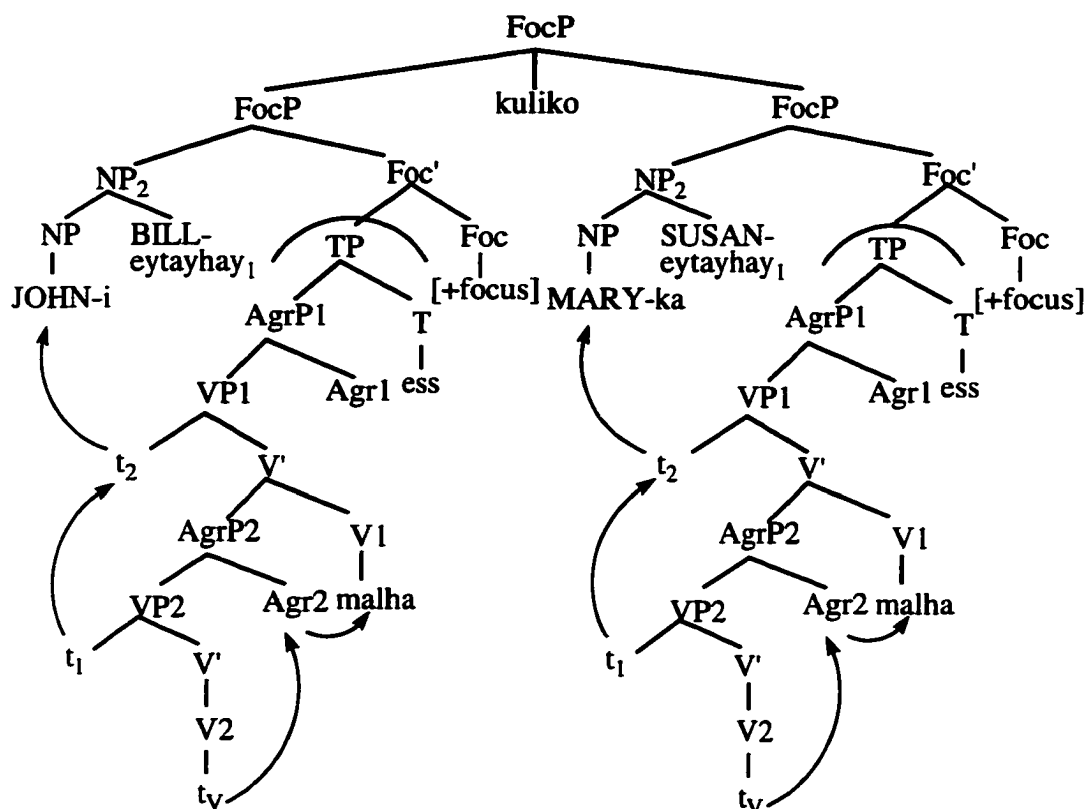
Let us turn to Korean Gapping. Consider the following contrast:

- (33) JOHN-i BILL-eytayhay kuliko MARY-ka SUSAN-eytayhay malhayssta
 -Nom -about and -Nom -about talked
 'JOHN (talked) about BILL, and MARY talked about SUSAN'
- (34) *John-i BILL-eytayhay kuliko John-i SUSAN-eytayhay malhayssta
 -Nom -about and -Nom -about talked
 'John (talked) about BILL, and John talked about SUSAN'

As in English Gapping, Korean Gapping requires that the remnants and the correspondents be in a contrastive focus relation. In this light, I propose that the remnant movement in Gapping is driven by the strong [+focus] (cf. Sohn 1994).

Let us now analyze the data. (33) will be analyzed as follows:

(35)



As in chapter 2, I assume a split VP structure, but this particular phrase structure is not crucial for the analysis of Gapping. As mentioned above, the feature which triggers the overt movement of remnants in Gapping is not [+EPP] which is weak, but [+focus]. Since the remnants (i.e., the subject NP and the complement PP) in (35) move out of the ellipsis site, TP, for the same reason, a question arises as to how to handle multiple remnants.

With respect to this question, Sohn (1994b) suggests two possibilities. The first possibility is that, following Kuroda's (1988) idea of multiple Specs in Japanese-type languages, a contrastive phrase which has moved to Spec of FocP and all the other

contrastive phrases which are adjoined to Spec of FocP are regarded as being in Spec of FocP and get into a checking relation with [+focus] in Foc. The second possibility is that, extending Saito's (1994) and Sohn's (1994a) ideas on additional-WH or argument effects, contrastive XP can adjoin to another contrastive XP repeatedly and the highest one, containing all the contrastive XPs, can move to Spec of FocP. Although Sohn (1994b) did not evaluate the two analyses on empirical grounds, in chapter 3 (also J.-S. Kim 1997h), I argued that this successive adjunction-type analysis, which I call *Checking-through-Adjunction*, is superior to *multiple Spec* analysis (cf. Kuroda 1988, Chomsky 1995, and Ura 1996). Below, I show how the multiple remnants movement is allowed without resorting to multiple Specs.

Let us return to (35). Previously, I observed that the remnants in Gapping are in a contrastive focus relation with the correspondents in the full conjunct, and that they move to Spec of FocP in order to check off the strong focus feature. Since all focused phrases must move to Spec of FocP, it seems that this movement should be driven by a formal inadequacy, i.e., a strong feature, of the moved items, rather than the head Foc. If the latter were the case, it would suffice to front only one focused phrase in (35), checking the strong [+focus] of the head Foc (cf. Bošković 1997b). Regarding multiple remnants in Gapping, I assume that the strong [+focus] resides both in the moved items and the head Foc. I propose that in (35) the lower focused phrase adjoins to the higher focused phrase in order to check its strong [+focus] against the strong [+focus] of the latter. But the complex of two focused phrases must move to Spec of FocP to check the strong [+focus] in the head Foc. Since Tense never appears in the gapped conjunct, I propose that Gapping is PF deletion of TP, with the remnants having moved out of TP via overt focus movement, as shown in (35).

This analysis is supported by the fact that multiple remnants are allowed in Korean Gapping:

- (36) a. *JOHN gave MARY a FLOWER, and BILL SUE a BOOK
 b. *JOHN put a FLOWER on the TABLE, and BILL a BOOK on the SOFA
 c. *JOHN built the HOUSE with the HAMMER, and
 MARY the GARAGE with a SAW
- (37) a. JOHN-i MARY-eykey KKOCH-ul kuliko
 -Nom -Dat flower-Acc and
 BILL-i SUE-eykey CHAYK-ul cwuessta
 -Nom -Dat book-Acc gave
 ‘JOHN (gave) MARY a FLOWER, and BILL gave SUE a BOOK’
- b. JOHN-i KKOCH-ul THAKCA-ey kuliko
 -Nom flower-Acc table-on and
 BILL-i CHAYK-ul SOPHA-ey nohassta
 -Nom book-Acc sofa-on put
 ‘JOHN (put) a FLOWER on the TABLE, and BILL put a BOOK on the
 SOFA’
- c. JOHN-i MANGCHI-lo CIP-ul kuliko
 -Nom hammer-with house-Acc and
 BILL-i THOP-ulo CHAGO-lul ciessta
 -Nom saw-with garage-Acc built
 ‘JOHN (built) the HOUSE with the HAMMER, and BILL built the
 GARAGE with a SAW’

In Korean Gapping, all focused phrases with the strong [+focus] must be fronted in order to check their strong focus feature, which is an ill-formed object at PF according to Chomsky (1993). This is why all the examples in (37) are good.

In English Gapping, however, not every focused phrase moves out of the ellipsis site, TP. As an illustration, consider (36a). Under the standard assumption, the EPP feature in English Agrs or T is strong. Hence, the subject may move out of TP independently of [+focus] in order to check the strong EPP feature in Agrs or T. Now we have two focused phrases inside TP. Since the strength of the [+focus] feature in English resides only in the head Foc, only one of the two remaining focused phrases is allowed to be fronted in order to check the strong [+focus] of the head Foc. The other focused phrase cannot be moved out of TP: the formal inadequacy, the strength of a feature, of the head Foc is satisfied. This is why only two remnants are generally allowed in English Gapping.

Another intriguing property in Korean Gapping is the relatively free order of remnants:

(38) a. JOHN likes FOOTBALL, and BILL BASKETBALL

b. *JOHN likes FOOTBALL, and BASKETBALL BILL

(39) a. JOHN-i CHWUKKWU-lul kuliko BILL-i NONGKWU-lul cohahanta
-Nom football-Acc and -Nom basketball-Acc likes

b. CHWUKKWU-lul JOHN-i kuliko NONGKWU-lul BILL-i cohahanta
football-Acc -Nom and basketball-Acc -Nom likes

c. ?JOHN-i CHWUKKWU-lul kuliko NONGKWU-lul BILL-i cohahanta
-Nom football-Acc and basketball-Acc -Nom likes

- d. ?CHWUKKWU-lul JOHN-i kuliko BILL-i NONGKWU-lul cohahanta
 football-Acc -Nom and -Nom basketball-Acc likes
 'JOHN (likes) FOOTBALL, and BILL likes BASKETBALL'

As shown in (38), in English Gapping, the linear order of the remnants is fixed. On the contrary, (39) shows that in Korean Gapping, the remnants are freely ordered. The diverse combinations also appear in ditransitive constructions:

- (40) a. JOHN-i MARY-eykey KKOCH-ul kuliko
 -Nom -Dat flower-Acc and
 BILL-i SUE-eykey CHAYK-ul cwuessta
 -Nom -Dat book-Acc gave
- b. MARY-eykey KKOCH-ul JOHN-i kuliko
 -Dat flower-Acc -Nom and
 SUE-eykey CHAYK-ul BILL-i cwuessta
 -Dat book-Acc -Nom gave
- c. MARY-eykey JOHN-i KKOCH-ul kuliko
 -Dat -Nom flower-Acc and
 SUE-eykey BILL-i CHAYK-ul cwuessta
 -Dat -Nom book-Acc gave
- d. KKOCH-ul JOHN-i MARY-eykey kuliko
 flower-Acc -Nom -Dat and
 CHAYK-ul BILL-i SUE-eykey cwuessta
 book-Acc -Nom -Dat gave

- e. KKOCH-ul MARY-eykey JOHN-i kuliko
 flower-Acc -Dat -Nom and
 CHAYK-ul SUE-eykey BILL-i cwuessta
 book-Acc -Dat -Nom gave
 ‘JOHN (gave) MARY a FLOWER, and BILL gave SUE a BOOK’

The free order of remnants in Korean Gapping is also derivable from the current account.

In the minimalist framework, checking takes place in two different configurations; Spec-Head configuration and Head-Head configuration. Above, I proposed another checking configuration, i.e., *Checking-through-Adjunction* by which I mean that two phrases with a matching checkable feature [+F] can get into a checking relation if the lower phrase adjoins to the higher one. More precisely, the lower phrase α can get into a checking relation with the higher phrase β via adjunction of α to β for the benefit of α or β , or both. Following Fukui (1993) and others, I assume that adjunction to Spec is allowed in either direction; leftward or rightward.

As an illustration, let us take (40a, b, c). In (40a) the lowest remnant *KKOCH-ul* adjoins overtly to the right of the medial remnant *MARY-eykey* in order to check its strong [+focus] against the strong [+focus] of the latter. In the next stage, the complex of *MARY-eykey KKOCH-ul* adjoins to the right of the highest remnant *JOHN-i* in order to check the strong [+focus] of the latter. In the next stage, the complex of *JOHN-i MARY-eykey KKOCH-ul* moves to Spec of FocP in order to check the strong [+focus] in the head Foc. If TP is deleted in PF, (40a) is derived.

Consider next (40b). First, *KKOCH-ul* adjoins to the right of *MARY-eykey* for the benefit of both. Second, the complex of *MARY-eykey KKOCH-ul* adjoins to the left of *JOHN-i* for the sake of the latter. Third, the complex of *MARY-eykey*

KKOCH-ul JOHN-i moves to Spec of FocP for the interest of the head Foc. If TP is deleted in PF, (40b) is derived.

Consider next (40c). Suppose that adjunction takes place from the bottom up. That is, suppose that in the first stage, *KKOCH-ul* adjoins to the right of *MARY-eykey*. Then, it seems impossible to derive the remnant order in (40c), since, in the surface order, *JOHN-i* intervenes between the complex of *MARY-eykey KKOCH-ul*. Even if we suppose that *KKOCH-ul* adjoins to the left of *MARY-eykey*, we are not sure how to derive (40c). However, there is a good alternative derivation, which is shown in (41).

- (41) a. [_{TP} [_{VP} JOHN-i MARY-eykey KKOCH-ul cwu]-essta] kuliko ...
 b. [_{TP} [_{VP} MARY-eykey₁-JOHN-i t₁ KKOCH-ul cwu]-essta] kuliko ...
 c. [_{TP} [_{VP} MARY-eykey₁-JOHN-i-KKOCH-ul₂ t₁ t₂ cwu]-essta] kuliko ...
 d. [_{FocP} [MARY-eykey₁-JOHN-i-KKOCH-ul₂]₃ [_{TP} [_{VP} t₃ t₁ t₂ cwu]-essta]
 [+focus]] kuliko ...
 e. [_{FocP} [MARY-eykey₁-JOHN-i-KKOCH-ul₂]₃ [_{TP} [_{VP} t₃-t₁-t₂ cwu]-essta]
 [+focus]] kuliko ...

As in (41b), suppose a derivation in which *MARY-eykey* adjoins to the left of *JOHN-i*. In the next stage, as in (41c), suppose that *KKOCH-ul* adjoins to the right of the complex of *MARY-eykey JOHN-i*. Suppose now, as in (41d), that the complex of *MARY-eykey JOHN-i KKOCH-ul* moves to Spec of FocP. If TP is deleted in PF, as in (41e), (40c) is derived.

In summary, I have shown that Gapping is overt focus movement followed by TP deletion and that the multiple remnants and their free surface order in Korean Gapping is well explained by *Checking-through-Adjunction*.

4.2.3.2 Postposition Drop and Case-marker Drop

Abe & Hoshi's (1993, 1995) LF copying analysis was proposed to explain the P-stranding fact in Korean/Japanese Gapping. In section 4.2.2 (see also Sohn 1994b, section 5.2), however, I showed that their analysis fails to cover all of the data. Consider the following again:

- (42) a. JOHN-*(i) BILL-(eytayhay) kuliko
 -Nom -about and
 MARY-ka SUSAN-eytayhay malhayssta
 -Nom -about talked
- b. BILL-*(eytayhay) JOHN-(i) kuliko
 -about -Nom and
 SUSAN-eytayhay MARY-ka malhayssta
 -about -Nom talked
- ‘JOHN ((talked) about) BILL, and MARY talked about SUSAN’

As mentioned before, there is an apparent conflict regarding P-stranding in Korean Gapping; (42a) seem to favor an LF copying analysis, whereas (42b) seem to prefer a PF deletion analysis.

With respect to the P-stranding conflict, I claim that Gapping is a PF phenomenon and that the P-stranding fact in (42a) follows from something else. I observe the following:

- (43) The postposition or Case-marker in Korean Gapping may drop only if the host remnant is immediately followed by the conjunction *kuliko* 'and'.

Notice that in (42a) the nominative Case-marker attached to the remnant *JOHN* must be overtly realized, but in (42b) it is optional. That is, (42) indicates that postpositions or Case-markers may drop only immediately before *kuliko* 'and'.¹¹ The following confirms this observation:

- (44) a. JOHN-*(i) [MARY-uy nwui]-(lul) kuliko
 -Nom -Gen sister-Acc and
 BILL-*(i) [SUE-uy nwui]-(lul) cohahanta
 -Nom -Gen sister-Acc likes
 b. [MARY-uy nwui]-(lul) JOHN-(i) kuliko
 -Gen sister-Acc -Nom and
 [SUE-uy nwui]-(lul) BILL-*(i) cohahanta
 -Gen sister-Acc -Nom likes
 'JOHN (likes) MARY's sister, and BILL likes SUE's sister'
- (45) a. JOHN-*(i) MARY-*(wa) HAKKYO-(eyse) kuliko
 -Nom -with school-at and
 BILL-*(i) SUE-*(wa) CIP-*(eyse) mannassta
 -Nom -with house-at met
 b. JOHN-*(i) HAKKYO-*(eyse) MARY-(wa) kuliko
 -Nom school-at -with and
 BILL-*(i) CIP-*(eyse) SUE-*(wa) mannassta
 -Nom house-at -with met

- c. HAKKYO-*(eyse) MARY-*(wa) JOHN-(i) kuliko
 school-at -with -Nom and
 CIP-*(eyse) SUE-*(wa) BILL-*(i) mannassta
 house-at -with -Nom met
 'JOHN (met) MARY at SCHOOL, and BILL met SUE at HOME'

As shown in (44), the accusative Case-marker on the object remnant is allowed to drop only if the remnant is immediately followed by *kuliko* 'and'. (45) also shows that only the remnants immediately followed by *kuliko* 'and' are permitted to drop their postpositions or Case-markers.

In sum, I suggested that P-stranding in Korean Gapping does not have anything to do with the issue of whether Gapping is deletion or copying and that it does not follow from a deeper principle other than (43).¹²

4.3 Gapping in English

In this section, I present additional evidence suggesting syntactic focus movement in ellipsis environments. To achieve this goal, I explore the Gapping construction in English. The content of this section is somewhat speculative; a brief analysis of Gapping is given, but no attempt is made to explain the many properties that have been observed in the literature.

4.3.1 The Apparent Non-constituency in Gapping

In (46) and (47) gaps appear as constituents.

(46) JOHN ate APPLES, and MARY ~~ate~~ BANANAS

(47) JOHN ate apples HUNGRILY, and MARY ~~ate apples~~ TIMIDLY

However, (48) suggests that Gapping may target non-constituents.

(48) a. TOM gave ALBUMS to Jane, and BILL ~~gave TAPES to Jane~~

b. LAURA put PLANTS in her office, and

CATHERINE ~~put ART in her office~~

c. JOHN worded the LETTER carefully, and

MARY ~~worded the MEMO carefully~~

d. JOHN paints BARNS red, and BILL ~~paints HOUSES red~~

e. BETSY rolled the DOUGH flat, and MARY ~~rolled the BUTTER flat~~

f. TIME believes AGNEW to have been guilty, and NEWSWEEK ~~believes~~

NIXON ~~to have been guilty~~

g. ARIZONA elected GOLDWATER senator, and PENNSYLVANIA ~~elected~~

SCHWEIKER ~~senator~~

h. NIELS proved a THEOREM wrong, and ALBERT ~~proved an ENTIRE~~

THEORY ~~wrong~~

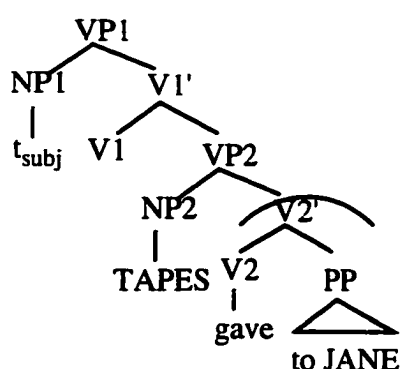
Since the examples in (48) are good instances of Gapping, the classic accounts (see, e.g., Ross 1970, Hankamer 1973, 1979, Stillings 1975, and Neijt 1979) admit that gaps may be non-constituents. Clearly, these accounts depart from the standard assumption that syntactic processes respect constituency.¹³

Below, I argue that under a plausible view of phrase structures, Gapping is a case of constituent ellipsis.¹⁴

4.3.2 Larson's (1990) (Leftward Movement followed by) VP/V' Deletion Analysis

Larson (1990), building on Larson (1988), has suggested that a revision to the underlying structure of VP will remove cases like (48) from those that illustrate Gapping's non-constituency. Notice that the right side remnants in (48) are all accusative Case-marked. Larson's (1990) particular proposal is that the phrase headed by a verb is built from a series of embedded VPs, one for each of the phrases that the verb combines with. The phrases that the verb combines with are arranged according to a hierarchy that puts direct objects in the specifiers of higher VPs, and the less direct object-like phrases in the specifiers or complement positions of lower VPs. He accounts for the fact that the verb canonically precedes all its complements with the suggestion that the verb occupies the highest V, perhaps by moving from a lower one, in overt syntax. For instance, applying this idea to (48a) results in the structure (49).

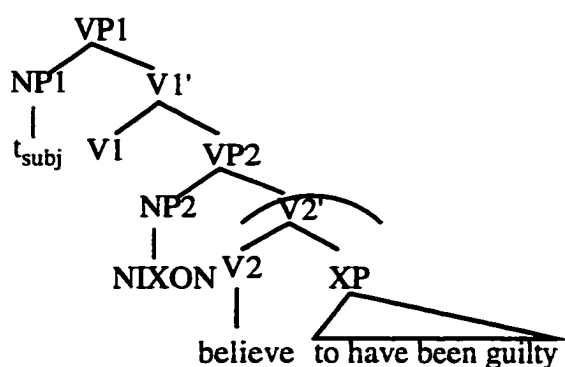
(49)



In (49) the subject NP has moved to Spec of AgrsP in overt syntax. According to Larson, the object NP originates in Spec of VP2 and the dative object in the complement position of VP2. If we allow Gapping to elide V2' before the verb has moved out of this projection, then the examples in (48a) can be generated. A similar account could be given of (48b-e). Note that Larson (1990) assumes that grammatical operations may target intermediate projections (e.g., V').¹⁵

The cases in (48f-h) can be given a similar treatment. Let us take (48f) for an illustration. Suppose that the gapped verb and predicate together form a complex predicate, which jointly assign the appropriate θ -role to the object. This would give to (48f) a D-structure like (50):

(50)



This is one option of applying Larson's (1990) suggestion to (48f-h).

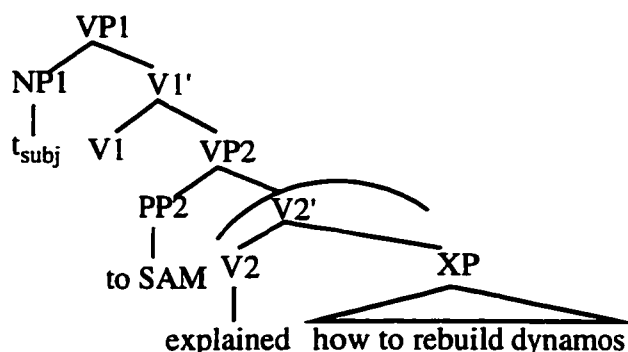
Let us now compare (48) to (51).¹⁶

- (51) a. *ERIC explained to BETSY how to rebuild dynamos, and ARTHUR
 explained to SAM how to rebuild dynamos

- b. *ADOLFO suggested to MITTIE to stay for the decision, and DOUG
~~suggested to SAM to stay for the decision~~
- c. *SANDRA mentioned to MIKEY that we were looking for a place to stay,
and TINA ~~mentioned to CHRIS that we were looking for a place to stay~~
- d. *LAURA shared with SARAH that we were unhappy, and BETSY ~~shared~~
with LIZ ~~that we were unhappy~~

Johnson (1994) notes that what seems to be significantly different between (48) and (51) is whether the remnant is an NP or PP.¹⁷ On Larson's model, the D-structure representations of (48) and (51) provide for a gap that elides the second term but leaves the first. That is, in (51), Larson's mapping would place the PP outside a constituent holding the verb and the second term, as in (52).

(52)



Since, in Larson (1990), intermediate projections are available for grammatical operations, if Gapping is able to elide V2' in (52), the facts in (51) become evident. Hence, Gapping does not support Larson's proposal that the hierarchical ordering of complements determines their linear order.

If we only consider (48) and (51), it seems to be relevant whether the remnant is an NP or not; since only NPs are (normally) able to escape the projections at issue (i.e., a lower VP or V'), only they will be able to serve as remnants when the verb has gapped with other complements.

It has been proposed in the literature that object nominals move to Spec of AgroP. The issue is where object movement takes place, in LF or in overt syntax. More concretely put, let us assume that object movement to Spec of AgroP is a surface phenomenon in English, in line with Johnson (1991), Koizumi (1993, 1995), Bošković (1997a), and Lasnik (1995b, c, 1997a, b, c). With this assumption, consider the following:¹⁸

- (53) a. HARRY ate bananas after BATHING, and NICK ~~ate bananas~~ after
RUNNING
b. MADELIN talked to Liz in order to get RECOMMENDATIONS, and
NINA ~~talked to Liz~~ in order to get RECIPES
c. ?BETSY danced with Andrew while holding a GLASS, and LIZ ~~danced~~
~~with Andrew~~ while holding a MUG
- (54) a. It's [eat bananas] that Nick will t after running
b. It's [talk to Liz] that Nina must t in order to get recipes
c. It's [dance with Andrew] that Liz did t while holding a mug

The contrast between (51) and (53) demonstrates that adjunct PPs are more easily able to stand as remnants than complement PPs (cf. Jackendoff 1971). We know that adjunct PPs are able to stand outside VP from the VP clefting data in (54). Johnson

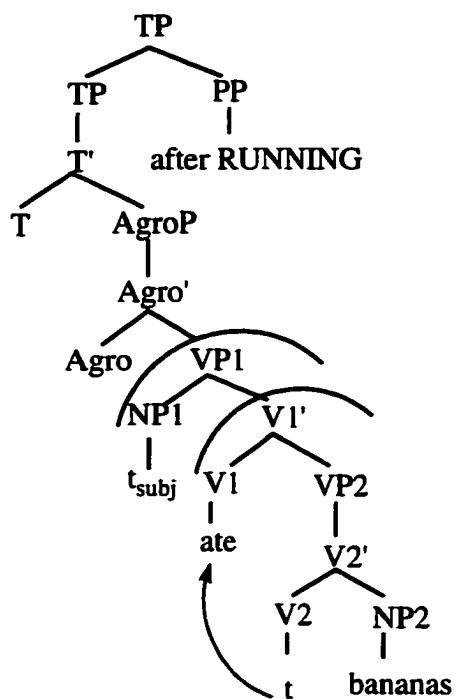
(1994) notes that the grammaticality of (53) should be compared to the ungrammatical (51), where the remnant PPs are complements.

Interestingly, however, adjunct PPs also seem able to be part of a gap that excludes complements. The examples in (55) are perhaps more awkward than (53), but are still acceptable:

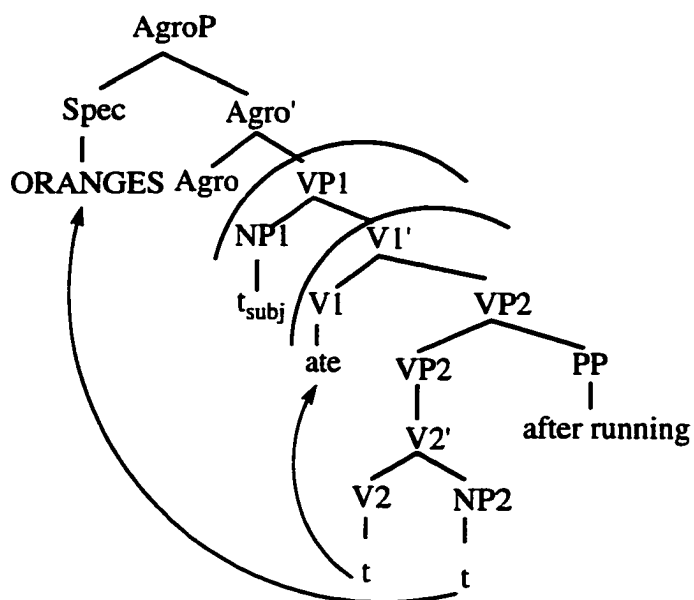
- (55) a. HARRY ate BANANAS after running, and NICK ~~ate~~ ORANGES ~~after~~
 running
 b. MADELIN talked to LIZ in order to get recommendations, and NINA
 ~~talked to BETSY in order to get recommendations~~
 c. BETSY danced with ANDREW while holding a glass, and LIZ ~~danced~~
 with SARAH ~~while holding a glass~~

Johnson suggests that adjunct PPs may occupy two different positions relative to the remnants in (53) and (55); right-adjoined either to the VP shell, or to a phrase containing VP (more precisely, TP according to Johnson 1994). Then, the two grammatical outcomes, (53a) and (55a), are derived as the result of Gapping applying to VP1 or V1' as in the following structures:¹⁹

(56)



(57)



Johnson claims that in (57) it is also necessary to move the object nominal out of the gapped verbal projection, for only then does it survive as a remnant.

To extend this idea to the other examples of (53) and (55), Johnson has to adopt the position that PPs and infinitival clauses, like NPs, are able to move leftward out of the verbal projection that gaps. Suppose that PPs and infinitival clauses might, like NPs, be able to move to Spec of AgroP where deletion of either V' or VP would strand them as remnants. Johnson (1994) claims that while allowing non-nominal complements to shift leftwards in this way is unconventional, it not only gives a method for capturing the optional gapability of adjuncts, but it also provides a clue to the following puzzle: a complement PP can be stranded by a complex gap when that gap contains an adjunct, as in (55b, c), but not when it contains a secondary complement, as in (51). Because the contrast between these examples hinges on whether an adjunct (see 55) or complement (see 51) has gapped, it is tempting to search for an explanation of this difference in the D-structure positions of these constituents. But this would incorrectly extend to the cases in (58).

- (58)
- a. AIDAN talked to SAM about the vote, and BILL ~~talked~~ to MITTIE ~~about the vote~~
 - b. PETER wrote to ANDREW about the problem, and SUSAN ~~wrote~~ to LIZ ~~about the problem~~
 - c. JOHN's child ran to SARAH's house from school, and BILL's child ~~ran~~ to MARY's house ~~from school~~
 - d. The SUPERINTENDENT heard about BUDGETARY CONSTRAINTS from the school committee, and the PRINCIPAL ~~heard~~ about FISCAL RESPONSIBILITY ~~from the school committee~~

- e. GARY spoke of LOVE to Chris, and MIKEY ~~spoke~~ of FAMILIAL DUTY ~~to Chris~~
- f. JOHN speaks with a DOCTOR about his health problem, and TOM ~~speaks~~ with a CHIROPRACTOR ~~about his health problem~~

The contrast of (51) and (58) demonstrates that the categorial status of the second complement influences whether an initial PP complement can remain after Gapping. In (51) a PP is stranded by a gapped clause, whereas in (58) a PP is stranded by another gapped PP. We therefore must search for something more refined than a simple adjunct/complement asymmetry.

In the next section, I will try to explain the aforementioned problems within a minimalist framework. The solution I will explore exploits the idea that while the gapped materials are old information, the remnants which are in a contrastive focus relation with the correspondents in the full conjunct are new information; (contrastively) focused items must move out of VP in overt syntax via focus movement.

4.3.3 Proposals: Rightward Focus Movement plus PF Deletion of TP

In the previous section, I examined Larson's (1990) extension of Larson's (1988) VP shell structure to the analysis of English Gapping. Initially, his revision of the underlying structure of VP seemed to gain support in that it eliminates some portion of the apparent non-constituency in Gapping. However, his VP or V' deletion approach to Gapping, based on the VP shell structure, causes non-trivial problems, even setting aside the issue of whether intermediate projections are visible for grammatical operations or not.

First of all, as has been claimed in the literature, there are certain differences between VP ellipsis and Gapping which are of sufficient variety and significance to render a combination of the two unlikely (see, for example, Williams 1977, Hankamer 1973, 1979, Sag 1976, Johnson 1994, and Lobeck 1995, 1997).

Among others, the conditions on antecedents are not the same for VP ellipsis and Gapping. The position that an elided VP may have in relation to its antecedent is quite free. But the relation between a gap and its antecedent is considerably restricted. As Jackendoff (1971) emphasizes, Gapping is possible only in coordinations involving *and* or *or*. VP ellipsis, by contrast, can apply to subordinate or coordinate clauses of all varieties:

- (59) a. Jane likes cats, and Suba ~~likes~~ dogs
 b. Mary put out the trash, or Debora ~~put out~~ the recycling bin
 c. ?*Pailing likes Chinese action film, but Masao ~~likes~~ sci-fi movies
 d. *Some ate apples today, because others ~~ate apples~~ yesterday
 e. *While some ~~like~~ beans, most like chocolate
- (60) a. Jane could like cats, and Suba might [_{VP} e] too
 b. Mary will put out the trash, or Debora might [_{VP} e]
 c. Pailing should like Chinese action movies, but Masao won't [_{VP} e]
 d. Some will eat apples today, because others had [_{VP} e] yesterday
 e. While some don't [_{VP} e], most like chocolate.

Even in coordination, however, Gapping and VP ellipsis have different antecedent conditions. Consider, for example, the cases where three clauses have been conjoined and the last conjunct contains the elision. In such cases, VP ellipsis allows for either of the previous two VPs to serve as an antecedent:

(61) John will eat apples, Bill will devour pears, and Tom won't [_{VP} e]

a. [_{VP} e] = eat apples

b. [_{VP} e] = devour pears

By contrast, Gapping seeks antecedents only from the immediately adjacent conjunct (Sag 1976):

(62) John prepared apples, Bill ate pears, and Tom [e] bananas

a. [e] = *prepared

b. [e] = ate

Next, VP ellipsis may find its antecedent within an embedded clause of the antecedent conjunct as in (63a), but Gapping cannot as in (63b):

(63) a. John claims that you eat apples, and you do [_{VP} e]

[_{VP} e] = eat apples

b. *John claimed that you ate apples, and Sam [e] rice

[e] = ate

Similarly, an elided VP may be within the embedded clause as in (64a), but a Gap cannot as in (64b):

(64) a. John ate apples, and Mary claimed that she could [_{VP} e] too

[_{VP} e] = eat apples

- b. *John ate apples, and Mary claimed that Tom [e] bananas

[e] = ate

In the previous section, I argued, following Johnson (1994), that Gapping does not support Larson's proposal that the hierarchical ordering of complements determines their linear order (refer back to the discussion of 51). Below, I will address additional problem of Larson's analysis.

A number of authors have assumed that the remnant movement in Gapping is leftward.²⁰ Since Larson's (1990) analysis of Gapping is very sketchy, I will examine Johnson's (1994) account regarding this matter. As in Pesetsky (1982: 652-3) and Wyngaerd (1993), Johnson (1994) suggests that Gapping makes use of processes otherwise covert in English syntax. Johnson expresses this suggestion as follows:

(65) Gapping licenses A-movement otherwise restricted to LF.

Johnson claims that (65) provides a method for capturing some of the problematic examples below (cf. 51). In (66) a verb plus PP gap leaves a clausal complement as a remnant. Compare (66) with (67).

- (66) a. ERIC explained to Betsy how to BUILD dynamos, and ARTHUR
~~explained to Betsy~~ how to FIX them
- b. ADOLFO suggested to Mittie to leave BEFORE the decision, and DOUG
~~suggested to Mittie~~ to leave AFTER the decision
- c. SANDRA mentioned to Mikey that we were looking for a place to MOVE,
 and TINA ~~mentioned to Mikey~~ that we were looking for a place to VISIT

- d. LAURA shared with Sarah that we were UNHAPPY, and BETSY ~~shared~~
~~with Sarah~~ that we were UNLUCKY
- (67) a. *It's [explain to Betsy] that I can t *how to build dynamos*
 b. *It's [suggest to Mittie] that Betsy will t *to leave*
 c. ?*It's [mention to Mikey] that Gary will t *that we are looking for a place to*
stay
 d. *It's [shared with Sarah] that Liz has t *that we were unhappy*

Since clausal complements cannot be stranded by VP clefting as in (67), it is unlikely that they are able to vacate VP in overt syntax. Johnson claims that “clauses move to the structurally Case-marked Spec of AgroP at LF now dovetails with (65) to generate these examples.” That is, his claim is that the LF in (68) he posits for these cases is licensed in overt syntax by (65), thereby producing the verbal projection that is gapped:

- (68) ... [_{AgroP} CP_i [_{Agro} [_{VP} [V PP t_i]]]]

However, (65) seems to be nothing but a stipulation in order to permit (normally) illicit leftward movement of clauses in overt syntax.

The aforementioned problem does not arise if the remnant movement is rightward. As is well known, clauses may be moved rightward:

- (69) a. Arthur explained *how to fix dynamos* to Betsy
 b. Arthur explained t to Betsy *how to fix dynamos*

In (69b) the infinitival clause was dislocated rightward. This fact suggests that the remnant movement may be rightward.

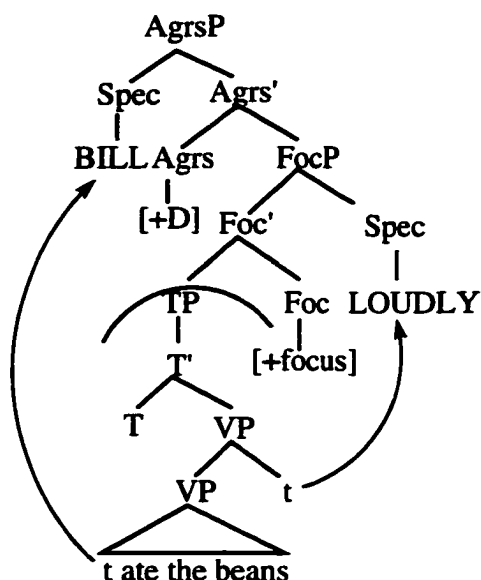
In chapter 3, I argued that English FocP is placed above TP and below AgrsP, and that its specifier position is final, through the analysis of *Sluicing with a stranded preposition*, which I called *Spill-over Sluicing*.

Consider now the following contrast, which suggests the directionality of focus movement in English:

- (70) a. *JOHN QUIETLY ate the beans, and BILL LOUDLY ~~ate the beans~~
 b. JOHN ate the beans QUIETLY, and BILL ~~ate the beans~~ LOUDLY

Note that in (70a) the adverb must precede the verb in order for it to precede the object NP since adverbs are not permitted to intervene between verb and object in English. In (70b) the adverb appears sentence-finally. When the gaps in (70) are formed by moving focal items out of TP (i.e., the adverb into Spec of FocP and the subject into Spec of AgrsP), only a sentence final position for a VP-level adverb is expected. This indicates that Spec of FocP is final, hence focus movement is rightward. If Spec of FocP were initial and focus movement were leftward, then (70a) should be good and (70b) should be bad. Under the current proposal, (70b) is derived as follows:

(71)



Abstracting away from the split VP hypothesis, the focalized VP adverb has moved to Spec of FocP in order to check the strong [+focus] in the head Foc. The focalized subject has moved to Spec of AgrsP in order to check its strong [+D] feature against [+D] in Agrs. If TP is deleted in PF under identity with the antecedent TP in the full conjunct, (70b) is derived.

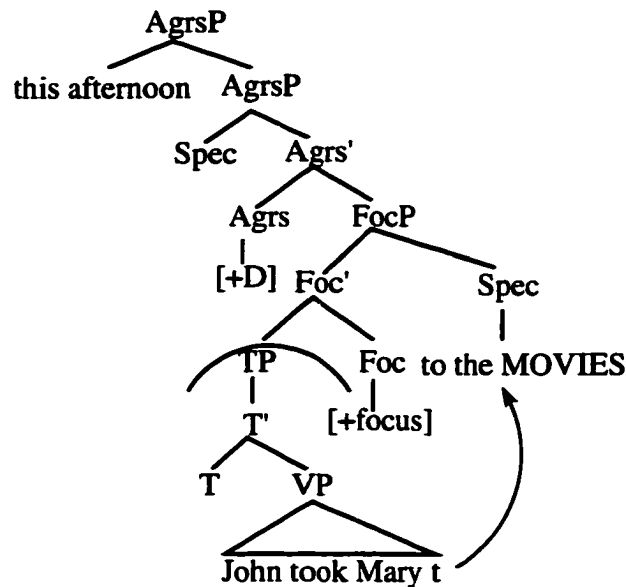
Perhaps the most compelling evidence for the present proposal is illustrated in (72), introduced in Kuno (1976) and discussed in Sag (1976).

- (72) a. Two days ago John took Mary out to DINNER, and this afternoon ~~John~~
~~took Mary~~ to the MOVIES
 b. On Monday I bought a CAR, and on Tuesday ~~I bought~~ a MOTORCYCLE
 c. On Tuesday Sam must have seemed HAPPY, and on Wednesday ~~Sam~~
~~must have seemed~~ SAD

These cases have two potentially problematic characteristics. First, the subject has gapped; and second, there is material in the right conjunct that is expected to be within VP or TP.

The second problem is rather easily solved: as proposed before, the right side remnants in (72) are focalized, hence they may move rightward to Spec of FocP in order to check the strong focus feature in the head Foc. The real problem is that the subject is able to remain within VP without violating any principle or condition. Under the standard minimalist assumption, the strong feature (i.e., [+EPP] or [+D]) forcing the raising of a VP-internal subject to Spec of AgrsP (under the Agr-based Case theory) is located in the target. Under this assumption, however, the grammatical status of (72) resists explanation since the strong feature in the target could not be eliminated. As in chapter 3, I assume that the strength of [+D] resides in the VP-internal subject rather than in Agrs. Then, two options are available which eliminate the strong feature in the subject NP. One is raising of the subject NP to Spec of AgrsP to check its strong [+D] feature against the [+D] in Agrs. The other is to stay in the ellipsis site, TP. Then, PF deletion could eliminate the unchecked strong feature (cf. Lasnik 1995c, 1997a, b, c). As an illustration, (72a) is derived as follows:

(73)



Suppose that sentence-level adverbs may adjoin to AgrsP.²¹ In (73) the left side remnant is generated outside of the ellipsis site. The focalized right side remnant may move out of the ellipsis site in order to check the strong focus feature in Foc. The unchecked strong D-feature in the subject NP could be eliminated by a PF deletion operation of TP. Then, (72a) is derived.

Before closing this section, I will explore one potential problem of the current proposal. The following is a collection of the representative data discussed above:

- (74) a. HARRY ate BANANAS after running, and NICK ~~ate~~ ORANGES ~~after~~
~~running~~ (=55a)
- b. HARRY ate bananas after BATHING, and NICK ~~ate bananas~~ after
 RUNNING (=53a)

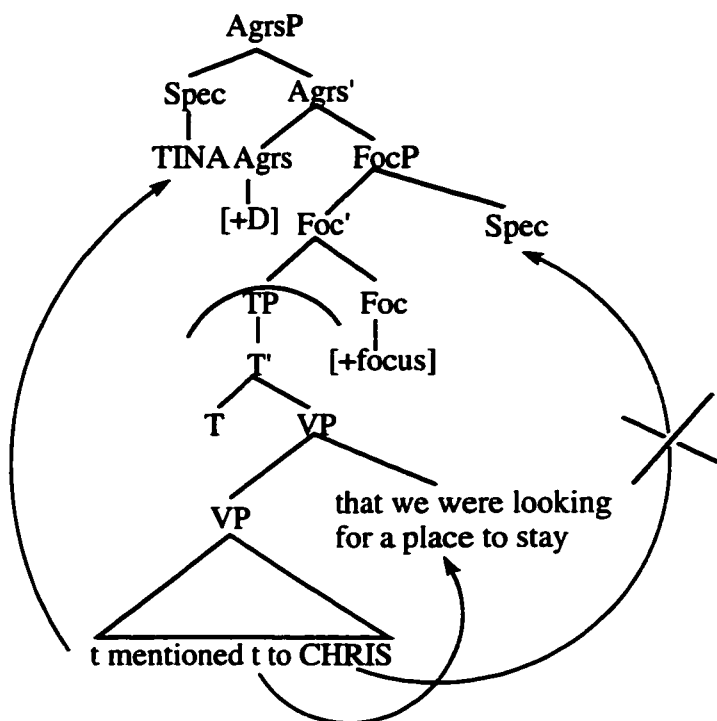
- (75) a. AIDAN talked to SAM about the vote, and BILL ~~talked~~ to MITTIE ~~about the vote~~ (=58a)
- b. SANDRA mentioned to Mikey that we were looking for a place to MOVE, and TINA ~~mentioned to Mikey~~ that we were looking for a place to VISIT (=66c)
- (76) *SANDRA mentioned to MIKEY that we were looking for a place to stay, and TINA ~~mentioned to CHRIS that we were looking for a place to stay~~ (=51c)

In (74a) the focalized items, which are new information, are the subject and the object NP, and in (74b) they are the subject and the adjunct PP. In (75a) they are the subject and the complement PP, and in (75b) they are the subject and the complement CP.

As argued before, if Gapping is TP deletion, preceded by the leftward movement of the subject to Spec of Agrs for strong D-feature checking and the rightward movement of the focalized remnant to Spec of FocP for strong focus feature checking, then the facts in (74) and (75) become evident. Note that focus movement is an XP movement of focalized items whatever their categorial status is; e.g., NPs, adjunct PPs, complement PPs, and complement CPs.

As mentioned in section 4.3.2, the apparent paradox is that in (76) the focalized complement PP is not able to stand as a remnant, while in (75a) it is. The only obvious difference, I wish to note, between the two is the categorial status of the second complement, which is part of the gaps; in (76) the remnant PP is stranded by a gapped CP, while in (75a) it is stranded by another gapped PP. Based on this observation, I speculate that the deviance of (76) might be related to a characteristic of Heavy NP Shift. I suggest the following structure for (76):

(77)



Following Stowell (1981), let us suppose that the gapped CP was generated as a complement to the elided verb and extraposed to the VP. The following examples without gaps show that the complement PP is able to move rightward across a PP but not across a clause:

(78) a. Bill talked *to Mittie* about the vote

b. Bill talked t_i [about the vote] *to Mittie*_i

(79) a. Tina mentioned *to Chris* that we were looking for a place to stay

b. *Tina mentioned t_i [that we were looking for a place to stay] *to Chris*_i

I suggest that the ungrammaticality of sentence (79b) with PP rightward movement is caused by the relative heaviness of the intervening clause. Similarly, I suggest that in (76) the relative heaviness of the extraposed clause may contribute to the unacceptability of the focalized PP as a remnant in Gapping.

In summary, reducing Gapping to (rightward) focus movement followed by TP deletion not only provides an explanation for the various properties of the construction reviewed in previous sections, but also gives a framework for understanding the range of its peculiarities.

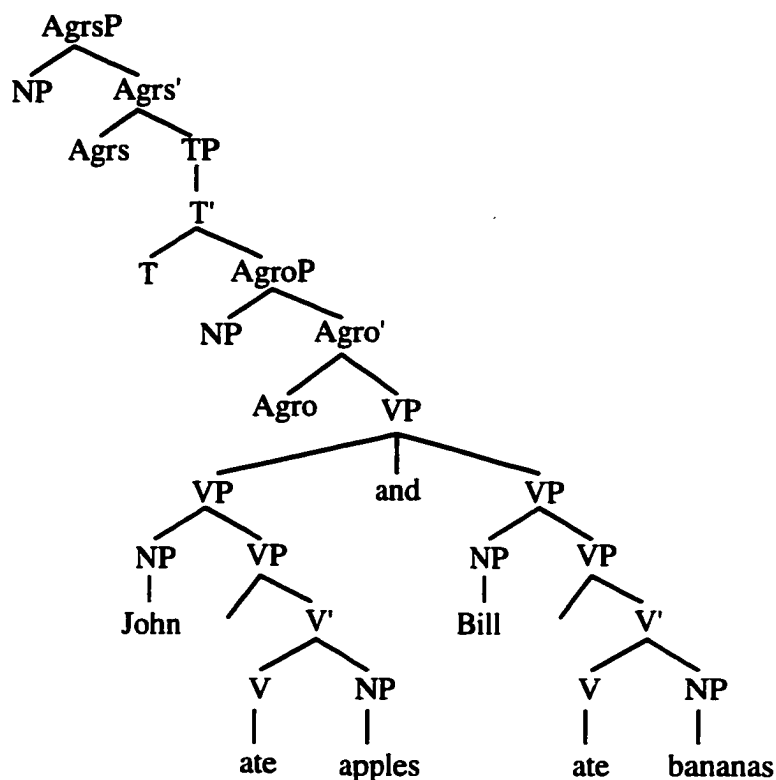
4.3.4 A Note on Johnson's (1994) Across-the-Board Movement Analysis of Gapping

Johnson (1994) argues that the gap in Gapping is a trace created by the movement of a verb, or verbal projection, that is found in the other coordinate. Let us begin with the following example:

(80) John ate apples, and Bill ~~ate~~ bananas

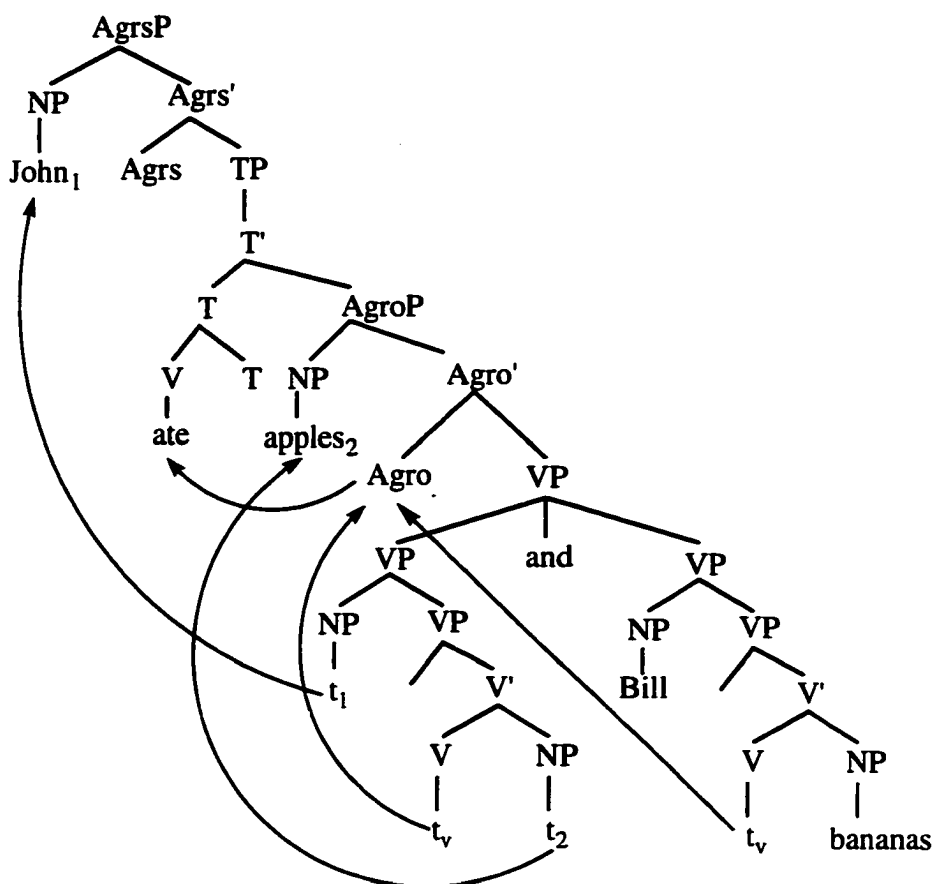
Suppose that the coordinated node is not IP but VP. The D-structure of (80) would be (81), under the Internal Subject Hypothesis.

(81)



Johnson assumes that object NPs in English are able to move to Spec of AgroP (according to him, YP) in overt syntax. This particular proposal entails that main verbs must also move overtly to a position outside AgroP. Suppose that English verbs move overtly to T. Suppose further that this happens in across-the-board (= ATB) fashion. The result would be a sentence whose word order is found in Gapping, if the subject and the object in the first VP move into Spec of AgrsP and Spec of AgroP, respectively, yielding (82).

(82)



According to Johnson, this is the representation of (80).

Johnson's proposal raises several questions, which are summarized in (83).

- (83) a. What forces a subject and an object to move into Spec of AgrsP and Spec of AgroP, respectively?
- b. How do the subject and the object of the second conjunct satisfy the Case Filter?

- c. Why may the subject and the object of the first conjunct move in apparent violation of Ross's (1967) Coordinate Structure Constraint (CSC)?

I will examine Johnson's answers to the questions in (83).

First, Johnson suggests that whatever is responsible for the fact that English clauses must generally have subjects in Spec of AgrsP in overt syntax is responsible for (83a). He also suggests that the object overtly moves for Case reasons.

As for (83b), Johnson simply assumes that both the subject NP and the object NP of the second conjunct may pass the Case Filter by receiving default Case, without moving into Spec of AgrP in overt syntax. But this assumption leads us to give up the Case Filter for English since NPs should always be able to receive default Case. That is, under this assumption, NPs do not have to move for Case at all since they can receive default Case.

Johnson claims that the answer to (83c) is found through a better understanding of the CSC. More specifically, he claims that the CSC allows A-movement from the first of the two conjuncts, but not the second. This is clearly not the case for A'-movement and Head movement, under normal circumstances, as (84) and (85) indicates.

- (84) a. *Who_i did Julie talk to t_i and Liz speak with Mason?
 b. *Who_i did Julie talk to Mason and Liz speak with t_i?
- (85) a. *Will_i [_{IP} John t_i go to the movies tonight] and [_{IP} Mary will go to the party tonight]?
 b. *Will_i [_{IP} John will go to the movies tonight] and [_{IP} Mary t_i go to the party tonight]?

Johnson suggests that independent A-movement is permitted from the first of two conjuncts, based on the following examples:

- (86) a. Liz made *Mason* out [_{IP} [_{IP} *t* to be intelligent] and [_{IP} Sarah to be kind]]
 b. Julie has believed *Liz* for a long time [_{IP} [_{IP} *t* to be honest] and [_{IP} Scott to be entertaining]]

I first summarize Johnson's argument. The particle verb *make out* belongs to the class of predicates that allows the subject of its infinitival complement to have access to the accusative Case-marked Spec of AgroP. A general feature of particle verbs is that they allow their NP complements to A-move past the particle (cf. Guéron 1987 and den Dikken 1992). According to Johnson, in (86a), *Mason* has A-moved from the first of two conjoined IPs, past the particle *out*, and into the higher clause.²² Also, in (86b), the subject of the first two conjoined IPs has moved past an adverbial belonging to the root clause (Postal 1974: 146ff), in apparent violation of the CSC. Johnson claims that these examples show that the CSC does not prevent independent A-movement from the initial conjunct. However, as (87) suggests, it must prevent A-movement from the second conjunct.

- (87) a. *Liz made *Sarah* out [_{IP} [_{IP} Mason to be intelligent] and [_{IP} *t* to be kind]]
 b. *Julie has believed *Scott* for a some time [_{IP} [_{IP} Liz to be honest] and [_{IP} *t* to be entertaining]]

In this light, Johnson motivates his particular proposal of Gapping.

However, a question arises as to one of the basic assumptions he makes; why is only A-movement allowed to violate the CSC? The null hypothesis should be that the

CSC holds for every movement. If there is evidence that the CSC does hold even for A-movement, then Johnson's theory will be undermined. Below, I explore alternative derivations for the examples in (86). For this purpose, I will briefly review Bošković's (1997a) argument for the overt object movement analysis of English ECM constructions over the covert object movement analysis.

Under the standard minimalist analysis, the matrix verb in (88a) is located in situ and the subject of the embedded clause is located in the embedded Spec of IP in overt syntax. Therefore, the coordinated node in (88a) is only analyzed as IP, as shown in (88b).

- (88) a. John believes Peter to be crazy and Mary to be smart
 b. John [_{AgroP} [_{VP} believes [[_{IP} Peter to be crazy] and [_{IP} Mary to be smart]]]]

Under this analysis, the embedded subject in (88b) must undergo LF movement to Spec of AgroP. Given the structure in (88b), one of the embedded subjects can be Case-licensed by moving to the matrix Spec of AgroP in LF. However, this movement violates the CSC (see, e.g., Ross 1967 and Williams 1978). Furthermore, since the subject of the other coordinated clause cannot be Case-licensed at all, the construction itself is also ruled out by Case theory.

There has been a growing body of literature where it is argued that object movement in English takes place overtly, accompanying the overt verb movement to a higher head position above the object (see, e.g., Johnson 1991, Koizumi 1993, 1995, Lasnik 1995b, c, and Bošković 1997a). In particular, Bošković (1997a) argues that, under the overt object movement analysis, (88a) involves matrix AgroP coordination,

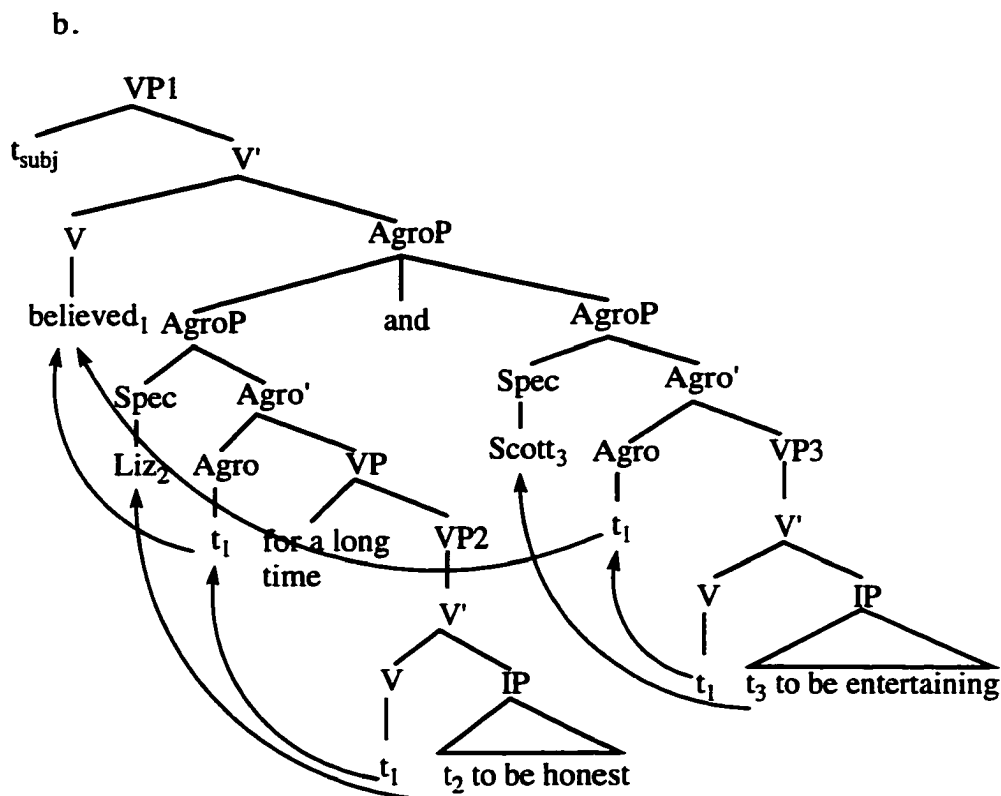
with the matrix verb undergoing overt ATB movement from the matrix AgroP. Under this analysis, (88a) can be analyzed in the following way:

- (89) a. John $[[_{\text{AgroP}} [_{\text{VP}} \text{believes } [_{\text{IP}} \text{Peter to be crazy}]]]]$ and
 $[_{\text{AgroP}} [_{\text{VP}} \text{believes } [_{\text{IP}} \text{Mary to be smart}]]]]$
 b. John believes₁ $[[_{\text{AgroP}} \text{Peter}_2 t_1 [_{\text{VP}} t_1 [_{\text{IP}} t_2 \text{to be crazy}]]]]$ and
 $[_{\text{AgroP}} \text{Mary}_3 t_1 [_{\text{VP}} t_1 [_{\text{IP}} t_3 \text{to be smart}]]]]$

Bošković (1997a) claims that the problems that arise under the covert object movement account of (88a) clearly do not arise under the overt object movement analysis: the CSC is not violated, and both subjects of the infinitival clauses are Case-licensed.

Assuming the overt object movement analysis, let us turn to the examples in (86). Consider first (86b), which is reintroduced as (90a). The partial structure, after the relevant movements, is (90b).

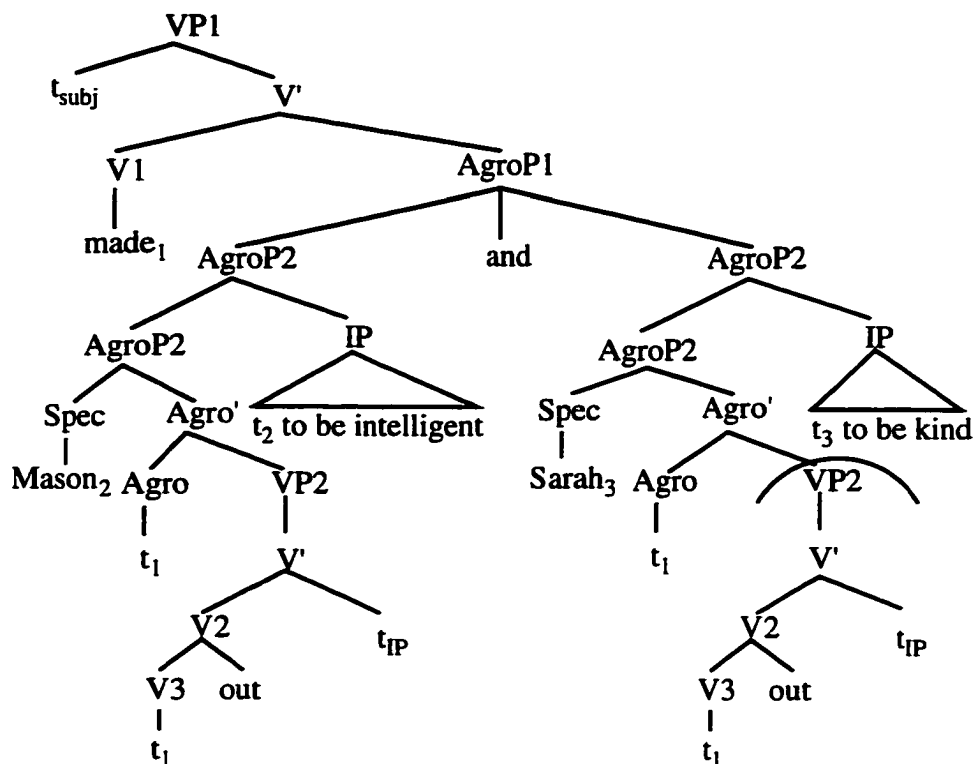
- (90) a. Julie has believed Liz for a long time to be honest and
 Scott to be entertaining



Under the overt object movement analysis, the coordinated node in (90) is the matrix AgroP. As shown in (90b), the subjects of the complement clauses have overtly moved to Spec of AgroPs, respectively, to check off some strong features in Agro. Suppose now that the matrix verb has undergone overt ATB movement out of the matrix AgroP.²³ Under this analysis, (90a) turns out to be invalid evidence that the CSC does not hold for A-movement from the first of two conjuncts.

Consider next (86a), which is reintroduced as (91a). I suggest that under the overt object movement analysis, it is derived, as shown in (91b).

- (91) a. Liz made Mason out to be intelligent and Sarah to be kind
b.



Suppose a derivation in which the overt movement of the ECM subjects and the overt ATB movement of the verb take place, leaving the particle behind. Suppose also that each IP is extraposed to a higher node, let us say, AgroP2. This derivation could produce the surface form in (92).

- (92) $?*/\sqrt{\text{Liz made Mason out to be intelligent and Sarah out to be kind}}$

If (91a) is derived from (92) by deletion of VP2 in the second conjunct, as shown in (91b), it is no longer evidence for Johnson's claim that the CSC does not hold for A-movement from the first of two conjuncts.²⁴

In summary, I have examined Johnson's (1994) theory of Gapping where it is crucially assumed that the CSC does not hold for A-movement from the first of two conjuncts in apparent violation of the null hypothesis. Although it is not superficially satisfactory, I have attempted to show that the CSC may hold for every movement without exceptions. As long as I succeed in this attempt, Johnson's (1994) theory will be significantly weakened.

4.4 Conclusion

In this chapter, I have explored the Gapping construction in Korean/Japanese vs. English. In these languages, Gapping was analyzed as an instance of incomplete TP ellipsis, with the remnants moved out of the ellipsis site via NP movement to Spec of AgrsP or focus movement to Spec of FocP.

Regarding multiple remnants in Gapping, which are observed in Korean/Japanese, but not in English, I proposed that the difference between these languages results from the locus of a strong feature. I argued that English Gapping normally does not tolerate multiple remnants since the strong focus feature resides only in the target, while Korean/Japanese Gapping allows multiple remnants since the strong focus feature resides in the moved items as well as the target.

In summary, the proposed analysis gives a unified account of Gapping in Korean/Japanese and English as overt focus movement followed by TP deletion, an account which is consistent with the claim that ellipsis is a PF deletion process rather than an LF copying one (Chomsky & Lasnik 1993).

Notes to Chapter IV

¹ The exact conditions determining what kind of constituent can and cannot undergo Gapping in a given sentence are extremely complex. See, for example, Neijt (1979) and Johnson (1994) for extensive discussion of Gapping.

² Some speakers find a contrast in (4), but they don't find (4b) so bad.

³ Korean/Japanese Gapping takes place backward, whereas English Gapping is a forward phenomenon. Following Ross (1970: 251), I suggest that the direction of Gapping depends on the input phrase structure configuration; forward if the identical elements are on left branches, and backward if they are on right branches.

⁴ There is a lower limitation as well. It is typical of the literature to require that Gapping has at least two remnants survive:

- (i) a. *JOHN left and MARY
- b. *JOHN ate them and MARY
- c. *JOHN gave them to friends and MARY

I will not address what accounts for this lower limitation.

⁵ Saito (1987) and others deal exclusively with Japanese data. But I use Korean data, assuming that Japanese and Korean pattern together in Gapping.

⁶ A potential problem in Saito's (1987) framework is that the trace *t*₁ and *t*₂ are not bound, violating the Proper Binding Condition (Fiengo 1977), since the right-node-raised *S*₃ which contains them are outside the *c*-command domain of their antecedents, as shown in (11b). Regarding this, Saito assumes that the PBC is not operative at PF.

⁷ One way out is to invoke the reanalysis of *P eytayhay* 'about' and *V malhayssta* 'talked' into one word, although it is questionable whether the reanalysis process is allowed in Korean/Japanese.

⁸ Among others, Hankamer (1971), Bresnan (1974), and Postal (1974) argue that only constituents may undergo Right Node Raising. However, Abbott (1976) shows that there are cases where right-node-raised elements do not form a constituent:

- (i) ?John tried to persuade, but failed to convince, his skeptical examiners that he knew the right answers

She suggests that the ungrammaticality of (13) is not a result of constituent structure but is caused by factors that make processing difficult or that produce stylistically inappropriate examples. Note also that under Larson's (1988) structures, the right-node-raised elements in (13, i) may be a constituent. Hence, it seems that the constituency argument against Saito (1987) is not strong.

⁹ Abe & Hoshi (1993, 1995) assume that the good remnants in Gapping must be outside I' in LF. Specifically, what they suggest is that since the subject is already outside I' in overt syntax, other potential remnants like complements should undergo some LF operation and adjoin to I'. But it is not clear how the remnant XP can be adjoined to intermediate projections like I' and why (the lower) I' should be a copying site. I speculate that what they have in mind is that since in the gapped conjunct, Tense never appears, the copying site should be at least higher than VP.

¹⁰ Abe & Hoshi (1993, 1995) suggest that the locality effect of leftward movement in Korean Gapping still follows from the claim that covert movement as well as overt movement is subject to subjacency, following Nishigauchi (1986, 1990), Choe (1987), Pesetsky (1987), and Reinhart (1991). In this thesis, I assume, agreeing with Huang (1982), Lasnik & Saito (1984), Chomsky (1986b), and Sohn (1994b), that the island sensitivity of movement shows that the movement takes place in overt syntax.

¹¹ This speculation was also suggested in Sohn (1994b, footnote 13).

¹² Korean observes the Left Branch Condition (no NP that is the leftmost constituent of a larger NP can be moved out of this NP):

- (i) a. John-un nwukwu-uy nwui-lul cohaha-ni?
 -Top who-Gen sister-Acc like-Q
 b. ?*Nwukwu-uy John-un t nwui-lul cohaha-ni?
 who-Gen -Top sister-Acc like-Q
 c. Nwukwu-uy nwui-lul John-un t cohaha-ni?
 who-Gen sister-Acc -Top like-Q
 'Whose sister does John like?'

One puzzling question arises in Gapping as to the Left Branch Condition:

- (ii) JOHN-*(i) [_{NP} MARY-(uy) ~~nwui-lul cohahanta~~ kuliko
 -Nom -Gen sister-Acc likes and
 BILL-*(i) [_{NP} SUE-*(uy) nwui]-*(lul) cohahanta
 -Nom -Gen sister-Acc likes
 'JOHN (likes) MARY's (sister), and BILL likes SUE's sister'

The above example seems to violate the Left Branch Condition regardless of deletion or copying. I leave this example open, mentioning in passing that even in (i) the Genitive Case-marker attached to the remnant *MARY* is optional immediately before the conjunction *kuliko* 'and'. I thank Keun-Won Sohn for pointing out this example.

¹³ However, for example, Larson (1990), Jayaseelan (1990), Wyngaerd (1993), and Johnson (1994) are exceptions.

¹⁴ Another apparent case of non-constituency involves long-distance Gapping such as (i), where the gap includes a part of clausal complement to the elided verb:

- (i) a. JOHN went out to buy BEER, and BILL ~~went out to buy~~ FRIED CHICKEN
 b. JOHN was glad to see JANE, and BILL ~~was glad to see~~ MARTHA

As with the local cases, it is difficult to see what constituent the elided strings in (i) could make. These data make sense, however, on Ross's (1970) view that Gapping elides the non-constituent variable that separates targets of a structural description. See, for example, Kuno (1976), Hankamer (1979), Neijt (1979), Wyngaerd (1993), and Johnson (1994) for an analysis. In this chapter, I will not explore the nature of long-distance Gapping.

¹⁵ If object movement to Spec of AgroP takes place in overt syntax, then Gapping is able to elide the maximal projection, VP2.

¹⁶ Apparently, the contrast between (48) and (51) is weak, or non-existent for some. I follow Johnson's (1994) judgements.

¹⁷ Another difference I wish to make is that the right side gaps are relatively *light* in (48), but *heavy* in (51). I will return to this observation later.

¹⁸ Some speakers find (53b, c) unacceptable. I follow Johnson's (1994) judgements.

¹⁹ In (56) and (57), if the verb did not move out of VP2, then Gapping may apply to VP2 or V2'.

²⁰ Jayaseelan (1990) is an exception.

²¹ There may be a checking relation between the sentential adverbial *this afternoon* and the uninterpretable D-feature in Agrs, given the multiple Spec hypothesis.

²² (86a) may not be a good example since some speakers find it bad.

²³ A question may be raised as to whether the adverbial PP *for a long time* scopes over both conjuncts. (Judgments are not clear.) I assume that the scope of the PP is confined to the first conjunct.

²⁴ In some dialects, (92) is more awkward than (91a). For these dialects, the question is why the ungrammaticality of (92) is improved by a later operation that results in a change in the ultimate representation. I do not have an answer for this question.

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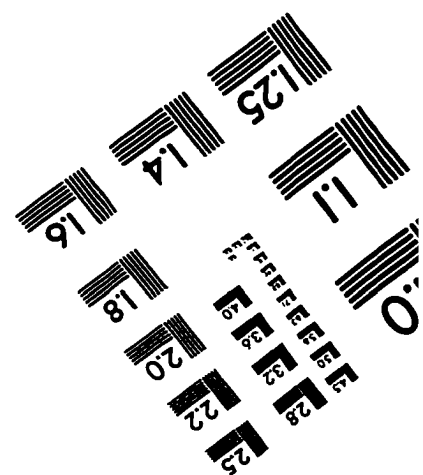
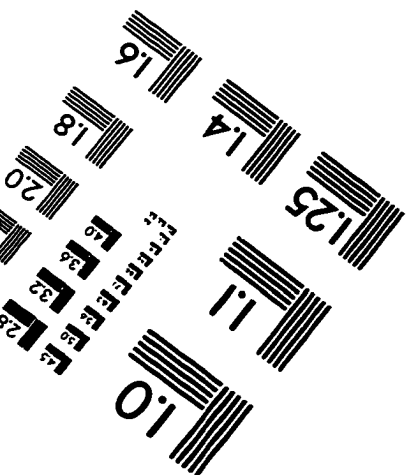
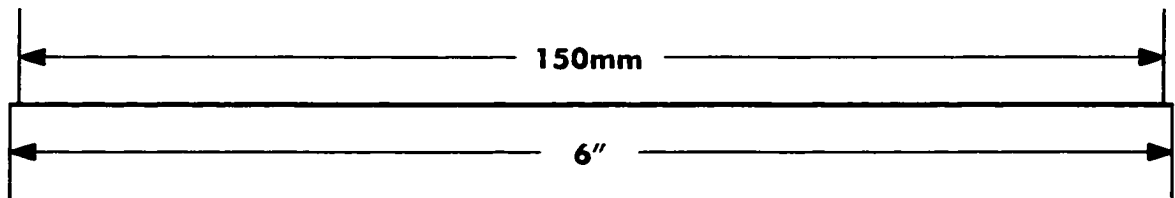
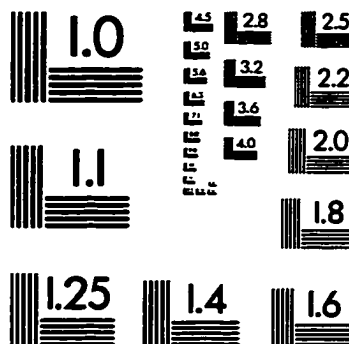
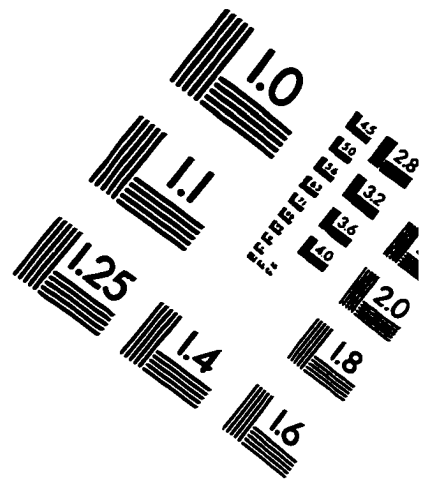
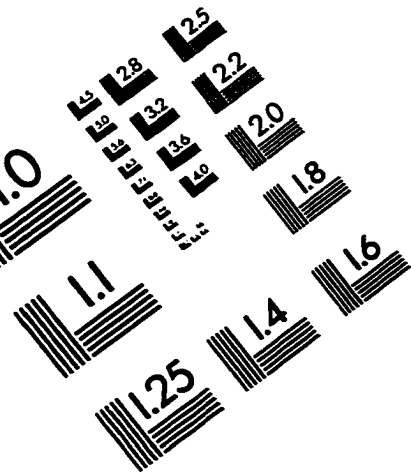
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IMAGE EVALUATION TEST TARGET (QA-3)



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