

Against Cyclic Linearization: Scrambling and Numeral Quantifiers in Korean*

Yong-Ha Kim
(Andong National University)

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This paper criticizes Ko's (2007) CL analysis of scrambling. Against her analysis, according to which a case-less numeral quantifier and its host NP comprise a constituent, I adapt Miyagawa's (1989) mutual c-command analysis in tandem with the current minimalist framework (Chomsky 2005), and propose that they do not form a constituent but do enter into an anaphoric relation. On the other hand, with Ko's (2007) analysis of vP as a Spell-out domain subject to criticism, I show that there are some serious theoretical problems with it. It should be noted that this criticism would apply to Fox & Pesetsky's (2005a) original proposal. Consequently, I will show that the intriguing phenomena observed by Ko (2007) can be reasonably accounted for in the way proposed in this paper.

Keywords: Cyclic Linearization, Order Preservation, scrambling, phase, Spell-out, Spell-out domain, quantifier floating, adverbial analysis of quantifier floating, numeral quantifier, parallel movement, tucking-in, overt Case, Case shift

1. Introduction

One of the main issues in the minimalist program, which has long been assumed and researched since the launch of generative grammar, is the question of which domains constitute cycles for syntactic derivations. The most recent concept in this regard is *phase*, which was introduced by Chomsky (2000). Phases play a number of important roles in relation to lexical array, cyclic Spell-out, and escape-hatch positions etc. Fox & Pesetsky (henceforth F&P) (2005a) have come up with another interesting role that phases are supposed to play with respect to the ordering of syntactic elements. They have proposed that once established, the relative ordering among elements in a phase should be maintained throughout the whole derivation. Thus, phases are domains that should keep the record of orderings and have influence on the orderings

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over the derivation at large. F&P call this aspect of ordering *Cyclic Linearization* (CL).

Drawing on F&P (2005a), Ko (2007) has claimed that puzzling but interesting phenomena related to scrambling in Korean can be successfully explained under CL. Her analysis hinges crucially on some subject-object asymmetries in Korean scrambling and the host NP-numeral quantifier (NQ) constituency, and on vP's status as a Spell-out domain. In this paper, I criticize her analysis particularly with respect to the host NP-numeral quantifier constituency and determination of Spell-out domains. Against her analysis, according to which a case-less numeral quantifier and its host NP comprise a constituent, I adapt Miyagawa's (1989) mutual c-command analysis in tandem with a current minimalist development (Chomsky 2008), and propose that they do not form a constituent but do enter into an anaphoric relation. On the other hand, with Ko's (2007) analysis of vP as a Spell-out domain subject to criticism, presenting some serious theoretical problems it makes. It should be noted that this criticism would apply to F&P's (2005a) original proposal. Consequently, I will show that the intriguing phenomena observed by Ko (2007) can be reasonably accounted for in the way proposed in this paper.

The organization of the paper is as follows. Section 2 introduces the notion of CL and its application to Korean scrambling by Ko (2007). Section 3 addresses the problems with F&P's CL approach and Section 4 presents other problems with Ko's (2007) CL analysis. Section 5 provides the basis for our alternative analysis by introducing recent developments in the minimalist program and suggesting some necessary revision. Section 6 presents the alternative analysis of the puzzling phenomena of Korean scrambling without recourse to the CL approach. Section 7 concludes the paper.

2. Cyclic Linearization

2.1. F&P's Order Preservation

Since Chomsky (2000), it has been extensively assumed that the mapping between syntax and phonology occurs cyclically in a derivation. This cyclic mapping is called cyclic (or multiple) Spell-out (cf. Uriagereka 1999). F&P (2005a) pay attention to a particular aspect of Spell-out: linearization. Rather than using the term *phase*, they employ the term *Spell-out domain*.¹ Under their proposal, once a domain is spelled-out, the elements in the domain are lin-

¹ Though similar, F&P's *Spell-out domain* and Chomsky's *phase* are different in that the former indicates the domain itself that is transferred to phonology, while the latter refers to the domain that provides edges as escape hatches and contains some phrase to be spelled-out.

earized, and the ordering information is kept throughout the derivation. If another Spell-out domain, in turn, is constructed, its elements are also linearized by Spell-out, and the ordering information is also accumulatively stored. Thus, the gist of their proposal can be expressed as follows:

(1) Order Preservation

Information about linearization, once established at the end of a given Spell-out domain, is never deleted in the course of a derivation.

With this notion of Order Preservation, F&P provide a clear and intriguing analysis of the phenomenon of Scandinavian Object Shift (OS). They show that their theory of cyclic linearization with the Order Preservation can explain ordering restrictions associated with Scandinavian OS without recourse to any complication of linguistic levels as presented by Holmberg (1999). Given that F&P’s list of Spell-out domains includes at least CP, VP, and DP, the theory of cyclic linearization explains the word order restrictions imposed on Scandinavian OS in the following way.²

(2) OS + V-C movement

a. Jag kysste henne inte [_{VP} t_V t_O]
 I kissed her not

b. VP: [_{VP} V O]

Ordering: V < O³

c. CP: [_{CP} S V [_{TP} t_S O adv [_{VP} t_V t_O]]]

Ordering: S < V V < O
 V < O
 O < adv
 adv < VP

(2a) is a legitimate example of OS in Swedish, in which the object *henne* ‘her’ has moved to a position outside VP and the verb *kysste* ‘kissed’ to C in terms of V2 in this language. In some step of the derivation of this sentence, VP is constructed and spelled-out as a Spell-out domain, where the ordering of V < O is established and recorded as in (2b). The derivation goes on to the point of CP as in (2c), where a new ordering information is provided, which creates no contradiction to the ordering information established by the previous Spell-out domain VP (V still precedes O in the domain of CP). Thus, the whole deriva-

² The Swedish data below are taken from Holmberg (1999), which have been also used in F&P (2005a).

³ The symbol < indicates linear precedence, and hence ‘V < O’ means that V precedes O.

tion involves no violation of the Order Preservation, and hence the sentence is grammatical.

Now, let's turn to a sentence that contains an illegitimate instance of OS.

(3) OS without V to C movement (embedded clause)

- a. * ... att jag henne inte [_{VP} kysste t_O]
 that I her not kissed

- b. **VP:** [_{VP} V O]

Ordering: **V<O**

- c. **CP:** [_{CP} C [_{TP} S O adv [_{VP} V t_O]]]

Ordering: **C<S** **V<O**

S<O

O<adv

adv<VP **adv<V**

(3a) shows an embedded clause where V-C movement does not occur but OS takes place nonetheless. The first Spell-out domain VP establishes the order 'V<O.' However, when the derivation reaches the second domain, CP, the ordering information includes 'O<adv' and 'adv<VP.' Since V is contained within VP, which entails V is preceded by adv, and hence by O, the ordering information from CP contradicts that from VP, rendering (3a) ungrammatical.

On the other hand, if a matrix clause like (4a) has an auxiliary verb that moves to C while V remains in situ, OS is blocked.

(4) OS without V to C movement (matrix clause with auxiliary verb)

- a. *Jag har henne inte [_{VP} kysst t_O]
 I have her not kissed

- b. **VP:** [_{VP} V O]

Ordering: **V<O**

- c. **CP:** [_{CP} S aux [_{TP} t_S O adv t_{aux} [_{VP} V t_O]]]

Ordering: **S<aux** **V<O**

aux<O

O<adv

adv<VP **adv<V**

Here again, the two Spell-out domains, VP and CP have contradictory ordering information, which causes the ungrammaticality of (4a). We find that F&P's (2005a) proposal has impressive simplicity. While previous proposals, including Chomsky (2001), Bobaljik (1995), and Holmberg (1999), involve complicated problems with verbal morphology and non-syntactic operations,

F&P's analysis appears to be nice and clear. Thus, their proposal would be much more convincing if it were possible to apply it to complex problems in other languages also in a nice and clear fashion. In this sense, Ko (2007) provides a great support for their proposal. The next subsection will take a look at her analysis of some puzzling phenomena related to Korean scrambling.

2.2. Cyclic Linearization and Scrambling Puzzles

Ko (2007) takes a puzzling subject-object asymmetry in Korean as the starting point of her analysis. As shown below, when scrambling involves subject- or object-oriented Numeral Quantifiers (NQs), the subject may intervene between the object and the object-oriented NQ, while the object cannot intervene between the subject and the subject-oriented NQ.

- (5) a. John-i maykcwu-lul sey-pyeng masi-ess-ta.
 -Nom beer-Acc 3-CL drink-Past-Dec
 'John drank three bottles of beer.'
- b. maykcwu-lul John-i sey-pyeng masi-ess-ta.
 beer-Acc -Nom 3-CL drink-Past-Dec
 'John drank three bottles of beer.'
- (6) a. haksayng-tul-i sey-myeng maykcwu-lul masi-ess-ta.
 student-PL-Nom 3-CL beer-Acc drink-Past-Dec
 'Three students drank beer.'
- b. *haksayng-tul-i maykcwu-lul sey-meyng masi-ess-ta.
 student-PL -Nom beer-Acc 3-CL drink-Past-Dec
 'Three students drank beer.'

(6b) runs parallel with the Japanese example below that has been presented by Saito (1985), who has claimed, based on this example, that subjects can never be scrambled.

- (7) *gakusei-ga sake-o san-nin nondeiru.
 student-Nom sake-Acc 3-CL drinking
 'Three students are drinking sake.'

Given that Japanese allows multiple scrambling as shown by (8), Saito (1985) raises the question of why (9) cannot be a possible representation for (7).

- (8) [_S sono hon-o₁ [_S John-ni₂ [_S Mary-ga [_{VP} t₂ t₁ watasita]]]] (koto)
 that book-Acc -Dat -Nom handed

- (9) [_S Gakusei-ga₁ [_S sake-o₂ [_S t₁ sannin [_{VP} t₂ noneiru]]]]]

Saito's (1985) answer to this question is the assumption that subjects are not assigned abstract Case in Japanese. As Saito (1985) takes scrambling as A'-movement, the trace left behind by scrambling is a variable, which is supposed to have abstract Case. Since the trace of the subject *gakusei-ga* does not have abstract Case in (9) accordingly, Saito's (1985) final conclusion is that subjects in general cannot be scrambled at all in Japanese.⁴

However, Ko (2007) claims that there is some evidence that subjects can indeed be scrambled. According to her, this claim is supported by such data as (10) and (11).

- (10) haksayng-tul-i₁ [na-nun [_{t₁} sey-myeng Mary-lul manna-ass-ta-ko]
 student-PL-Nom I-Top 3-CL -Acc meet-Past-Dec-Comp
 sayngkakha-n-ta.
 think-Pres-Dec

- (11) haksayng-tul-i₁ pwunmyenghi t₁ sey-myeng maykcwu-lul
 student-PL-Nom evidently 3-CL beer-Acc
 masi-ess-ta.
 drink-Past-Dec

In (10), the embedded subject moves to the sentence initial position via long-distance scrambling. Though in order to advocate the impossibility of subject-scrambling, one would claim, as Saito (1985) does, that the embedded subject is not actually moved, but the matrix subject is lowered to be a downgraded parenthetical expression, Ko (2007) argues that adverbs like *pwunmyenghi* 'evidently' are vP-external and hence the subject in (11) is scrambled to the effect that it moves across the high adverb *pwunmyenghi*.




With this argumentation in favor of the possibility of subject-scrambling, Ko (2007) points out that the ungrammaticality of (6b) should be explained in terms of CL. In order to provide an analysis based on CL, Ko (2007) makes the following assumptions.⁵

⁴ Note that Saito (1985) gets his hypothesis about subject Case marking in Japanese subject to the framework of the so-called GB theory, which is difficult to subsume under the minimalist program. His hypothesis, hence, doesn't seem to be available in the current approach.

⁵ I will address problems with these assumptions in the next section. Meanwhile, I will just follow her analysis here.

- (12) a. vP and CP are the Spell-out Domains (phases) in Korean.
- b. XP in(side) [Spec, α P] cannot move to [Spec, α P] of the same head α . (cf. Ko's (2005) Edge Generalization)
- c. NP and NQ are merged as sisters.

With these assumptions, Ko (2007) first provides an analysis for the unproblematic case of scrambling in (5b).

- (13) a.  [O₁ S t₁ NQ_{obj} V]
maykcwu-lul₁ John-i t₁ sey-pyeng masi-ess-ta.
 beer-Acc -Nom 3-CL drink-Past-Dec
 'John drank three bottles of beer.'
- b.  [vP O₁ [v S t₁ NQ_{obj} V v]]
 Linearize vP: O<S<NQ_{obj}<V<v
- c.  [CP [TP O₁ [vP t₁ [v S t₁ NQ_{obj} V v]] T] C]
 Linearize CP: O<vP<T<C \Rightarrow Ordering in CP:
O<S<NP_{obj}<V<v<T<C

As graphically seen from (13b) and (13c), the object scrambles over the subject to the outer Spec-v and then to Spec-C. In vP the relative ordering between the object and the subject is established as O<S, which is maintained in the domain of CP, and then yields no ordering contradiction between the two domains.⁶

For the ungrammatical example (6b), Ko (2007) explores three possibilities, all of which are eventually rejected in some manner. A first possible derivational scenario is shown in (14).

⁶ A problem with this analysis is that there is another route through which an ordering contradiction can appear. Since Ko (2007), as well as F&P (2005a), does not rest on the Phase Impenetrability Condition (PIC), it is possible to extract the object from within vP without moving it to Spec-v. This will result in the ordering in vP as S<...O., which contradicts the ordering in CP 'O<S.' Ko (2007) seems to assume that this scrambling case without going through Spec-v is just not allowed with the derivation ruled out at PF. A different, but related, problem arises with F&P's (2005a) account of OS under CL. In order to yield V<O order in OS constructions, F&P (2005a) claims that Spec-V is not available for OS. Though they try to explain this restriction in terms of Case checking, this claim has been criticized by some of the authors (Peter Sells, Øystein Nilsen, Jonathan D. Bobaljik, and Elena Anagnostopoulou among others) involved in discussing the pros and cons of F&P's (2005a) CL approach in *Theoretical Linguistics (TL)* 31 (2005). Another issue concerning this problem is the domain internal movement triggered by CL, which will be discussed in Section 3. Also, see G-S Moon (2007).

- (14) a. * $[S_2 O_1 t_2 NQ_{subj} t_1 V]$
 ***haksaying-tul-i₂** *maykcwu-lul₁* t_2 sey-meyng t_1 masi-ess-ta.
 student-PL-Nom beer-Acc 3-CL drink-Past-Dec
 'Three students drank beer.'
- b. $[_{VP} O_1 [_{V} S NQ_{subj} t_1 V v]]$
 Linearize vP: $O < S < NQ_{subj} < V < v$
- c. $[_{CP} O_1 [_{VP} t_1 [_{V} S t_1 NQ_{obj} V v]] T C]$
- d. $[_{CP} S_2 O_1 [_{VP} t_1 [_{V} t_2 t_1 NQ_{obj} V v]] T C]$
 Linearize CP: $S < O < NQ_{subj} < V < v < T < C$ [ordering contradiction!]

In this scenario, the object scrambles over the subject in the vP domain, which establishes the ordering that places the object in front of the subject. After the object moves further to Spec-C, the subject undergoes scrambling over the object. The final ordering in CP includes the subject placed before the object, which contradicts the ordering in the previous Spell-out domain vP. Hence, this scenario is ruled out.

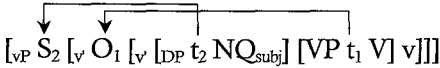
A second scenario presented by Ko (2007) allows the object in situ in the vP domain as shown in (15a).

- (15) a. $[_{VP} S NQ_{subj} O V v]]$
 Linearize vP: $S < NQ_{subj} < O < V < v$
- b. $[_{CP} S_2 O_1 [_{VP} t_2 NQ_{subj} t_1 V v]] T C]$
 Linearize CP: $S < O < NQ_{subj} < V < v < T < C$ [ordering contradiction!]

Since it does not undergo scrambling, the object follows both the subject and the NQ_{subj} in the vP domain as the linear ordering in (15a) shows. In (15b) both the subject and the object move out of the vP domain to the upper CP domain. After this CP is spelled out, the ordering between the subject and the object is consistent in this case, but the newly established linear order between the object and NQ_{subj} is differentiated from their ordering in the vP domain. This discrepancy renders the sentence ungrammatical.

There is a scenario for the derivation of (6b), which, according to Ko (2007), is not available since it violates the Edge Generalization as stated in (12b).

(16) Unavailable scenario: subject scrambling from Spec-v to Spec-v



The problem with the derivation in (16) is that the subject is moved from within the DP that is in a specifier position of vP, and then it is raised to another specifier position of the same head v. Ko (2007) argues that this kind of movement should be severely banned since the probe feature of a head cannot c-command into an element that is within its specifier; the probe cannot search the goal in such a situation (cf. Chomsky 2000, 2001).

Along this line of analysis, Ko (2007) is apparently successful in claiming that there is no “ban on subject scrambling” and the subject-object asymmetry in scrambling follows from the structural probe-goal relationship and CL. However, since there are also some problems with Ko’s (2007) analysis and, ultimately, with F&P’s theory of cyclic linearization, we will discuss them in the next sections.

3. Problems with CL⁷


In the Principles-and-Parameters approach, prevailing in the 1980s and 1990s, it was assumed that movement leaves a trace, which is co-indexed with the moved element. However, the trace is not an element that can survive in the minimalist program, since it necessarily requires certain objects like indices, which the inclusiveness condition never allows to be present in the computational system of human language.⁸ Thus, the inclusiveness condition forces the grammar to employ the copy theory of movement. The element left behind by a movement operation is a copy of the moved element itself, which is selected from the lexicon (via numeration). Suppose that movement involves copying operations, and extraction from a Spell-out domain leaves a copy. Then, does the copy left behind participate in the ordering table? Here, the CL analysis finds itself in a predicament. If the answer to this question is negative, the ordering table contains no information about linearization between the

⁷ Some comments on the discussion in this section are in order. One of the reviewers pointed out that the CL approach has been very extensively discussed in *Theoretical Linguistics* 31 (2005). He/she seemed to regard the discussion in this section as just repeating some of the contents in that journal. Though I’m grateful to him/her for indicating what I should have done with the prior work, the discussion in this section is different from those in the journal, which is the reason why I did not specifically cite individual papers. At any rate, I will indicate the relevant work in the course of discussion in this section in order to avoid such misunderstanding.

⁸ The inclusiveness condition requires that no new objects be added in the course of computation apart from rearrangement of lexical properties. Note also that the trace itself is difficult to regard as an object from the lexicon.

moved element and others that are still within the Spell-out domain. On the other hand, if the answer is affirmative, the ordering table may never be completed when there arises a domain-internal movement within a single Spell-out domain. Consider the following example.⁹

(17) Successive-cyclic *wh*-movement + V-movement to C



Ven₃ kysste₂ jag [VP t₃ t₂ t₃] ?
 who kissed I

In (17), the final ordering table of the CP domain should linearize *ven* ‘who’ followed by *kysste* ‘kissed.’ This relative order between the two elements, in turn, should entail that they are linearized in the same order within the lower Spell-out domain, VP, as presented graphically by the arrowed line in (17). The problem, then, is how one can linearize the two copies of *ven* (=t₃) in this domain. Since one of these two copies should not participate in the ordering table, the CL approach seems to find out a way to ignore one of them in determining the linearization of the VP domain. F&P (2005a: 41) attempt to break through this predicament by abandoning the copy theory of movement. They admit that if movement of a constituent α with phonological properties P is viewed as a process that produces a copy of α and merges the copy in a new position, then the grammar must include some statement that prevents one of the two copies from being pronounced, i.e., one that prevents P from being copied along with the other properties of α (cf. Groat and O’Neil 1996, Pesetsky 1998). Thus, they adopt the view that movement is a process that takes a single instance of α and remerges it, and hence the issue of multiple realization of P does not arise (cf. Chomsky’s (2000) idea of occurrence).

However, their selection of the remerge operation over the copying operation does not seem to solve the problem since a spelled-out domain becomes a chunk from which no element can be extracted. This means that if an element participated in an ordering table, it could not be extracted from the Spell-out domain. On the other hand, if one tries to have an extracted constituent α in a Spell-out domain, there is no such constituent as α under the hypothesis of movement as remerge. Moreover, there is a serious flaw in the analysis that posits domain internal movement as in the VP of (17). If dislocation of an element involves domain-internal movement as in (17), it necessarily targets the projection of the same head it has first merged with (cf. Grohmann 2003). Pesetsky himself, in the famous work co-authored by Torrego (P&T 2001),

⁹ In (17), the traces and their indices are used only for convenience’s sake. They should be regarded as copies of the moved elements.

claims that this kind of movement should be banned.¹⁰

(18) Ban on Domain Internal Movement (BDIM)

The movement of complement to its head has the effect of merging it with the same head twice.

The movement within VP in (17) vertically violates (18). In fact, if a movement is required to use an edge of a Spell-out domain through domain-internal movement, it always violates (18). Thus, F&P (2005a) should have motivated such a domain-internal movement in order to explain why CL cannot help using it in some cases. But I don't see any possibility for them to present supporting evidence for such a kind of movement.¹¹

Let's assume, nevertheless, that F&P (2005a) can somehow evade the problem with the domain internal movement. Even in this case, they encounter further counter-evidence against their theory of CL. Richards (1997, 2001) has claimed that there are instances of tucking-in movement in languages where multiple movements to Specs to a single head occur. At first glance, tucking-in movement of two affected elements is consistent with the CL analysis by F&P (2005a) because the affected elements maintain their original relative order in a lower domain as presented by the following Bulgarian examples.¹²

- (19) a. Kogo₁ kakvo₂ e pital Ivan [_{VP} t₁ t₂]
 whom what aux asked
 b. ?*Kakvo₂ kogo₁ e pital Ivan [_{VP} t₁ t₂]
 what whom aux asked

Without recourse to the tucking-in movement hypothesis by Richards (1997, 2001), F&P's (2005a) CL seems to successfully account for the contrast between (19a) and (19b). Assuming VP as a Spell-out domain in Bulgarian just

¹⁰ Chomsky (2001, 2008) claims that complement-specifier distinction is useless except that complements are first-merged and specifiers are later-merged. He bases this claim on the biolinguistic perspective, which takes the Merge-triggering feature EF as undeletable, and hence yielding an infinite range of expressions. We can derive the BDIM in (18) from this biolinguistic perspective so as to eliminate complement-to-specifier movement within a single head's projection.

¹¹ The domain internal movement has been addressed by Sells, Bobaljik, Nilsen, Anagnostopoulou, and F&P themselves in *TL* 31 (2005). However, the focus of these authors' concern has been put on the usability of the VP-edge as an escape hatch with respect to the Inverse Holmberg Effect (IHE), which F&P have labeled for the Quantifier Movement (QM) in several Scandinavian languages. The main point of this issue is what is the reason why OS should not use the VP-edge while QM with IHE should make use of it. Though this issue is not trivial, I will not further discuss it. The reader should refer to the work in *TL* 31 (2005) and the references cited therein.

¹² Williams (2005) has also given Serbo-Croatian *wh*-movement cases that provide the same puzzle for the CL theory.

as in Icelandic, we can explain the ungrammaticality of (19b) by showing that the final ordering between *kakvo* 'what' and *kogo* 'whom' contradicts the ordering in VP ($t_1 < t_2$).

However, when dealing with Bulgarian sentences containing more than two *wh*-elements moved to the Specs of a single head, the CL analysis fails to apply since according to Richards (1997, 2001), ordering between *wh*-elements other than the highest one can be freely varied. Richards contrives a principle to explain such freer ordering among multiply moved elements.

(20) Principle of Minimal Compliance (PMC; Richards 1997, 2001)

If the tree contains a dependency headed by H which obeys constraint C, any syntactic object G which H immediately c-commands can be ignored for purposes of determining whether C is obeyed by other dependencies.

In order to see how aptly the PMC works with Bulgarian multiple *wh*-movement cases, consider the following examples.

- (21) a. Koj₁ kogo₂ kakvo₃ t₁ e pital [_{VP} t₂ t₃]
 who whom what aux asked
 b. Koj₁ kakvo₃ kogo₂ t₁ e pital [_{VP} t₂ t₃]
 who what whom aux asked

(21a) is parallel with (19a) except for the addition of the subject *wh*-word, which occupies the most sentence-initial position. Furthermore, the other two *wh*-words maintain the same order as that in VP ($t_2 < t_3$), and hence seem to support the theory of CL by F&P (2005a). However, the picture is different with the ordering between *kakvo* and *kogo* in (21b). The ordering that linearizes *kakvo* in front of *kogo* clearly compromises the ordering between t_2 and t_3 in the lower Spell-out domain, VP. Here, F&P's (2005a) CL hypothesis fails but Richards' (1997, 2001) PMC succeeds. The choice we should make with this example is evident: discarding the CL hypothesis, and finding a new approach or accepting the PMC.

Before ending this section, I would like to present an additional problem with F&P's (2005a), as well as Ko's (2007), CL hypothesis. F&P (2005a) assumes that the list of Spell-out domains includes CP, VP and DP at least. According to their analyses of OS and QM in Icelandic, vP should be excluded from this list in Icelandic. On the other hand, Ko (2007) puts vP in the Spell-out domain list at least in the case of Korean with VP as another Spell-out domain. This means Spell-out domains can be parameterized. However, given that one of the reasons why Spell-out domains are needed is that the burden of working memory can be greatly reduced in terms of Spell-out's chunk-making

effect (Chomsky 2000), the domains for Spell-out should be universal rather than language-specific because it doesn't seem to make sense to claim that different language speakers adjust to different working memory burdens. In one of their footnotes, F&P (2005b) have stated that they do not argue that Spell-out domains do vary across languages, but that external merger of an external argument may occur before or after Spell-out. Thus, in a language in which vP doesn't appear to be as a Spell-out domain, specifiers and adjuncts of vP are merged after the Spell-out of vP. However, this is likely to be another case of ad hoc parameterization though we might be required to wait for F&P presenting decisive evidence that will feed this timing parameterization. Meanwhile, it seems reasonable to reject the CL hypothesis as an adequate device for explaining word order variations across languages.

4. Problems with Ko's (2007) Analysis

In the previous section, we looked at some arguments with which it is reasonable to reject the CL hypothesis as an adequate theory of word order variations across languages. However, as we saw in section 2, Ko's (2007) analysis of Korean scrambling facts under the CL hypothesis gets impressive achievements. Despite the flaws of the CL hypothesis, I feel that we cannot help admitting its strengths in explaining actual linguistic phenomena, and hence that it is necessary to explore whether there are troubles specific to Ko's (2007) own analysis. I see some problems with Ko's (2007) analysis despite its seeming success in explaining Korean scrambling facts. Thus, I will present them putting aside the inherent problems with the CL hypothesis presented in the previous section.¹³

The first problem with Ko's (2007) analysis comes from her explanation of the DP-NQ constituency and quantifier floating. With respect to the structure of the DP-NQ combination in Korean, Ko (2007) assumes that the host-DP and the case-less NQ are combined as a single DP underlyingly at least, and later can be dissociated in the same way that the inalienable possessor is dissociated with the possessee. However, this analysis runs counter to the Subject Condition, which expresses the (universal) restriction that no element can be extracted from within subject constituents (cf. Huang 1982, D Kim & Y-H Kim 2002).¹⁴ Consider the following contrast between quantifier floating in

¹³ This does not mean that the above discussed problems with the CL hypothesis do not hold for Ko's (2007) analysis. Rather, the problems with CL should be regarded as inherent to the theory itself, which Ko's (2007) analysis is supposed to have in addition to the problems to be addressed in this section.

¹⁴ Recently, Chomsky (2008) has addressed the Subject Condition within a different context. Presenting some cases involving subject extraction, Chomsky (2008) proposes a constraint that in-

Korean and subject *wh*-extraction in English.

- (22) a. haksayng-i₁ [_{VP} [_{DP} t₁ han-myeng] maykcwu-lul masi] n-ta.
 student-Nom one-CL beer-Acc drink Pres-Dec
 'A student drinks beer.'
 b. *It was the car [of which]₁ [[the driver t₁] caused a scandal.

One can insist that Korean quantifier floating cases are different from subject *wh*-extraction cases in English since Korean allows subject extraction at large while English does not. Furthermore, it can also be claimed that quantifier floating is possible with host DPs even in English, which might suggest that subject-associated quantifier floating should not be compared with subject *wh*-extraction (cf. Sportiche 1988, Fitzpatrick 2006). However, the point I would like to make in this section is the same as this claim. I think that quantifier floating may involve different derivational steps from those related to subject extraction. In other words, as quantifier floating is different from subject *wh*-extraction, it is also different from inalienable possessor raising cases in languages like Korean.

There is crucial evidence that suggests the possibility that the host DP-NQ constituency is different from the inalienable possessor-possessee constituency. Based on previous studies (H-S Choe 1987; Ura 1996, 2000, S Cho 2000) and her own arguments,¹⁵ Ko (2007) advocates the so-called *constituent approach* to the inalienable possessor raising construction (IPRC) that argues that the possessor is a direct argument of the possessee and is extracted from the DP that contains both of them. Recognizing the parallelism between the IPRC and the quantifier floating construction, she further claims that her account of quantifier floating constructions directly extends to the corresponding IPRC constructions. However, there is an asymmetry between the two kinds of constructions, which Ko (2007) has missed unfortunately. Consider the following examples.

- (23) a. haksayng-i han-myeng maykcwu-lul masi-n-ta.
 student-Nom one-CL beer-Acc drink-Pres-Dec
 'A student drinks beer.'

hibits movement from within Specs of phase heads but not extraction from Specs of non-phase heads. In fact, the expression "universal" enclosed by parentheses might be eliminated regarding the Subject Condition since there are cases where subject extraction is possible as in languages like Japanese and Spanish. This issue has triggered much interest and related debates. See Hornstein et al. (2007) and references cited therein.

¹⁵ We will not discuss Ko's arguments here since I basically agree with her in taking inalienable possessor raising constructions to be underlyingly constituents. I have addressed this issue in other independent work (see Y-H Kim 2008).

- b. *chelswu-ka tongsayng hakkyo-ey tani-n-ta.
 -Nom younger brother school-to come and go-Pres-Dec
 ‘As for Chelswu, his brother goes to school.’
- (24) a. haksayng-i han-myeng-i maykcwu-lul masi-n-ta.
 student-Nom one-CL-Nom beer-Acc drink-Pres-Dec
 ‘A student drinks beer.’
 b. chelswu-ka tongsayng-i hakkyo-ey tani-n-ta.
 -Nom younger brother-Nom school-to come and go-Pres-Dec
 ‘As for Chelswu, his brother goes to school.’
- (25) a. chelswu-ka sayngsen-ul han-mali mek-ess-ta.
 -Nom fish-Acc one-CL eat-Past-Dec
 ‘Chelswu ate a fish.’
 b. *chelswu-ka sayngsen-ul soksal mek-ess-ta.
 -Nom fish-Acc fillet eat-Past-Dec
 ‘Chelswu ate the fillets of a fish.’
- (26) a. chelswu-ka sayngsen-ul han-mali-lul mek-ess-ta.
 -Nom fish-Acc one-CL-ACC eat-Past-Dec
 ‘Chelswu ate a fish.’
 b. chelswu-ka sayngsen-ul soksal-ul mek-ess-ta.
 -Nom fish-Acc fillet-Acc eat-Past-Dec
 ‘Chelswu ate the fillets of a fish.’

What is notable with these examples is that genuine IPRCs don't allow the possessee not to be case-marked (23a, 25a) whereas quantifier floating constructions may have NQs without a case marker (23b, 25b). This is crucial because Ko (2005, 2007) analyzes case-marked NQs as adverbial elements base-generated separately from their host NP/DPs. One can ask why IPRCs differ from quantifier floating constructions in behavior with case-marking if, as Ko (2005, 2007) claims, the possessor-possessee constituency resembles the host DP-NQ constituency contrary to fact. Thus, from the contrasts shown in (23)-(26), we can infer that there is something wrong with Ko's presentation of the host DP-NQ constituency.

On the other hand, there are some impressive data presented by Ko (2007), which, she claims, provide further evidence in favor of her host DP-NQ constituency. See the following examples.

- (27) a. *John-i kong-ul apeci-ka cha-n-ta.¹⁶
 Jonn-Nom ball-Acc father-Nom kick-Pres-Dec
 'John's father plays soccer.'
- b. John-ul Mary-ka tali-lul cha-ass-ta.
 John-Acc Mary-Nom leg-Acc kick-Past-Dec
 'Mary kicked John's leg.'

What Ko (2007) emphasizes in applying the possessor-possessee structure to the host NP-QP constituency with respect to scrambling is that the asymmetry found between the possessor raising examples (27a) and (27b) has been also witnessed between the quantifier floating examples (5b) and (6b), repeated below.

- (5) b. maykcwu-lul John-i sey-pyeng masi-ess-ta.
 beer-Acc -Nom 3-CL drink-Past-Dec
 'John drank three bottles of beer.'
- (6) b. *haksayng-tul-i maykcwu-lul sey-meyng masi-ess-ta.
 student-PL-Nom beer-Acc 3-CL drink-Past-Dec
 'Three students drank beer.'

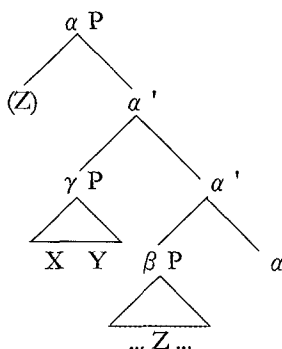
Just as the object *kong-ul* cannot intervene between the double subjects *John-i* and *apeci-ka* in (27a), the object *maykcwu-lul* cannot come between the host NP *haksayng-tul-i* and the NQ *sey-myeng* in (6b), while the subjects *Mary-ka* in (27a) and *John-i* in (5b) don't do anything harm when they intervene. With this parallelism between IPRCs and floating quantifier constructions, Ko argues that her CL analysis for the latter can be directly extended to the former. Thus, it seems that the two types of constructions are subsumed under Ko's (2005) Edge Generalization (EG).

¹⁶ (27a) is not identical to Ko's (2007) original example in its tense form. I have purposefully altered the past tense in her original example into the present tense since even with the ordinary order the sentence does not have a normal status.

i) ¹⁷John-i apeci-ka kong-ul cha-ass-ta.
 -Nom father-Nom ball-Acc kick-Past-Dec
 'John's father kicked a ball.'

This fact seems to be related to some aspectual restrictions on Korean double subject constructions, which we will not address here. See Y Kim (1980) for a detailed account.

(28) The Edge Generalization



If X and Y are dominated by a non-complement (Spec) γP of a Spell-out domain αP , X and Y cannot be separated by an αP -internal element Z that is not dominated by γP .

I think that EG makes sense and is descriptively correct. However, it is not clear whether the ungrammaticality of (27a) is due to the violation of EG and CL as Ko (2007) assumes, because she has missed the following contrast.

- (29) a. *kong-ul John-i apeci-ka cha-n-ta.
 ball-Acc -Nom father-Nom kick-Pres-Dec
 'John's father plays soccer.'
- b. maykcwu-lul haksayng-i sey-myeng massi-ess-ta.
 beer-Acc student-Nom three-Cl drink-Past-Dec
 'Three students drank beer.'

If Ko (2007) is right in claiming that the ungrammaticality is due to the violation of EG and CL, (29a) should be grammatical in parallel with (29b) contrary to fact. If the deviant status of (27a) and (29a) can be explained by some interpretive reasons,¹⁷ we can dispense with CL (though not with EG). Given the problems with CL as discussed in section 3, I do not see any reason that we should pursue the guidance provided by CL.

Another point that Ko (2007) has missed is related to an aspect of scrambling that includes subjects with covert Case in the sense of Y-H Kim (1998, 1999). Korean allows the subject to have non-overt nominative case (hence covert Case) in certain transitive sentences while the object is marked with overt Case.¹⁸ Curiously enough, the object cannot scramble over the subject in

¹⁷ The deviant status in question seems to be related with the topic/focus statuses of the double subjects. Though I cannot determine what the reason is for this deviant status, some relevant discussion about the statuses of the double subjects can be found in J. H-S Yoon (1987).

¹⁸ In Y-H Kim (1998, 1999), I claimed that covert Case is fully possible with subjects in Korean. But some researchers have argued against subjects with covert Case in Korean. Among them, Ahn and Cho have claimed in a series of their work related to this issue (H-D Ahn and S Cho 2005, 2006a,b, 2007) that in fact, seemingly covertly case-marked subjects in Korean are left dislocated elements (for related issues, see also D Lee (2003), W Lee and S Cho (2003), K Choi (2005), Y-T Hong (2004), and H-P Im (2007) among others). Though I should admit that sub-

such sentences.

- (30) a. chelswu maykcwu-lul masi-n-ta
 beer-Acc drink-Pres-Dec
 ‘Chelswu drinks beer.’
 b. *maykcwu-lul Chelswu masi-n-ta
- (31) a. chelswu-ka maykcwu-lul masi-n-ta
 -Nom beer-Acc drink-Pres-Dec
 b. maykcwu-lul Chelswu-ka masi-n-ta

For whatever reason (30b) is impossible, it seems clear that we are not able to deal with this example under Ko’s CL analysis since the minimal difference between (30b) and (31b) (and between (30a) and (31a)) lies in the manner of case marking, which is not directly related to word order.¹⁹ What I want to note with respect to the implication of these examples is the contrast between (33a) and (33b).

- (32) a. haksayng-i han-myeng maykcwu-lul masi-n-ta.
 student-Nom one-CL beer-Acc drink-Pres-Dec
 ‘A student drinks beer.’
 b. haksayng-i han-myeng-i maykcwu-lul masi-n-ta.
 student-Nom one-CL-Nom beer-Acc drink-Pres-Dec
- (33) a. *haksayng-i maykcwu-lul han-myeng masi-n-ta
 student-Nom beer-Acc one-CL drink-Pres-Dec
 ‘A student drinks beer.’

jects with covert Case are not always possible in Korean, I still believe that they have some differences from left dislocated elements in the sense of Kim (1991). I will not pursue this issue here, but the reader should refer to Y-H Kim (1998, 1999) for detailed discussion.

¹⁹ One of the reviewers has claimed that there is no reason to suppose that Ko’s (2007) theory should account for all restrictions on movement or scrambling. Hence (30b) could well fall under her account with some extension. I agree with him/her that it could be possible to extend the CL analysis proposed by Ko (2007) to cover these data. However, notice that my argument presupposes the problems inherent in the theory of CL. It is doubtful that we should depend on the CL analysis with such an additional extension despite its inherent problems. Moreover, I cannot see a clear way to have (30a) subject to the CL analysis without an additional independent restriction on case marking.

- b. haksayng-i maykcwu-lul han-myeng-i masi-n-ta²⁰
 student-Nom beer-Acc one-CL-Nom drink-Pres-Dec
 'A student drinks beer.'

Though more complicated factors are involved in determining the ungrammaticality of (33a) than in accounting for the deviant status of (30b), they have something in common in regard of object positions for accusative case checking and scrambling. It could be possible to deal with the problems of ungrammaticality of data like the above ones under Ko's or F&P's CL analysis with some revision or make-up of their theory. However, I'll attempt a totally different approach to these data and show that they can be accounted for without recourse to the CL, which has serious problems both conceptually and empirically. But, before proceeding toward presenting my analysis, an additional note is necessary for the DP-NQ relation.

In fact, Ko's analysis of quantifier floating falls within the stranding analysis, which, together with the adverbial analysis, has comprised the main stream in the analysis of quantifier floating.²¹ Drawing mainly on the contrasts among sentences like (23-26) and between (30) and (31), Y-H Kim (2008) claims that the adverbial analysis is more plausible for Korean quantifier floating constructions than the stranding analysis.²² According to him, floated NQs are adverbial QPs that contain the anaphoric empty pronominal PRO. For convenience's sake, let's take Y-H Kim's (2008) claim without argument. Then, an NQ and its host DP do not form a constituent but are merged separately. Their relation is a kind of anaphor-antecedent relation constrained by a condition like Miyagawa's (1989) mutual c-command,²³ though we cannot accept Miyagawa's (1989) mutual c-command condition because it adopts multiple branching structures. Instead, adapting Miyagawa's (1989) mutual c-command condition, I tentatively posit the following immediate c-command con-

²⁰ A reviewer has pointed out that it is not desirable for me to offer no account of (33b). Though I have my own analysis of data like this example, I will not provide it due to the limit of space. However, it should be noted that my analysis is just the reverse of Ko's (2007) in that the parallelism with IPRCs should be applied to (33b), given the contrast between (25a) and (25b), and the inertness of the subject condition in examples like (22a). See Y-H Kim (2008) for the details of my analysis in this context.

²¹ I follow Fitzpatrick (2006) in dividing the approaches to quantifier floating into two categories: namely, the adverbial analysis and the stranding analysis.

²² A reviewer criticized my treatment of floating quantifiers as adverbials (hence the adverbial analysis) for its being hardly new. I have never claimed that the adverbial analysis is a novel and original proposal made in this paper (as the reviewer pointed out, B Kang (2002) already adopt the adverbial analysis, for example). I just claim that the adverbial analysis is more convincing than the stranding analysis, which will prove to serve as a useful means for explaining scrambling facts in floating quantifier constructions.

²³ For similar approach to the relationship of a floating quantifier and its host DP, see Bobaljik (1995).

dition. Here, α immediately c-commands β iff there is no γ such that γ is c-commanded by α and c-commands β .

(34) A DP or its trace should immediately c-command its associate NQ.²⁴

Though the immediate c-command condition (34) is not an established principle, it can serve to cover the data we have been trying to explain. Thus, we have partly set up the stage for explaining cases that do not appear to be handled by Ko's CL analysis. In the next section, to provide a plausible alternative to Ko's CL analysis, I will present a further proposal for completing the stage, which includes some recent theoretical issues related to the explanation to be provided in this paper, and then present a novel analysis of the relevant data.

5. Verb phrase Architecture and Parallel Movement

5.1. Feature inheritance and v*P structure

As researchers in the field of the minimalist syntax know well, Chomsky has tried to limit phase heads to C and v* (and possibly D²⁵). Especially, he claims in Chomsky 2001 that T (or INFL) is a kind of substantial category to the effect that its finiteness and ϕ -completeness are determined by C. This claim has become more strengthened in Chomsky 2008, where he argues that INFL inherits features, especially its Agree-features, from C, and hence has them

²⁴ A reviewer asks whether there is empirical evidence that shows DPs other than the host DP cannot c-command the associate NQ. He points out the following example as counter-evidence to the immediate c-command condition (34).

i) Speaker A: i chayk cal phalli-eyo?
 this book well sell-Comp
 'Does this book sell well?'

Speaker B: onul haksayng-tul-i i chayk-ul ney-myeng saka-ass-eyo.
 today student-PI-Nom this book-Acc four-Cl buy-Past-Comp
 'Today, four students bought this book.'

The sentence uttered by Speaker B challenges to any approach to quantifier floating in Korean. Ko (2007) also admits this phenomenon but does not intensively address it. So many complicated matters including focus, stress and intonation etc. are involved in sentences of this type that I can't fully address this problem here, but a possible solution to this problem can be found in Miyagawa and Arikawa (2007).

²⁵ Chomsky has shown a reserved attitude toward the establishment of the phasehood of DP in that he has only alluded to the possibility of DP being a phase head. There are so many different proposals about determining phasal categories that some researchers have even argued every maximal phrase functions as a phase (cf. Boeckx & Grohmann 2007). For the time being, we will not touch the problem of DP as a phase head. For relevant discussion bearing on this issue, see Uriagereka (1999), Bošković (2005), Hiraiwa (2005), Boeckx and Grohmann (2007), and Y-H Kim (2005).

only derivatively. In addition, he also admits the possibility, a la Miyagawa (2005a,b), of focus features inherited by INFL. Let's assume, with Chomsky (2008) and Miyagawa (2005a,b), without argument, that Agree- and focus-features (and the edge feature) of C is inherited by (or transmitted to) INFL only derivatively. Can this inheritance mechanism be accommodated by v^* -V?

On this matter, Chomsky (2008) argues that on optimal assumptions, transmission of Agree-features should be a property of phase-heads in general, not just of C. According to him, v^* has to transmit its Agree-features to V, which due to the inherited Agree-features should be able to raise an object to Spec-V. This is highly analogous to subject-raising to Spec-INFL. Chomsky seems to keep ECM constructions in mind while taking this analogy to be generally applicable to raising to Spec-V. He presents the following example as one that indicates the plausibility of the analogous raising to Spec-V.²⁶

- (35) *The slave₁ expected [the picture of him₁] to be somewhere else.

Here, the pronoun *him* should not be bound by the subject *the slave*, which suggests that the object DP [the picture of him] does not occupy the position of the subject of the embedded infinitival clause. If this DP has been raised up to Spec-V as Chomsky (2008) suggests, the impossibility of the co-reference of the subject DP and the pronoun can be accounted for by Binding Condition B.

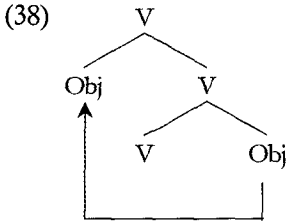
However, though Chomsky's analysis in (35) seems to be effective for ECMed objects in general, it conflicts with the following statement by Chomsky (2008) himself.

- (36) The number of specifiers is unlimited; the specifier-complement distinction itself reduces to first-Merge, second-Merge, etc.

Suppose that we have a language that has overt object-movement for Case checking and it targets V as Chomsky (2008) assumes. Due to (36), this movement is the second-Merge of the same goal to the same probe, which should be strictly banned because one of the natural consequences of (36) is as follows.

- (37) The movement of complement to its head has the effect of merging with the same constituent twice.

²⁶ A reviewer claims that (35) is fully grammatical with the co-reference of *the slave* and *him*. Since I have no available argument for the grammaticality status of the example, I will follow Chomsky (2008) in treating the co-indexing as impossible.



As graphically shown by (38), the movement of the object Obj targets the same head (in fact, a projection of the same head). Allowing this kind of movement, we seem to be unable to block infinite movement that targets Specs of the same head.

To avoid such an undesirable result, we should try to look for another route while maintaining feature inheritance system within the verbal phase v^*P . For this purpose, I will adopt Y-H Kim's (2005) idea that the position of object for accusative Case checking is lower than that of the external argument EA.²⁷ Y-H Kim (2005) further claims that this movement is not Object-Shift in the sense of Holmberg (1986), and thus it should be called Case-shift (cf. Svenonius 2000). However, the analysis of Case shift within v^*P structure by Y-H Kim, as well as by other researchers mentioned in note 27, has a couple of conceptual problems. First of all, it distinguishes outer and inner Specs as if they have different statuses: the outer Spec as the position for EA and the inner Spec as the position for Case shift. As the statement in (36) indicates, if the distinction between the specifiers and the complement is only a matter of the order of Merge, the same logic should be applicable among specifiers: i.e., specifiers should not be distinguished in their statuses. Secondly, if Chomsky (2008) is correct in establishing C-INFL relationship for feature inheritance, which enables A-movement for Case checking (i.e., Case shift), it will be desirable for v^* to have a feature-inheritance relationship with some element other than V. In this sense, using distinction between inner and outer Specs of v^* is likely to fail to facilitate A-movement for Case checking.

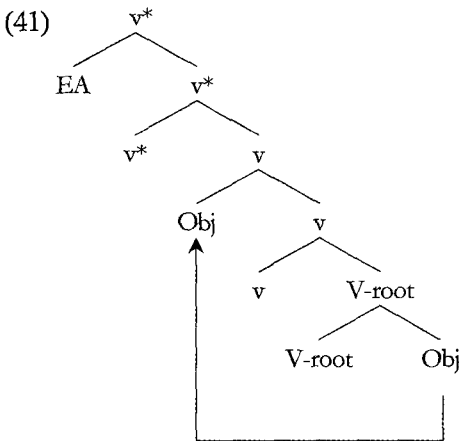
Here, a speculation about C's and v^* 's roles is in order. Given their status as phase heads, the relevant question is this: Are C and v^* are parallel in their functions? The answer to this question is of course negative. Consider some of their roles listed below, which are quoted from D Kim and Y-H Kim (2007).

(39) C: the locus of the EF and Agree-feature, being a phase head

²⁷ This idea is not totally new since there have been some researchers who make a similar suggestion. To my knowledge, Bobaljik (1995) is the first who has argued for the lower position for object shift, followed by Y-H Kim (1998), and C Yim (2007). Ura (1996, 2000) also allows inner Spec- v to be used for object shift (OS) though he claims that outer Spec- v is also an available position for OS.

- (40) v^* : the locus of the EF and Agree-feature, being a phase head, providing the configuration for EA's theta-role, determination of verbal category, providing the position of OS or Case shift

Why are much more burdens of roles imposed on v^* than on C? With respect to this question, of the roles listed in (39), "determination of verbal category" is noteworthy. This role is related to Marantz's (1997) theory that lexical categories are introduced without categorial features, but their categorial statuses are determined later by the functional heads associated with them (cf. Chomsky (2008), Hiraiwa (2005) and work in distributed morphology including Halle and Marantz (1993) and Harley and Noyer (1999)). Then, a lexical root R is determined as V when it is associated with v^* , and as N when associated with n , a functional element corresponding to v^* . With respect to this theory, we can ask whether this n head has the same function as v^* 's? It should be noted that the asterisk as in v^* is added because the little verb with a full argument structure (i.e., the transitive little verb) should be distinguished from the little verb associated with unaccusative verbs (cf. Chomsky 2001, Legate 2003). Though it is not clear whether Chomsky (2001) makes substantial distinction between v^* and v , it is v , not v^* , that makes a lexical root R verbalized in the case of unaccusative constructions. Thus, suppose that v^* and v are distinguished from each other, and that v always appear with R for category determination independently from v^* . Then, we can get a desirable advantage: reducing the burdens on v^* . To sum up what we have discussed so far, the following verbal phrase structure can be given to us.



In this structure, accusative Case is assigned to NPs/DPs (except EA) in the v^* - v domain, and hence the v^* - v relationship, not the v^* - V relationship, is parallel to the C-INFL relationship. Hence, we can improve the feature inheri-

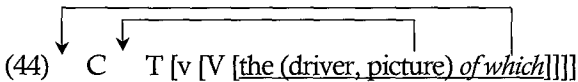
tance system and the weakness of inner-outer Spec distinction.

5.2. Parallel Movement and Scrambling

Chomsky (2008) considers some cases where Huang's (1982) CED does not hold. His examples include the sentences in (42).

- (42) a. It was the car of which the driver was found.
 b. Of which car was the picture awarded a prize?
- (43) a. *It was the car of which the driver caused a scandal.
 b. *Of which car did the picture cause a scandal?

Chomsky (2008) claims that the reason for these examples not showing CED effects comes from the fact that they have passive or unaccusative verbs. Admitting that CED effects still hold with the examples in (43), he suggests a new way of deriving the examples in (39). He assumes that it is not INFL that yields A-movement of the subjects to the Spec-INFL position in (43). Instead, he claims that A- as well as A'-movement must be triggered by C's features. Thus, merged to the structure, some *wh*-accessing feature of C²⁸ attracts the *wh*-phrases within the object DPs to its Spec and the object DPs to the Spec of INFL, which inherits relevant agreement-features from C. This results in the dissociation of the A-chain from the formation of the A'-chain in parallel as shown by (44)



Chomsky (2008) further claims that this dissociation should hold for *wh*-constructions in general. Thus, according to him, A- and A'-positions are distinguished not by their structural status within a phrase marker, but by the manner in which they are derived. The object *wh*-phrase in a passive or unaccusative construction never undergoes movement to Spec-C through Spec-INFL, but rather the relevant A- and A'-movement must occur separately. To see this, let's look at an example from Chomsky (2008).

- (45) a. C [INFL [who [_v* [see John]]]]
 b. Who_i [C [who_j [INFL [who_k v* [see John]]]]]
 c. Who saw John

²⁸ Chomsky (2008) abandons *wh*- or Q-feature as an uninterpretable feature triggering *wh*-movement, but proposes that *wh*-movement is made possible by the same mechanism that induces other A'-movement like topicalization.

With relevant feature checking accomplished in the v*P, C's probe features seek their goals. In this case, C's edge feature (\div -EPP feature) raises *who* to Spec-C, and its Agree feature ($=\varphi$ -feature), inherited by INFL, raises the same *who* to Spec-INFL. (45b) shows the result of these operations. Here, *who_i* and *who_k* have a direct relation with each other, and the same is true for *who_j* and *who_l*. However, *who_i* and *who_j* never have any relationship regarding chain formation. Though invisible, the A-chain (*who_j*, *who_l*) exists independently of the A'-chain (*who_i*, *who_k*). This is supported by examples like those presented below.

- (46) a. Who was never seen?
 b. *Who was there never seen?

The minimal difference between (46a) and (46b) is the existence of *there*, which occupies the position that should be provided for the independent A-movement of *who*. This example suggests that A'-movement can take place only when the relevant, but independent, A-movement is carried out in parallel.

Now, let's turn ourselves to scrambling. Suppose that the mechanism of parallel movement proposed by Chomsky (2008) should apply to A'-movement in general. What do we expect to happen with scrambling? Though there has been much work devoted to scrambling with respect to its A-movement properties (see Weibelhuth (1992) and Mahajan (1990) among others), scrambling is most reasonably treated as A'-movement. D Kim and Y-H Kim (2007), briefly addressing scrambling from the perspective of parallel movement, suggest the following.

- (47) As a bona-fide A'-movement, scrambling must include Case-shift: i.e. Scrambling of the object over the subject should include Case-shift of object to Spec-v and movement to Spec-v* in parallel.

(47) includes what (46a) has suggested above to the effect that A'-movement can occur only when the relevant, but independent, A-movement takes place in parallel.

With (47) and the mechanism of parallel movement, we can present an interesting analysis of those scrambling cases that involve NPs/DPs with covert Case in the sense of Y-H Kim (1998, 1999). According to him, overt Case indicates the activation of INFL's and v's EF feature (inherited from C and v* respectively), whereas covert Case indicates the inertness of the same feature. See the following examples.

- (48) a. *maykcwu haksayng-i masi-ess-ta
 beer student-Nom drink-Past-Dec
 'A student drank beer.'
- b. *maykcwu-lul haksayng masi-ess-ta
 beer-Acc student drink-Past-Dec
 'A student drank beer.'

In (48a), the object *maykcwu* has undergone scrambling without any case morphology, which means that it has covert Case. The parallel movement mechanism requires the object to move to Spec-v in parallel with its movement to Spec-C through Spec-v*. However, as is meant by its covert Case, the object's movement to Spec-v is impossible due to the inertness of v's EF feature; hence, the ungrammaticality. On the other hand, there are no problems with the movement of *maykcwu-lul* in (48b), but in this case, the subject *haksayng*, which has covert Case, induces the ungrammaticality due to the inertness of INFL's EF feature. Note that (48b) resembles (46b) in that the necessary A-movement is blocked in the two cases.

Now, we are ready to analyze our problematic data presented by Ko (2007), which are repeated below.

- (49) a. haksayng-i sey-myeng maykcwu-lul masi-ess-ta.
 student-Nom 3-CL beer-Acc drink-Past-Dec
 'Three students drank beer.'
- b. maykcwu-lul haksayng-i sey-myeng masi-ess-ta.
 beer-Acc -Nom 3-CL drink-Past-Dec
 'John drank three bottles of beer.'
- c. *haksayng-i maykcwu-lul sey-meyng masi-ess-ta.
 student-Nom beer-Acc 3-CL drink-Past-Dec
 'Three students drank beer.'

In the next section, I will present my analysis of these examples based on the discussion so far.

6. Analysis

Let's first consider the derivation of (49a). This sentence will reach the following stage of the derivation.

- (50) [_{VP} haksayng-i sey-myeng [_{VP} [_{VP} maykcwu-lul masi] v] v*]

Here, v inherits Agree-feature and EF-feature from v* as we discussed in the

previous section. Let's assume with Y-H Kim (1998, 1999) that DPs with overt Case moves to its Case-checking position overtly (Case shift). Then, the object *maykcwu-lul* should undergo Case shift to Spec-v since it is overtly case-marked.

- (51) a. $[_{v^*P} \text{haksayng-i sey-myeng } [_{VP} [_{VP} \text{maykcwu-lul masi}] v] v^*]$
 (feature inheritance by v from v*)
- b. $[_{v^*P} \text{haksayng-i sey-myeng } [_{VP} \text{maykcwu-lul}_1 [_{VP} t_1 \text{masi}] v] v^*]$
 (Case shift)
-

Then, INFL and C is merged with v*P in turn, and the subject *haksayng-i* moves to Spec-INFL after the feature inheritance by INFL from C is carried out.

- (52) $[_{CP} [_{IP} \text{haksayng-i}_2 [_{v^*P} t_2 \text{sey-myeng } [_{VP} \text{maykcwu-lul}_1 [_{VP} t_1 \text{masi}] v] v^*] \text{ess}] \text{ta}]$
-

There are no problematic steps in the derivation, and hence the resulting sentence is grammatical.

(49b), which includes object-scrambling, shares with (49a) the steps up to (51a). At the stage of (51a), the object undergoes parallel movement to Spec-v and Spec-v* as shown in (53).

- (53) $[_{v^*P} \text{maykcwu-lul}_1 \text{haksayng-i sey-myeng } [_{IP} \text{maykcwu-lul}_1 [_{VP} t_1 \text{masi}] v] v^*]$ (parallel movement)
-

Then, the object in Spec-v* further moves to Spec-C after C and INFL is introduced, and the subject raises to Spec-INFL by the Agree-feature inherited by INFL from C. Here, the movement of the object to Spec-C precedes the subject's Case-shift because the former will induce the DIC (Defective Intervention Constraint) effect in the sense of Chomsky (2001) unless it opens up the route for the subject raising to Spec-INFL by moving to Spec-C.

- (54) a. $[_{CP} \text{maykcwu-lul}_1 [_{IP} [_{v^*P} t_1 \text{haksayng-i sey-myeng } [_{VP} \text{maykcwu-lul}_1 [_{VP} t_1 \text{masi}] v] v^*] \text{ess}] \text{ta}]$ (further A'-movement)
- b. $[_{CP} \text{maykcwu-lul}_1 [_{IP} \text{haksayng-i}_2 [_{v^*P} t_1 t_2 \text{sey-myeng } [_{VP} t_1 [_{VP} t_1 \text{masi}] v] v^*] \text{ess}] \text{ta}]$ (subject raising to Spec-INFL)
-

The analysis presented so far shows that the course of the derivation of (49b) also has no problematic steps, and hence the sentence is ruled in.

To get the ungrammatical sentence (49c), we can take three routes towards the resulting sentence. Let's look at each of them.

A first possible course of derivation includes the stage of (53), but this time, the object does not undergo further A'-movement to Spec-C after C and INFL is merged. In turn, INFL with the Agree-feature and EF inherited from C should raise the subject to Spec-INFL. However, the object in the outer Spec- v^* , with its relevant features checked off, induces the DIC (defective intervention constraint) effect, which renders the sentence ungrammatical.

- (55) a. $[_{v^*P} \text{ maykjwu-lul}_1 \text{ haksayng-i sey-myeng } [_{VP} \text{ maykjwu-lul}_1 \text{ } [_{VP} \text{ t}_1 \text{ masi}] \text{ v}] \text{ v}^*]$ (parallel movement)
- b. $*[_{CP} [_{IP} \text{ haksayng-i}_2 \text{ } [_{v^*P} \text{ maykjwu-lul}_1 \text{ t}_2 \text{ sey-myeng } [_{VP} \text{ t}_1 \text{ } [_{VP} \text{ t}_1 \text{ masi}] \text{ v}] \text{ v}^*] \text{ ess}] \text{ ta}]$ (DIC)

In order to avoid the DIC effect, the object has to move to Spec-C to open up the route for the subject's Case shift, but in this case the resulting sentence will be (49b) rather than (46c). Note that this analysis resembles Chomsky's (2001) partially representational treatment of *wh*-movement cases like the following.

- (56) (Guess) $\text{what}_{\text{obj}} [_{\text{John}}_{\text{Subj}} \text{ T } [_{v^*P} \text{ t}_{\text{Obj}} \text{ } [_{\text{t}_{\text{Subj}}} \text{ read } \text{ t}_{\text{Obj}}]]]$

For (56), Chomsky (2001) provides the argument that the phonological edge of v^* occupied by *what* should be vacated for *John* to be accessible to T's probe features. This means that the object in the outer Spec- v^* always leaves for an upper position or undergoes stylistic/phonological operation like OS. The movement of *haksayng-i* to Spec-INFL is impossible for the same reason.

In another possible route towards (49c), the feature inheritance by *v* from v^* is carried out after the introduction of the NQ *sey-myeng* even though the subject is not yet merged to Spec- v^* . The merger of *sey-myeng* should be considered possible for its adverbial nature.

- (57) $[_{v^*P} [_{VP} \text{ sey-myeng } [_{VP} \text{ maykjwu-lul masi}] \text{ v}] \text{ v}^*]$ (feature inheritance by *v* from v^*)

At this point of derivation, the object moves to Spec-*v* and Spec- v^* in parallel before the subject is merged to the outer Spec- v^* . The resultant v^*P contains the NQ *sey-myeng* not immediately c-commanded by its host, the subject. Since there is no way to establish the immediate c-command relation between the subject and its associate NQ, the sentence is ruled out ((58a) and (58b)).

- (58) a. [_{v*P} maykjuwulul₁ sey-myeng [_{vP} maykjuwulul₁ [_{vP} t₁ masi] v] v*] (parallel movement)
- b. [_{v*P} haksayng-i maykjuwulul₁ haksayng-i [_{vP} maykjuwulul₁ [_{vP} t₁ masi] v] v*] (immediate c-command violation)

The other possible course of derivation goes through the same derivational steps as those for the previously considered derivation. Those steps are summarized as follows.

- (59) a. [_{v*P} haksayng-i sey-myeng [_{vP} [_{vP} maykjuwulul masi] v] v*] (feature inheritance from v* to v)
- b. [_{v*P} maykjuwulul₁ haksayng-i sey-myeng [_{vP} maykjuwulul₁ [_{vP} t₁ masi] v] v*] (parallel movement)
- c. [_{CP} maykjuwulul₁ [_{IP} [_{v*P} t₁ haksayng-i sey-myeng [_{vP} t₁ [_{vP} t₁ masi] v] v*] ess] ta] (further A'-movement)

To get the word order in (49c), the subject targets the outer Spec-C while it also undergoes the movement to Spec-INFL in parallel.

- (60) [_{CP} haksayng-i₂ maykjuwulul₁ [_{IP} haksayng-i₂ [_{v*P} t₁ t₂ sey-myeng [_{vP} t₁ [_{vP} t₁ masi] v] v*] ess] ta]

Here, the problem is the subject's movement to the outer Spec-C. Note that this movement is triggered by the EF feature of C, which also affects the object raising to the inner Spec-C. This suggests that the movement of the subject to the outer Spec-C should have been carried out in the tucking-in fashion in the sense of Richards (1997, 2001), who has claimed that multiple movements targeting the same single head must obey the tucking-in restriction. Thus, we can treat (60) as a case of the tucking-in violation with the two movements to the specifiers of C triggered by a single EF feature of C.

Though using the tucking-in restriction is a possible means to account for the illegitimate status of (60), I have to admit that we can only tentatively attempt to block (60) since it seems to be very difficult work to prove that the tucking-in restriction holds for a wide range of, if not all, movement types in Korean. However, a possible case involving the tucking-in fashion movement comes from *-key ha* causative constructions in Korean. See the following contrast.

- (61) a. *chelswu-eykey chayk-ul yenghi-ka ilk-key ha-yess-ta.*
 -Dat book-Acc -Acc read-KEY do-Past-Dec
 ‘Yenghi made Chelswu read a book.’
 b. ?*chayk-ul chelswu-eykey yenghi-ka ilk-key ha-yess-ta.*

Assume that the dative-marked causee *chelswu-eykey* is base generated as an argument of the matrix verb *ha*.²⁹ Then (61a) is derived at least from a structure like the following.

- (62) *yenghi-ka chelswu-eykey chayk-ul ilk-key ha-yess-ta.*
 -Nom -Dat book-Acc read-KEY do-Past-Dec
 ‘Yenghi made chelswu read a book.’

With *chelswu-eykey* superior to *chayk-ul* in (62), the deviant status of (61b) naturally follows if the tucking-in restriction works in Korean. That is to say, as the two moved elements in (61) are supposed to be raised by the EF feature of the single matrix C, they should observe the tucking-in restriction, hence the ungrammaticality of (61b).³⁰ Of course, there might be many complicated factors involved in the discussion of the applicability of the tucking-in restriction in Korean, but those examples above suggests that it is applicable to Korean.

In sum, the analysis and account presented in this section, I hope, show the possibility that the puzzling examples in (49) can be explained by means of the recent minimalist mechanisms without recourse to the dubious CL approach. Though one can hardly say that it is impossible to revise and extend the CL approach so that it can resolve the problems presented in this paper, the analysis in this section suggests that the CL approach is unnecessary for explaining the scrambling puzzles in question.

7. Conclusion

In this paper, I have examined the strengths and weaknesses of the theory of Cyclic Linearization (CL) proposed by F&P (2005a), and its application to Korean scrambling data presented by Ko (2007). Despite the merits of the CL

²⁹ *-key ha* causative constructions, also called periphrastic causatives, have three ways of case marking the causee: namely, nominative, dative, and accusative. I will concentrate only on the dative causee case for the purpose of avoiding complex matters associated with the structural description of *-key ha* causative constructions. Note also that the current discussion draws heavily on Y Kim's (1993) account of the structures of the constructions.

³⁰ Note incidentally that the CL seems ineffective in providing an account of the deviant status of (61b) when it runs into the following (mid-distance) scrambling of *chayk-ul*.

i) *yenghi-ka chayk-ul, chelswu-eykey t, ilk-key ha-yess-ta.*

analysis, I could not accept Ko's CL analysis of scrambling in Korean as well as F&P's original proposals, since they cannot help allowing undesirable operations to be introduced and Ko (2007) has missed some crucial facts about Korean scrambling and case marking. Thus, adopting the adverbial analysis of quantifier floating in the sense of Fitzpatrick (2006), I have presented a novel analysis of the problematic data presented by Ko (2007) under Chomsky's (2008) recent proposals including the parallel movement among others. I think that my analysis is successful to the effect that it covers the same range of data as Ko (2007), but does not bring about any of the conceptually and empirically undesirable assumptions involved in her analysis. If the analysis presented in this paper proves tenable, it ultimately can contribute at least to rethinking the viability of the theory of CL.

References

- Ahn, Hee-Don and Sungeun Cho. (2005). The emergence of silent Cs and Ds in Korean: Distribution and licensing. In K. Choi and C. Yim, eds., *Ellipsis in Minimalism*, 1-12. Hankukmunhwasa.
- Ahn, Hee-Don and Sungeun Cho. (2006a). *Wh*-topics and unpronounced case markers. *Studies in Generative Grammar* 16, 61-90.
- Ahn, Hee-Don and Sungeun Cho. (2006b). Unpronounced case markers and apparent subject-object asymmetry. *Studies in Modern Grammar* 43, 55-80.
- Ahn, Hee-Don and Sungeun Cho. (2007). Non-case-marked *wh*-phrases and left-dislocation. In A. Omaki et. al., eds., *University of Maryland Working Papers in Linguistics* 16, 111-141. UMWPI.
- Anagnostopoulou, E. (2005). Holmberg's Generalization and Cyclic Linearization. Remarks on Fox and Pesetsky. *Theoretical Linguistics* 31, 95-110.
- Bobaljik, J. D. (1995). *Morphosyntax: The Syntax of Verbal Inflection*. Doctoral dissertation. MIT.
- Bobaljik, J. D. (2005). Re: CycLin and the role of PF in Object Shift. *Theoretical Linguistics* 31, 111-125.
- Boeckx, C. and K. K. Grohmann. (2007). Putting phases in perspective. *Syntax* 10, 204-222.
- Bošković, Ž. (2005). On the locality of left branch extraction and the structure of NP. *Studia Linguistica* 59, 1-45.
- Cho, Sungeun. (2000). *Three Forms of Case Agreement in Korean*. Doctoral dissertation. State University of New York, Stony Brook.
- Choe, Hyon-Sook. (1987). Syntactic adjunction, A-chain and the ECP: Multiple identical case construction in Korean. *NELS* 17, 100-120.
- Choi, Kiyong. (2005). Remarks on structural case particles in Korean. *Studies in Generative Grammar* 15, 29-51.

- Chomsky, N. (1995). *The Minimalist Program*. MIT Press.
- Chomsky, N. (2000). Minimalist inquiries: The framework. In R. Martin et. al., eds., *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, 89-156. MIT Press.
- Chomsky, N. (2001). Derivation by phase. In M. Kenstowicz, ed., *Ken Hale: A Life in Language*, 1-52. MIT Press.
- Chomsky, N. (2008). On phases. In R. Freidin et. al., eds., *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud*, 133-166. MIT Press.
- Diesing, M. (2005). Some remarks on Fox and Pesetsky: Cyclic linearization of syntactic structure. *Theoretical Linguistics* 31, 127-136.
- Fitzpatrick, J. M. (2006). *The Syntactic and Semantic Roots of Floating Quantification*. Doctoral dissertation. MIT.
- Fox, D. and D. Pesetsky. (2005a). Cyclic linearization of syntactic structure. *Theoretical Linguistics* 31, 1-45.
- Fox, D. and D. Pesetsky. (2005b). Cyclic linearization and its interaction with other aspects of grammar: A reply. *Theoretical Linguistics* 31, 235-262.
- Groat, E. and J. O'Neil. (1996). Spell-out at the LF interface. In W. Abraham et. al., eds., *Minimal Ideas*, 113-139. John Benjamins.
- Grohmann, K. K. (2003). *Prolific Domains: On the Anti-locality of Movement Dependencies*. John Benjamins.
- Halle, M. and A. Marantz. (1993). Distributed Morphology and the pieces of inflection. In K. Hale and S. J. Keyser, eds., *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, 111-176. MIT Press.
- Harley, H. and R. Noyer. (1999). Distributed Morphology. *Glott International* 4, 1-9.
- Hiraiwa, K. (2005). *Dimensions of Symmetry in Syntax: Agreement and Clausal Architecture*. Doctoral dissertation. MIT.
- Holmberg, A. (1986). *Word Order and Syntactic Features in the Scandinavian Languages and English*. Doctoral dissertation. University of Stockholm.
- Holmberg, A. (1999). Remarks on Holmberg's Generalization. *Studia Linguistica* 53, 1-39.
- Hong, Yong-Tcheol. (2004). Omission and absence of case morphemes in Korean (in Korean). *Société Coréenne d'Enseignement de Langue et Littérature Françaises* 18, 13-30.
- Hornstein, N., H. Lasnik and J. Uriagereka. (2007). The dynamics of islands: Speculations on the locality of movement. *Linguistic Analysis* 33, 149-175.
- Huang, J. C-T. (1982). *Logical Relations in Chinese and the Theory of Grammar*. Doctoral dissertation. MIT.
- Im, Hong-Pin. (2007). Syntax and semantics of bare NPs in Korean (in Korean). *Journal of Korean Linguistics* 49, 69-106.
- Kang, Beommo. (2002). Categories and meanings of Korean floating quantifiers. *Journal of East Asian Linguistics* 11, 375-398.
- Kim, Dongseok. and Yong-Ha. Kim. (2002). Multiple spell-out and multiple subjects/objects in Korean (in Korean), *Studies in Generative Grammar* 12, 3-45.

- Kim, Dongseok. and Yong-Ha. Kim. (2007). Recent minimalist issues in Korean syntax. *Studies in Modern Grammar* 50, 27-46.
- Kim, Younghee. (1980). Static situation and multiple subject construction (in Korean). *Hangeul* 169, 117-147.
- Kim, Younghee. (1991). Conditions on unmarked Case (in Korean). *Journal of Language Studies* 9, 5-32.
- Kim, Younghee. (1993). Types of the “key ha” causative construction (in Korean). *Eomunhak* 54, 89-120.
- Kim, Yong-Ha. (1998). Overt Case and covert Case in Korean. *Studies in Generative Grammar* 8, 177-237.
- Kim, Yong-Ha. (1999). *A Minimalist Approach to Case and Word Order in Korean* (in Korean). Hankukmunhwasa.
- Kim, Yong-Ha. (2005). Some notes on Holmberg’s Generalization. *Studies in Modern Grammar* 42, 71-107.
- Kim, Yong-Ha. (2008). Syntax of floating quantifiers in Korean (in Korean), *Poetics and Linguistics* 15, 241-275.
- Ko, Heejeong. (2005). *Syntactic Edges and Linearization*. Doctoral dissertation. MIT.
- Ko, Heejeong. (2007). Asymmetries in scrambling and cyclic linearization. *Linguistic Inquiry* 38, 49-83.
- Lee, Doowon. (2003). Two types of object and object shift. *Studies in Generative Grammar* 13, 565-596.
- Lee, Wonbin. and Sungeun. Cho. (2003). Argument scrambling and object shift. *Studies in Generative Grammar* 13, 39-59.
- Legate, J. A. (2003). Some interface properties of the phase. *Linguistic Inquiry* 34, 506-515.
- Mahajan, A. K. (1990). *The A/A-bar Distinction and Movement Theory*. Doctoral dissertation. MIT.
- Miyagawa, S. (1989). Structure and case marking in Japanese. *Syntax and Semantics* 22. Academic Press.
- Miyagawa, S. (2005a). On the EPP. Ms., MIT.
- Miyagawa, S. (2005b). Unifying agreement and agreement-less languages. Ms., MIT.
- Miyagawa, S. and K. Arikawa. (2007) Locality in syntax and floating numeral quantifiers. *Linguistic Inquiry* 38, 645-670.
- Moon, Gui-Sun. (2007). Scrambling and PIC: Against cyclic linearization. *Studies in Generative Grammar* 17, 233-250.
- Müller, Guisun. (2005). Remarks on cyclic linearization and order preservation. *Theoretical Linguistics* 31, 159-171.
- Nilsen, Ø. (2005). Some notes on cyclic linearization. *Theoretical Linguistics* 31, 173-183.
- Pesetsky, D. (1998). Some optimality principles of sentence pronunciation. In P. Barbosa et. al., eds., *Is the Best Good Enough?*, 337-384. MIT Press.
- Pesetsky, D. and E. Torrego. (2001). T-to-C movement: Causes and consequences. In M. Kenstowicz, ed., *Ken Hale: A Life in Language*, 355-426. MIT Press.

- Richards, N. (1997). *What Moves Where When in Which Language*. Doctoral dissertation. MIT.
- Richards, N. (2001). *Movement in Language: Interactions and Architectures*. Oxford University Press.
- Saito, M. (1985). *Some Asymmetries in Japanese and their Theoretical Implication*. Doctoral dissertation. MIT.
- Sells, P. (2005). Comments on object shift and cyclic Linearization. *Theoretical Linguistics* 31, 185-198.
- Sportiche, D. (1988). A theory of floating quantifiers and its corollaries in constituent structure. *Linguistic Inquiry* 19, 425-449.
- Surány, B. (2005). Object shift and linearization at the PF interface. *Theoretical Linguistics* 31, 199-213.
- Svenonius, P. (2000). On Object shift, scrambling and the PIC. Ms., University of Tromsø.
- Ura, H. (1996). *Multiple feature checking: A theory of grammatical function splitting*. Doctoral dissertation. MIT.
- Ura, H. (2000). *Checking Theory and Grammatical Functions in Universal Grammar*. Oxford University Press.
- Uriagereka, J. (1999). Multiple spell-out. In S. D. Epstein and N. Hornstein, eds., *Working Minimalism*, 251-282. MIT Press.
- Webelhuth, G. (1992). *Principles and Parameters in Syntactic Saturation*. Oxford University Press.
- Williams, E. (2005). A note on Cyclic linearization. *Theoretical Linguistics* 31, 229-234.
- Yim, Changguk. (2007). Parameterizing syntactic positions. *Studies in Modern Grammar* 50, 179-207.
- Yoon, James Hye-Suk. (1987). Some queries concerning the syntax of multiple subject constructions in Korean. In S. Kuno et. al. eds., *Harvard Studies in Korean Linguistics* 2, 138-162. Hanshin Publishing Company.

Yong-Ha Kim

Department of Korean Language and Literature

Andong National University

388 Songcheon-dong, Andong-si

Gyeongsangbuk-do, 760-749, Korea

E-mail: kyocheon@andong.ac.kr

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