# The SVO Hypothesis in Korean: Word Order Variation, Head Movement and Linearization* 

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#### Abstract

Lee, Jeong-Shik. (2015). The SVO Hypothesis in Korean: Word Order Variation, Head Movement and Linearization. The Linguistic Association of Korea Journal 23(4), 63-90. This paper argues for the SVO hypothesis for Korean based on the discussions of word order variations and head movement phenomena displayed in one type of verb repetition construction. It is shown that the new SVO hypothesis is to be preferred to the previous SOV hypothesis. The results of the discussion suggest a more restricted way of obtaining verbal morphology in Korean, make it possible to apply Kayne's (1994) Linear Correspondence Axiom to Korean, and obviate the need of the head parameter, thereby reducing computational complexity and helping minimize UG (Chomsky, 2005).


Key Words: word order variation, head movement, linearization, SOV hypothesis, SVO hypothesis

## 1. Introduction

It is well known that Korean, a typical SOV language, displays word order variation in a simple sentence, as observed in the literature (Nam and Ko, 1986:23, 251; Jo, 1986:3; Huh, 1988:263; Lee, 2007; Chung, 2008; among others). Thus, in addition to the typical SOV order in (1a), other orders, namely, OSV, SVO, OVS, VSO, and VOS, are also available; among them the SVO order is representatively introduced in (1b). Despite the word order differences, the sentences are by and large synonymous.

[^0](1) a. Cheli-ka Yenghi-lul manna-ess-ta. (SOV)

Cheli-Nom Yenghi-Acc meet-Past-Dec 'Cheli met Yenghi.'
b. Cheli-ka manna-ess-ta Yenghi-lul. (SVO)

Behind the word order variation lies focus. The preverbal element Yenghi in (1a) carries more or less focus with it; the postverbal Yenghi in (1b) is downgraded and thereby defocused.

This paper deals with more complex paradigm, in which the sentence in (1a) is changed into verb repetition construction via clefting of the verb, as shown in (2a), and more interesting word order variants thereof are available, as provided in $(2 b, c)$ :
(2) a. Cheli-ka Yenghi-lul manna-ki-nun manna-ess-ta. Cheli-Nom Yenghi-Acc meet-KI-CF meet-Past-Dec (Lit.) 'Meeting, Cheli met Yenghi.'
b. Cheli-ka manna-ki-nun manna-ess-ta Yenghi-lul.
c. Cheli-ka Yenghi-lul manna-ess-ta manna-ki-nun.

In (2a), $-k i$ after the clefted verb is a gerundive or an infinitive affixal marker and glossed as KI , and -nun right after manna-ki represents Contrastive Focus (henceforth, CF). 1) Compared to (1a), (2a) contains two verbal complexes (i.e., manna-ki-nun and manna-ess-ta) that are clefted from the root verb manna- 'meet' and realized in different morphological forms with different affixes.

[^1]Under the traditional head-final structure, this verb clefting was analyzed as resulting from rightward head movement of the verb (Kang, 1988). Thus, in (2c), manna-ki-nun may have undergone rightward head movement over another complex verbal head manna-ess-ta, undesirably violating the Head Movement Constraint; leftward movement of manna-ess-ta is not allowed, either, since there is no head on the left under the head-final structure, thus calling for complicated derivations.

This paper suggests a different analysis for the mode of head-movement in Korean: under the head-initial structure, verbal complexes are formed through leftward head-movement, as seen in (3a) below. Under the head-final structure, they are formed through rightward head-movement (Choi, 2003), as seen in (3b), or by phrasal affixation or PF merge (Yoon 1989), as seen in (3c). ${ }^{2}$ )


This paper will argue against the previous views represented in $(3 \mathrm{~b}, 3 \mathrm{c})$ and argue for the alternative one shown in (3a), namely, syntactic leftward head-movement. Accordingly, the current approach offers a more restrictive analysis of verbal complex formation in Korean.

It has been assumed in Korean syntax that the base word order is determined as SOV in the computation without any doubt and without any scientific verification. In this paper, I urge this fixed idea to be changed and argue that in dealing with word order variation in Korean, the base word order should be SVO. For the purpose of discussion, I will call the base

[^2]SOV word order hypothesis with a head-final structure simply "the SOV hypothesis" and call the base SVO word order hypothesis with a head-initial structure simply "the SVO hypothesis."

Under the SVO hypothesis, the typical SOV order in Korean is derived from the underlying SVO structure via the leftward movement of the object, as illustrated in (4a), and a word order variant SVO is directly obtained by the surface realization of the base order SVO. Under the SOV hypothesis, the SVO order is derived from the base SOV order by rightward movement of the object under the mono-clausal approach, as seen in (4b) and as illustrated in (2b); under the bi-clausal analysis, the SVO order is derived by the following two steps: scrambling of the object in the second conjunct clause, with deletion of the object in the first conjunct, and deleting the remaining part in the second conjunct (Chung, 2009), as illustrated in (4c):3)


The current claim that the typical word order SOV is derived from the underlying SVO order in Korean as in (4a) enables us to help maintain the universal underlying Spec-head-complement or SVO order proposed by Kayne (1994).4) Accordingly, this helps eliminate the head-parameter from the computation. To implement the universal SVO hypothesis, Kayne proposed a linearization principle, namely, the Linear Correspondence Axiom

[^3](henceforth, LCA) in (5) to the effect that the surface word order in PF is determined by the asymmetric c-command relation between the two elements in the syntactic structure.5)
(5) Linear Correspondence Axiom (LCA)

Let $X, Y$ be non-terminals and $x, y$ terminals such that $X$ dominates $x$ and $Y$ dominates $y$. Then if $X$ asymmetrically c-commands $Y, x$ precedes $y$.

Thus, different linear orders imply different hierarchical relations. With the LCA activated, the SVO hypothesis is able to capture restrictive relation between syntactic phrase marker and word order in PF in Korean.

The SOV hypothesis still lacks a principled way of linearizing the terminal nodes in the phrase marker. When a verb raises to C via T for its inflection in a head-final structure, the verbal complex positioned in C then c-commands the object as well as the subject. Thus, if Kayne's LCA were to apply, the result would be the order linearzied as VSO, not the ordinary linear order SOV. Another approach assuming phrasal affixation or PF merge (under Chung's bi-clausal approach) does not pinpoint any exact locus of the resulting verbal complex in the phrase marker. Thus, how the terminal nodes are linearized remains stipulative: terminal nodes are merely linearized from left to right. Consequently, the SVO hypothesis eventually contributes to minimizing Universal Grammar (UG) by helping eliminate the head-parameter in conformity with the recent trend of the minimalist framework (Chomsky, 2005).

This paper will argue that the word order variations in (2) cannot be dealt with properly under the SOV hypothesis but they can under the SVO
5) In Kayne (1994) c-command is defined in terms of 'the first node up,' not 'the first branching node up.' Another version of the LCA with the latter notion is also found, for example, in Hornstein, Nunes, and Grohmann (2005: 227, (17)):
(i) A lexical item a precedes a lexical item $\beta$ iff
a. a asymmetrically c-commands $b$, or
b. an XP dominating a asymmetrically c-commands $\beta$.

Adoption of any particular version of the LCA is not an immediate concern here.
hypothesis. In particular, in deriving the inversion of the two verbal complexes in (2c) and right dislocation in (2b), problems with the previous analyses proposed under the SOV hypothesis will be uncovered, and it will be shown that no problems arise under the SVO hypothesis.

This paper is organized as follow. Section 2 reveals problems with the analyses that were proposed to deal with the word order variation under the SOV hypothesis. Section 3 advocates the SVO hypothesis extensively and proves that the mode of head-movement in (3a) and that of object movement are right. Finally, section 4 concludes the paper by reiterating some theoretical consequences of the current claim.

## 2. Problems with the SOV hypothesis

This section shows that some previous analyses under the SOV hypothesis cannot deal with right dislocation in (2b) and inversion of the two verbal complexes in (2c) properly and hints at the SVO hypothesis.6)

### 2.1. Deriving the verb repetition construction

I will now consider the examples in (2) one by one to show that the SOV hypothesis cannot derive them properly.

Let us first consider (2a), repeated below.
(2) a. Cheli-ka Yenghi-lul manna-ki-nun manna-ess-ta.

Cheli-Nom Yenghi-Acc meet-KI-CF meet-Past-Dec (Lit.) 'Meeting, Cheli met Yenghi.'

Here, the root verb manna- 'meet' is clefted and the resulting copies take morphologically different affixes, thereby displaying the aspect of verb repetition. Under the SOV hypothesis, the structure of this sentence would

[^4]be roughly represented as follows (the suffix $-k i$ is assumed to project kiP, for relevant discussions, see Kang, 1988; Lee, 1995, among others).
(6)


In the above structure, the verb manna- 'meet', being a bound morpheme, cannot stand alone, so it combines with -ki and -nun to yield manna-ki-mun; the verb manna- 'meet' remerges with the higher v and further raises up to T and C , finally resulting in the complex manna-ess-ta. So the same verb is realized in different morphological forms, preserving its phonological content in two positions (see Nunes, 1999 for related discussion).

The following binding facts tell us that the head-final structure under the SOV hypothesis confronts difficulties:
(7) a. Chelli-ka caki $\mathrm{i}_{\mathrm{i}} /{ }^{* j}$ cip-eyse Yenghij-lul manna-ki-nun Cheli-Nom self house-at Yenghi-Acc meet-KI-CF manna-ess-ta.
meet-Past-Dec
(Lit.) 'Meeting, Cheli met Yenghi at his house.'
b. Chelii-ka Yenghijlul caki ${ }_{i j j}$ cip-eyse manna-ki-nun Cheli-Nom Yenghi-Acc self house-at meet-KI-CF manna-ess-ta. meet-Past-Dec
(Lit.) 'Meeting, Cheli met Yenghi at his/her house.'

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c. Chelii-ka Yenghij-lul manna-ki-nun caki \(i_{i / j}\) cip-eyse Cheli-Nom Yenghi-Acc meet-KI-CF self house-at manna-ess-ta.
meet-Past-Dec
(Lit.) 'Meeting, Cheli met Yenghi at his/her house.'
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In (7b), the object Yenghi-lul has moved from (7a) to the left of [pp caki cip-eyse], adjoined to vP in (6), to have a new binding relation with the anaphor caki. The surface order of (7c) can be derived by moving $l_{k i P}$ Yenghi-lul manna-ki-nun] to the left, as seen below.
 manna-ess-ta.

In this case, however, Yenghi-lul cannot bind caki because Yenghi-lul within kiP cannot c-command the anaphor, yielding the wrong prediction. Alternatively, Yenghi-lul and manna-ki-nun may undergo a series of separate leftward adjunction to vP in (6) for Yenghi-lul to bind caki; that is, movement of Yenghi-lul, movement of [kip $t$ mana-ki-mun], and another movement of Yenghi-lul. (Recall that the complex verbal head manna-ki-nun alone cannot undergo head movement to the left under the head-final structure.) Although this alternative can manage to derive the surface order, this kind of repeated adjunction to the same node doesn't really have any motivation.7)

### 2.2. Problems with the rightward movement approach

The main problem with the SOV hypothesis is revealed from the right-dislocated construction (henceforth, RDC). In this subsection, I introduce a couple of sample cases that are recalcitrant to the rightward movement approach under the SOV hypothesis but amenable to the SVO hypothesis. For the purpose of discussion, (2b) is first repeated below.

[^5](2) b. Cheli-ka manna-ki-nun manna-ess-ta Yenghi-lul. Cheli-Nom meet-KI-CF meet-Past-Dec Yenghi-Acc

In the above example, the RD element Yenghi-lul is understood to be an argument of the preceding predicate manna-, and they can belong to the same intonational group. Prosodically, the RD part is mostly unstressed and can be uttered without a pause right before it, and the intonation of this part must stay low (Lee 2009, 2011a). This fact indicates that the RD element is a constituent of a single sentence, and that this RDC is derived under the SOV hypothesis via rightward movement of Yenghi-lul, as seen in (9).
(9) Cheli-ka Yenghi-lut manna-ki-nun manna-ess-ta Yenghi-lul. Cheli-Nom Yenghi-Acc meet-KI-CF meet-Past-Dec Yenghi-Acc

Problems with this rightward movement approach are found when other examples are taken into consideration.

Under the mono-clausal approach together with rightward movement, the RDC in (10a) will be derived by the rightward movement of the object Yenghi-lul, as shown in (10b).
(10) a. Cheli $i_{i}$-ka caki $\mathrm{i}_{/ / j}$ cip-eyse manna-ki-nun manna-ess-ta Cheli-Nom self house-at meet-KI-CF meet-Past-Dec Yenghiji-lul.
Yenghi-Acc
(Lit.) 'Meeting, Cheli met Yenghi at his house.'
b. [[Chelii-ka ( $\mathrm{t}_{\mathrm{i}}$ ) caki cip-eyse ( $\mathrm{t}_{\mathrm{i}}$ ) manna-ki-nun manna-ess-ta] Yenghij-Iul].

In (10b), the RD element Yenghi-lul is positioned higher than the anaphor caki, so it wrongly binds the anaphor.

To see another problem, let us first consider the following examples that show that a moving element can cancel or create a binding relation in Korean, as shown in the contrasts, namely, (11a) vs. (12a) and (11b) vs. (12b).
(11) a. Sensayngnim-i [motun haksayng]i-eykey [ $\mathrm{ku}_{\mathrm{i}}$-uy ccak]-ul teacher-Nom every student-Dat he-Gen partner-Acc sokayha-ess-ta. introduce-Past-Dec
'Teacher introduced [every student] $]_{i}$ his partner.' $^{\text {. }}$
b. *Sensayngnim-i [kui-uy ccak]-eykey [motun haksayng $]_{i}$-ul teacher-Nom he-Gen partner-Dat every student-Acc sokayha-ess-ta.
introduce-Past-Dec
'Teacher introduced [every student] $]_{i}$ to his partner.' $^{\text {. }}$
 he-Gen partner-Acc teacher-Nom every student-Dat sokayha-ess-ta.
introduce-Past-Dec
'Teacher introduced [every student] $]_{i}$ his partner.' $^{\text {p }}$
b. [Motun haksayng $]_{i-u l}$ sensayngnim- ${ }^{-} \quad\left[\mathrm{ku}_{\mathrm{i}}\right.$-uy every student-Acc teacher-Nom he-Gen ccakJ-eykey sokayha-ess-ta.
partner-Dat introduce-Past-Dec
'Teacher introduced [every student] $]_{i}$ to his $s_{i}$ partner.'

With this in mind, consider then the following examples in which rightward movement has been applied ( Lee, 2008).
(13) a. Sensayngnim-i sokayha-ess-ta [motun haksayng] $]_{i}$-eykey teacher-Nom introduce-Past-Dec every student-Dat [ $\mathrm{ku}_{\mathrm{i}}$-uy ccak]-ul.
he-Gen partner-Acc
'Teacher introduced [every student] ${ }_{i}$ hisi partner.'
b. *Sensayngnim-i sokayha-ess-ta [kui-uy ccak]-eykey

Teacher-Nom introduce-Past-Dec he-Gen partner-Dat
[motun haksayng]i-ul.
every student-Acc
${ }^{* *}$ Teacher introduced hisi partner [every student $]_{\mathrm{i}}$.'

In order to yield the above word order under the SOV hypothesis, the Dative object first undergoes rightward movement via adjunction to CP , and then the Accusative object undergoes the same CP-adjunction above the previously adjoined Dative object:8)
(14) a.

b.


Now in (13a) the binder is structurally lower than the bindee, as seen in (14a), and thus, the latter cannot be bound by the former, resulting in contrary prediction. This is confirmed by the fact displayed in (12a) where the binder is structurally lower than the bindee. Exactly the opposite situation is observed in (13b): although the binder can structurally bind its bindee, as seen in (14b), the sentence becomes wrongly ungrammatical. This is confirmed by the fact displayed in (12b) where the binder is structurally higher than the bindee. In section 3.1., the above binding contrasts will be handled without such problems under the SVO hypothesis.

Next, consider (2c), repeated below, in which two verbal complexes are switched.

[^6](2) c. Cheli-ka Yenghi-lul manna-ess-ta manna-ki-nun.
Cheli-Nom Yenghi-Acc meet-Past-Dec meet-KI-CF

Here, the verbal complex manna-ki-nun is right-dislocated, and thus, this complex involving the contrastive focus marker -nun is downgraded and defocused thereof. The above example can be derived by head movement of the verbal complex manna-ess-ta to the left of the verbal complex manna-ki-nun under the mono-clausal approach. This movement, however, is not permitted for two reasons: first, there is no head that can accommodate this leftward head movement in the head-final structure; second, since manna-ess-ta is formed in $\mathrm{C}_{\text {, }}$ it has to be a lowering from C to a position between the object Yenghi-lul and the verbal complex manna-ki-nun, which is not generally admitted in syntax. Therefore, the complex manna-ki-nun has to undergo rightward head movement to a head position above the CP. But this movement has to cross another verbal complex head manna-ki-nun, so a violation of the head movement constraint (HMC) results. This leads to a situation in which Yenghi-lul first has to left-adjoin to vP and then the remnant ${ }_{k i p} t$ manna-ki-nun] has to right-adjoin to CP to derive the word order in (2c). This kind of left and right adjunction doesn't really have any motivation and directionality. In section 3.2., (2c) will be derived under the SVO hypothesis without such problems.

### 2.3. Problems with the bi-clausal analysis

Under the SOV hypothesis, Chung (2009) provides a bi-clausal analysis for RDCs in Korean. The RDC in (2b) is derived, as illustrated in (15), in which \& is intended to be a coordinator.
(2) b. Cheli-ka manna-ki-nun manna-ess-ta Yenghi-lul.

Cheli-Nom meet-KI-CF meet-Past-Dec Yenghi-Acc
(15) a. [Cheli-ka Yenghi-lul/pro manna-ki-nun manna-ess-ta] \&
[Yenghi-Iul [Cheli-ka Yenghi--tul manna-ki-nun
manna-ess-ta]]

# b. [Cheli-ka Yenghi-lul/pro manna-ki-nun manna-ess-ta] \& [Yenghi-Iul [Cheli-ka Yenghi-tul manna-ki-nun-manna-ess-ta]] <br> c. [Cheli-ka e manna-ki-nun manna-ess-ta] \& [Yenghi-lul] 

The RD element Yenghi-lul in (2b) is derived by its scrambling to the initial position in the second clause, as seen in (15a), and by deleting the rest of the clause, as seen in (15b). What is noted here is that in the preceding clause the object appears as an empty category, marked as e in (15c). This element can be obtained by deletion of the object or regarded as pro, as seen in (15b).

The RD element in (2b) can be understood to receive a Theme role from the preceding verb, and they can belong to the same prosodic unit, as aforementioned. In (15c), however, the RD element belongs to a different unit due to the clausal boundary marked by \&. Thus it remains unclear why the RD element should be derived from the separate clause.9) The more fundamental question is why the same clause should be repeated at all if it is to be deleted anyway. ${ }^{10)}$

The RD element Yenghi-lul in (2b) does not usually receive any particular interpretation such as topic or focus. If it does, it may be topic rather than focus (e.g., grounded topic, continuing topic, etc. in the sense of Manetta 2012.).11) By contrast, when the object scrambles to the sentence initial position, it carries focus with it, contrary to fact.
9) There could be one or more prosodic units in the RD constructions in Korean. The current point is that the verb(al complex) and the following RD element can belong to the same prosodic unit. Recall that prosodically, the RD part is mostly unstressed and can be uttered without a pause right before it. Under the bi-clausal analysis, the verb(al complex) and the RD element belong to separate units due to the clausal boundary (marked by \&), thus undesirably excluding the possibility that the two items belong to the same unit.
10) It needs to be mentioned that the RD element does not behave like a fragment obtained by the same deletion process. Chung (2009) also argues that RDC must be distinguished from the fragment construction for a number of reasons, not reproduced here for space reasons.
11) Ko (2015) claims that the post-verbal element bears specficational focus, a focus similarly found in cleft and copular constructions. Chung (2015), however, argues against Ko's claim. Although I do not intend to reproduce his arguments here, this suggests that Ko's derivation of RDC regarding the first step of (specificational) focus movement of the RD element is not warranted.

Now, consider the following contrast with regard to the omission of the Accusative case marker:
(16) a. Cheli-ka congcong Yenghi(-lul) manna-ess-ta.

Cheli-Nom often Yenghi-Acc meet-Past-Dec 'Cheli often met Yenghi.'
b. Yenghi*(-lul) Cheli-ka congcong $t$ manna-ess-ta. Yenghi-Acc Cheli-Nom often meet-Past-Dec

This contrast follows from the familiar generalization that the deletion of the Accusative case marker on the object is allowed under adjacency with the verb in Korean (see Lee 1992 and references therein). The RD element in $(2 b)$ is adjacent to the verb to permit deletion of its case marker:
(17) Cheli-ka manna-ki-nun manna-ess-ta Yenghi(-lul). Cheli-Nom meet-KI-CF meet-Past-Dec Yenghi-Acc

If this RD element is obtained through derivational steps, as suggested in (15), the Accusative case marker on it is not to be optional, just as in (16b).12) Most of all, as the object in the preceding clause appears as an empty category, as shown in (15c), the bi-clausal approach has to rely on backward deletion or backward null pronominalization, as seen in (15b), repeated below.
(15) b. [Cheli-ka congcong Yenghi-tut/pro manna-ess-ta] \& [Yenghi-lul [Cheli-ka congcong Yenghi-lul manna-ess-ta]]

[^7]Unfortunately, however, this backward operation is not empirically attested in coordinate conjunction construction in Korean (Lee, 2009, 2011a, 2013). The following contrast is concerned with the impossibility of backward deletion:
(18) a. *Cheli-ka Yenghi-lut manna-ki-nun manna-ess-ta Cheli-Nom Yenghi-Acc meet-KI-CF meet-Past-Dec (kuliko) Doli-to Yenghi-lul manna-ki-nun manna-ess-ta. and Doli-also Yenghi-Acc meet-KI-CF meet-Past-Dec
b. Cheli-ka Yenghi-lul manna-ki-nun manna-ess-ta Cheli-Nom Yenghi-Acc meet-KI-CF meet-Past-Dec (kuliko) Doli-to Yenghi-lut manna-ki-nun and Doli-also Yenghi-Acc meet-KI-CF manna-ess-ta. meet-Past-Dec

Backward (null) pronominalization is not attested, either.
(19) a. *Cheli-ka pro/kunye-lul manna-ki-nun manna-ess-ta Cheli-Nom she-Acc meet-KI-CF meet-Past-Dec (kuliko) Doli-to Yenghi-lul manna-ki-nun manna-ess-ta. and Doli-also Yenghi-Acc meet-KI-CF meet-Past-Dec
b. Cheli-ka Yenghi-lul manna-ki-nun manna-ess-ta Cheli-Nom Yenghi-Acc meet-KI-CF meet-Past-Dec (kuliko) Doli-to pro/kunye-lul manna-ki-nun and Doli-also she-Acc meet-KI-CF manna-ess-ta. meet-Past-Dec

It is noted that backward pronominalization, null or overt (i.e., pro or kunye-lul), is not allowed in (19a). Only forward deletion and forward (null) pronominalization are allowed, as seen in (18b) and (19b), respectively. Thus, it remains unclear what the identity of the empty category in (15c) is under the bi-clausal analysis.13)

[^8]Under the SVO hypothesis, on the other hand, the RDC in (2b) can be derived without any problems by clefting the predicate to the left, with the object kept in the post-verbal position. This will be discussed more in detail in the next section. ${ }^{14)}$

Next, under the bi-clausal analysis, (2c) can be derived, as illustrated below: Yenghi-lul first left-adjoins to vP in (6), and then the remnant [kip $t$ manna-ki-nun] has to front to survive after deletion.
(20) a. [Cheli-ka [Yenghii-lul [ $\mathrm{t}_{\mathrm{i}}$ manna-ki-nun]] manna-ess-ta] \& [ $\left[t_{i} \text { manna-ki-nun] }\right]_{\mathrm{i}}$ [Cheli-ka [Yenghii-lul $\mathrm{t}_{\mathrm{j}}$ ] manna-ess-ta]]
b. [Cheli-ka [Yenghii-lul $\left[\mathrm{t}_{1}\right.$ manna-ki-nun]] manna-ess-ta] \& [ $\mathrm{t}_{\mathrm{i}}$ manna-ki-nun] ${ }_{j}$ €heli-ka [Yenghii-lul $\mathrm{t}_{\mathrm{j}}$ ] manna-ess-ta]]
c. Cheli-ka Yenghi-Iul manna-ess-ta manna-ki-nun. $(=(2 c))$

The derivation, however, inevitably involves unattested backward deletion of the verbal complex manna-ki-nun in the first conjunct, as seen in (20b). Note also that the fronted verbal complex manna-ki-nun here carries focus, contrary to fact in (20c) (recall that the RD element is downgraded and actually defocused):15)
movement as well as rightward movement is not involved in Japanese (and thus in Korean [mine]). Also, as revealed in the previous section, rightward movement faces problems in deriving RDCs. What this means is that Fukui and Takano's approach cannot derive RDCs at all. Although the bi-clausal approach may be an alternative for them, it is no longer tenable, as discussed here.
14) It may be claimed that when a clause is repeated, backward deletion is actually observed:
(ii) Tutie haynay-ess-ta, ku elyewun il-ul haynay-ess-ta.
finally do-Past-Dec that difficult job-Acc do-Past-Dec
'We finally did it, we did that difficult job!'
True! When a clause is repeated, however, some kind of emphasis is expressed through exclamation, deploration, etc. What matters here is that RD constructions no longer express original emphasis, with the RD element downgraded:
(iii) Tutie haynay-ess-ta ku elyewun il-ul.
finally do-Past-Dec that difficult job-Acc
'(We) finally did that difficult job.'
This means that the RD constructions have a different structural source, not the bi-clausal source. Thus the more fundamental question still remains: why should the same clause be repeated at all if it is deleted anyway?

## 3. Arguing for the SVO hypothesis

This section proves that the SVO hypothesis can successfully deal with the word order variation in (2) and suggests that the SVO hypothesis should be adopted.

### 3.1. Morphology of verbal complexes and head-initial phrase structure in Korean

In this subsection, I briefly introduce a morphological template in Korean to propose a proper phrase structure for the ensuing discussion. In Korean a verbal root is followed by a series of morphological slots which are occupied by morphemes, as presented below.16)

| (21) Vroot $>$ | Asp | $>$ | Mood $>$ |
| :---: | :---: | :---: | :--- |
| manna- | -ess- | -ta | -ko |
| 'meet | Past | Dec | Comp' |

The known tense element ess- is regarded as an aspectual element (Yang, 2008).17) Discourse is preceded by Mood, which is preceded by Asp, which is in turn preceded by a verbal root. Thus, verbal complexes out of combinations in different orders yield ungrammatical results:
(22) a. manna-ess-ta-ko 'meet-Asp-Mood-Discourse'
b. *manna-ta-ess-ko 'meet-Mood-Asp-Discourse'
15) Jo (2004) offers different derivations of the verb clefting construction under discussion: $-k i$ takes a VP (or clausal) complement rather than a simple predicate, coupled with VP-copying in a higher Spec, FP. Lee (2012: 91), however, points out some problems with this approach, not reproduced here for space reasons.
16) Koopman (2005) also provides a slightly different template.
17) It has been controversial whether or not Korean has a tense system as in European languages. Yang (2008: 710, (31)) argues that the alleged tense marker -ess- is in fact an aspectual element. Three main reasons for his argument are: (i) the element -ess- does not always refer to past, (ii) other elements can also represent past, (iii) this element can be interpreted ambiguously either as past or as perfective aspect. In this paper, I agree with Yang's (2008) view (see references cited there).

c. *manna-ess-ko-ta 'meet-Asp-Discourse-Mood'<br>d. *manna-ko-ess-ta 'meet-Discourse-Asp-Mood'

I propose the following core skeletal structure for Korean based on the above morphological template ( Lee 2011b):
(23) C--T--v(V)--M--Asp--V

Here the Asp head is inside the verbal projections, namely, VP-layers; it is preceded by M (ood); as inner Asp obtains, inner M is also possible under the SVO hypothesis;18) T, devoid of a tense feature now, has only a [+EPP] feature; C hosts a discourse marker like -ko 'that' and is assumed to have a Force feature (cf. Rizzi, 1997) agreeing with a relevant feature in the Mood affix for clause typing. In the above template, v can be replaced by V in the verb repetition construction under consideration (see Lee, 2011b). In addition, under Rizzi's (1997) split-CP analysis, Foc and/or Top may be posited around T . This will be illustrated in discussion below.19)

The current SVO hypothesis assuming the head-initial structure now offers a simple explanation of the binding contrast in (13) that remains problematic for the SOV hypothesis. Since Dative object is generated structurally over the Direct object here (i.e., S V IO $\forall \mathrm{DO}$ ), the former can bind the latter in (13a), and the latter cannot bind the former in (13b), thereby leading to the contrast in question. Other examples from (11, 12), with movements of the objects involved, can be handled in the same way. Notice also that the SVO hypothesis does not involve the unmotivated

[^9]consecutive CP-adjunction in (14a,b) needed under the SOV hypothesis.

### 3.2. Deriving the word order variants

This subsection argues that the examples in (2) can be successfully derived under the SVO hypothesis.

First, let us start with the example, repeated from (2a).
(2) a. Cheli-ka Yenghi-lul manna-ki-nun manna-ess-ta.

Cheli-Nom Yenghi-Acc meet-KI-CF meet-Past-Dec (Lit.) 'Meeting, Cheli met Yenghi.'

Based on the skeletal structure in (23), (2a) can be derived as roughly represented in the structure in (24) below. To save space a little bit, MP and AspP are contracted into MP/AspP.




Through Agree between C and Mood affix in the verbal complex downstairs, correct clause typing is determined. More specifically, I assume that C bears a Force feature (i.e., [uM], e.g., [u declarative], [ u interrogative],
etc.) that agrees with a relevant feature (i.e., [iM], e.g., [+dec], [+int], etc.) in the verbal complex containing a Mood affix for correct clause typing. In Lee (2011b) a number of syntactic arguments are provided to show that the second verb in the complex V-Asp-M is a real verb and that the first verb in the complex manna-ki-nun is just a copy of the real verb.

As seen in (24) and in (25) below, the verb manna- 'meet' merges with its object Yenghi to create [VP manna- Yenghi], and it further raises to Asp and M to yield the verbal complex manna-ess-ta. The verb manna- then remerges with v and moves to the contrastive focus head (-ki)-nun to form the verbal complex manna-ki-nun. ${ }^{20}$ ) It is well known that in a context like (2a), the marker -nun at the end of the verbal complex manna-ki-nun serves as a contrastive focus marker (cf. Kang, 1988; Lee, 1995). The postverbal object Yenghi raises up to Spec, FocP. Since Yenghi-lul manna-ki-nun receives contrastive focus (Lee, 2011b), Yenghi-lul is accommodated in Spec FocP, and the complex manna-ki-mun in the Foc head.21) The subject Cheli is finally merged at an appropriate stage to derive the sentence in (2a). The above derivational process is roughly represented in a linear fashion:
(25) a. manna- Yenghi-lul
b. manna-ess-ta Yenghi-lul
c. Yenghi-lul manna-ess-ta Yenghi-lut
d. manna-ki-nun Yenghi-Iul manna-ess-ta Yenghi-lut
20) Here, the verb merges on v rather than Foc. This is due to theta-role assignment to the subject in Spec vP. I also assume that $v$ may simply be $V$ to host the first verb manna'meet' in the verb repetition construction in question (see Lee 2011b for relevant discussion in detail). So the remerge in question applies within the VP-layers of the verb manna- 'meet,' displaying a certain locality.
21) Recall that [Yenghi-lul manna-ki-nun] should not be a constituent, as discussed around (8), repeated as (i) below.
(i) Chelii-ka [Yenghij-Iul manna-ki-nun] $]_{k}$ caki $i_{i / j}$ cip-eyse $\mathfrak{t}_{k}$ manna-ess-ta.

Cheli-Nom Yenghi-Acc meet-KI-CF self house-at meet-Past-Dec (Lit.) 'Meeting, Cheli met Yenghi at his/her house.'
This is because Yenghi-lul cannot bind caki owing to the lack of c-command relation between them, suggesting that Yenghi-lul and manna-ki-nun undergo separate movements, so that Yenghi-lul can bind caki.
e. Yenghi-lul manna-ki-nun Yenghi-lut manna-ess-ta Yenghi-fut
f. Cheli-ka Yenghi-lul manna-ki-nun Yenghi-lut manna-ess-ta Yenghi-lut

In (24, 25) two verbal complexes, manna-ki-nun and manna-ess-ta, are morphologically different elements. So they are allowed to be pronounced when Kayne's (1994) LCA applies to linearize the lexical items under the nodes in the given phrase marker (Nunes, 1999).22)

Next, let us derive other examples. With the structure in (24) taken into consideration, (2b) will be derived, as given in (26).
(2) b. Cheli-ka manna-ki-nun manna-ess-ta Yenghi-lul. Cheli-Nom meet-KI-CF meet-Past-Dec Yenghi-Acc
(26) a. Yenghi-lul manna- Yenght
b. manna-ess-ta Yenghi-lul manna= Yenghi-
c. manna-ki-nun manna-ess-ta Yenghi-lul manna- Yenghi
d. Cheli-ka manna-ki-nun manna-ess-ta Yenghi-lul -manna- Yenghi

Verbal complexes, manna-ki-nun and manna-ess-ta, are formed just as in (2a), and the object Yenghi-lul stays in Spec, VP throughout the derivation in (26). ${ }^{23)}$

The inversion of the complex manna-ess-ta with the complex manna-ki-nun in (2c), repeated below, can be achieved by movement of the whole MP to Spec, FocP in (27) below.
(2) c. Cheli-ka Yenghi-lul manna-ess-ta manna-ki-nun.

Cheli-Nom Yenghi-Acc meet-Past-Dec meet-KI-CF
22) In (24) the lower verb manna- 'meet' and the higher verb manna-v (v is a null affix) are morphophonologically open and thus they are assumed to be deleted. The same happens in Vata predicate clefting discussed in Koopman (1984) (e.g., li ... li-da ... lit... 'Eat ... eat-Past ... eat...').
23) However, embedded clauses in Korean allow a verb-final order only. I do not intend to deal with this matter here for space reasons (see Lee, 2010b, 2010c for relevant discussions).
(27)


This process can be roughly represented in a linear fashion as follows.
(28) a. manna- Yenghi
b. manna-ess-ta Yenghi-lul
c. Yenghi-lul manna-ess-ta Yenghi-lut
d. manna-ki-nun [Yenghi-lul manna-ess-ta Yenghi-lut]
e. [Yenghi-lul manna-ess-ta] manna-ki-nun [Yenghi-lut manna-ess-ta]
f. Cheli-ka [Yenghi-lul manna-ess-ta] manna-ki-nun [Yenghi-lul manna-ess-ta]

What is noted here is that (2a) and (2c), repeated below, have basically the same interpretation despite the surface order difference arising from the inversion of the two verbal complexes:
(2) a. Cheli-ka Yenghi-lul manna-ki-nun manna-ess-ta. Cheli-Nom Yenghi-Acc meet-KI-CF meet-Past-Dec (Lit.) 'Meeting, Cheli met Yenghi.'
c. Cheli-ka Yenghi-lul manna-ess-ta manna-ki-nun.

I assume that the Foc head here can satisfy the [+EPP] feature in more than one way. That is, for the satisfaction of the [+EPP] feature, Yenghi-lul moves to Spec FocP, say, Spec-raising, in (25e) to derive (2a) and [Yenghi-lul manna-ess-ta] moves to Spec FocP through pied-piping, say, Spec-piedpiping, in (28e) to derive (2c). ${ }^{24)}$

Accordingly, in satisfying the relevant feature of a head, it does not matter whether Spec-raising or Spec-piedpiping applies, which is fundamentally due to syntactic indeterminacy arising from minimization of Universal Grammar (Chomsky, 2005). In this line of reasoning, therefore, word order variation results from the movement of constituents of different size.

The validity of the two types of movement above is empirically confirmed when examined by the binding facts, as illustrated below.25)
(29) a. Cheli $i_{i}$-ka Yenghij-lul manna-ki-nun caki $i_{i, j}$ cip-eyse Cheli-Nom Yenghi-Acc meet-KI-CF self house-at manna-ess-ta. (=(7c))
meet-Past-Dec
(Lit.) 'Meeting, Cheli met Yenghi at his/her house.'
b. Chelii-ka Yenghij-Iul manna-ess-ta caki $\mathrm{i}_{i}$ ? ${ }^{2} \mathrm{j}$ cip-eyse

Cheli-Nom Yenghi-Acc meet-Past-Dec self house-at manna-ki-nun.
meet-KI-CF
(Lit.) 'Meeting, Cheli met Yenghi at his/her house.'
24) This analysis is preceded by Biberauer \& Richards (2006) and Richards (2008), who discussed "true optionality" widely observed in languages such as Dutch, German, Russian, Arabic, Imbabura Quechua, etc.
25) There is a contrast between (29b) and (i) in binding.
(i) Cheli $i_{i}$-ka Yenghi-lul manna-ess-ta caki $\mathrm{i}_{i j}$ cip-eyse.

Cheli-Nom Yenghi-Acc meet-Past-Dec self house-at 'Cheli met Yenghi at his/her house.'
This contrast arises because of the different mode of movement. In (29b) Spec-piedpiping has to take place to precede the verbal complex manna-ki-mun, as seen in (28e), and thus, Yenghi-lul does not c-command the anaphor; in (i) Yenghi-lul can raise alone to bind the anaphor.

Under the current analysis, $(29 a, b)$ are given the representations in $(30 a, b)$ in which the difference in c-command relation between the binder and the bindee gives rise to the binding contrast in question--in (30a) Yenghi-lul can c-command caki, but in (30b) Yenghi-lul cannot:
(30) a. Chelii ${ }_{i}$-ka [FocP [Yenghi-lul] [Foc manna-ki-nun] [caki $\mathrm{i}_{\mathrm{i} / \mathrm{j}}$ cip-eyse Yenghí-lut manna-ess-ta Yenghi-lut]]
b. Chelii-ka [FocP [Yenghij-lul manna-ess-ta] [caki $\mathrm{i}_{i}$ ? ${ }^{*}{ }_{j}$ cip-eyse manna-ki-nun [Yenghi-lul manna-ess-ta]].

It might be said that to derive (29b), Yenghi-lul and manna-ess-ta can move separately so that Yenghi-lul may bind caki. For this to happen, however, the verbal complex manna-ess-ta has to cross another verbal complex manna-ki-nun in violation of the HMC.

Under the SOV hypothesis, the word order variation displayed in (2) cannot be dealt with properly without any problems. Especially, the inversion between the two verbal complexes in (2c), yielding near true optionality, can hardly be captured under this hypothesis. Necessary movements involved have no real motivation and/or directionality except for the purpose of deriving the required word order variation. Under the SVO hypothesis, all the movements are motivated from morphological, Case, interpretive reasons like focus (or topic).

## 4. Conclusion

This paper has discussed one type of the verb repetition construction from Korean and focused on dealing with word order variation and head movement phenomena displayed in this construction. Through the results of the discussions, the traditional SOV hypothesis with a head-final structure was shown to be unable to capture the word order variation and the head movement phenomena. On the other hand, the advocated SVO hypothesis with a head-initial structure was proven to be able to deal with them with success. Thus, it is shown that word order variation takes place by leftward
movement of the relevant element, and in particular, a verbal complex is formed through leftward head movement in syntax under the SVO hypothesis. Accordingly, the results of the current paper suggest new analyses concerning the phrase structure and verbal morphology in Korean. With regard to verbal morphology in Korean, the current SVO hypothesis suggests a more restricted way of obtaining verbal inflection in Korean, compared to the old SOV hypothesis that loosely permits several different but unclear ways to get that. Most of all, the present results make it possible to exploit Kayne's (1994) LCA that holds in the universal Spec-head-complement base structure that tightly matches the current SVO hypothesis. Consequently, the paper offers a possibility of obviating the need of the head parameter in the computation, thereby reducing computational complexity and helping minimize UG in conformity with the spirit of the recent minimalist framework (Chomsky 2005).

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[^1]:    1) In (2a), the verbal complex manna-ki-nun lays focus on the object Yenghi-lul involving negative implicature (e.g., VP-focus in Kang, 1988). It is noted that (2a) can be an answer to the following wh-question:
    (i) Cheli-ka nwukwu-lul manna-ki-nun manna-ess-ni?

    Cheli-Nom who-Acc meet-KI-CF meet-Past-Q
    (Lit.) 'Meeting, who did Cheli meet?'
    Thus it is seen that Yenghi-lul in (2a) can carry focus with it, and the marker -nun induces a certain contrastive focus, yielding a reading such that 'Cheli just met Yenghi, not having done anything else.'

[^2]:    2) Thus, the SOV hypothesis allows some loose analyses with regard to the combination of head elements since heads do not affect word order in the head-final structure whether they stay in their positions or they move. Under the phrasal affixation or PF merge analysis in (3c), V, T, and C elements stay in their positions and are put together all at once at PF. But it is unclear how this is possible, and it is hard to imagine where the resulting verbal complex is located in the phrase marker. The lexicalist view (e.g., Sells, 1995) is reserved here since it is not widely adopted in the literature (see Choi, 2003 for reasons).
[^3]:    3) There are other approaches, for example, under the leftward movement approach assuming a mono-clausal structure, it is obtained by object fronting followed by subsequent leftward movement of the whole remnant clause (Ko, 2015). I will return to this approach later.
    4) Admitting that Spec-head-complement is not exactly the same as SVO, I sometimes regard the two terms interchangable for convenience. The universal underlying structure may also be claimed to be SOV logically, as Fukui and Takano (1998) actually proposed. But their proposal faces difficulties in deriving word order variation in Korean due to the limit of the proposal not allowing verb movement and rightward movement.
[^4]:    6) In the following discussion throughout the paper, for the purpose of discussion the term "right dislocated element" will be used even under the SVO hypothesis with the recognition that it is compatible only with the SOV hypothesis.
[^5]:    7) One may say that "repeated adjunction to the same node" can be replaced by "movements to Specs of different functional heads." Although this may be an option, it only requires proliferation of unknown functional heads.
[^6]:    8) Again, it is unclear what really motivates the consecutive CP-adjunction here. Notice also that $(13 \mathrm{a}, \mathrm{b})$ cannot be derived by leftward head movement of the inflected verb to the sentence medial position under the SOV hypothesis.
[^7]:    12) One may say that (16b) is acceptable with the Case-markerless displaced object on a par with (i) below:
    (i) Yenghi nwu-ka ttayli-ess-e?

    Yenghi who-Nom hit-Past-Q
    'Yenghi, who hit her?'
    I analyze the displaced object as a left-dislocated element base-generated in the sentence-initial position (Ahn and Cho, 2009; Lee, 2009). On this analysis, Yenghi in (i) is regarded as a topic rather than a focus. In Chung's bi-clausal approach, however, the RD element is obtained through scrambling.

[^8]:    13) As mentioned in fn 4, Fukui and Takano (1998) under the SOV hypothesis claim that verb
[^9]:    18) Under the SVO hypothesis, Lee (2011b) offers arguments for the inner Asp in Korean, motivated from the verb repetition construction under consideration and similar verb repetition construction from Chinese (Paul 2002).
    19) Detailed illustration of derivations including verbal inflection under this structure will be omitted here and in the subsequent discussion only necessary derivations will be presented for space reasons. In Koopman (2005), roll-up movement of a constituent eventually yields verbal morphology in Korean, but verb repetition constructions like those in (2) including RDCs are not discussed there, which require a different way of forming verbal morphology, for example, head movement via V-Asp-to-M for the derivation of the verbal complex manna-ess-ta 'meet-Asp-M' (see next subsection).
