Verb Raising: A Parameter among Languages*

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Lee, Wooseung. (2012). Verb raising: A parameter among languages. *The Linguistic Association of Korea Journal, 20*(4), 71-95. Verb Raising has been taken for granted under minimalism, which assumes that various features of a verb are checked against functional heads such as Infl and Mood etc. The issue of Verb Raising, however, has long puzzled linguists especially in Japanese/Korean linguistics as these are heavily agglutinative languages where such movement seems to be string vacuous and morphemes seem to be loosely concatenated with each other like affixes (Yoon 1994, inter alia). This paper thus investigates the debate on Verb Raising in Korean and Japanese. Based on various syntactic and semantic evidence, it is concluded that verbs are inserted in bare forms, not fully inflected forms, in these languages and thus do not necessarily leave out of its phrase (VP) for the sake of feature checking.

Key Words: Verb Raising, Functional heads, Feature Checking, Coordination, Cleft, Scrambling

1. Introduction

With the advent of Infl (Chomsky 1981) and expansion of functional categories thereafter (Pollock 1989, Chomsky 1995), it is commonly assumed that verbal inflectional morphology is accomplished with the help of a transformational rule such as verb raising via head movement. The placement of the verb in regard to adverbs (Pollock 1989, inter alia) has been used as one of the frequently used diagnostics to find out if a language possesses verb-raising

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or not. For instance, 'verb-adverb' order is taken to be evidence for verb raising in French (1a-b), and 'adverb-verb' order is taken to be evidence for INFL lowering in English (1c-d).

(1) a. Jean embrasse souvant Marie.
Jean kisses often Marie
b.*Jean souvant embrasse Marie.
Jean often kisses Marie
c. John often kisses Mary.
d.*John kisses often Mary.

Under recent minimalism (Chomsky 1991, 1993, among others), however, a verb is assumed to be inserted into a structure from the Numeration with its verbal features, which must be checked against functional heads such as Infl by adjunction-via-raising to the relevant head.[1)]

Recent proposals from Koizumi (1995) among others also argue for the existence of 'verb raising' based on some constituents observed in Coordination, Cleft and Scrambling in (Korean and) Japanese. However, universality of such an operation has been controversial regarding head-final agglutinative languages like Japanese and Korean where such movement would be string vacuous. In

1) For checking to take place, the relevant structural relationship between the two must be established. Phrases check their features in the specifier of the relevant head while heads check their features by 'adjunction via movement' to the relevant head. Thus, under minimalism, feature checking is the only motivation for movement. For instance, it is assumed that there is a tense feature on the verb and that this tense feature has to be the same as the tense feature on T. We further assume that any tense feature on the verb is uninterpretable and that, as might be expected, tense fetaures are interpretable when they are on the tense head T. If we look at the following examples (ia-d), the last two examples are unacceptable because the uninterpretable tense feature on the verbal complex has not been checked (Adger 2003). As finite Infl in English has a weak V-feature, verb movement will take place covertly in compliance with Procrastinate.

(i) a. T[past] ... V+v [*u*~~past~~]
b. T[present] ... V+v [*u*~~present~~]
c. *T[past] ... V+v [*u*present]
d. *T[present] ... V+v [*u*past]

addition, there are some language variations. Specifically, lexicalist assumptions might hold in English, whereas, tense and mood affixes must be treated as independent syntactic atoms separating them from the verb in Japanese and Korean.

By discussing some coordinate constructions, Yoon (1994) conclusively showed that verbal affixes in Korean combine with roots not by Verb Raising (VR, hereafter), but by phrasal affixation. In other words, they combine with their hosts in a manner similar to Cliticization, not via Head Movement[2]. In addition to coordination, one of the good arguments for anti-VR comes from the so-called surprising constituents frequently found in Japanese and Korean. It is worth noting that the embedded structure [John-eykey kempwute-lul Mary-eykey cacenke-lul] makes sentence (2) fully felicitous without the embedded structure's possible verb such as cwu-ta 'give', senmwulha-ta 'present' etc.

(2) Na-un colep senmwul-lo [John-eykey kempwute-lul,
I-nom graduation present-as J-dat computer-acc
Mary-eykey cacenke-lul] saynkakha-ko-iss-ta.
M-dat bike-acc think-comp-nonpast-dec
'As for graduation present, I am considering (giving) John a computer and (giving) Mary a bike.'

This is an obvious challenge to the Pro-VR view because VR must move a

2) Chung (2009, 2011) also states why predicates cannot undergo right-dislocation as shown in (i).

(i) a. Na-nun Cheli-ka ___ manna-ss-ta-ko
I-Top C-nom meet-pst-decl-comp
saynggakha-y Yenghi-lul.
think-decl Y-acc
'I think Cheli met Yenghi.'
b. Na-nun ___ Yenghi-lul manna-ss-ta-ko saynggakha-y Cheli-ka.
c. *Na-nun Cheli-ka Yenghi-lul _____ sayngkakha-y manna-ss-ta-ko.

He attributes the ungrammaticality of (ic) to the fact that inflected predicate 'manna-ss-ta-ko' is not a constituent in syntax (cf. Yoon 1994, 1997; M-K Park 1994, etc.)

verb out of a VP and place it in the head position of TP. If so, the moved verb out of the VP must be located somewhere outside VP, which is not the case in (2). (or, unless otherwise we adopt some sort of unmotivated deletion mechanism.) Fukushima (2003) observes that the same type of sentence is also acceptable in Japanese. These types of sentences have long puzzled linguists who stand on the ground of VR approach due to the fact that a verb is completely missing in the embedded sentence, which results in the Case-markings without a verb unexplained.

This paper will take the challenge by extending Fukushima's insight (classifiers as functors) further to Korean Case markers. Put it in another way, I will claim that Case markers are combinatorial functors which can take both a verb and a nominal argument as their combinatorial arguments (Choi 2007). Due to their 'active' roles in syntactic combination, the so-called surprising constituents where a verb is completely missing to form a constituent with only nominals are frequently found in the dependent-marking languages that exhibit overt Case morphology. Further supporting evidence for this claim can also be found in Japanese as well. As mentioned in Fukushima (2003), due to the semantic incompleteness of the unusual constituents, the semantic roles of the NPs need to be indicated in order to facilitate contextual recovery of an appropriate predicate meaning. Though case markers (ex. *-ga* and *-o*) are not definitive indications of such roles, it is certain that they are helpful in inferring what sort of predicate will be relevant. For instance, an NP with *-ga* usually corresponds to agentive/experiencer roles and that with *-o* to patient/theme type roles.

The organization of this paper is as follows. In section 2 and 3, I will illustrate the two different views on VR: pro-VR vs. anti-VR. I then point out the problems in the pro-VR approach by closely examining dependent-marking (in terms of Nichols 1986) languages such as Japanese and Korean. In section 4, after introducing Fukushima's syntactico-semantic analysis of classifiers, I will show the possibility of extending his ideas to Korean data. In so doing, I will show that it is necessary to investigate the role of Korean (or Japanese) Case markers as compositional functors. Section 5 concludes and discusses the implications it does have.

2. No VR in Japanese

2.1. Analyses for VR: Koizumi (2000) among others

Koizumi (2000) (cf. Against VR in Japanese: Hoji (1998), Takano (2002), Sakai (2001), Fukui and Sakai (2003), Fukushima (2003)) proposes a VR account in Coordination, Clefting and Scrambling Constructions. The matters of constituency involving floating Numeral Classifiers (ex. *ni-ko* 'two-CL') constitute the central evidence of Koizumi's argument. This is illustrated in (3a-b).

(3) a. Taroo-ga [NP ni-ko-no ringo]-o kinoo kat-ta
Taroo-Nom two-CL-Gen apple-Acc yesterday buy-past
'Taroo bought two apples yesterday.'
b. Taroo-ga [NP ringo-o kinoo ni-ko] kat-ta
Taroo-Nom apple-Acc yesterday two-CL buy-past
'Taroo bought two apples yesterday.'

Koizumi (2000) argues that the unusual constituent observed in (3b) is found in other constructions such as coordination in (4).

(4) Taroo-ga [ringo-o kinoo ni-ko]-to
Taroo-Nom [apple-Acc yesterday two-CL]-conj
[mikan-o kyoo san-ko] kat-ta.
[orange-acc today three-CL] buy-past
'Taroo bought two apples today and three oranges yesterday.'

He argues that coordination of unusual constituent as in (4) is a simple matter of VP coordination as analyzed in (5). VR moves a verb out of a VP and places it in the head position of a TP.

(5) [vp apple yesterday 2-CL [v t_i]]-and
[vp orange yesterday 3-CL [v t_i]] buy_i
(only VPs are shown)

Similarly, he analyzes cleft sentences like (6a) as in (6b) where a remnant VP is in the sentence final focus position. VR moves a verb out of a VP and places it in the head position of a TP.

(6) a. Taro-ga kat-ta-no-wa [ringo-o kinoo ni-ko]-da.
T-Nom buy-Past-NML-Top [apple-Acc yesterday two-CL]-cop
'What Taro bought yesterday was two apples.'
b. [OPi [Taro t_i buy-Tense]]-NML-TOP
[vp apple yesterday 2-CL [v e]]$_i$

Finally, Koizumi argues that scrambling also involves VR. According to Saito (1985: 174), a true adjunct in the matrix domain can be associated with the matrix clause but not with the embedded clause as illustrated in (7a-b).

(7) a. Mary-wa [Bill-ga naze sono hon-o katta to]
Mary-TOP [Bill-NOM why that book-Acc bought that]
Itta no?
Said Q
'Whyi did Mary say [that Bill bought the book ti]?
b. *Nazei Mary-wa [Bill-ga ti sono hon-o katta to]
whyi Mary-Top [Bill-NOM ti that book-ACC bought that]
itta no?
Said Q
'Why did Mary say that Bill bought the book?'

Koizumi nonetheless observes that examples (8a-b) both allow *naze* 'why' to be associated with the embedded clause because object undergoes movement with the adjunct. This paradigm is naturally explained if we assume that what is fronted in (8) is the embedded VP (or some larger phrase) from which the embedded verb has moved out.

(8) a. naze sono book-o, Mary-wa [Bill-ga katta to]
why that hon-Acc, Mary-TOP [Bill-NOM bought that]
Itta no?

Said Q
'Why did Mary say that Bill bought the book?

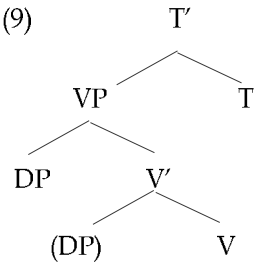
b. sono hon-o Naze, Mary-wa [Bill-ga katta to]
that book-ACC why, Mary-Top [Bill-NOM bought that]
itta no?
Said Q
'Why did Mary say that Bill bought the book?

2.2. Problems with Koizumi (2000)

Koizumi's analysis faces problems on both empirical and theoretical grounds. Fukushima (2003) showed that the unusual constituents in Koizumi's (2000) analysis turned out not to be unusual, but to be frequently found constituents in Japanese (This will be discussed in more detail in next section 2.3). Also, Koizumi's analysis of coordination (Previous examples 3, 4) implies that verbs in Japanese are lexically inflected like those in English. This, however, is not the case; Takano (2004) shows conclusively that there are just V-coordinations in Japanese. The fact that finite verbs cannot be conjoined in Japanese suggests that Japanese employs a different strategy for verbal inflection. Also, on independent grounds Takano (1996), Fukui and Takano (1998), Sakai (1998), and Aoyagi (2001) have proposed that in Japanese all finite verbs are bare in syntax and are merged with their inflectional morphemes in the phonological component under the condition of adjacency.

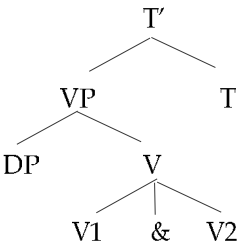
On this view, structure (9) follows. His analysis makes it possible to account for the fact that finite verbs cannot be conjoined and that when verbs are conjoined, the first conjunct must be a bare verb. Whereas English finite verbs are fully inflected when entering syntactic derivation, Japanese verbs and their inflectional morphemes are separated in syntax and are merged in the phonological component. In other words, UG has both types of verbal inflection available for particular language to employ.

(9)



Given that V and T do not form a constituent, it is impossible to conjoin verbs having inflectional morphemes. (10) thus follows.

(10)



2.3. Analysis against VR: Fukushima (2003)

Fukushima (2003) points out problems with Koizumi (2000) on the following grounds. Though NCs in previous examples give rise to "unusual" looking constituents, it will be shown that analyzing such constituents as VPs is misguided. They can appear in other constructions as an independent NP constituent accompanied by case markers like *-ga* and *-o*. This is illustrated in (11-12).

(11) Taroo-no oyatu-ni-wa [ring-o kyoo ni-ko]-ga
Taroo-gen snack-for-Top [apple-acc today 2-CL]-nom
Datoo-da.
Adequate-Cop.Pres
'As for Taroo's snack, (eating/giving him etc.) two apples for today is adequate.'

(12) T-no oyatu-ni-wa M-ga [ring-o kyoo ni-ko]-o
T-gen snack-for-Top M-Nom [apple-acc today 2-CL]-acc
kangaete-iru.
Consider-prog.pres
'As for Taroo's snack, Michiko is considering (his eating/giving him etc.) two apples for today.'

Moreover, if Koizumi is right, (13a-b) should be acceptable because the bracketed part is the remnant of VP, where the verb moved out to the Spec of TP.

(13) a. *Taroo-no oyatu-ni-wa [ring-o ni-ko kyoo]-ga
Taroo-gen snack-for-Top [apple-acc 2-CL today]-nom
Datoo-da.
Adequate-Cop.Pres
'As for Taroo's snack, (eating/giving him etc.) two apples for today is adequate.'
b. *T-no oyatu-ni-wa M-ga [ring-o ni-ko kyoo]-o
T-gen snack-for-Top M-Nom [apple-acc 2-CL-acc today]-acc
kangaete-iru.
Consider-prog.pres
'As for Taroo's snack, Michiko is considering (his eating/giving him etc.) two apples for today.'

Koizumi predicts that (14a-b) should be well-formed, contrary to the fact. This shows that the evidence based on the behavior of numeral classifiers does not support Koizumi's (2000) claim that VR occurs in Japanese.

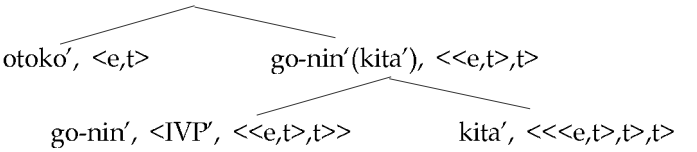
(14) a. *Taroo-ga [ringo-o ni-ko kinoo]-to
Taroo-Nom [apple-Acc two-CL yesterday]-conj
[mikan-o san-ko kyoo] kat-ta.
[orange-acc three-CL today] buy-past
'Taroo bought two apples today and three oranges yesterday.
b. *T-ga kat-ta-no-wa [ringo-o ni-ko kinoo]-da.

T-Nom buy-Past-NML-Top [apple-Acc two-CL yesterday]-cop
'What Taroo bought yesterday was two apples.'

Fukushima's (2003) account provides us with more reasonable support for the anti-VR view, where he claims that Japanese classifiers such as *-nin* are compositional functors. The compositional role as a functor then yields a surprising constituent by a sequence of λ-abstractions. For example, the Japanese sentence *otoko go-nin kita* 'Five men came.' in (15a) is analyzed as in (15b), where *go-nin* 'five people' is a functor and the verb *kita* is its semantic argument.

(15) a. otoko-ga go-nin ki-ta
man-nom five-CL come-PST
'Five men came'

b. (go-nin′(kita′))(otoko′), t



Fukishima's type-theoretic analysis is accompanied by its concomitant semantic translations, where each component is lexically assigned its semantics as in (16).

(16) a. go-nin: $\lambda W \lambda P.W(\lambda Q.|P \cap Q| \geq 5)$
[TYPE(W) = TYPE(IVP′), TYPE(P)=TYPE(CN′), TYPE(Q)= <e,t>]
b. otoko: λy.otoko′(y)
c. kita: λT.T(λx.kita′(x))
[TYPE(T) = TYPE(NP′)]

With these, example (15a) will be translated as (17).

(17) a. go-nin ki-ta (<<e,t>,t>): $\lambda P.|P \cap \lambda x.\text{kita}'(x)| \geq 5$
b. otoko-ga go-nin ki-ta (*t*): $|\lambda y.\text{otoko}'(y) \cap \lambda x.\text{kita}'(x)| \geq 5$

The translation indicates that there are two sets of individuals, i.e., a set of men and a set of comers, and the absolute value of the intersection of the two sets is greater than or equal to five.

As shown in the semantic interpretations given above, *go-nin* 'five people' is a lexically type-raised functor and it takes *kita* 'came' as its semantic argument. The combination yields a new intransitive verb phrase which now searches for a common noun argument *otoko* 'men'. Surprising constituents are thus explained without utilizing a verb-raising or deletion mechanism.

Fukushima (2003) provides insightful analyses of Japanese sentences containing classifiers. Nonetheless, he deals with only the case in which classifiers play a role as a functor, which makes such cases as surprising constituents without classifiers still unexplained. Let us think of the Korean sentence I introduced in section one where the similar surprising constituents are observed without classifiers. As reintroduced in the below (18), the so-called surprising constituents are still felicitous without the presence of classifiers.

(18) Na-nun colep senmwul-lo [John-eykey kempwute-lul,
I-nom graduation present-as J-dat computer-acc
Mary-eykey cacenke-lul] saynkakha-ko-iss-ta.
M-dat bike-acc think-comp-nonpast-dec
'As for graduation present, I am considering (giving) John a computer and (giving) Mary a bike.'

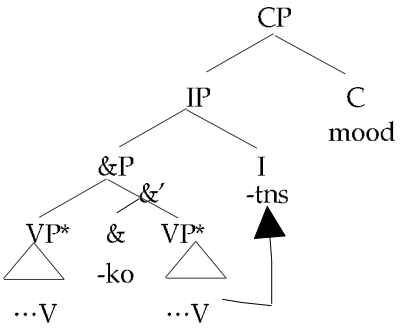
Although Fukushima does not explicate how he deals with such an example, we might infer from his analysis that he might claim that Case markers in this case have a similar role to classifiers in that they play a role as a functor type-theoretically as well as semantically (see Koga 2000 for similar intuition). Thus, following Fukushima (2003) and Koga (2000), I will assume that Korean Case markers are functors in syntactic combinations in terms of type-theoretic calculus.

3. No VR in Korean

3.1. Analysis for VR: E-Y Yi (1994) among others

E-Y Yi (1994) argues that affixal coordination structures are actually adjunct-head structures and that overt VR is restricted to what appears to be the final conjunct since it is really the main clause. Structure (19) shows how the lexical verbs combine with their inflectional morphemes.

(19)



(Verb Raising)

This analysis, however, is invalid shown by plenty of evidence for the existence of coordinations by Yoon (1997). In addition, in English, where VR occurs, verb raises systematically ATB even when the coordinate structure is interpreted as asymmetric as in (20-21).

(20) What cani John [ti [go to the store]] and [ti [buy e]]?
(21) *What cani John [ti [go to the store]] and [has [bought e]]?

Since VR in languages where it can be identified robustly is always ATB, and since it is always non-ATB in Korean, we can take this to conclude that there is no VR in Korean in coordination structures as well as syntax in general.

3.2 Analysis against VR

3.2.1 Evidence: Syntax

Based on coordination constructions, Yoon (1994) showed that verbal Affixes

in Korean combine with roots not by Verb Raising, but by phrasal affixation. In other words, they combine with their hosts in a manner similar to Cliticization, not via Head Movement (VR). Yoon (1994) proposed that a tensed verb will never be inserted as the head of a sub-IP level constituent in Korean, called "The One Tensed V per Clause restriction". He distinguishes between Clausal and Subclausal Coordinations based on the following criteria. First, Negative Aux 'anh' subcategorizes for an untensed verb ending in -ci Comp form. Sentences (22-23) show that NPI cannot be licensed in IP coordinations, where the first conjunct has an overt tense marking.

(22) a. VP coordination + NPI subject

amwuto	pap-ul	cis-kena	selkeci-lul	ha-ci	anh-ass-ta
anyone	meal-acc	cook-or	dish-acc	do-comp	Neg-Past-Dec

'No one cooked the meal or washed the dishes.'

b. IP coordination + NPI subject

*amwuto	pap-ul	cis-ess-kena	selkeci-lul	ha-ci	anh-ass-ta
anyone	meal-acc	cook-past-or	dish-acc	do-comp	Neg-Past-Dec

'No one cooked the meal or washed the dishes.'

(23) a. VP coordination + NPI object

J-un	amwukesto	pala-kena	amwuto	wonmangha-ci	anh-ass-ta
J-Top	anything	hope-or	anyone	blaim-comp	Neg-Past-Dec

'John didn't hope for anything or blame anyone.'

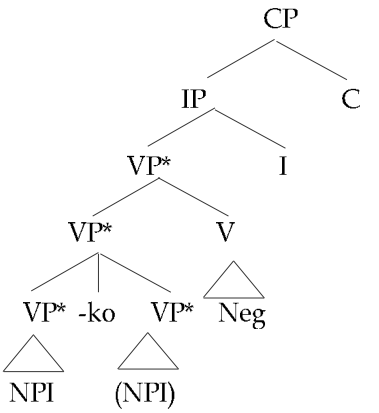
b. IP coordination + NPI object

*John-un	amwukesto	pala-ss-kena	amwuto	wonmangha-ci
J-Top	anything	hope-past-or	anyone	blaim-comp

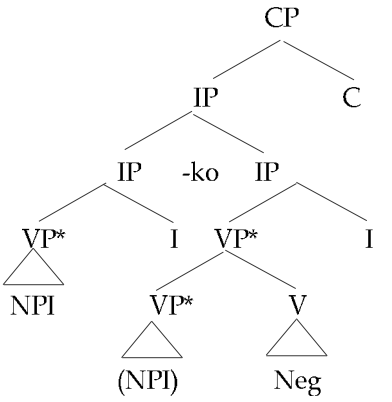
anh-ass-ta
Neg-Past-Dec
'John didn't hope for anything or blame anyone.'

This shows the syntactic independence of verbal inflectional morphemes in Korean as in (24).

(24) a. Untensed 1st conjunct



b. Tensed 1st conjunct



Second, there is interaction between (a)symmetric conjunction and tense specification. Asymmetric coordination must be subclausal in both English and Korean. These are illustrated in (25-27). However, there are some differences between the two languages. In Korean asymmetric coordinations, tense-marking in nonfinal conjunct is absent, whereas in English, even asymmetric coordinations must contain inflected verbs in each conjunct.

(25) *This whisky$_i$, John went to the store and he bought t_i.

(26) Mwues-ul$_i$ John-i chayk-ul il-ko t_i mek-ess-ni?
What-acc J-nom book-acc read-conj eat-past-Q
'What did John eat after reading a book?'

(27) *Mwues-ul$_i$ John-i chayk-ul il-ess-ko t_i mek-ess-ni?
What-acc J-nom book-acc read-past-conj eat-past-Q
'What did John eat after reading a book?'

Interaction of negation-aux scope and tense specification shows that the tense morpheme is separate from the verb. Only when the initial conjunct is untensed, the aux can optionally combine with conjoined VP*s, taking both conjuncts in its scope. Examples follow in (28-29).

(28) Untensed 1st Conjunct + Negation
John-i pap-ul cis-kena mek-ci anh-ass-ta
J-nom meal-acc cook-or eat-comp Neg-Past-Dec
'John didn't cook or eat the meal.'

(29) Tensed 1st Conjunct + Negation
John-i pap-ul mek-ess-kena kulus-lul chiu-ci
J-nom meal-acc eat-past-or dish-acc clean-comp
anh-ass-ta
Neg-Past-Dec
'Either John ate the meal or he didn't clean the dishes.'
(=/='John didn't eat the meal or clean the dishes.')

The discussion so far shows that the tensed verb will never be inserted as the head of a sub-IP level constituent in Korean and that the bare verb combines with each inflectional morpheme by cliticization. (or, at least not via Head Movement, i.e. VR)

3.2.2 Evidence: Semantics

In this section, I will provide some evidence against VR, based on the semantic interpretations of *same* and *different*. According to Carlson (1987) (and Takano (2000, 2002)), plural, distributive eventuality, conjoined NPs and plural

NPs allow a sentence to denote a plural eventuality, whereas singular NPs do not. Both sentence internal and external reading[3] are possible in (30a-b) where plural NP 'subscriptions' and conjoined NP 'Bob and Alice' yield sentence internal reading, which yields interpretations of two different magazine subscriptions and Bob's classes different from those of Alice's, respectively.

(30) a. The same salesman sold me these two magazine subscriptions.
b. Bob and Alice attend different classes.

However, sentences in (31) do not have sentence internal reading. It has sentence external reading only because they do not contain any elements that denote a plural eventuality. That is, in (31b) for instance, the place where Smith visited this year is different from that of his previous vacations, making it impossible to read "Smith went to several different places this year".

(31) a. The man went to the same play tonight.
b. Smith went to a different place on his vacation this year.

Korean exhibits the same pattern. Both sentence internal and external reading are possible in (32) due to the conjoined NP *John-kwa Bill* 'John and Bill'.

(32) John-kwa	Bill-i	kathun/talun	yenghwa-lul
John-and	Bill-Nom	same/different	movie-acc
po-ass-ta			
saw(watch)-past-dec			

3) For sentence internal and external readings, consider example (i).

(i) John and Mary attend different classes.

Sentence (i) has two different meanings (a-b).
(a) John attends a different class than Mary attends. (sentence-internal reading)
(b) John and Mary attend different classes than Sue attends. (sentence-external reading)
The interpretation (a) is sentence-internal in the sense that the comparison is available due to the meaning of the sentence itself. The interpretation (b) is sentence-external in the sense that it is anaphoric to the discourse referent previously introduced.

'John watched the same movie that Bill did./John watched a different movie than Bill did.' (sentence-internal reading)
'John and Bill watched the same movie that I did./John and Bill watched a different movie than I did.' (sentence-external reading)

On the other hand, sentence (33) does not have sentence internal reading. It has external reading only because it does not contain any elements that denote a plural eventuality.

(33) Bill-i kathun/talun yenghwa-lul po-ass-ta
Bill-Nom same/different movie-acc saw(watch)-past-dec
'Bill went to the same/a different movie.'

This semantic property of *same* and *different* can be used as a diagnostic for conjoined structure. As Carlson notes, RNR that derives (34a) from (34b) is problematic. Both sentence internal and external reading are possible in (34a), while only sentence external reading is possible in (34b). Thus, it is problematic to derive (34a) from (34b).

(34) a. John maligned, and Mary praised, the same recording artists.
b. John maligned the same recording artists and Mary praised the same recording artists.

Likewise, sentence internal reading is possible in (35). However, if we assume that (35) involves RNR (VR) analysis, (35) will be analyzed as in (36).

(35) John-i orange-lul han-kay kuliko
J-nom orange-acc one-CL and
Mary-ka sakwa-lul two-kay
Mary-Nom apple-acc two-CL
kathun/talun salam-eykey cwu-ess-ta
same/different person-DAT give-past-dec
'John gave one orange to the same person that Mary gave two apples to./John gave one orange to a different person than Mary gave two

apples to.' (sentence-internal reading)

(36) [$_{CP}$ [$_{TP}$ [$_{TP}$ John-i t_j orange-lul han-kay t_i]
kuliko [$_{TP}$ Mary-ka t_j sakwa-lul two-kay t_i]]
kathun/talun salam-eykey$_j$ cwu-ess-ta$_i$]

On this RNR (VR) analysis, 'kathun/talun' originates from the trace position within each conjunct TP and is thus interpreted there. So, it does not derive sentence internal reading unlike (35). This shows that (35) is not derived as in (36). Specifically, the derivation in (36) implies that each conjunct denotes a singular eventuality, as confirmed by (37), which lacks a sentence-internal reading. This is the crucial argument against RNR (VR).

(37) John-i kathun/talun salam-eykey orange-lul han-kay
John-Nom same/different person-Dat orange-Acc one-CL
cwu-ess-ta
give-pst-dec
'John gave an orange to the same person/to different persons.'

4. A Proposal

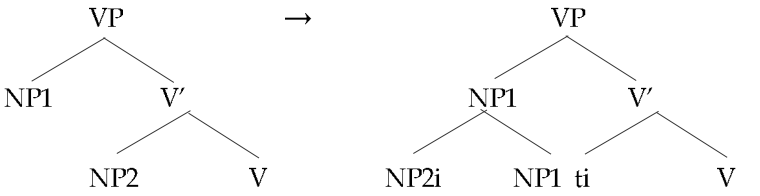
So far we have seen that there is no VR in Japanese and Korean. However, even analyses against VR (Fukushima 2003, Takano 2002) cannot explain sentences like (38) (Previous Example 1), where no verb is present at all. Although Fukushima's analysis provides a nice insight for those constructions in question, the Korean sentence (38) where no classifier is found is still open to the full explanation.

(38) Na-nun colep senmwul-lo [John-eykey kempwute-lul,
I-nom graduation present-as J-dat computer-acc
Mary-eykey cacenke-lul] saynkakha-ko-iss-ta.
M-dat bike-acc think-comp-nonpast-dec
'As for graduation present, I am considering (giving) John a computer and (giving) Mary a bike.'

Also, in order to account for the surprising constituents in Japanese, Takano devised a non-standard mechanism called 'Oblique Movement'. Here, Oblique Movement is movement of an element to another element that does not dominate it. Following Saito (1994) and Sohn (1994), it is assumed that oblique movement involves an adjunction. As one example of oblique movement, I will show how the unusual constituent in cleft sentence (39) is derived in (40). (Takano 2002:257)

(39) John-ga ageta no wa hon-o Mary-ni da.
John-Nom gave NM Top book-Acc Mary-Dat is
'It is a book to Mary that John gave.'

(40)



NP1 = Mary-ni, NP2 = hon-o, V = ageta

Assuming that the indirect object 'Mary-ni' is higher than the direct object 'hon-o' (Hoji 1985; Takano 1998) and that only leftward adjunction is possible (Kayne 1994, Contra Sohn 1994), the direct object 'hon-o' undergoes oblique movement and adjoins to the indirect object 'Mary-ni', forming a new constituent.

To derive the cleft sentence (39), this newly formed constituent 'hon-o Mary-ni' undergoes movement within the embedded clause and gets deleted at PF under identity with the focus element. Thus, before PF deletion, the example (39) has the structure in (41).

(41) [hon-oi [Mary-ni]]j John-ga tj ti ageta no wa
[hon-o [Mary-ni]] da

However, since 'Oblique Movement' assumes the existence of a certain verb even in (42), we are forced to explain why the verb underwent a deletion, which

is not satisfactorily answered by the proponents of 'Oblique Movement' (Takano 2002).

(42) colepsenmwul-lo-non John-un [Mary-eykey CD-lul]
graduation present-for-Top John-nom M-dat CD-acc
kuliko [Sue-eykey Computer-lul] sayngkakha-ko-iss-ta
and Sue-dat Computer-acc consider-prog-dec
'As for graduation present, John is considering (giving) Mary CD and (giving) Sue Computer.'

This type of 'missing verb' phenomena[4)] are rampant in Korean, virtually with all possible combinations of structural and semantic Case marked NPs as in (43).

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4) Below are more examples of 'surprising constituents'.

(i) kwawoyhwaltong-ulo-nun na-nun [khun ay-eykey violin-ul]
extracurricular.activities-for-Top I-Top the,first.one-dat violin-acc
kuliko [cakun ay-eykey piano-lul] sayngkakha-ko-iss-ta
and the.second.one-dat piano-acc consider-prog-decl
As for extracurricular activities, I am considering (teaching) the first one to play the violin and (teaching) the second one to play the piano.

(ii) colepyoken-ulo-nun ku tayhak-un
graduation.requirement-for-Top the university-Top
[hakpwusayng-eykey TOEFL sengcek-ul] kuliko
undergraduate.students-dat TOEFL score-acc conj
[tayhakwonsayng-eykey nonmwum-ul] sayngkakha-ko-iss-ta
graduate.students-dat paper-acc consider-prog-decl
'As for graduation requirements, the university is considering (having) undergraduates (submit) TOEFL score and (having) graduates (submit) a paper.'

As indicated in the translation (i-ii) above, various verbs can be left unexpressed/suppressed in Korean.

(43) kansik-ulo-nun [Mary-nun sakwa-lul] kuliko
snack-for-Top M-nom apple-acc and
[Sue-nun banana-lul] sayngkakhan-ta
Sue-nom banana-acc think-dec
'As for snack, Mary considers (eating) apples and Sue considers (eating) bananas.'

It is worth noting that if Case markers are dropped in these constructions as in (44), they are no longer acceptable, making them syntactically and semantically awkward.

(44) a.* sayngilsenmwul-lo-non John-un [Mary CD] kuliko
birthday present-for-Top John-Nom Mary CD and
[Sue Computer] sayngkakha-ko-iss-ta
Sue Computer consider-prog-dec
'As for birthday present, John is considering (giving) Mary a CD and (giving) Sue a Computer.'
b.* kansik-ulo-nun [Mary sakwa] kuliko
snack-for-Top Mary apple and
[Sue banana] sayngkakhan-ta
Sue banana think-dec
'As for snack, Mary considers (eating) apples and Sue considers (eating) bananas.'

These observations reveal that case markers in Korean possibly play a crucial role in syntactic combination (Choi 2007, inter alia). However, the claim that Case markers are syntactic functors is not enough to account for the sentences because the accusative marked nominal fails to combine with a verb simply due to the fact that there is no verb to combine with. It thus is necessary to propose that Case markers be semantic functors at the same time. For example, the Accusative-marked nominal looks for a verb to continue a combination process, which is blocked again by the absence of verb in (42). At this point, some semantic process occurs, which makes it possible to insert a contextually inferable verb (pragmatically relevant verb). To put it in another way, Case

markers must be treated as elements which have lexically specified higher type elements. Then they must be semantically specified for a verb which can be contextually instantiated. For instance, the Accusative Case marker *-lul* would have the following semantic interpretation (45).

(45) λy[λP[P(y)]]

Then the accusative marker first combines with a nominal (CD in this case) to yield (46a). If a verb exists, the accusative-marked nominal combines with the verb, which is its argument. However, even in case where no verb is present, the combination process can proceed by providing a phonologically null verb which is contextually relevant (notated by [VERB] in (46b)).

(46) a. CD-lul → λP[P(CD)]
b. CD-lul ∅[CWU-TA] → ∅[CWU-TA](CD)

Again, the underlying assumption in this approach is that Korean Case markers not only play a role as combinatorial functors but also should be treated as a functor for semantic interpretations. This claim is a non-standard view on Case markers in the sense that the Accusative and the Nominative markers are usually regarded as structural Case[5] without semantic contributions. In spite of my claim's being of non-standard, the semantic interpretation I have in mind is in fact a kind of vacuous mechanism in that the interpretation takes an argument and then a predicate in turn without adding new information. This process thus might be understood parallel to the standard view of Case markers (Nom, Acc) as structural Cases.

5. Conclusion and Implications

Verbs do not combine with affixal functional categories by VR in Japanese and Korean. This is significant in the sense that we can raise some important

5) Under minimalism, Case features are checked against functional heads such as T or AgrO.

questions and draw implications from this fact. First, the fact that affixes can be separated from their hosts shows that the (strong) Lexicalist Hypothesis which states that affixation occurs in the lexicon must be reconsidered.

Second, although it is obviously true that Kayne-style VR account provides a reasonable way to account for various phenomena in English-type isolate languages, the same mechanism does not capture the properties found in dependent-marking languages such as Japanese and Korean. Rather my observation and analyses suggest that strict head-final languages must be treated differently from strictly head-initial languages. Along the same line, Fukui and Sakai (2003) proposed that strictly head-final languages such as Japanese are more likely to have PF/Morphological-merger.

Third, I claimed that the 'surprising constituents' are independently motivated by some syntactic elements such as Japanese classifiers and Korean Case markers. In other words, in case of Korean Case, Case markers play very significant roles in establishing syntactic dependencies. Furthermore, they not only serve as syntactic functors but also semantic functors which enable us to insert some contextually relevant verbal elements if they do not phonologically exist.

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