

A Note on Particle Stacking*

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This paper critically examines the problems of selection with the syntactic treatment of particle stacking as presented by Sells (1995), and tries to find a possible solution to them. Reviewing the analysis proposed by Koopman (2005) to resolve the problems of selection, this paper points out that her analysis is also problematic though intriguing. Finally, a potential solution is proposed in this paper that adapts Kim's (2009) approach to the status of postpositions in Korean.(Andong National University)

Key Words particles, particle stacking, lexicalist approach, problems of selection, PLS, antisymmetry, parameter

1. Introduction

As is well known, the post-nominal affixes in Korean are called particles, and a lot of phenomena related to them enrich the research in Korean syntax. Of such phenomena, the one that this paper tries to address is particle stacking. Especially, the main concern of this paper is Sells's (1995) criticism of a syntactic approach to particle stacking that is based on the head-movement analysis. He claims that the verbal and nominal morphologies in Korean and Japanese are not determined by syntactic operations like movement, the reason for which is that the verbal endings and nominal particles in these languages do not show characteristics of syntactic heads. Thus, Sells (1995) proposes a strong lexicalist approach in which the verbal and nominal morphologies in Korean and Japanese are fully determined in the Lexicon. However, in this paper we can see that the lexicalist approach like Sells's (1995) has more weaknesses than strengths. On the other hand, admitting that Sells's (1995) criticism is to the point, Koopman (2005) proposes a solution to the problems with the movement approach by adapting Kayne's (1994, 2003) antisymmetry approach. Though interesting, Koopman's analysis is not unproblematic because it

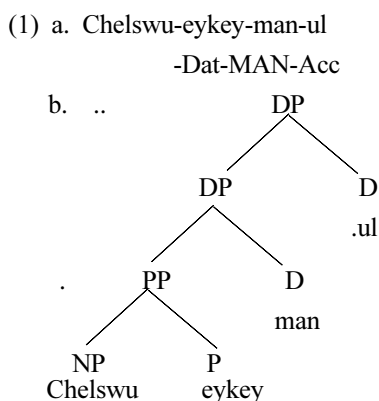
* I would like to express my gratitude to two anonymous reviewers for their helpful comments and sharp criticism. All errors are, of course, mine.

allows massive movements that have little motivation. Thus, after examining Sells's (1995) and Koopman's (2005) analyses, with its focus mainly on Korean data, this paper will explore a solution to the problems that Sells (1995) has pointed out.

The organization of this paper is as follows. Section 2 reviews the gist of Sells's (1995) lexicalist approach and discusses some of its problems. Section 3 shows Koopman's (2005) antisymmetry approach to Korean (Case) particle stacking and reveals its problems. Section 4 explores a possible solution to the problems with the syntactic treatment of Korean (Case) particle stacking in order to strengthen the logic of the syntactic approach.

2. Problems with the Strong Lexicalist Approach

The most popular analysis of Korean (Case) particles in the realm of Korean linguistics is the one that treats them as syntactic heads (cf. Lim 1991, Kim 2011). Though there are certain variations in assigning them to syntactic categories, the analysis posits the structure of Korean nominal phrase under the DP hypothesis as follows (cf. Abney 1987, Kim 1999).¹



However, addressing the verbal and nominal morphologies in Korean and

¹ We will not go into details about the motivation of this analysis because it is too big an issue to address fully in this paper. The reader should refer to Lim 1991, Kim 1999, Han 2003, Kim 2011 and references cited therein for details of the particles-as-heads analysis.

Japanese altogether, Sells (1995) provides some pieces of evidence that seem to reject the syntactic treatment of Korean (and Japanese) verbal endings and nominal particles. Of them, the most convincing is his observation that the syntactic approach seems to be unable to account for the problem of particle stacking.² See the following example.

- (2) Swuni-hanthey-kkaci-nun cwu-ess-ta
 -Dat-even-Foc give-Past-Dec
 ‘I gave it even to Suni.’

According to Sells (1995), it is a lexical property of the verb *cwu-* ‘give’ that determines dative case on the goal argument, expressed by *-hanthey*. However, the two so-called D elements, *-kkaci* and *-nun* intervene between *cwu-* and *-hanthey*. If all of these particles are heads that project phrases, then *cwu-* is separated from its dative argument by the two intervening phrasal projections. In other words, analyses like the one in (1) cannot capture our intuition about the fact that *cwu-* selects a project headed by *-hanthey*. In addition, Sells (1995) claims that there is further evidence that the syntactic approach cannot account for the Korean nominal morphology. Consider the following sentence.

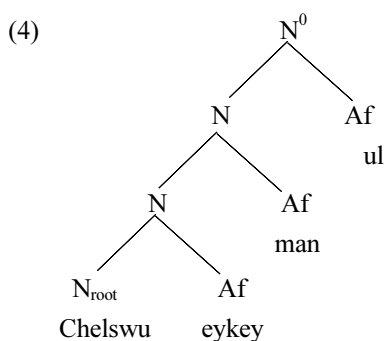
- (3) [Sensayng-nim-tul]-kkeyse-man-i kulen il-ul ha-si-pnita.
 [teacher-Hon-Pl]-Hon.Sub-only-Nom such work-Acc do-Hon-Dec
 ‘Only teachers do such work.’

What attracts Sells’s (1995) interest is the honorific subject marker *-kkeyse* in sentences like this. Though it falls in the same morphological slot as postpositons, one of its roles is marking the nominative Case of the subject. As Sells (1995) correctly points out, this element seems to be even more of a “grammatical” marker than is of a regular nominative marker. Thus, it can’t mark syntactic subjects, nominative objects, or non-thematic adjuncts as a regular nominative marker does. Sells (1995) consequently claims that *-kkeyse* marks only nominative subjects.

² Schütze (1996, 2001) provides a comprehensive solution to the problems of Case stacking in Korean, which, I think, does not completely solve the problems noted by Sells (1995). I will offer some criticism of Schütze’s (1996, 2001) approach elsewhere.

Furthermore, he argues that the syntactic approach cannot account for why the two subject markers, *-kkeyse* and *-i* can simultaneously occur in different slots respectively in (3). On the other hand, he makes the point that the lexicalist approach proposed by him can explain the cooccurrence of the two markers since it is not uncommon that the same information can be multiply marked in morphology.

In conclusion, according to Sells (1995), the most plausible alternative to the problematic syntactic approach is his strong lexicalist analysis under which particle stacking is determined in the Lexicon in which particles are combined with a nominal root as schematized in (4).³



A question we are to ask now is whether the word structure in (4) can solve the problems that examples like (2) and (3) impose. With unnecessary details eliminated, the gist of Sells's (1995) approach is that the noun in (4) can satisfy the selectional feature of verbs like *cwu-* since *Chelswu-eykey-man-i* is also a noun with a dative affix just as *Chelswu-eykey* is. As such, the strong lexicalist approach proposed by Sells (1995) suggests that Korean particles are declensional endings which are part of nominal words but not of independent syntactic heads.

However, the points Sells (1995) has made with respect to the problems with the syntactic approach can be refuted. First of all, the double marking of the subject with *-kkeyse* and *-i* can be made non-redundant if we treat the former as an agreement marker but not as a Case marker (cf. Kim et al 2006).⁴ In addition, the

³ This is reminiscent of Chomsky's (1993) lexicalist proposal to form fully inflected words in the lexicon, which he quickly discarded.

⁴ Sells (1995) rejects the idea that *-kkeyse* is an honorific agreement marker because he follows Han (1991) and Park (1991) in claiming that the "agreement" marked by *-kkeyse* is not syntactically

strong lexicalist approach reaches an impasse with the following examples.

- (5) a. [[Chelswu-wa [etten namca]]-ka] o-ass-ta.
 -and some man-Nom come-Past-Dec
 ‘Chelswu and a man came.’
 b. [Chelswu-wa] [[etten] [namca-ka]] o-ass-ta.

The strong lexicalist approach will take the structure of the subject in (5b) to be correct. As one can easily observe, the first conjunct NP/DP *Chelswu-wa* is stranded away from the second conjunct, which is too awkward an analysis to accept. This analysis in which *Chelswu-wa* is conjoined with *etten namca-ka* but not with *etten namca* is obviously counter-intuitive (cf. Im 1997, 1999). As (5a) shows, the most plausible analysis of the subject NP/DP is the structure in which *-ka* is combined with the NP consisting of two conjuncts *Chelswu-wa* and *etten namca*.

Another fact that we should note is that Sells's (1995) approach does not (or cannot) distinguish between derivational morphemes from inflectional or syntactic ones, a distinction necessary for the correct analysis of Korean phrase structure. In Sells's (1995) analysis, the Korean copula *-i-* is like a verbalizing suffix combined with an N in the lexicon. One can easily see the flaw of this analysis given the fact that *ani-*, the negative form of *-i-*, is a complex word derived by combining the negative adverb *ani* and the copula as shown in (7b). Since Sells (1995) himself assumes that this negative element is an adverb, and therefore it does not participate in the (suffixal) morphology at all.⁵

necessary in the same sense that more familiar agreement is. According to Sells (1995), the most important aspect of the agreement marked by *-kkeyse* is that honorific subjects and nonhonorific verb forms might not be pragmatically unmarked, but they are not strictly ungrammatical. However, I can't understand what the expression 'strictly ungrammatical' means. It can be admitted that the absence of *-kkeyse* is allowed in the presence of the honorific ending *-si*, but the presence of *-kkeyse* necessarily requires the verb to be marked with *-si*. We will not go further for this issue. But, for the mechanism of honorific agreement in Korean, see Kim 1999 and references cited therein.

⁵ It should be noted that *ani-* is not a suppletive form of *ani-i-*, but a contracted form, one piece of evidence for which is the common embedded declarative ending *-la* for *-i-* and *ani-*. Since the usual declarative ending for embedded verbs is *-ta*, the most plausible explanation for the fact that the copula and its negative form take the same declarative ending is the analysis that takes *ani-* as a complex word consisting of *ani-* and *-i-*.

- (6) a. Ku namca-ka pemin-i-ta.
 the man-Nom criminal-Cop-Dec
 ‘The man is the criminal.’
 b. Ku namca-ka pemin-i ani-ta.
 the man-Nom criminal-Nom Neg.Cop-Dec
 ‘The man is not the criminal.’
- (7) a. [_V [_N pemin] ita]]
 b. [_N [pemin]-i] [_V [_{Neg} ani] ita]

Furthermore, his approach is in a predicament when it comes to the analysis of other copula-like suffixes including *-tap-* and *-sulep-*.⁶ These two copula-like suffixes are treated as derivational suffixes in traditional Korean linguistics, but they show different behavior with respect to the units they are attached to, which strongly suggests that their categorial statuses are different from each other. The most striking difference between them is obviously shown by the fact that *-tap-* can be combined with a phrasal category while *-sulep-* cannot. However, it is difficult for the strong lexicalist approach to provide a natural explanation for this difference. See the following example.

- (8) a. Yeksi Chelswu-nun wuswuha-n hakca-tap-ta.
 as-expected -Top excellent-Adn scholar-TAP-Dec
 ‘As expected, Chelswu behaves as an excellent scholar.’
 b. *Yeksi Chelswu-nun wuswuha-n hakca-sulep-ta.
 as-expected -Top excellent-Adn scholar-SULEP-Dec
 ‘As expected, Chelswu is like an excellent scholar.’
 c. [_V [_N hakca]-tap/slep-]

The ungrammaticality of (8b) is expected with the structural analysis of *hakca-sulep-* in (8c), given that *wuswuha-n* ‘excellent’ is an adnominal form of the stative verb *wuswuha-*. Since an adnominal form cannot modify a verbal element, *wuswuha-n* is unable to modify the surface verb *hakca-sulep-*. On the other hand, the same *wuswuha-n* is capable of modifying *hakca-tap-*, which is analyzed in the same

⁶ These two suffixes are similar in their meaning, which can be roughly translated into ‘behave like’ or ‘naturally be like’ in English.

way as *hakca-sulep-* in (8c). How can a verbal element like *hakca-tap-* be modified by an adnominal form? I don't think that the strong lexicalist approach proposed by Sells (1995) can provide a convincing answer. After all, the only way to account for the grammaticality contrast in (8), I think, is to admit that there exist syntactic suffixes.

In this section, we have seen that the strong lexicalist approach taken by Sells (1995) creates more problems than it solves. However, this does not mean that his sharp criticism about the problems of selection, which the syntactic approach must solve, also fails. In the next sections we will explore a possible syntactic treatment of the problems of selection.

3. Koopman's (2005) Antisymmetry Treatment

3.1. Antisymmetry and the Principle of Locality of Selection

On the basis of his own Linear Correspondence Axiom (LCA; Kayne 1994), Kayne (2003) presents a way of building nominal projections headed by Case particles and/or postpositions in languages like Japanese. According to him, the postpositional head P and the K head for Kase is always merged outside VP. Translating his analysis into one for the Korean language, the following course of derivation can be posited in order to build a construction like *hakkyo-ey ka-* (school-to go) 'go to school'.

- (9) a. ... ka hakkyo → merger of K
- b. ... K ka hakkyo → movement of DP to Spec-K
- c. ... [hakkyo₀₁ K ka t₁] → merger of P'⁷
- d. ... P' [hakkyo₀₁ K ka t₁] → movement of VP to Spec-P'
- e. ... [ka t₁]₂ P' [hakkyo₀₁ K t₂] → merger of P
- f. ... ey [ka t₁]₂ P' [hakkyo₀₁ K t₂] → movement KP to Spec-P
- g. ... [hakkyo₀₁ K t₂]₃ ey [ka t₁]₂ P' t₃

⁷ According to Kayne (2003), P' is an unpronounced double of P to whose Spec VP moves. One of the problems with Kayne's antisymmetry analysis is the existence of omnipresent place-holders like P'.

The most striking in Kayne's (2003) analysis is the assumption that the nominal functional categories taken for granted hitherto are actually clausal functional categories. Hence, functional categories like K and P are introduced even outside VP. Though it seems difficult to justify such massive movements in building such a simple construction like *hakkyo-ey ka-*, it might be interesting to try to apply Kayne's antisymmetry analysis to languages like Korean and Japanese. Koopman's (2003) work is an excellent example, which we will examine soon.

On the other hand, Sportiche (2005) claims that reconstruction does take place with A-movement. The reason why he makes this claim is that there are obvious cases of scope reconstruction. See the following examples.

- (10) a. A southerner is predicted to win every senate race.
 b. It is predicted that for every senate race, there is a (possibly different) southerner who will win it.
 c. For every senate race, there is a (different) southerner who is predicted to win it.
 d. For every senate race, it is predicted that there is a (different) southerner who will win it.

According to Sportiche (2005), the readings paraphrased in (10c,d) correspond to readings in which the sentence expresses a summary of individual predictions, one for each senate race. Given that the availability of such readings is not relevant for the possibility of A-reconstruction, (10b) is the most relevant for his purpose. Sportiche (2005) claims that the sentence in (10a) can most naturally report a unique global prediction corresponding to the reading in (10b). This means that *every senate race* can outscope *a southerner* with both of them in the scope of the verb *predict*. Thus, one input for scope computation is (11a).

- (11) a. is predicted [a southerner to win every senate race].
 b. a southerner will win every senate race.

As the prominent reading of (11b) shows, *every senate race* can outscope *a southerner*. Thus, Sportiche (2005) suggests that there seems to be solid grounds for concluding that reconstruction under A-movement takes place for scope computation.

Along with this observation, there are cases where it seems that one cannot assume there is reconstruction. Thus, Sportiche (2005) claims that we face the following two questions

- (12) a. What is the mechanism by which scope reconstruction takes place, when it does?
- b. What explains cases that should be consistent with this mechanism but fail to allow scope reconstruction?

On the question in (12a), Sportiche (2005) takes it that reconstruction is just interpretation of copies, and no other mechanism is involved. On the question in (12b), Sportiche (2005) suggests that cases in which there is no (relevant) reconstruction are cases in which there is no (relevant) movement. Consider the following sentence.

- (13) In 1986, *no* integer had been proven to falsify Fermat's theorem.

From the perspective of the standard QR analysis (cf. May 1985), *no integer* is raised from the embedded subject position, and this raising is regarded as a typical A-movement. Also, since A-movement is supposed not to reconstruct, the verb *prove* cannot outscope *no integer*. However, Sportiche (2005) does not follow this standard line of analysis. He claims that there is no selectional relation between V and other properties of DP. According to him, V selects only NP but not DP, and D is not generated in VP but in the surface position. Hence, in (12) *no* is not merged as part of the embedded VP but is merged in its surface position within the matrix clause. Consequently, (14) is not the underlying structure for (12) but (15a) is, and (15b) partially represents the structure of (13).

- (14) In 1986, had been proven to no integer falsify Fermat's theorem.
- (15) a. Underlying Structure: No ... prove ... [embedded clause integer falsify ...]
- b. Surface: [No integer] had been proved [to integer falsify ...]

Sportiche (2005) bases the movement of *integer* into the DP headed by *no* on a requirement that he calls the Principle of Locality of Selection (PLS), which requires

Koopman (2005) claims that a syntactic account is possible for the problems of selection pointed out by Sells (1995), in terms of Kayne's (2003) antisymmetry and Sportiche's (1999, 2005) PLS. The problems of selection are the most striking in sentences like (16), in which particle stacking keeps the nominal expression from satisfying the selectional property of the verb *cwui*-.

- According to Koopman (2005), Sportiche’s PLS provides a solution to Sells’s (1995) problems of selection: the particles are indeed heads, but at the point in the derivation where selection is locally satisfied, they have not yet been merged. They are merged later in the derivation, and they attract the focused constituent to their Spec as in Kayne 2003, yielding surface strings like that in (16). A simplified derivation for (16) illustrates this analysis as in (17).

- (17) a. [_{VP} Swuni [cwu ...]] → Merge P_{hanthey}, attract DP (Swuni)
give
b. [_{PP} Swuni [hanthey [_{VP} Swuni [cwu ...]]]] → Merge F, move VP
Dat give
c. [_{FP} [[cwu ...]] [F [_{PP} Swuni [hanthey [cwu ...]]]]] → Merge
give Dat
kkaci, move remnant PP

- d. [[_{PP} Swuni [hanthey ...] [kkaci [_{VP} cwu ...]]] [F [_{PP} Swuni
Dat even give
hanthey]]]] → Merge T, move remnant VP
- e. [_{TP} [cwu ...] [ess [[_{PP} Swuni hanthey ...] [kkaci [_{FP} [[cwu]]]]]
give Past Dat even
→ Merge nun, move PP
- f. [_{TopP} [[[_{PP} Swuni hanthey ...] [kkaci ...]]] [nun [_{TP} [cwu ...] [ess
Dat even Top
[[_{PP} Swuni hanthey ...] [kkaci]]]]]] → Merge ta, move TP; TP
pied-pipes TopP (nunP)
- g. [_{DeclP} [_{TP} Swuni hanthey kkaci nun cwu ess] [ta [Swuni
Dat even Top give Past Dec
hanthey-kkaci-nun-cwu-ess]]]

According to Koopman (2005), the movements in (17b, d, e, f and g) are forced by the PLS, selection being satisfied after movement. The step in (17c) creates the remnant PP necessary for the movement in (17f).

The line of analysis proposed by Koopman (2005) also intriguingly accounts for Lee's (2004, 2005) observation of scope interactions triggered by the Korean focus particle *man*. Let's take a look at the following examples.

- (18) a. Chelswu-man-ul motun-salam-i salangha-n-ta.
 -only-Acc every-person-Nom love-Pres-Dec
 ‘Everyone loves Chelswu (and no one else).’
 (every > only, *only > every)
- b. Chelswu-hako-man motun-salam-i akswuha-yess-ta.
 -with-only every-person-Nom shake.hands-Past0Dec
 ‘Everyone shook hands with only Chelswu.’ or
 ‘Chelswu is the only one with whome everyone shook hands.’
 (every > only, only > every)

In (18a), the accusative object that precedes the universal subject cannot outscope the subject QP, but in (18b), the PP preceding the universal subject can take scope either over or under the quantified subject. Lee (2004, 2005) argues that word

structure accounts for these scop interactions.⁸ Koopman (2005) argues that these scope facts are accounted for very similarly by the proposal made by her, in which *man* is merged directly as a Focus head, higher than Acc, provided that we accept head-complement order (cf. Kayne 1994). The linear string *man-Acc* shows that *man* must be merged immediately above Acc, in conjunction with the universal hierarchy Focus > Case, since this is the only way to form this particular surface constituent.

- (19) [_{FocP} NP [_{man} [_{AccP} NP [_{ul} [... NP ...]]]]]

How can we account for the scope facts Lee (2004, 2005) has observed with this line of analysis? The answer to this question by Koopman (2005) is that *man* cannot be merged higher than nominative subject when it is combined with Acc, whereas it can be merged higher when it is combined with P. The ban on the higher merger of *man* is drawn from a language-specific filter that blocks the order of Acc-*man*. On the other hand, there is no filter that blocks the order of P-*man*, and hence there also is the scope interaction observed in (18b). This explanation is briefly shown below.

- (20) a. subject-Nom ... NP *man* NP *ul* (No scope interaction)
 b. *NP-Acc *man* ... subject-Nom ... NP-Acc ... (ban on Acc-*man*)
 (21) a. subject-Nom ... NP-P *man* ... NP-P ... (subject > Foc)
 b. NP-P *man* ... subject-Nom ... NP-P ... (Foc > subject)

Based on Sportiches's (1999, 2005) PLS, Koopman (2005) believes that such an analysis can resolve what Sells (1995) criticizes about the syntactic approach to particle stacking. The PLS means that selectional dependencies should be satisfied locally. Thus, the movement of NP to Spec-Acc and to Spec-*man* in (19) is to satisfy the selectional properties of Foc and Acc.

Though certainly interesting, Koopman's (2005) analysis allows (and furthermore requires) the complement of a head to move to the specifier of the same head. Why does the complement that has already satisfied the head's selectional property locally, move to the Spec of the same head to satisfy that head's selectional property once again locally? This is an obvious violation of the spirit of Anti-Locality proposed by

⁸ We are not discussing the details of what Lee proposes to account for these scope facts. The reader should refer to Lee's own work (2004, 2005).

Grohmann (2000, 2003). For example, TP in (22b) is to move to Spec-CP in order to allow for the order of morphemes we want to be formed as in (22c).

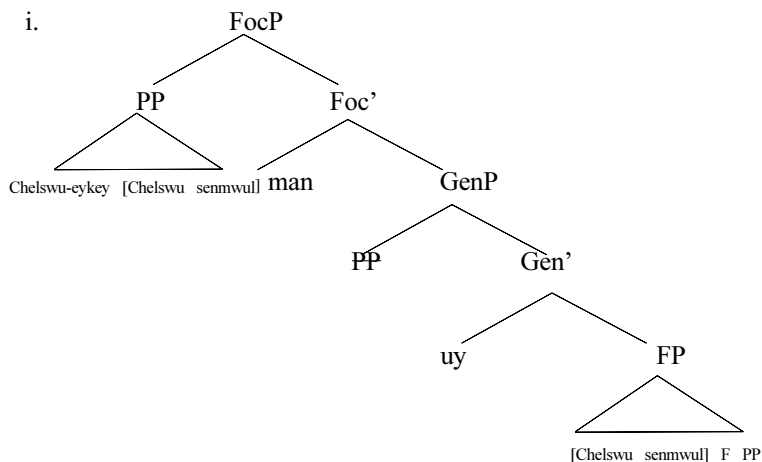
- (22) a. Chelswu-ka Swunhi-lul salangha-yess-ta.
 -Nom -Acc love-Past-Dec
 ‘Chelswu loved Swunhi.’
 b. [_{CP} ta [_{TP} Chelswu-ka Swunhi-lul salangha-yess]]
 Dec -Nom -Acc love-Past
 c. [_{CP} [_{TP} Chelswu-ka Swunhi-lul salangha-yess] ta t_{TP}]
 -Nom -Acc love-Past Dec

One thing to note in passing is the fact that the movement of TopP pied-piped with TP in (17f→g) is related to the movement in (20c), which is also very uncomfortable.

Furthermore, Koopman’s (2005) approach comes into trouble with nominal expressions like *Chelswu-ekey-man-uy senmwul* ‘Chelswu-Dat- Foc-Gen present (a present only to Chelswu).’ See the following steps of derivation.

- (23) a. [_{PP} eykey [_{NP} Chelswu [senmwul]]]
 Dat present
 b. [_{PP} Chelswu [eykey [_{NP} Chelswu [senmwul]]]]
 c. [_{FP} F [_{PP} Chelswu [eykey [_{NP} Chelswu [senmwul]]]]]
 d. [_{FP} [_{NP} Chelswu [senmwul]] F [_{PP} Chelswu [eykey [_{NP} Chelswu
 [senmwul]]]]]
 e. [_{GenP} uy [_{FP} [_{NP} Chelswu [senmwul]] F [_{PP} Chelswu [eykey [_{NP}
 Chelswu [senmwul]]]]]
 f. [_{GenP} [_{PP} Chelswu [eykey [_{NP} Chelswu [senmwul]]]] [_{uy} [_{FP} [_{NP}
 Chelswu [senmwul]] F [_{PP} Chelswu [eykey [_{NP} Chelswu
 [senmwul]]]]]
 g. [_{FocP} man [_{GenP} [_{PP} Chelswu [eykey [_{NP} Chelswu [senmwul]]]] [_{uy}
 [_{FP} [_{NP} Chelswu [senmwul]] F [_{PP} Chelswu [eykey [_{NP} Chelswu
 [senmwul]]]]]
 h. [_{FocP} [_{PP} Chelswu [eykey [_{NP} Chelswu [senmwul]]]] man [_{GenP} uy [_{FP}
 [_{NP} Chelswu [senmwul]] F [_{PP} Chelswu [eykey [_{NP} Chelswu

{senmwul}]}}]]



As one can see from the steps in (23a-h) and the resultant structure, the nominal expression *Chelswu-eykey-man-uy senmwul* is FocP in terms of the Koopmanian analysis. See the following sentence.

- (24) Swunhi-nun Chelswu-eykey-man-uy senmwul-ul cwunpiha-yess-ta.
 -Top -Dat-only-Gen present-Acc prepare-Past-Dec
 ‘Swunhi prepared a present only to Chelswu.’

To get this sentence in the light of Koopman’s (2005) analysis, the nominal expression *Chelswu-eykey-man-uy senmwul* should be merged in VP as the complement of the verb *cwunpiha-*. However, this nominal expression has the status of FocP as shown in (23i), which seriously undermines Koopman’s (2005) motivation that V always selects only the same category locally. Hence, we’d better seek another solution to the problems of selection unless the Koopmanian approach provides solutions to the problems of Anti-Locality and local selection.

4. Transparency of Functional Categories

Given the discussion so far, one question we may ask is this: ‘Is there any solution to the problems raised by sentences like (2)?’

- (2) Swuni-hanthey-kkaci-nun cwu-ess-ta
 -Dat-even-Foc give-Past-Dec
 ‘I gave it even to Suni.’

A promising solution we can consider is to adapt the approach Lee (2008) takes in order to account for the transitive subcategorizational relations among verbal endings. He proposes a rule like the one below.

- (25) If α subcategorizes β , and β γ , then α also subcategorizes γ .

In other words, Lee’s (2008) rule means that verbs like *cwu-* in (2) ultimately selects *-hanthey* by the transitive relations among *hanthey*, *kkaci*, and *nun*, if we assume that the general order among particles is ‘NP>P>X-lim>-Y-lim’ as Ahn (1988) observes.⁹ However, it seems difficult to apply a rule like (25) to the hierarchy of particles as in Ahn 1988 because there is no limit in the transition of subcategorizational features in (15) as it is.¹⁰ For example, rule (25) does not set a limitation in transmitting higher functional elements’ subcategorizational properties to lower functional elements, and hence verbs like *cwu-* can be regarded as selecting even the bare NP *Swuni*. Thus, we need to seek another syntactic solution.

In Kim (2009), I have proposed a solution to the problem of the status of postpositions in Korean. First of all, I classify Korean particles as in (26) below.

- (26) a. Postpositions: ey ‘to, at, in …,’ eykey ‘to,’ eyse ‘from, in …,’ lo

⁹ Lee’s rule is not completely alone since it reflects Choe’s (1937) concept of *Poco Ekan* ‘auxiliary stem.’ This concept is unique in that Choe treats Korean particles as elements that can result in category recursion of the stem they are attached to. Thus, when a verb stem is combined with an auxiliary stem, the result is another verbal stem, to which another auxiliary stem can be attached, and so on until a final ending occurs. Furthermore, Im’s (1997) mechanism of restructuring and Kim’s (1999) supercategory formation are also similar to Lee’s (2008) rule and Choe’s (1937) auxiliary stem system in spirit.

¹⁰ In fact, Lee (2008) proposes rule (25) only for selectional dependencies among verbal endings.

‘with, by ...’

- b. Type-I delimiters (P’s): kkaci ‘upto, including ...,’ pwute ‘from’
- c. Type-II delimiters (D’s): pakkey ‘nothing but,’ cocha ‘even,’ mace ‘even, at last,’ man ‘only,’ inama ‘at most’
- d. Type-III delimiters (D’s): ina ‘any, every,’ nun ‘topic,’ to ‘also, even’ iya ‘at least,’ ilato ‘even’
- e. Case particles (D’s): ka ‘nominative,’ lul ‘accusative,’ uy ‘genitive’

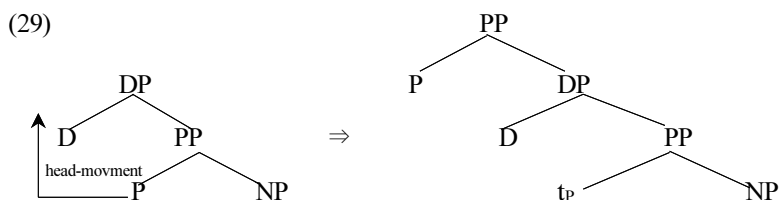
Then, I establish the order of combination among the particles as in (27).

- (27) NP + P + P (Type-I delimiters) + D (Type-II delimiters) + D (Type-III delimiters and Case particles)

Suppose my (2009) classification is on the right track and is supported by the discussion so far. Simplifying some of the details of the Korean nominal projection by fusing postpositions with Type-I delimiters and Type-II delimiters with Type-III delimiters and Case particles, we can notice the contrast between Korean and English nominal projections with order irrelevant.

- (28) a. Korean: D-P-NP
b. English: P-D-NP

From (28), we can find out that P is the closest particle to NP in Korean but the most distant element from NP in English. Thus, it is natural to think that the different behavior of P’s between the two languages is due to this distributional fact. A very interesting analysis with respect to this fact comes from Pesetsky and Torrego (2004). Under their analysis, English PP is formed by the movement of P which was generated inside DP as in (29).



If the analysis in (29) is viable in some way, we can say that the difference between Korean and English in the distribution of P is only apparent. Thus, in Kim (2009), I propose that the pre-movement structure in (29) be the universal base nominal projection, and that the post-movement structure is specific to languages like English. I further argue that this proposal enhances the uniformity hypothesis proposed by Chomsky 2001, Sigurðsson 2003, and Miyagawa 2010 (30), and the parallelism between the verbal projection and the nominal projection in the sense of Grimshaw's (2005) extended projection (31).

(30) Uniformity Hypothesis

In the absence of compelling evidence to the contrary, assume languages to be uniform, with variety restricted to easily detectable properties of utterances.

- (31) a. Verbal projection: C ... INFL ... v ... VP
 b. Nominal projection: D ... P ... n ... NP

Though my (2009) proposal is only tentative and should be refined to have a certain empirical coverage, let's assume that its line of reasoning is on the right track. Then, the question we can raise at this point is: "What is the factor that determines the movement and non-movement of P in English and in Korean?" A tentative answer I want to provide in this paper is that the factor is a parameter of transparency of functional categories with respect to selection. I suggest that the parameter have the following contents.

- (32) a. Functional categories are transparent for the categorial features of their complements in Korean.
 b. Functional categories are not transparent for the categorial features of their complements in English.

With this parameter, we can account for the movement and non-movement of P in English and in Korean. Given (32b), English D is opaque for the categorial feature of its complement P. Thus, the selectional property of a verb that selects P as its complement head cannot be satisfied in English if P does not move as in (29). On the other hand, there is no need for P-movement in Korean since Korean D's are

transparent for the categorial features of their complements including P. Thus, the selectional property of a verb that selects P is easily satisfied without movement in Korean.

5. Conclusions

Korean particles always raise interesting issues in Syntax. Among other issues triggered by Korean particles, this paper addresses the problem of particle stacking. It argues that the criticism made by Sells's (1995) strong lexicalist approach is not warranted and the problems of selection can be accounted for in another way. As the lexicalist approach is not satisfactory, we after all seek a syntactic solution. Koopman (2005), who also seeks a syntactic defense against Sells's (1995) criticism, proposes a very intriguing analysis of particle stacking on the basis of Kayne's (2003) antisymmetry and Sportiche's (1999, 2005) PLS, but we have seen that her analysis is not yet fully satisfactory due to some theoretical problems. After all, the approach taken in this paper is assuming a parameter that has influence on the movement and non-movement of P in different languages.

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