ON THE UNAVAILABILITY OF SUCCESSIVE-CYCLIC MOVEMENT VIA SPEC CP IN KOREAN*

Jungmin Kang
University of Connecticut

1. Introduction

This paper examines movement out of CP in Korean, and argues that this movement does not proceed via SpecCP. In particular, I present certain contrasts between Korean, Japanese and English regarding successive-cyclic movement via SpecCP, which involve binding ambiguity, Numeral Quantifier (NQ) floating, and A-movement out of CP. I show that Korean does not have successive-cyclic movement via SpecCP/SpecvP, and explore consequences of this state of affairs for the theory of phases.

2. The Data

The English sentence in (1) has three possible readings, depending on whether (i) *John* binds *himself*, (ii) *Bill* binds *himself*, or (iii) *Bob* binds *himself*. This binding ambiguity has often been cited as evidence for successive cyclic movement via SpecCP. Specifically, we can get reading (i) when the *wh*-phrase is in the Spec of the higher embedded CP, (ii) when the *wh*-phrase is in the Spec of the most deeply embedded CP, and (iii) when the *wh*-phrase is in its base-generated position.1

(1) [which picture of *himself*] does *John* think that *Bill* said that *Bob* would like to buy?

It has gone unnoticed that, surprisingly, the Korean counterpart (2) does not allow the intermediate binding reading (ii), where *Bill* binds *caki casin.*2

(2) [caki casin-uy etten sacin-ul] [John-un] [Bill-i] [Bob-i sako self-GEN which picture-ACC John-TOP Bill-NOM Bob-NOM buy siphehan-ta-ko] malha-yss-ta-ko] sayngkakha-ni]?

‘Which picture of himself does John think Bill said Bob would like to buy?’

In fact, in English the intermediate reading, i.e. reading (ii), is also somewhat difficult to

* I am grateful to Željko Bošković, Susi Wurmbrand, Jonathan Bobaljik, and Mamoru Saito for their helpful comments and suggestions. This material is partially based upon work supported by the National Science Foundation under Grant No. NSFSBE #0920888.

1 Other possible landing sites for the *wh*-phrase are the specifier positions of vP. Movement to these positions could also yield the interpretations in (i) – (iii). I put this issue aside for the moment and return to it later.

2 Among five native speakers consulted, three allow reading (i) and reading (iii) and two only allow reading (iii). Crucially, the reading in (ii) is not possible for any of them. As for reading (i), I speculate that for some speakers the scrambled *wh*-phrase is IP-adjoined so that *John* can c-command and bind *caki casin* while for some speakers the phrase in question moves to the specifier position of a separate projection (which means that *John* does not c-command the anaphor for these speakers).
obtain; however when the intermediate subject is the only potential binder, as in (3), it is easily available (cf. Barrs 1986).

(3) [which picture of *himself*] does *Mary* think that *Bill* said that *Sue* would like to buy?

In Korean, however, even when the intermediate subject is the only potential binder, intermediate binding relations are still not possible. In (4), a plural marker *tu*l co-occurs with the anaphor. Since only the matrix subject bears the plural marker in (4a), the matrix subject is the only possible binder. In the same way, the most deeply embedded subject is the only potential binder in (4c) and the intermediate subject is the only potential binder in (4b). Contrary to the English (3), even when the intermediate subject is the only potential binder, as in (4b), the sentence is not acceptable in Korean. That is, unlike English, the intermediate binding reading is not available in Korean regardless of the context.

   ‘Which picture of themselves do those students think Bill said Bob would like to buy?’

   ‘Which picture of themselves does John think those students said Bob would like to buy?’

   ‘Which picture of themselves does John think Bill said those students would like to buy?’

The unavailability of reading (ii) is surprising if we assume that the *wh*-phrase in (2) undergoes scrambling successive-cyclically, which means that it would have to stop in the Spec of the embedded CPs; these movements are in fact required by the Phase Impenetrability Condition (PIC) if CPs are phases (the PIC requires movement to proceed via phase edges). In other words, if the specifier position of each embedded CP in Korean is a possible landing site for the *wh*-phrase, as is the case in English, it is surprising that *Bill* cannot bind *ca*ki *casin* in (2).³

---

³ Assuming that the scrambled element is adjoined to the projection where the subject is located, *John-un* may be able to bind the anaphor in the anaphor’s surface position. For example, Bošković and Takahashi (1998) show that the second subject c-commands into the first subject of the multiple subject construction in (i), resulting in a Condition C violation. (ii) patterns with (i) in this respect (see also footnote 2).

(i) *[IP [John-i no heya]-ga [IP [karè]-ga anisindekiru]].
   *John*-GEN room-NOM he-NOM can feel relieved
   ‘It is John’s room in which he can feel relieved.’

(ii) *[IP [John-i no ha*ha*oya]-o [IP [karè]-ga semeta]].
   *John*-GEN mother-ACC he-NOM blamed
   ‘John’s mother, he blamed.’
This contrast between English and Korean poses a non-trivial question – first of all, does this contrast mean that A’-movement in Korean does not stop in the Spec of each embedded CP? If this is the case, how can the movement in question be possible at all considering the general assumption about movement, namely, that movement out of a phase is only possible through the edge of the phase?

Note that the absence of reading (ii) in (2) is not the only case that may be problematic for this general assumption about movement when it comes to Korean. As shown in (5), Numeral Quantifiers (NQ) such as sayngkakha can be stranded when the object noun maykcwu-lul undergoes scrambling.

(5) John-i t1 sayngkakha t2 beer-ACC John-NOM three-CL drink-ASP-DECL

‘John drank three bottles of beer.’ (Ko 2005)

In (6a), the NQ is stranded within the most deeply embedded CP. (6b) shows that the NQ can also be fronted along with the scrambled object noun.4

drink-ASP-DECL COMP say-ASP-DECL COMP think-MOOD-DECL

‘John thinks Bill said Mary drank three bottles of beer.’

drink-ASP-DECL COMP say-ASP-DECL COMP think-MOOD-DECL

‘John thinks Bill said Mary drank three bottles of beer.’

Now, if scrambling occurs successive-cyclically via intermediate Specs of CPs, we would expect that NQs can be stranded in the Spec of an embedded CP (see footnote 4). However, this seems not to be the case, as shown in (7).5 Again, the ungrammaticality of (7) is problematic under standard assumptions concerning successive-cyclic movement.

drink-ASP-DECL COMP say-ASP-DECL COMP think-MOOD-DECL

‘John thinks Bill said Mary drank three bottles of beer.’

drink-ASP-DECL COMP say-ASP-DECL COMP think-MOOD-DECL

‘John thinks Bill said Mary drank three bottles of beer.’

Notice in this respect that West Ulster English, which also allows Q-float under A’-movement, allows floating quantifiers in intermediate SpecCPs, as shown by McCloskey (2000).

4 Note that Korean (non case-marked) floating numeral quantifiers can float only under A’-movement of their associated NP, as shown in Fitzpatrick (2006).

5 I again put aside the issue of SpecvP as a landing site of successive-cyclic movement, returning to it later.
Another argument involves A-movement out of CP in Korean, which is standardly assumed not to be possible given that A-A'-A movement, i.e. improper movement, is disallowed. In fact, it has been observed in the literature that Japanese exhibits A-movement out of CP. For example, Tanaka (2002) shows that Japanese (9) involves A-movement of Bill into the matrix clause (see also Bošković to appear). His arguments are as follows: (i) orokanimo in (9) can only modify the matrix verb which means Bill is in the matrix clause; (ii) to in (9) is standardly taken to be C; (iii) Bill’s binding properties indicate that it is located in an A-position. In (10), karera, which starts as the embedded clause subject, binds the anaphor, which indicates that it first undergoes A-movement. In addition, Tanaka shows that the construction in question cannot be handled in terms of control, i.e. he shows that (9) indeed involves movement into the matrix clause. That is, this movement is basically object shift, but out of a CP (see also Takeuchi 2010).

   John- NOM Bill- ACC stupidly genius-COP- COMP think-PROG
   ‘John thinks of Bill stupidly as a genius.’ (Tanaka 2002)

(10) Karera1-o otagai-no sensei-ga t1 [t1 baka-da-to] omot-teiru.
    them1-ACC each other1’s teacher-NOM t1 [t1 fool COP- COMP] think-PROG
    ‘Them1, each other1’s teachers think of t1 as fools.’ (Tanaka 2002)

All these arguments also extend to Korean examples like (11). That is, the sentence in (11) involves A-movement of Bill out of the embedded CP. Again, if CP is a phase in Korean, then given the PIC, this movement should not be possible since it would involve improper movement (A-A’-A).

    John- NOM Bill- ACC stupidly genius-COMP think-MOOD-DECL
    ‘John thinks of Bill stupidly as a genius.’

3. Analysis

I have shown above that Korean does not allow binding into intermediate SpecCPs, cannot float quantifiers in such positions, and allows A-movement out of CPs. The first two properties straightforwardly argue against successive-cyclic movement via SpecCP in Korean. This poses, however, a non-trivial question - how the movement in question can be possible at all - considering the general assumption that movement out of a phase is only possible through the edge of the phase.

The availability of A-movement out of CP also raises a similar issue: under the standard assumption of successive-cyclic movement, the moving element should stop by the specifier position of CP. Since this is an A’-position, A-movement from this position should not be possible. Crucially, this movement is puzzling only if we assume that CP is a phase, given the PIC. In other words, as noted by Bošković (to appear), if CP is not a phase in Korean, the example in (11) is no longer surprising since Bill in (11) then does not need to move through the specifier position of the embedded CP. Consequently, the example in (11) does not in fact have to involve improper movement (A-A’-A).

Furthermore, if CP is not a phase in Korean but is a phase in English, the contrast between Korean and English regarding binding ambiguity can also be accounted for. Assuming that movement can occur only through the edge of a phase, a moving element
cannot stop in the specifier positions of embedded CPs if CP is not a phase in Korean. On the other hand, since CP is a phase in English, the moving element must stop in such positions.\(^6\)

Turning to an account of a non-phrasal CP in Korean, I argue that Korean lacks TP, following Bošković’s (to appear) No-TP analysis for article-less languages. Bošković (to appear) argues that article-less languages in general lack a TP projection in addition to lacking a DP projection, assuming that DP is the nominal counterpart of TP/IP given that the subject of a noun phrase is located in the specifier position of DP similarly to the subject of a verb phrase being located in the specifier position of TP (for no-CP analyses of at least some article-less languages see also Fukui 1988, Corver 1992, Chierchia 1998, Bošković 2005, Willim 2000, and Baker 2003 among others). As Bošković (to appear) points out, the lack of TP captures the fact that Serbo-Croatian does not have tense morphology despite its rich verbal morphology. Furthermore, Bošković argues that this may also hold for other article-less languages; for example, a number of researchers have reported that some article-less languages which are traditionally assumed to have tense morphology, such as Turkish, in fact do not have tense morphology; rather, the traditionally assumed tense morphology is in fact composed of aspectual or modal markers (cf. Yavaş 1980, 1981, 1982; Giorgi and Pianesi 1997; Talyan 1988, 1996, 1997). A similar approach has been proposed for Japanese (cf. Fukui 1988; Osawa 1999; Whitman 1982) and Korean (cf. Choi 1971; Sohn 1975; Baek 1986; Song 2009; Kang 2012 among others).\(^7\) For Korean, Kang (2012) shows that traditionally assumed tense verbal morphology in Korean is in fact not tense morphology, and analyzes the traditional past tense morpheme as an aspect marker, and the traditional present tense morpheme as a mood marker. Bošković (to appear) presents several additional properties of article-less languages related to the absence of TP, such as the lack of subject expletives, the lack of subject/object asymmetries in terms of extraction, the lack of Sequence of Tense effects, and the possibility of A-movement out of CPs (see Bošković to appear for details). Given that Korean exhibits all of the properties above, we can conclude that Korean lacks TP.

Now let us consider how the lack of TP is related to a non-phrasal CP in Korean. Chomsky (2008) argues that C and T are “associated” in that they function together with respect to movement and feature-checking; the properties of Tense that are involved in these processes are passed on to T from C. Takahashi (2011) argues that phases are determined by Case valuation.\(^8\) In particular, he argues that vP is a phase only if v assigns structural case to its object. Focusing on the scope asymmetry with respect to only and can in Japanese examples like (12), Takahashi argues the QR of only above vP, which is needed to get the reading “only > can”, is possible only if vP is not a phase, i.e. he assumes that QR of only is phase-bound. As a consequence, only can scope over can in (12b), where vP is not a phase since structural case, accusative case in Japanese, is not assigned; in contrast, this is possible in (12a), where vP is a phase since accusative case is assigned.\(^9\)


John-NOM right.eye-only-ACC close-can-PRES ‘John can close only his right eye.’

\(^6\) See Epstein and Seely (2006) for an account of A-movement that is fully compatible with the assumption that successive-cyclic movement can only proceed via phase edges.

\(^7\) Bošković (2010), however, also proposes an analysis in which the presence of true tense morphology actually does not require a dedicated TP projection.

\(^8\) See also Kasai (2004), Miyagawa (2011), and Epstein et al. (2010, to appear).

\(^9\) Takahashi (2011) shows that these facts cannot be handled in terms of Case movement of the object above can (where nominative dake but not accusative dake would undergo Case movement) since the same facts obtain for dake in a PP which does not bear Case.
John-NOM right.eye-only-NOM close-can-PRES
‘John can close only his right eye.’

What is crucial here is that we can extend to CP Takahashi’s argument that a phase is determined by structural case assignment, which is in fact also discussed in Takahashi (2011). Under the C-T association analysis, where C and T work together in feature-checking, C is also involved in Case assignment when it is associated with T which assigns nominative case. Takahashi then suggests that all phases are determined by case valuation: all CPs in (1) are phases because they are involved in Case assignment. If Korean does not have TP, CP is then not involved in Case assignment in Korean, hence CP should not count as a phase.10

To summarize, if CP is not a phase in Korean, we have an account of the following: (i) the contrast between English and Korean in terms of the binding ambiguity in (1-2) - since the moving element does not stop in SpecCP in Korean in contrast to English, the reading in (ii) is not possible in Korean; (ii) the impossibility of NQ stranding in the specifier of embedded CPs, which can be accounted for in the same way; (iii) the possibility of A-movement out of a CP in Korean - (20) does not involve improper movement since there is no reason for the object to stop in the specifier of the embedded CP given that CP is not a phase.

Even if CP is not a phase in Korean, however, this is in fact not enough to capture all of the data above. If vP is a phase in Korean, the specifier position of an embedded vP should be a possible landing site for the moving element, which should result in binding ambiguity in (2), contrary to fact. More specifically, if vP is a phase in Korean, the moving element must stop by the specifier positions of the embedded vPs. That is, caki casin in (2) must stop in the specifier position of each embedded vP if vP is indeed a phase. This wrongly predicts that Bill should bind caki casin in (2) when it stops in the specifier position of the higher embedded vP. That is, if vP is a phase in Korean, the data in (2) is still not accounted for even assuming that CP is not a phase.11

We can resolve this issue by looking at certain contrasts between Japanese and Korean. Bošković (in press) observes that in the Japanese (13), there is a scope asymmetry between accusative and dative objects; only can scope over can in (13b) but not in (13a). Note that Bošković (2012) argues that inherent case does not involve case valuation. Following Chomsky (1986), Bošković argues that inherent case licensing is carried out together with θ-role assignment. It is then not surprising that inherent case in Japanese patterns with nominative case rather than accusative case, with respect to the scope of dake, as in (13b). Thus Bošković argues that inherently case-marked only can scope over can in (13b) because vP here is not a phase given that vP here is not involved in Case valuation, just as in the case of nominative objects.

Mary-NOM Bill-only-ACC love-can-PRES
‘Mary can love only Bill.’ (*?only>can, can>only)

b. Mary-ga Bill-dake-ni a-e-ta.
Mary-NOM Bill-only-DAT meet-can-PAST
‘Mary could meet only Bill.’ (only>can, can> only)

10 Note that under the no-TP analysis, nominative case is the default/contextual case in Korean (see Bošković to appear). CP could still be associated with another projection in Korean; however, as long as it is not involved in structural case assignment, it would not be a phase under the above assumptions.

11 This problem does not arise with the floating quantifier argument given that A’ Q- float is possible only in SpecCP, not SpecvP, as argued by McCloskey (2000).
Crucially, in the Korean (14), there is no scope asymmetry between accusative and dative objects; *only* can scope over *can*, irrespective of which case is assigned. In (14a), where the object bears accusative case, *only* can scope over *can*. In (14b), where the object bears dative case, *only* can also scope over *can*.

    Mary-NOM Bill-only-ACC love-can-exist-ASP-DECL
    ‘Mary could love only Bill.’
    (only>can, can>only)

    Mary-NOM Bill-DAT-only apologize-can-exist-ASP-DECL
    ‘Mary could apologize only to Bill.’
    (only>can, can>only)

This is surprising if accusative case in Korean is structural case; if that were the case, vP should be a phase in Korean – focusing on (14), *only* should then not be able to scope over *can* since QR of *only* above a phasal vP should not be possible, given Takahashi (2011). If accusative case in Korean is not structural case, however, this is expected since vP would not constitute a phase. Based on the fact that accusative in Korean patterns with dative (and not with accusative) in Japanese with respect to the scope of *only*, I suggest that accusative case in Korean is not structural case.\(^{12}\) This means that vP is not a phase in Korean. Recall also that, as discussed above, due to the lack of TP, CP is also not a phase in Korean.\(^{13}\) This straightforwardly captures the lack of successive-cyclic movement via Spec CP/vP since neither CP nor vP is a phase in Korean. Thus, if neither vP nor CP are phases in Korean, the moving element in (2) does not stop in the specifier position of vP or the specifier position of CP, thereby accounting for the observed readings.\(^{14}\)

Finally, there is another very interesting difference between Japanese and Korean: the Japanese counterpart of (2) allows three binding readings in contrast to the Korean example in (2).\(^{15}\)

(15) Zibun-no dono syasin-o [John-ga [Bill-ga [Bob-ga kai-tai-to]
    self-GEN which picture-ACC John-NOM Bill-NOM Bob-NOM buy-want.to-COMP

---

\(^{12}\) There are other differences between Japanese and Korean regarding Case, particularly accusative case. For example, Korean exhibits double (accusative) object constructions with ditransitives, which are not possible in Japanese. In addition, Korean allows Case stacking while Japanese does not. I leave a more detailed investigation of accusative case in Korean for future research.

\(^{13}\) We might need to assume that QR is CP-bound even if CP is not a phase. I leave this issue for future research.

\(^{14}\) Note that what I have said seems to imply that ECM should not be allowed in Korean. However, ECM could still be allowed in some contexts if accusative can be structural in some contexts (see Ahn and Yoon 1989, Kim and Kim 2003 among others, regarding ECM in Korean). But the availability of this option in some contexts should not affect the account of (2) above (see also Bošković (2002) for the claim that accusative in English can be inherent or structural). What is more important here is that Franks (1995) shows that in some languages ECM is possible even with inherent case, i.e. he shows that dative can be exceptionally assigned under ECM in certain contexts in Russian, suggesting inherent ECM is not completely impossible.

\(^{15}\) Among three Japanese native speakers consulted, one does not admit the reading in (ii). Significantly, this speaker is also unsure about the scope asymmetry between *can* and *only*; this speaker sometimes admits the interpretation where *only* scopes over *can* with the accusative object. This is not at all surprising if accusative case is not structural case for this speaker, as is the case in Korean. In fact, the speaker variation within Japanese seems to provide rather strong evidence for the proposals made here.
In other words, Japanese behaves like English and not Korean, here. Japanese, however, exhibits the exact same pattern as Korean with respect to NQ stranding. In (16), the NQ can be stranded or floated under scrambling. As is the case in Korean, however, the NQ cannot be stranded in the specifier position of embedded CPs, as shown in (17). This can be captured if CP is not a phase in Japanese, as discussed above for Korean.

(16) a. [Biiru-01 John-wa [Bill-ga [Mary-ga t₁ san-bon nonda-to]]
   beer-ACC John-TOP Bill-NOM Mary-NOM 3-CL drank-COMP
   itta-to] omotteiru].
   said-COMP think
   ‘John thinks Bill said Mary drank three bottles of beer.’

b. [Biiru-01 san-bon₂ John-wa [Bill-ga [Mary-ga t₁ t₂ nonda-to]]
   beer-ACC 3-CL John-TOP Bill-NOM Mary-NOM drank-COMP
   itta-to] omotteiru].
   said-COMP think
   ‘John thinks Bill said Mary drank three bottles of beer.’

(17) a.*[Biiru-0₁ John-wa [san-bon₂ Bill-ga [Mary-ga t₁ t₂ nonda-to]]
   beer-ACC John-TOP 3-CL Bill-NOM Mary-NOM drank-COMP
   itta-to] omotteiru].
   said-COMP think
   ‘John thinks Bill said Mary drank three bottles of beer.’

b. *[Biiru-0₁ John-wa [Bill-ga [san-bon₂ Mary-ga t₁ t₂ nonda-to]]
   beer-ACC John-TOP Bill-NOM 3-CL Mary-NOM drank-COMP
   itta-to] omotteiru].
   said-COMP think
   ‘John thinks Bill said Mary drank three bottles of beer.’

The above data from Korean and Japanese can all be straightforwardly captured if vP but not CP is a phase in Japanese while neither CP nor vP is a phase in Korean. Since vP is a phase in Japanese, as argued by Takahashi (2011) based on the scope properties of dake, the scrambled wh-phrase in (15) stops by the Spec of each embedded vP, resulting in three possible binding readings. On the other hand, this is not the case in Korean since vP is not a phase; the only possible interpretations are reading (iii), which we can get in the anaphor’s base-generated position, and reading (i), which we can get in the anaphor’s surface position, assuming that the scrambled element is adjoined to the projection where the subject is located. As for NQ stranding, in both languages the NQ cannot stop in the Spec of embedded CPs since CP is not a phase in either language. Recall also that McCloskey (2000) argues that the Spec of vP is independently not a position where quantifiers that are floated under A’-movement can be stranded.¹⁶

4. Conclusion

I have provided an account of several contrasts between Korean, Japanese, and English

¹⁶ If there are Japanese speakers who accept (17), this could mean that McCloskey’s ban on Q-float in SpecvP, which McCloskey discussed with respect to West Ulster English, is not universal.
regarding successive-cyclic movement, which involve binding ambiguities, NQ floating, and A-movement out of CP. I have shown that Korean has no successive-cyclic movement via SpecCP/SpecvP and that Japanese has successive-cyclic movement via SpecvP, and explored the consequences of this state of affairs for the theory of phases.

I have argued that neither CP nor vP are phases in Korean which accounts for the lack of successive-cyclic movement via SpecCP/SpecvP. First, under the C-T association, C is involved in Case assignment when it is associated with T which assigns nominative case. Second, there is no TP in Korean under Bošković’s (to appear) no-TP analysis of NP languages. Thus C is not involved in case assignment since there is no T in the first place. Assuming Takahashi (2011), according to which phases are determined by Case valuation, CP is then not a phase in Korean since there is no Case valuation due to the absence of TP. Furthermore, in the case of vP, based on the scope interpretation of only phrases, I have shown that the accusative case in Korean is not structural case, a result of which is that vP is not a phase in Korean either, given Takahashi (2011). As for Japanese, CP is not a phase in Japanese for the same reason that it is not a phase in Korean. But vP is a phase in Japanese. I have tied the different behavior of vP in Korean and Japanese with respect to phasehood to a difference in the interpretation of only phrases in Korean and Japanese.

References


