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A New Way to Define Binding Domain in Korean

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Abstract

This paper examines a binding paradigm in Korean which is claimed to support the Highest Edge Effect (HEE), where in a phase with multiple edges, only the highest-edge is accessible from outside of the phase due to the Phase-Impenetrability Condition (PIC), as proposed in Bošković (2013). It has been argued by a number of authors that the binding domain for principle A should be stated in terms of phases (e.g. Lee-Schoenfeld 2008, Despić 2011, Wurmbrand 2013b, Zanon 2015, Bošković 2016a). Under this approach, an anaphor must be bound in its minimal phase. What is important for our purposes is that an anaphor can be bound outside of its own minimal phase XP only if it is located at the edge of the phase (the anaphor then does not really "belong" to phase XP, but to a higher phase). I also argue that the binding patterns from Korean examined here provide empirical evidence for contextuali-ty of phasal edgehood, where the existence of another specificer of a phase (i.e. edge) affects the edgehood of other specifiers (see Bošković 2016a).

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1 Introduction

This paper examines a binding paradigm in Korean which is claimed to support the Highest Edge Effect (HEE), where in a phase with multiple edges, only the highest edge is accessible from outside of the phase due to the Phase-Impenetrability Condition (PIC), as proposed in Bošković (2013).

It has been argued by a number of authors that the binding domain for principle A should be stated in terms of phases (e.g. Lee-Schoenfeld 2008, Despić 2011, Wurmbrand 2013b, Zanon 2015, Bošković 2016a). Under this approach, an anaphor must be bound in its minimal phase. What is important for our purposes is that an anaphor can be bound outside of its own minimal phase XP only if it is located at the edge of the phase (the anaphor then does not really "belong" to phase XP, but to a higher phase). I also argue that the binding patterns from Korean examined here provide empirical evidence for contextuality of phasal edgehood, where the existence of another specifier of a phase (i.e. edge) affects the edgehood of other specifiers (see Bošković 2016a).

2 Phasal Approach to Binding Domain

2.1 Puzzle

Consider (1a). As Yang (1983) and others noted, the anaphor (which is not a logophor as discussed in Kim and Yoon 2009) can be bound across a CP here. This is not allowed in the corresponding English sentence, as shown in (1b).

(1) a. J_i-ka [$_{CP}$ caki-casin$_i$-i chayk-ul   sa-ss-ta-ko]   sayngkakha-n-ta].
       J-NOM   self-NOM   book-ACC   buy-PST-DEC-C   think-PRES-DEC
       'J thinks that himself bought a book'
    b. *John$_i$ thinks that himself$_i$ bought a book.

The grammaticality of (1a), a well-known puzzle, is surprising under the phase-based approach to principle A because the anaphor, which is the embedded clause subject, hence not at the edge of the embedded clause under standard assumptions, can still be bound by its antecedent in the higher clause. This is contrary to English (1b), whose ungrammaticality is expected. The contrast found in (1) poses a challenge since the anaphor in (1a) is located in the embedded CP, which should confine its binding domain in the GB approach as well as the phase-based approach to binding. In this paper I will show that this issue can in fact be accounted for given the Highest Edge Effect. I will also argue that Korean binding data with multiple edges support both the phase-based approach to Condition A and the contextuality of phasal edges.

In Section 3.1, I will examine the position of the embedded subject in Korean and show that the phase-based approach can account for the Korean binding data in (1a). Section 3.2 discusses the Highest Edge Effect (HEE) and the contextuality of edgehood concerning more complicated Korean binding paradigms. In Section 4, I will argue that the Highest Edge Effect and the contextuality of phasal edges apply to Korean binding by looking into data with multiple edges and ECM/Non-ECM constructions. I will also support the proposed analysis by examining Korean binding in the NP-domain as well as principle B. Section 5 concludes this paper.

3 Ingredients

3.1 The Position of the Embedded Subject in Korean

The puzzling data in (1a), repeated here in (2), can be accounted for under the phase-based approach to binding domains. Under this approach, the embedded subject *caki-casin-i* should be located at the edge of the embedded CP, where it can be bound by a matrix antecedent. I will provide evidence

that this is indeed the case by examining more data in Korean below.

(2) J_i-ka   [$_{CP}$ caki-casin$_i$-i   chayk-ul   sa-ss-ta-ko]   sayngkakha-n-ta.
    J-NOM   self-NOM   book-ACC   buy-PST-DEC-C   think-PRES-DEC
    'J thinks that himself bought a book.'

   In (3), the embedded subject *J-ka* precedes *way* 'why', which is base-generated in Spec,CP of the clause it modifies (see Ko 2005). Since subjects can undergo short scrambling in Korean (see Ko 2008), this word order suggests that the embedded subject can be located in Spec,CP, which is the phasal edge position.

(3) Y-nun   [$_{CP}$ J-ka$_i$ [$_{CP}$ way   **t**$_i$ kong-ul   ca-ss-ta-ko]   sayngkakhay-ss-ni?
    Y-NOM   J-NOM   why   ball-ACC kick-PST-DEC-C   think-PST-Q
    'Why did Y think that J kicked the ball?'
    Intended: For a reason x, such that Y thinks J kicked the ball for x.'

It should be noted here that, as is well-known, subjects in Korean cannot undergo scrambling across a finite clause boundary, as shown by (4), and scrambling out of a finite clause into the middle field of a higher clause is not allowed (see footnote 1). This ensures that the embedded subject *J-ka* 'J-NOM' is located in the embedded clause in (3).

(4) *J-ka$_i$ [$_{CP}$ Y-ka   kong-ul   t$_i$ ca-ss-ta-ko]   sayngkakha-n-ta.
    J-NOM   Y-NOM   ball-ACC   kick-PST-DEC-C   think-PRES-DEC
    Intended: 'Y thinks that J kicks a ball.'

Furthermore, as is well-known, scrambling of adjuncts is also disallowed, as illustrated by (5), which means that *way* 'why' cannot be located in the higher clause.

(5) *iyuepsi$_i$ [$_{CP}$ J-ka   [$_{CP}$ M-i   t$_i$ ku   chayk-ul   ilknunta-ko]   malhay-ss-ta].
    without a reason   J-NOM   M-NOM   the book-ACC read-C   say-PST-DEC
    'John said that M reads the book without a reason.'

The above data thus provide evidence that the embedded subject can be located at the edge of the embedded clause in Korean, as shown in (6) below.

(6)
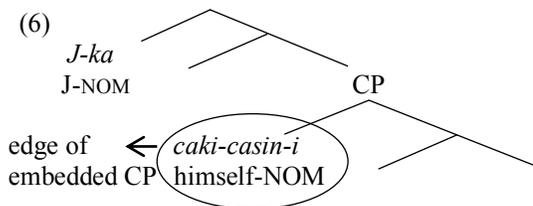
Turning back to the puzzling binding data, given that the embedded anaphoric subject is located at the edge of CP, it can be bound by an antecedent in the matrix clause. Therefore, the sentence in (2) (=(1a)) can be accounted for under the phasal approach to binding domain. On the other hand, in English (1b), the subject is located in Spec,TP, hence it cannot be bound from the outside (see Lasnik and Saito 1992 and Bošković 2016b on the impossibility of short subject movement in English).

3.2 Highest Edge Effect and Contextual Approach to Phasal Edge

I will now discuss cases where the phase in question involves multiple edges. Bošković (2016a) argues that only the highest edge is available for movement and anaphor binding when there is more than one phrase at a phasal edge, for the purpose of the PIC. The configuration of the highest edge is illustrated in (7). In (7a), 'YP' is the highest edge, so extraction of 'YP' is possible in (7b). On the other hand, 'ZP' in (7c) cannot be extracted because 'YP' is the highest edge, blocking extraction

of 'ZP'. The extraction is allowed in (7d) once 'ZP' becomes the highest edge after movement of 'YP', suggesting that the phasal edge is determined contextually (with traces not counting as edges).

(7) a. [$_{XP}$ YP [$_{XP}$ ZP X]]

          ↓

          the highest edge

     b. YP ··· [$_{XP}$ t_{YP} [$_{XP}$ ZP X]]

     c. *ZP ··· [$_{XP}$ YP [$_{XP}$ t_{ZP} X]]

          blocks extraction

     d. ^{OK} YP ··· [$_{XP}$ t_{YP} [$_{XP}$ ZP   X]]

          becomes the highest edge

Bošković (2016a) provides relevant evidence from Serbo-Croatian (SC), given in (8). Here I assume that NP counts as a phase (cf. Bošković 2014). Also note that SC allows free word order between possessors and adjectives (both *Jovanovog ponosnog* and *ponosnog Jovanovog* are possible in SC).[1] In (8a), extraction of the adjectival complement is not allowed because AP is not located at the phasal edge, given that only the highest edge counts as the edge for the purpose of the PIC. In (8b), however, this extraction is possible since the AP is located at the phasal edge, suggesting that when multiple elements are located at a phasal edge, only the outmost edge counts as the phasal edge.

(8) a. *Na tebe$_i$ sam vidio [$_{NP}$ Jovanovog [$_{NP}$[ponosnog t_i] [$_{NP}$ oca]]]
         of you am seen   Jovan's   proud   father
          'I saw Jovan's father who is proud of you.'
     b. Na tebe$_i$ sam vidio [$_{NP}$ [ponosnog t_i] [$_{NP}$ oca]]
         of   you   am seen   proud   father

Furthermore, Bošković (2016a) shows that only the element located at the highest edge can be bound from the outside, following Zanon's (2015) data regarding binding in Russian. Unlike in (9a), the anaphor *svoju* in (9b) cannot be bound by *Marija* 'Mary'. Not being at the highest edge, the anaphor does not count as being at the edge of the NP phase for the PIC.

(9) a. Marija$_i$ je prodala [$_{NP}$ [svoju]$_i$ [$_{NP}$ omiljenu] [$_{NP}$ knjigu]]].
         Mary   is sold   her-anaphor favorite   book
          'Mary sold her favorite book.'
     b. *Marija$_i$ je prodala [$_{NP}$ omiljenu [$_{NP}$ svoju$_i$ [$_{NP}$ knjigu]]].
         Mary   is sold   favorite   her-anaphor book

As pointed out in (7d), Bošković (2016a) also argues that the *phasal edge* is contextual, in a sense that the lower specifier can count as *phasal edge* if the higher specifier moves. In (10), when *omiljenu* 'favorite' located at the highest edge moves to the front (note that *omiljenu* must be the highest edge here or it could not move), the anaphor *svoju* is then positioned at the phasal edge and becomes available for binding from the outside. This suggests that the syntactic context should be considered when the status of phase and phasal edge is determined with respect to the PIC (see Bošković 2016a for additional evidence).

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[1] Bošković thus argues that these elements are adjoined to NP (DP is missing in SC, a language without articles).

(10) Omiljenu$_j$ je   Marija$_i$ prodala [$_{NP}$ t$_j$ [$_{NP}$ svoju$_i$ knjigu]].
     favorite   is   Marija   sold   her-anaphor   book
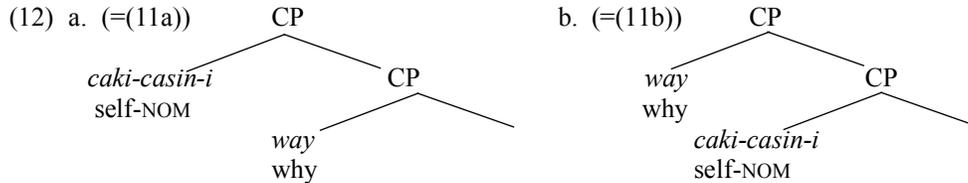   'Mary sold her favorite book.'

4   Binding Domain as a Phase in Korean

4.1   The Contextuality of Phasal Edge in CP-domain

As discussed Section 3.1, the subject that precedes *way* 'why', which is base-generated in Spec,CP, is located in Spec,CP. I will now discuss data in (11), which involve multiple edge positions that are filled with the embedded anaphoric subject and *way* 'why'. The embedded subject is bound properly only in (11a), not in (11b).

(11) a. J$_i$-ka   [$_{CP}$ caki-casin$_i$-i [$_{CP}$ way [$_{CP}$ chayk-ul   sa-ss-ta-ko]]]   sayngkakhay-ss-ni?
        J-NOM   self-NOM   why   book-ACC   buy-PST-DEC-C   think-PST-Q
        'Why did J think he bought a book?'
        Intended: 'For a reason x, such that J thinks he bought a book for x.'
    b. ?*J$_i$-ka [$_{CP}$ way [$_{CP}$ caki-casin$_i$-i [$_{CP}$ chayk-ul   sa-ss-ta-ko]]   sayngkakhay-ss-ni?
        J-NOM   why   self-NOM   book-ACC buy-PST-DEC-C think-PST-Q

In (11a) and (11b), both the embedded subject and *way* 'why' are located in specifiers of CP, which are traditionally counted as *phasal edges*. However, what is important here is that the anaphor can be bound only when it is at the higher specifier, preceding *way* 'why', as in (11a). The contrast between (11a) and (11b) provides additional evidence for Bošković's (2016a) claim that only the highest edge counts as the phasal edge and is available for binding. As seen in (12a), only when the embedded anaphoric subject is located at the highest edge, it can be properly bound by the antecedent in the matrix clause, which is not the case in (12b).

(12) a. (=(11a))   CP   b. (=(11b))   CP

    caki-casin-i   CP   *way*   CP
    self-NOM   why

            way   *caki-casin-i*
            why   self-NOM

It should also be noted that the data discussed above provide evidence that binding of subject anaphors is sensitive to phase-related mechanisms, which provides evidence for the phase-based approach to Condition A. The above data are surprising under approaches that capture the possibility of clausal subject anaphors in Korean by appealing to the lack of agreement or approaches like that of Kang (2014), who does adopt the phasal approach to binding, but argues that CP is not a phase in Korean. Such approaches fail to capture the sensitivity of anaphor binding to phasal edges.

4.2 The ECM/Non-ECM Construction and its Implications

Let us now discuss binding with the ECM (Exceptional Case Marking) construction in which the embedded subject receives accusative Case from the matrix verb in Spec,CP (Hiraiwa 2005, Taguchi 2009 among others). Given that the position of the embedded subject is important for our purposes, I will examine how the ECM construction and binding domain interact with each other from this perspective.

    In (13a), the embedded subject, which bears accusative, is located in the specifier of the embedded CP, which puts it into the same phasal domain with its binder, as shown in (13c). Thus, the embedded subject in (13a) can be bound by its antecedent while (13b) is degraded because the anaphor is not at the outmost edge, violating principle A.

(13) a. J_i-ka   [_{CP} caki-casin_i-ul [_{CP} way [_{CP} chayk-ul   sa-ss-ta-ko]]]   sayngkakhay-ss-ni?
        J-NOM   self-ACC   why   book-ACC   buy-PST-DEC-C think-PST-Q
        'Why did J think he bought a book?'
        Intended: 'For a reason x, such that J thinks he bought a book for x.'
    b. ?*J_i-ka [_{CP} way [_{CP} caki-casin_i-ul [_{CP} chayk-ul   sa-ss-ta-ko]]   sayngkakhay-ss-ni?
        J-NOM   why   self-ACC   book-ACC   buy-PST-DEC-C think-PST-Q
    c. [_{TP} J_i-NOM … … [_{CP} [_{NP} caki-casin_i-ACC] [_{CP} *way*] … C]

To complete the paradigm, I will also discuss non-ECM verbs, which cannot assign accusative Case to the embedded subject. *sangsangha(y)* 'imagine' in Korean is one such verb, as shown by (14b).

(14) a. J-ka   [_{CP} Y-ka   kongpwuha-n-ta-ko]   sangsanghay-ss-ta.
        J-NOM   Y-NOM study-PRES-DEC-C   imagine- PST-DEC
        'J imagined that Y studied.'
    b. *J-ka   [_{CP} Y-lul   kongpwuha-n-ta-ko]   snagsanghay-ss-ta.
        J-NOM   Y-NOM study-PRES-DEC-C   imagine- PST-DEC

Though the embedded verb is a non-ECM verb, the grammaticality of (15a) shows that the embedded subject has to be located at the Spec,CP. That the embedded subject precedes *way* 'why' indicates that the embedded subject is able to undergo clause internal scrambling so that the anaphor is bound by its antecedent. In other words, the embedded subject can be located in the phasal edge regardless of the verb type, hence a Condition A violation occurs. Contrary to (15a), when the embedded anaphoric subject is at the lower edge of the phase as in (15b), the sentence becomes degraded, confirming that the embedded anaphoric subject is not able to access its antecedent here.

(15) a. J_i-ka   [_{CP} caki-casin_i-i [_{CP} way [_{CP} chayk-ul   pha-n-ta-ko]]]   sangsanghay-ss-ni?
        J-NOM   self-NOM   why   book-ACC sell-PRES-DEC-C imagine-PST-Q
        'Why did J imagine that himself sold a book?'
        Intended: 'For a reason x, such that J thinks he sold a book for x.'
    b. ?*J_i-ka [_{CP} way [_{CP} caki-casin_i-i [_{CP} chayk-ul   phanta-ko]]   sangsanghay-ss-ni?
        J-NOM   why   self-NOM   book-ACC sell-PRES-DEC-C imagine-PST-Q

I will now explore how scrambling affects anaphor binding. Consider (16).

(16) a. J_i-ka   [_{CP} caki-casin_i-i [_{CP} chayk-ul   pha-n-ta-ko]]   sangsanghay-ss-ta.
        J-NOM   self-NOM   book-ACC   sell-PRES-DEC-C imagine-PST-DEC
        'J imagined that himself sold a book.'
    b. ?*J_i-ka   [_{CP} chayk-ul   [_{CP} caki-casin_i-i phanta-ko]]   sangsanghay-ss-ta.
        J-NOM   book-ACC   self-NOM   sell-PRES-DEC-C imagine-PST-DEC

As predicted by the current proposal, (16a) is grammatical because the anaphor *caki-casin* is located at the highest edge of the phase, where it can be bound by its antecedent while (16b) is degraded due to the embedded object preceding the embedded subject.[2] If the current analysis is on right track, the sentence in (16b) should improve when the object is scrambled out of the CP, which renders the embedded subject accessible to its binder (recall that traces do not count as edges). Therefore, in (17), the embedded anaphoric subject can be bound by its antecedent in the matrix clause.

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[2] Here I assume that the sentence in (17b) involves clause internal scrambling of the embedded object, which is also indicated by the fact that the scrambled element cannot precede a matrix adverbial (see in fact Murasugi and Saito 1994 for arguments that scrambling into the higher clause middle field is not possible).

(i) ?*J-ka   phulangsue-lul   ppalukey Y-ka calhanta-ko   sayngkakha-ni?
    J-NOM   French-ACC   quickly   Y-NOM be good at-C   think-Q
    'Intended: Does J quickly think that Y is good at French?'

(17) chayk-ul$_j$ [$_{CP}$ J$_i$-ka [$_{CP}$ t$_j$ caki-casin$_i$-i pha-n-ta-ko]]   sangsanghay-ss-ta.
     book-ACC   J-NOM   self-NOM   sell-PRES-DEC-C imagine-PST-DEC
     'J imagined that himself sold a book.'

4.3 The Contextuaility of Phasal Edge in NP-domain

In the previous sections, I discussed the Korean binding paradigm in the CP-domain by adopting the Highest Edge Effect and contextuality of phasal edges under the phase approach to Condition A. In this section, I will discuss how the system applies to binding in the NP-domain. Consider the Korean counterpart of (9), given in (18) (note that the order of possessors and adjectives is also in principle free in Korean; see (18c)).

(18) a. ?*J$_i$-ka   caymiitnun   caki-casin$_i$-uy   chayk-ul   pala-ss-ta.
        J-NOM   interesting   self-GEN   book-ACC   sell-PST-DEC
        'J sold self's interesting book.'
     b. J$_i$-ka   caki-casin$_i$-uy   caymiitnun chayk-ul   pala-ss-ta.
        J-NOM   self-GEN   interesting book-ACC sell-PST-DEC
     c. [$_{NP}$ caki-casin-uy [$_{NP}$ [interesting] [$_{NP}$ [book]]]

In (18a), the possessor *caki-casin-uy* 'self-GEN' is not located at the highest edge, so the antecedent cannot properly bind the anaphor. However, in (18b), the anaphoric possessor is located at the outmost edge, hence it is accessible to its binder, *J-ka* 'J-NOM', in the matrix clause.

5   The Interaction between HEE and Condition B

5.1 Condition B in CP-domain

I now turn to the interaction between the Highest Edge Effect and Condition B. Given that anaphors and pronouns typically show complementary distribution, we may expect pronouns to behave differently from anaphors. Consider (19).

(19) a. J$_i$-ka   [$_{CP}$ way [$_{CP}$ ku$_i$-ka   [$_{CP}$ chayk-ul   sassessta-ko]]]   sayngkakha-ni?
        J-NOM   why   he-NOM   book-ACC   bought-C   think-Q
        'Why does J$_i$ think he$_i$ bought the book?'
     b. *J$_i$-ka   [$_{CP}$ ku$_i$-ka   [$_{CP}$ way [$_{CP}$ chayk-ul   sassessta-ko]]]   sayngkakha-ni?
        J-NOM   he-NOM   why   book-ACC   bought-ko   think-Q

The reason why (19b) is degraded can be straightforwardly explained under the current approach. The embedded pronoun subject preceding the adverb causes a Condition B violation given that the former is located at the outmost edge, hence in the same binding domain as *J-ka* 'J-NOM'. On the other hand, the adverb precedes the embedded pronoun subject in (19a), hence binding is possible here. The contrast between these sentences thus supports both the phase-based approach and HEE.

   Furthermore, the current analysis can also be confirmed with data with additional adverbs. In principle, Korean allows either word order of *ecey* 'yesterday' and the embedded subject in (20).

(20) a. Y-ka [$_{CP}$ ecey   [$_{CP}$ ku-ka   [$_{CP}$ way   chayk-ul   sassessta-ko]] sayngkakha-ni?
        Y-NOM yesterday he-NOM   why   book-ACC]] bought-C   think-Q
        'Why does Yenghuy think he bought the book yesterday?'
     b. Y-ka [$_{CP}$ ku-ka [$_{CP}$ ecey [$_{CP}$ way chayk-ul   sassessta-ko]]]   sayngkakha-ni?
        Y-NOM he-NOM   yesterday why book-ACC bought-C   think-Q

Now let us consider (21) and (22).

(21) a. J$_i$-ka [$_{CP}$ ecey [$_{CP}$ ku$_i$-ka [$_{CP}$ way chayk-ul   sa-ss-ta-ko]]   sayngkakhay-ss-ni?
        J-NOM   yesterday he-NOM   why   book-ACC   buy-PST-DEC-C   think-PST-Q
        'Why did J$_i$ think he$_i$ bought the book yesterday?'
     b. *J$_i$-ka [$_{CP}$ ku$_i$-ka [$_{CP}$ ecey [$_{CP}$ way chayk-ul   sa-ss-ta-ko]]   sayngkakhay-ss-ni?
        J-NOM   he-NOM   yesterday why   book-ACC   buy-PST-DEC-C   think-PST-Q

(22) a. J$_i$-ka [$_{CP}$ ecey [$_{CP}$ ku$_k$-ka [$_{CP}$ way chayk-ul   sa-ss-ta-ko]]   sayngkakhay-ss-ni?
        J-NOM   yesterday he-NOM   why   book-ACC   buy-PST-DEC-C   think-PST-Q
        'Why did J$_i$ think he$_k$ bought the book yesterday?'
     b. J$_i$ -ka [$_{CP}$ ku$_k$-ka [$_{CP}$ ecey   [$_{CP}$ way chayk-ul   sa-ss-ta-ko]]   sayngkakhay-ss-ni?
        J-NOM   he-NOM   yesterday why   book-ACC   buy-PST-DEC-C   think-PST-Q

The pronoun in (21b) is located at the outmost edge of the embedded clause, hence the sentence violates Condition B. Without coindexing as in (22b), the sentence is fine. On the other hand, in (21a), where *ecey* 'yesterday' occupies the outmost phasal edge, the Condition B violation is voided since the pronoun is not at the phasal edge, as predicted by the analysis argued for here.

(23) *J$_i$-ka   [$_{CP}$ ku$_i$ -ka   phulangsue-lul   calhanta-ko]   sayngkakha-n-ta.
     J-NOM   he-NOM   French-ACC   be good at-C   think-PRES-DEC
     'J$_i$ thinks that he$_i$ is good at French.'

(23) can be explained if the embedded pronoun subject *ku-ka* 'he-NOM' is located at the outmost edge of its phase, Spec,CP, causing a Condition B violation. Such examples then provide evidence that the embedded subject not only can, but must, move to the Spec,CP position.
    The same pattern is found with a non-ECM verb, as in (24).

(24) *J$_i$-ka   [$_{CP}$ ku$_i$-ka   nalswu-issta-ko] sangsanghay-ss-ta.
     J-NOM   he-NOM   fly-able-C   imagine-PST-DEC
     'J$_i$ imagined that he$_i$ can fly.'

    Now let us consider (25).

(25) J$_i$-ka   [$_{CP}$ phulangsue-lul [$_{CP}$ ku$_i$-ka   calhanta-ko]   sayngkakha-n-ta
     J-NOM   French-ACC   he-NOM   be good at-C   think-PRES-DEC
     'J$_i$ thinks that he$_i$ good at French.'

In (25), when the object *phulangsue-lul* 'French-ACC' precedes the embedded subject, the sentence improves. Since the object is located at the outmost edge of the phase, there is no Condition B violation here, as predicted by the current analysis. On the other hand, if this element undergoes further scrambling into the matrix clause, as in (26), we get a Condition B violation, as expected.

(26) ?*phulangsue-lul$_i$ J$_i$-ka [$_{CP}$ t$_i$ ku$_i$-ka   calhanta-ko] sayngkakha-n-ta.
     French-ACC   J-NOM   he-NOM   be good at-C   think-PRES-DEC
     'J$_i$ thinks that he$_i$ is good at French.'

In (26), after the object is scrambled to the front of the sentence, the embedded pronoun subject is located at the highest phasal edge (since traces do not count as edges), thus a Condition B violation occurs.
    Since we are looking into the highest edge effect regarding the position of the embedded subject, it is also worth considering ECM contexts for Condition B. Consider (27).
    Given that the embedded subject in (27a) is located in SpecCP, the ungrammaticality of (27a) is due to a violation of Condition B. The example in (27b) appears to be problematic, but (27d), where there is no coindexing, indicates that the example is ruled out independently of Condition B.[3]

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[3] It may be that an accusative pronominal subject must move into the higher clause (see Lasnik 1999 for

(27) a. *J$_i$-ka   [$_{CP}$ ku$_i$-lul   phulangsue-lul   calhanta-ko]   sayngkakhanta]
       J-NOM   he-ACC   French-ACC   be good at-C   think-PRES-DEC
       'J$_i$ thinks that he$_i$ is good at French'
    b. *J$_i$-ka   [$_{CP}$ phulangsue-lul   ku$_i$-lul   calhanta-ko]   sayngkakhanta.
       J-NOM   French-ACC   he-ACC   be good at-C   think-PRES-DEC
    c. Y$_i$-ka   [$_{CP}$ ku$_k$-lul   phulangsue-lul   calhanta-ko]   sayngkakhanta]
       Y-NOM   he-ACC   French-ACC   be good at-C   think-PRES-DEC
       'Y$_i$ thinks that he$_k$ is good at French'
    d. *Y$_i$-ka   [$_{CP}$ phulangsue-lul   ku$_k$-lul   calhanta-ko]   sayngkakhanta]
       Y-NOM   French-ACC   he-ACC   be good at-C   think-PRES-DEC

5.2 Condition B in NP-domain

I now consider Condition B in the nominal domain, as in (28).

(28) a. Y$_i$-ka   caymiitnun   kunye$_i$-uy   chayk-ul   pala-ss-ta.
       Y-NOM   interesting   she-GEN   book-ACC   sell-PST-DEC
       'Y$_i$ sold her$_i$ interesting book.'
    b. ?*Y$_i$-ka   kunye$_i$-uy   caymiitnun   chayk-ul   pala-ss-ta.
       Y-NOM   she-GEN   interesting   book-ACC   sell-PST-DEC

In (28b), the pronoun *kunye-uy* 'she-GEN' is located at the highest edge of a phase, which is NP, resulting in a Condition B violation under the highest edge effect. On the other hand, the sentence in (28a) improves because the pronoun is not at the outmost edge.

6   Conclusion

In this paper, I argued that the binding domain for Conditions A and B in Korean should be stated under a phase-based approach to binding along with the notion of the highest edge effect. The fact that an antecedent in a matrix clause can bind a subject anaphor in the embedded clause is an unsolved puzzle in Korean. To solve this issue, I examined the position of the embedded subject, arguing that the embedded anaphoric subject can be bound by its antecedent in a higher clause because it is located at the edge of the embedded clause hence it is in the same domain as its binder. Furthermore, more complicated Korean binding paradigm with multiple edges provide evidence that the concept of phasal edge is contextual, as argued by Bošković (2016a). I also showed that the proposed analysis can explain the interaction between binding and the position of the subject in ECM/Non-ECM constructions in Korean, where I provided evidence that subject scrambling within CP occurs regardless of verb type. Finally, I discussed how current analysis applies to the nominal domain for both Condition A and B. Overall, the data examined in the paper provide strong evidence for the phase-based approach to binding.

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the claim that in English ECM construction only pronouns must undergo object shift).

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