

Syntax and Semantics of Split Antecedence in English and Korean

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This paper aims to provide in-depth syntactic and semantic analyses of split antecedence in English and Korean. A point to note is that just as in the case of English pronouns, Korean pronouns permit split antecedence, but Korean reflexives and English reflexives behave differently with respect to split antecedence. A further point to note is that logophors and pronouns in English and Korean easily permit split antecedence. A major point of this paper is that Korean reflexives can serve as a SELF anaphor or a SE anaphor and that Korean reflexives can pattern with English pronouns, yielding split antecedence. It is worthwhile pointing out that while English induces split antecedence when the English reflexive *themselves* serves as a logophor, Korean always yields it when the plural suffix *tul* 'plurality' is attached to singular reflexives. It should be pointed out that split antecedence in English is captured by Chomsky's (2019a/2019b) theory. It should be pointed out that split antecedence of the English reflexive *themselves* can be licensed by the SEM after the first Transfer or the second Transfer, but a syntactic constraint is also necessary to capture the existence of split antecedence in English.

Keywords: split antecedent, merge, coargument, logophor, SE anaphor, SELF anaphor

1. Introduction

The ultimate goal of this article is to provide in-depth syntactic and semantic analyses of split antecedence in English and Korean. As well-known in the literature, the so-called-split antecedence is used as a property of non-local reflexives (a logophor) and pronominals. A specific goal of this article is to capture split antecedence with Chomsky's (2019a., 2019b) merge. It is taken for granted that split antecedence is a property of pronominals and a logophor. We attempt to delve into syntactic and semantic properties of split antecedence. First, we aim to define split antecedence in English and Korean and then see what is going on in English and Korean. Second, we try to explain why logophors and pronouns permit split antecedence. A semantic approach to split antecedence plays a role. Third, we try to explain why the local English reflexive *themselves* in the PP position cannot induce split antecedence. On the other hand, we try to explain why logophors and pronominals in English easily induce split antecedence. A question that immediately arises is "how do we account for the fact that they are in complimentary distribution". One way of accounting for this is to posit the hypothesis that a logophor functions as a pronominal in English and Korean, thus observing R&R's (1993) theory rather than Chomsky (1995). Fourth, we try to classify reflexives into two types especially with respect to their distribution. One is a pronoun-like reflexive (a SE anaphor) and thus it functions as a logophor. The other one is a local reflexive (a SELF anaphor) that turns up in the object position. The second one is captured by R&R's (1993) semantic approach. Fifth, we aim to account for the difference between English and Korean with respect to split antecedence. Kang & Yang (2025) hypothesize that the existence of overlapping reference in Korean is attributed to the Korean suffix *tul*. Quite interestingly, the Korean morpheme *tul* 'plurality' triggers split antecedence in local binding and non-local binding. Sixth, we attempt to explain why English and Korean local reflexives allow split antecedence. Seventh, we try to capture the existence of split antecedence in English in terms of Chomsky's (2019a/2019b) merge.

2. Results

2.1. Split Antecedence

This section is devoted to defining split antecedence which is dubbed split antecedents that bind their dependent terms. To start with, let us consider the following sentences. The following sentences illustrate the contrastive properties of reflexives and pronouns with respect to split antecedence:

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- (1) *John told Tom about themselves.
 (2) John told Tom that there was a picture of themselves/them inside.

As illustrated in (2), a logophor (or non-local anaphors) and a pronoun allow split antecedents, while as indicated in (1), the local reflexive *themselves* cannot permit split antecedents. Also, observe the case of the split antecedents:

- (3) John_i told Tom_j that they_{i/j} should go.

Recall why the Binding Theory fails for (3). *John* and *Tom* must have different indices in (3). However, what index does the pronoun *they* have? If the pronoun *they* bears an index different from those of *John* and *Tom*, then it will be disjoint from *John* and *Tom*. This is why Chomsky gave up his Binding Theory. Those cases are empirical and hence prove important arguments that are against the coindexation-based view of the Binding theory. In (3), the reference of the pronoun *they* includes the reference of *John* and the reference of *Tom*. More specifically, it should be pointed out that (3) is two ways ambiguous. First, *they* can be interpreted as referring to some other people (a free reading). The other interpretation is interesting. (3) is interpreted as meaning that John told Tom, “We should go”. Another way of testing split antecedence is as follows:

- (4) John told Tom that the picture of each other would amuse them.

In (4), *each other* has the pronoun *them* as its antecedent, which, in turn, has split antecedents. Quite interestingly, (4) is four ways ambiguous. First, *them* could be interpreted as referring to some other people. So, (4) could be interpreted as meaning “John told Tom that John’s picture would amuse some other people”. (4) could also be interpreted as meaning that “John told Tom that Tom’s picture would amuse some other people. The other two are interesting. (4) could be interpreted as meaning that John told Tom that John’s picture would amuse them (John and Tom). (4) could be interpreted as meaning that John told Tom that Tom’s picture would amuse them (John and Tom). As evidenced by (4), *them* inherits its reference from *John* and *Tom*, thus being dubbed split antecedents (part from *John* and part from *Tom* and possibly all of interpretation from the antecedents *John* and *Tom*).

Now let us turn our attention to split antecedence in Korean:

- (5) John-i Tom-eykey Mary-ka ku-tul-ul piphanhayssta-ko malhayssta.
 (John told Tom that Mary criticized them.)

(5) is two ways ambiguous. The Korean pronoun *ku-tul* ‘they’ could be interpreted as referring to some other people in discourse (a free reading). The other interpretation is interesting. *Ku-tul* ‘they’ could be interpreted as referring to *John* and *Tom*, thereby having split antecedents, namely the reference of *John* and the reference of *Tom*. From all of this, it is evident that the Korean pronoun *ku-tul* ‘they’ patterns with the English pronoun *they* with respect to split antecedence. Note, however, that Korean plural reflexives behave differently with respect to split antecedence:

- (6) *John told Tom about themselves.
 (7) John-i Tom-eykey caki-casin-tul-ekwanhayse malhayssta.
 (John told Tom about themselves.)

It must be pointed out that while (7) is totally grammatical, (6) is ruled out as ungrammatical. Notice, furthermore, that reflexives are inherently non-referential. This holds for English reflexives and Korean reflexives. A question that immediately arises is “why do (6) and (7) show the difference in these examples?” It is worthwhile pointing out that English reflexives can occur in the PP position to inherit their reference. Put differently, the PP position (about NP) is reflexive-marked in English. However, only a subject antecedent licenses its PP position, but not an object antecedent, as evidenced by (8):

- (8) John told Mary about himself.

(8) could be interpreted as having the following predicate: $\lambda x (x \text{ told Mary about } x)$. In this case, x can be anything. If x is a quantifier like everyone, then (8) induces the following interpretation: John told Mary about himself, Tom told Mary about himself, Bill told Mary about himself, James told Mary about himself, etc. (8) is fully grammatical since the PP position can be reflexive-marked by a subject antecedent. Then a question that naturally arises is “why is (7) grammatical unlike English?” We wish to argue that just as in the case of English reflexives, the Korean reflexive *caki-casin-tul* ‘self-self-pl’ is inherently non-referential, but the suffix *tul* ‘plurality’ makes split antecedence available in this example. We are going to deal with this issue in detail in section 2.4. We thus

conclude that just as in the case of English pronouns, Korean pronouns permit split antecedence, but Korean reflexives and English reflexives behave differently with respect to split antecedence.

2.2. A Semantic Approach

In what follows, we aim to consider why English reflexives exceptionally permit split antecedence. We try to account for this in terms of a semantic approach. Let us consider the following sentence, repeated here:

(9) John told Tom that there was a picture of themselves/them inside.

A question that immediately arises is “why do *them* and *themselves* permit split antecedents in this example?” We digress from this issue for the time being. We will call reflexives that are not subcategorized by the predicate a logophor in the spirit of R&R (1993), as exemplified in (10):

(10) The chairman defended us, my friend and myself.

It is worthwhile noting that (10) is fully grammatical, despite the fact that there is no antecedent for *myself*. Syntactically speaking, a reflexive is inherently non-referential, so it must inherit its reference from its antecedent so that it can be fully interpreted. Then how do we account for the grammaticality of (10)? We wish to argue that (10) does not have the following predicate: λx (x defended x). Strictly speaking, *myself* is not subcategorized by the predicate. *Myself* does not serve as an argument of the predicate. It is part of an argument of the predicate. An argument of the predicate is *my friend and myself*, not *myself*. This is why the predicate permits *myself*. Even *me* is also possible in (11) since the object position is not reflexive-marked. That is to say, (10) does not have the reflexive predicate like “ λx (x defended x)”, so (10) allows *myself* or *me* to occur in this position. Exactly the same can be said of (9). In (9), *themselves* is not subcategorized by the predicate. An argument of the predicate is *a picture of themselves*, not *themselves*. In (9), even *them* can occur since the position is not reflexive-marked. We have extended R&R’s (1993) theory to split antecedence. This is empirical so that Korean examples can also be applied to their idea, as evidenced by (11):

(11) John-un Tom-eykey silnaye ku-tul/ku-tul-casin-uy sagin-i issessta-ko malhayssta.
(Joh told Tom that there was a picture of themselves/them inside.)

It is worth noting that *ku-tul* ‘they’ or *ku-tul-casin* ‘themselves’ is not subcategorized by the predicate. *Ku-tul* ‘they’ and *ku-tul-casin* ‘themselves’ do not serve as an argument of the predicate. They are part of an argument of the predicate. More specifically, an argument of the predicate is *ku-tul-uy sacin* ‘their picture’ or *ku-tul-casin-uy sacin* ‘a picture of themselves’, not *ku-tul* ‘they’ or *ku-tul-casin* ‘themselves’. That is why our semantic approach allows reflexives and pronouns to overlap in the same position. Chomsky’s Binding Theory (1981, 1995) cannot account for the fact that reflexives and pronouns overlap in the same position. He tries to argue that they are in complementary distribution. We thus conclude that logophors and pronouns in English and Korean easily permit split antecedence.

2.3. Local Reflexives and Pronoun-like Reflexives

This section is dedicated to going over local reflexives and pronoun-like reflexives that induce split antecedence. To start with, let us consider the following sentences. It is worth pointing out that (13), (14), and (15) easily give rise to split antecedence:

- (12) John kwa Tom-i ku-tul-ul onghohayssta.
(John and Tom defended them.)
(13) John kwa Tom-i caki-tul-ul onghohayssta.
(John and Tom defended themselves.)
(14) John kwa Tom-i caki-casin-tul-ul onghohayssta.
(John and Tom defended themselves.)
(15) John kwa Tom-i ku-tul-casin-ul onghohayssta.
(John and Tom defended themselves.)

It must be stressed that as illustrated in (13), (14), and (15), Korean plural reflexives refer to *John* and *Tom* as their antecedents, inducing split antecedence. Yet, in (12), *ku-tul* ‘they’ does not refer to *John* and *Tom* as its antecedents,

thus not inducing split antecedence. As a matter of fact, *ku-tul* ‘they’ is interpreted as referring to some other people in discourse (a free reading). A question that naturally arises is “why do Korean reflexives and pronouns show the difference in these examples?” We wish to argue that while binding of Korean reflexives takes place between coarguments (a subject and an object) of a predicate, binding of Korean pronouns does not take place between coarguments (a subject and an object) of a predicate. We will call these Korean reflexives SELF anaphors. Put differently, in the case of the so-called SELF anaphor, its binding can take place between coarguments of a predicate. However, note that in the case of Korean pronouns, its binding cannot take place between coarguments of a predicate. Chomsky (1981, 1995) tries to classify binding into local binding and non-local binding. R&R (1993) try to classify anaphors into SELF anaphors and SE anaphors. Note, however, that Korean binding does not lend its support to their approaches. We intend to claim that Korean reflexives serve as a SELF anaphor or a SE anaphor. Binding of SELF anaphors operates between coarguments of a predicate, while that of SE anaphors does not operate between coarguments of a predicate. We will call a SE anaphor a pronoun-like anaphor. Let us take a look at (16), (17), (18), and (19):

- (16) John kwa Tom-i ku-tul-i smart-hata-ko sayngkakhanta.
(John and Tom think that they are smart.)
- (17) John kwa Tom-i caki-tul-i smart-hata-ko sayngkakhanta.
(John and Tom think that they are smart.)
- (18) John kwa Tom-i caki-casin-tul-i smart-hata-ko sayngkakhanta.
(John and Tom think that they are smart.)
- (19) John kwa Tom-i ku-tul-casin-i smart-hata-ko sayngkakhanta.
(John and Tom think that they are smart.)

It is worthwhile observing that (16) is two ways ambiguous. First, *ku-tul* ‘they’ refers to some other people in discourse. The second interpretation is interesting. *Ku-tul* ‘they’ could be interpreted as referring to *John* and *Tom*, producing split antecedence. Note that in (16), pronominal binding does not take place between coarguments of a predicate, hence the grammaticality of (16). Note that in (17), (18), and (19), Korean reflexives are interpreted as related to the conjunct *John* and *Tom*, thereby yielding split antecedence. It must be pointed out that in (17), (18), and (19), binding does not take place between coarguments of a predicate. We wish to argue that these anaphors behave as a SE anaphor (pronoun-like reflexives), which is different from a SELF anaphor whose binding operates between coarguments of a predicate. It is thus reasonable to assume that Korean anaphors can pattern with Korean pronouns, inducing split antecedents. It is also reasonable to assume that Korean reflexives can serve as a SELF anaphor whose binding takes place between coarguments of a predicate. Quite interestingly, (16), (17), (18), and (19) express the same proposition, but they are semantically different. It should be pointed out that (16) and (17) are two ways ambiguous. First, (13) and (14) are interpreted as “John and Tom think that they (as a set) are smart”. The other interpretation is interesting. (16) is interpreted as “John thinks that he is smart and Tom thinks that he is smart”. Notice, furthermore, that (18) and (19) are interpreted as “John thinks that he is smart and Tom thinks that he is smart”. We thus conclude that Korean reflexives can serve as a SELF anaphor or a SE anaphor and Korean reflexives can pattern with English pronouns, yielding split antecedence.

2.4. Split Antecedence and the Suffix *Tul* ‘plurality’

This section is devoted to going over the difference between English and Korean with respect to split antecedence. As observed earlier, the English plural reflexive *themselves* permits split antecedence when it serves as a logophor. On the other hand, Korean reflexives easily induce split antecedence when they are used as a SELF anaphor or a SE anaphor. To begin with, let us consider (21) and (22):

- (20) John told Tom that there was a picture of themselves/them inside.
- (21) *John told Mary about themselves.
- (22) John told Mary about himself.

It is important to note that while, as observed earlier, (22) is grammatical, (21) is not grammatical if split antecedence is intended from this example. More interestingly, in (21), *themselves* is not interpreted as referring *John* and *Mary*. On the other hand, in (22), *himself* is interpreted as referring to *John*, but not *Mary*. This, in turn, indicates that the English reflexive *themselves* cannot refer to a subject and an object as their antecedents even though the position of the reflexive (PP) is subcategorized by the predicate. This leads us to hypothesize that the English plural reflexive *themselves* cannot be bound to a subject antecedent and an object antecedent, thereby not

yielding split antecedence. Now let us turn to Korean:

- (23) John-i Mary-eykey ku-tul-casin-ekwanhayse malhayssta.
(John told Mary about themselves.)

Quite interestingly, the Korean reflexive *ku-tul-casin* ‘themselves’ easily yields split antecedence, unlike English. A question that immediately arises is “why do English and Korean show the difference in these examples?” We wish to argue that the Korean reflexive *ku-tul-casin* ‘themselves’ yields split antecedence, due to the fact that the plural morpheme *tul* ‘plurality’ triggers it, as evidenced by (24):

- (24) John kwa Tom-i ku-casin-ul piphanhayssta.
(John and Tom criticized himself.)

It must be stressed that in (24), *ku-casin* ‘himself’ without *tul* ‘plurality’ never induces split antecedence. Rather, it induces a distributive reading. More specifically, (24) is interpreted as “John criticized himself and Tom criticized himself. As evidenced by (24), the existence of split antecedence in Korean is attributed to the plural morpheme *tul* ‘plurality’. In the case of English, however, syntactic constraints such as logophors play a pivotal role in split antecedence, as evidenced by (20), repeated here:

- (25) John told Tom that there was a picture of themselves/them inside.

It should be pointed out that in (25), binding of *themselves* does not take place between coarguments of the predicate, thus being dubbed a logophor. Thus, even the pronoun *them* can occur in the position since that position is not one of coarguments (a subject and an object) of the predicate. A question that immediately arises is “what triggers split antecedence in English and Korean?” We wish to argue that while split antecedence in English takes place when the plural reflexive *themselves* serves as a logophor, in the case of Korean, it takes place when the suffix *tul* ‘they’ is attached to singular reflexives. There is another environment where the English reflexive *themselves* reveals split antecedence:

- (26) John and Tom defended themselves.
(27) John kwa Tom-i ku-tul-casin-ul onghohayssta.
(John and Tom defended themselves.)

It is worthwhile noting that English and Korean have something in common. More specifically, both English and Korean exhibit split antecedence when binding takes place between coarguments (a subject and an object) of the predicate. As exemplified in (26) and (27), the position of *themselves* and *ku-tul-casin* ‘themselves’ is one of coarguments of the relevant predicate. This, in turn, indicates that split antecedence in English can take place when binding takes place between coarguments of the predicate. Notice that split antecedence in Korean can take place when the plural morpheme *tul* ‘plurality’ is attached to singular reflexives. It is thus reasonable to conclude that both English and Korean reveal split antecedence when binding takes place between coarguments of the predicate. It is also reasonable to contend that while English induces split antecedence when the English reflexive *themselves* serves as a logophor, Korean always yields it when the plural suffix *tul* ‘plurality’ is attached to singular reflexives.

2.5. Split Antecedence in Chomsky (2019a/2019b)

In what follows, we try to capture split antecedence within Chomsky (2019a/2019b) in terms of Merge and Transfer. Chomsky (2019b) tries to argue that “Merge and Transfer are rooted in principles of efficient computation” (Chomsky 2019b). We adopt Chomsky’s (2019a/2019b) merge as follows:

- (28) a. Lexical items are syntactic units.
b. If A and B are syntactic units then Merge (A, B) = {A, B} is a syntactic unit.

Also, Adger & Sevenonius (2015) employ “Transfer” to capture the governing category as in (29):

- (29) Transfer: Transfer the minimal structure containing the finite complementizer to phonological and semantic

computations. Once a structure has been transferred, it is no longer accessible to further syntactic computation.

Now, we will provide the following theorem in this section:

- (30) Split antecedence of English plural reflexives is licensed by semantic computations after the first transfer or the second transfer.

Now, let us turn our attention to split antecedence of the English plural reflexive *themselves* that occurs in the object position:

- (31) John and Tom defended themselves.

Merge (John and Tom, defended) = {John and Tom, defended}
 Merge {John and Tom, {defended, (themselves)}}
 Merge {John and Tom, {defended, {themselves}}}
 The first Transfer takes place because the derivation is finished.
 SEM: [x=a person y=a person] [x+y defended x+y]

It is worthwhile noting that in (31), binding takes place between coarguments of the predicate, as observed earlier. In this case, the English plural reflexive *themselves* is interpreted as referring the antecedents *John* and *Tom*, yielding split antecedence. Note that as illustrated in (31), after the derivation is finished, semantic computations with respect to the derivation are provided. It must be pointed out that as indicated in (31), the semantic computations state that x+y defended x+y, which is in accordance with split antecedence that *themselves* yields.

Now let us consider the following English sentence:

- (32) John told Tom that there was a picture of themselves inside.

Merge (there, was) = {there, was}
 Merge {there, {was, (a picture)}}
 Merge {there, {was, {a picture, (of)}}}
 Merge {there, {was, {a picture, {of, (themselves)}}}}
 Merge {there, {was, {a picture, {of, {themselves, (inside)}}}}}
 Merge {there, {was, {a picture, {of, {themselves, {inside}}}}}}}
 Merge (that, {there, {was, {a picture, {of, {themselves, {inside}}}}}}})
 The first Transfer takes place because that is a finite complementizer.
 SEM: [x=a person, y=a person] [there was a picture of x+y inside]
 Merge (Tom, {that, {there, {was, {a picture, {of, {themselves, {inside}}}}}}}}})
 Merge (told, {Tom, {that, {there, {was, {a picture, {of, {themselves, {inside}}}}}}}}})
 Merge (John, {told, {Tom, {that, {there, {was, {a picture, {of, {themselves, {inside}}}}}}}}})
 Merge {Jon, {told, {Tom, {that, {there, {was, {a picture, {of, {themselves, {inside}}}}}}}}}}}
 The second Transfer takes place because the derivation is finished.
 SEM: [x=a person, y=a person] [x told y that there was a picture of x+y inside]

It must be stressed that in (32), the English reflexive *themselves* is interpreted to referring to *John* and *Tom*, yielding split antecedence. Note that Transfer took place twice, namely one for *that* COMP and one for the finished derivation. After the second Transfer, the semantic computations license the existence of split antecedence, as exemplified in (32). It is worth observing, on the other hand, that in (32), *themselves* serves as a logophor, thereby inducing split antecedence. Notice that the semantic computations state that x told y that there was a picture of x+y inside, which is in accordance with binding of *themselves*.

Finally, let us turn to (33), repeated here:

- (33) *John told Mary about themselves.

Merge (John, told) = {John, told}
 Merge {John, {told, (Mary)}}
 Merge {John, {told, {Mary, (about)}}}
 Merge {John, {told, {Mary, {about, (themselves)}}}}
 Merge {John, {told, {Mary, {about, {themselves}}}}}
 The first Transfer takes place because the derivation is finished.
 SEM: [x=a person, y=a person] [x told y about x+y]

Notice that in (33), *themselves* is not interpreted as referring to *John* and *Mary*, thus not inducing split antecedence. Notice, furthermore, that the SEM wrongly predicts that *themselves* yields split antecedence. One way of solving this problem is to posit a constraint as follows:

(34) The English plural reflexive *themselves* cannot be bound to a subject and an object at the same time.

This filter must be applied to the SEM. More specifically, after the derivation of (33) is finished, (34) must be applied to the SEM so that the sentence can be ruled out as ungrammatical. To sum up, the English reflexive *themselves* can be licensed by the SEM after the first Transfer or the second Transfer, but a constraint such as (34) is also necessary to capture the existence of split antecedence in English.

3. Conclusion

To summarize, we have provided in-depth syntactic and semantic analyses of split antecedence in English and Korean. It is worth noting that just as in the case of English pronouns, Korean pronouns permit split antecedence, but Korean reflexives and English reflexives behave differently with respect to split antecedence. It should be pointed out that logophors and pronouns in English and Korean easily permit split antecedence. It must be stressed, on the other hand, that Korean reflexives can serve as a SELF anaphor or a SE anaphor and that Korean reflexives can pattern with English pronouns, yielding split antecedence. It is interesting to observe that while English induces split antecedence when the English reflexive *themselves* serves as a logophor, Korean always yields it when the plural suffix *tul* 'plurality' is attached to singular reflexives. We have tried to capture split antecedence in English in terms of Chomsky's (2019a/2019b) merge. It must be noted that the English reflexive *themselves* can be licensed by the SEM after the first Transfer or the second Transfer, but a constraint such as (34) is also necessary to capture the existence of split antecedence in English.

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