

# The Internal Structure of Reflexives and a NP-internal Movement Analysis

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**Kim, Hyosik. (2023). The internal structure of reflexives and a Np-internal movement analysis.** *The Linguistic Association of Korea Journal*, 31(3), 51-68. This study investigates the internal structure of reflexive expressions, focusing on the construction of *cakicasin* in Korean and *himself* in English. There have been two approaches to the question of English reflexives: the transformational theory and the phrase structure theory of reflexives. This paper will show that the reflexive expressions in both languages exhibit a unique distributional property: the reflexive expressions can be separated by adjectives, in the form of *caki+adj+casin* and *his+adj+self*. Building on the previous analysis for reflexive expressions in English, this study aims to show that the reflexive expressions constitute a possessive phrase and the *caki+adj+casin* construction involves the movement of *caki* to Specifier of a higher phrase.

**Key Words:** reflexives, possessive phrase, genitive, case drop, Across-The-Board (ATB) movement, coordination

## 1. Introduction

According to the transformational theory of reflexive, reflexives are not encoded in deep structure, and the surface structure is derived via transformation from an underlying structure of a noun phrase under certain conditions. For example, in this view, a sentence like *John likes himself* would be derived from an underlying structure that is roughly identical as *John likes John* (Lees & Klima, 1963; Postal, 1966). On the contrary, according to the phrase structure theory of reflexives, reflexives are analyzed as possessives and such structure is presented in the deep structure (Helke, 1973). In a similar vein, it is claimed

that English reflexives such as *himself*, *herself*, *oneself*, and etc, have an internal structure of possessives DPs (Ahn & Kalin, 2018; Collins, 2019). The primary evidence of the claim comes from the observation that English reflexives can be separated by an adjective, as in *his usual self*, with the pronoun being marked with the genitive case. It is argued that the reflexive has a fully-fledged complex structure of possessive DPs, and the pronoun part of the reflexive moves to Specifier of a higher phrase.

It is commonly argued that the syntax of Korean nominals and reflexives differ from that of English. Therefore, this paper aims to investigate the internal structure of reflexive expressions in Korean and examines the phrase structure theory of reflexives. It will show that Korean reflexive expressions also involve a fully-fledged syntactic structure of possessives. Specifically, this study investigates constructions in (1), where the expression *cakicasin* in (1a) can be separated by an adjective as shown in (1b).<sup>1)</sup>

- (1) a. John-i        cakicasin-ul        macuhayssta.  
       John-NOM oneself-ACC        faced  
       ‘John faced himself’
- b. John-i        caki-uy    canhokhan    casin-ul        macuhayssta.  
       John-NOM one-GEN brutal        oneself-ACC    faced  
       ‘John faced his brutal self.’

Like English reflexives, Korean reflexives consist of two components, *caki* (one) and *casin* (self). In this paper, *caki* will refer to the pronominal element of the reflexive expression. As illustrated in (1b), the reflexive expression can be separated by an adjective. Building upon the previous analysis to the English reflexives (Collins, 2019), this paper will show that the adjective reveals that Korean reflexive pronoun *cakicasin* has the multi-layered structure resembling a possessive phrase as shown in (2), where the specifier position of the outer phrase can be occupied by the pronominal element *caki* via

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1) Unlike English, Korean *caki-adj-casin* construction is not commonly used. In this paper, I do not claim that the example represents a natural sentence. Instead, I focus on its grammaticality, considering the wide consensus on the idea that the omission of the genitive case marker has a substantial influence on speakers’ judgments, as shown in (i).

(i) \*John-i        caki(-uy) canhokhan    casin-ul        macuhayssta.  
       John-NOM    one-GEN brutal        oneself-ACC    faced  
       ‘John faced his brutal self.’

movement. Furthermore, this analysis predicts that the pronoun moved to the specifier position must bear the genitive case marker, satisfying Case Filter (Chomsky, 1981).

(2) [*caki*<sub>i</sub>-GEN [<sub>FP</sub> adj [<sub>PossP</sub> *t*<sub>i</sub> [*casin* <sub>Poss</sub>]]]]

The main argument is as follows: both languages permit two morphological forms of the pronominal elements, yet the separation of reflexives by adjectives requires the separated pronominals to bear the genitive morphology. This morphological constraint within a specific distributional environment can be explained by the existence of reflexive expressions with layered structures, wherein the pronominal element moves to a position for a genitive marking (Ahn & Kalin 2018; Collins, 2019).

Section 2 of this paper will delve into the distribution of English reflexives and present the movement analysis proposed by the previous studies. Section 3 will focus on the distribution of Korean reflexives and propose a modified version of the analysis to account for the observed distributional facts. In Section 4, an alternative analysis that can accommodate these facts will be discussed. Section 5 will present additional evidence supporting our analysis, followed by Section 6, which demonstrates that the same analysis extends to other types of nominals. Finally, Section 7 will provide the concluding remarks.

## 2. Reflexives in English

Collins (2019) proposes that English reflexive expressions, such as *himself*, have internal structures akin to possessives. He begins by demonstrating that English third-person reflexives exhibit the following distributional patterns: the pronominal component, *him*, can manifest in two morphological forms, the accusative (3a) and the genitive (3b); it can be separated by adjectives (3c), and when separation occurs, only the genitive forms are permissible (3d). Notably, adjectives cannot precede the pronominals (3e-g).

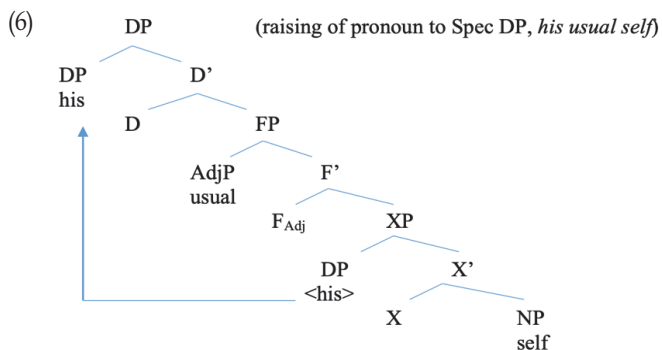
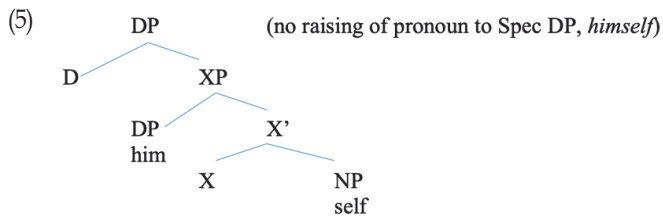
- (3) a. He is not himself.  
 b. ?He is not his self.  
 c. He is not his usual self.  
 d. \*He is not him usual self.  
 e. \*He is not usual himself.

- f. \*He is not his usual himself.  
g. \*He is not usual hisself.

From these observations, the following generalization can be made.

- (4) a. Two morphological forms are possible with third person reflexives, i.e., the accusative and genitive forms (3a-b, although the genitive form is less preferred).  
b. When adjectives separate the pronoun from *self*, only the genitive forms are possible (3c-d).  
c. Adjectives cannot precede the pronouns (3e-g).

To explain these observations, Collins (2019) proposes that English reflexive expressions possess multi-layered structures involving possessives. This is illustrated through the proposed structures in (5) and (6) (directly adopted from Collins (2019)). (5) depicts the structure of a reflexive without adjectives, which corresponds to a reduced functional structure. On the other hand, (6) represents the structure of a reflexive with an additional functional projection that can host adjectives.



First, Collins argues that the pronoun *his* is base generated in Spec\_XP and *self* in the complement of the head, forming a possessive phrase. Based on the detailed syntactic structure of reflexives, he argues for a movement analysis where the pronoun moves to DP\_Spec in cases when the pronoun bears the genitive morphology.<sup>2)</sup> Crucially, he claims that DP\_Spec licenses the genitive form, and thus the genitive forms of the pronoun are used only and only if the pronoun is in the Spec\_DP, otherwise different morphology is used.<sup>3)</sup> He further argues that the English nominals are divided into two groups, namely one group that allows adjectival modifications and the other that does not, varying in their syntactic structure as illustrated in (5) and (6), and he claims that the two distinct structures are available for English reflexive *himself* as well.<sup>4)</sup> The core ingredients of his analysis is summarized in (7).

- (7) a. The Spec XP (Possessive Phrase) is the base position of the pronoun.  
 b. The pronoun (optionally) moves to Spec\_DP and the genitive forms are used if and only if it is in Spec\_DP.  
 c. A functional category that can host adjectives, i.e., FP, exists only when the pronoun moves to Spec\_DP.

Based on this analysis, the distribution of the reflexive in English in (3) can be explained as follows. The outer DP layer provides a position that the pronoun can occupy

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2) Ahn and Kalin also argues for the movement analysis. Roughly speaking, they argue that the pronoun bears the accusative case morphology when the whole expression is interpreted as reflexives, whereas the pronoun bears the genitive case when the expression is interpreted as non-reflexives. They further argues that the accusative case is assigned within the local configuration, while the genitive case is assigned by the movement of the pronoun to Spec\_DP.

3) According to his analysis, the reduced functional structure is not a phase and it means that the outer DP does not block case assignment. As a result, the inner DP can receive the accusative case from v. When there is a functional projection, it may block the case assignment. The pronoun then moves to Spec\_DP and receives the genitive case.

4) In Collins (2007), English nouns, e.g., *home*, are classified into three main groups: regular nouns, bare nouns, and light nouns. These groups can be further subdivided depending on whether the noun allows adjectival modification or not. According to this categorization, regular nouns allow adjectival modification, e.g., *the beautiful homes*, while the other two categories do not, e.g., *John stayed at (\*comfortable) homes*. Based on this, Collins suggests categorizing English reflexive nouns, such as *himself*, into two groups based on their (dis)allowance of adjectival modification, stemming from the structural distinction between the reduced and non-reduced functional structures proposed in (5) and (6). As far as I am concerned, Korean nominals allow adjectival modification freely.

through (vacuous) movement (as in 3b) otherwise it remains in-situ (as in 3a), with the pronoun being genitive-marked only when it moves. The contrast between (3c) and (3d) is expected since the pronoun has moved to Spec\_DP and it is correctly genitive-marked in (3c), but not in (3d). Importantly, this analysis predicts that the pronoun can stay in situ since the movement is optional. Therefore, if (3e) has the structure of (6), it should be grammatical, contrary to fact. To account for this, Collins suggests that the structure for (3e) corresponds to the reduced functional structure in (5) when the nominal remains in situ. In this case, there is no position that can hold the adjective, and as a result, the lack of the functional projection prohibits the insertion of the adjective. The examples in (3f) and (3g) are ill-formed due to either having the structure of (5) with no position for the adjective or the movement of *his* resulting in a resumptive pronoun rather than a trace. (3g) is ungrammatical because the pronoun is marked as genitive but has not moved to Spec\_DP.

Collins' proposal of these complex structure of possessives provides a framework for understanding the distributional characteristics of English reflexive expressions, accounting for their morphological variations and restrictions when combined with adjectives. In what follows, I will present Korean data to show a remarkably similar distribution to English reflexives. As such, the data indicate that the same analysis is applicable to Korean examples. This in turn supports the idea that reflexives have possessive structures presented in deep structure.

### 3. Korean Reflexives

Before I discuss the internal structure of Korean reflexives, I will provide first that both the *cakicasin* and *caki+adj+casin* constructions satisfy the Condition A of the Binding Theory (Chomsky, 1981), which states that anaphors must be bound in its domain. The binding fact thus suggests that the *caki+adj+casin* construction is a variant of reflexives rather than an idiosyncratic construction. First of all, as is well known, the reflexive *cakicasin* is licensed when it is c-commanded by the subject *John* as shown in (8a). The reflexive is not licensed in (8b) because *John* does not c-command it. The c-command condition holds true for the *caki+adj+casin* construction as shown in (8c-d).

## (8) C-Command Condition

- a. John<sub>i</sub>-i          cakicasin<sub>i</sub>-ul          pinanhayssta.  
 John-NOM    oneself-ACC          criticized  
 'John criticized himself.'
- b. \*John<sub>i</sub>-uy          tongsayng-i          cakicasin<sub>i</sub>-ul          pinanhayssta.  
 John-GEN    brother-NOM    oneself-AcCC          criticized  
 '\*John<sub>i</sub>'s brother criticized himself<sub>i</sub>.'
- c. John<sub>i</sub>-i          caki-uy          canhokhan casin<sub>i</sub>-ul    pinanhayssta.  
 John-NOM    oneself-GEN    brutal          self-ACC    criticized  
 'John criticized his brutal self.'
- d. \*John<sub>i</sub>-uy          tongsayng-i    caki-uy    canhokhan casin<sub>i</sub>-ul    pinanhayssta.  
 John-GEN    brother-NOM    one-GEN    brutal          self-ACC    criticized  
 '\*John<sub>i</sub>'s brother criticized his brutal self<sub>i</sub>.'

In addition, both constructions exhibit the same agreement condition. The reflexive *cakicasin* can require second and third person NPs to be licensed, thus when the subject is a first person NP in shown (9a), the reflexive cannot be licensed (cf., (8a)). The agreement condition holds true for the *caki+adj+casin* construction as well as shown in (9b).

## (9) Agreement condition

- a. \*Na-nun    cakicasin-ul    pinanhayssta.  
 I-TOP      oneself-ACC    criticized  
 'I criticized myself.'
- b. \*Na-nun caki-uy          canhokhan    casin<sub>i</sub>-ul    pinanhayssta.  
 I-TOP    one-GEN          brutal          self-ACC    criticized  
 'I criticized my brutal self.'

As for the distribution, Korean reflexives in the forms of *cakicasin* and *caci-uy+adj+casin*, exhibit a remarkably similar distribution to English reflexives. First, the nominal component *caki* can manifest in two morphological forms, namely the genitive form or the bare form as shown in (10a/b). Secondly, the pronominal element *caki* can be separated by adjectives as in (10c), in which case only the genitive forms are permissible, thus (10d) is not acceptable. However, despite the fact that the reflexives in the two languages share similar distributional facts, the placement of adjectives differs between Korean and

English, with Korean allowing adjectives to appear before the pronoun as shown in (10e).

- (10) a. John-un cakicasin-ul macuhayssta.  
 John-TOP oneself-ACC faced  
 'John faced himself.'
- b. ?John-un caki-uy casin-ul macuhayssta.  
 John-TOP one-GEN self-ACC faced  
 '?John faced his self.'
- c. John-un caki-uy picamhan casin-ul macuhayssta.  
 John-TOP one-GEN miserable self-ACC faced  
 'John faced his miserable self.'
- d. \*John-un caki picamhan casin-ul macuhayssta.  
 John-TOP one miserable self-ACC faced  
 '\*John faced him miserable self.'
- e. John-un picamhan cakicasin-ul macuhayssta.  
 John-TOP miserable oneself-ACC faced  
 '\*John faced miserable himself.'
- f. \*John-un caki-uy picamhan cakicasin-ul macuhayssta.  
 John-TOP one-GEN miserable oneself-ACC faced  
 '\*John faced his miserable himself.'
- g. \*John-un picamhan cakiuycasin-ul macuhayssta.  
 John-TOP miserable hisself-ACC faced  
 '\*John faced miserable hisself.'

The distributional fact of Korean reflexives can be summarized as following.

- (11) a. Two morphological forms are possible with the pronoun *caki* 'one', namely, the genitive and bare forms (=10a/b).
- b. When adjectives separate the pronoun from *casin* 'self', only the genitive forms are possible (=10c/d).
- c. Adjectives can precede the pronoun (=10e).

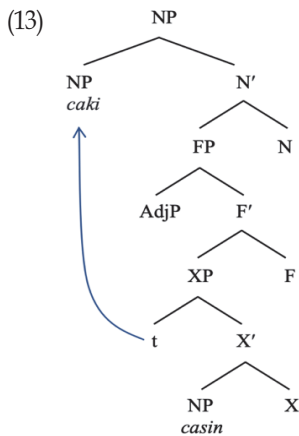
Notice that the Korean reflexive shows a remarkably similar pattern, except the fact that in English adjectives cannot precede the pronoun whereas Korean adjectives can



(10e). To account for the comparable or distinct distributional patterns observed in Korean and English reflexive expressions, we suggest a slight modification to Collins' analysis. Specifically, I propose a revised version of the framework depicted in (7), which is presented as (12).

- (12) a. Spec XP (Possessive Phrase) is the base position of the pronoun *caki*.
- b. The pronoun (optionally) moves to Spec\_NP and the genitive forms are used if and only if it is in Spec\_NP.
- c. FP exists regardless of the position of the pronoun *caki*.

The crucial difference is (12c). In Collins' analysis, English nominals are divided into two groups: the one that allows adjectival modification and the other one that does not. The two groups differ in their internal structure with respect to the presence or the absence of a functional projection, FP. His claim is that the two different structures are available for reflexives. The structure which does not have the functional projection bans the adjectives precede the pronominals (3e-g). On the contrary, the fact that Korean adjectives can precede the pronoun (8e) suggests that the structure of the reflexive expressions must include the position that can host the adjectives. This amounts to saying that the internal structure of *cakicasin* corresponds to the structure of (6) where the place for adjectives is available regardless of the position of the pronoun.<sup>5)</sup> Thus, the internal structure of *cakicasin* in Korean must be like the one in (13).



5) This means that FP exist even when no adjectives are overtly inserted.

Based on the analysis, let me illustrate the observed facts about Korean reflexives. When there are no adjectives (10a/b), *caki* can stay in-situ and the bare form is used as a default case (10a), and when it moves to Spec\_NP, the genitive form is used (10b).<sup>6</sup> In (10c/d), when adjectives are included, *caki* moves to Spec\_NP and (10c) is grammatical as the genitive form is correctly used. On the contrary, (10d) is ungrammatical because the moved *caki* is not cased marked, thus in violation of Case Filter. Importantly, unlike English, FP is always present in Korean reflexive structure as proposed in (13).<sup>7</sup> This means that the structure does not block the presence of adjectives, and as a result, the adjectives can precede *caki* (10e). (10f) is ungrammatical because the movement of *caki* does not leave a trace, and (10g) is ungrammatical as the pronoun is genitive marked but is not moved.

It is important to note that in the current analysis the genitive marker *-uy* in Korean is treated as Case that is "structurally assigned" as traditionally assumed in the GB framework (Chomsky, 1980, 1986). That is, noun phrases are assigned a Case when it is governed by a licensing head. While the idea that genitive marker *-uy* is a structural case (Case assigned by a structural configuration) has been suggested in the Korean literature (Kang, 1986; Bak, 2006; Choi, 2009), it is also claimed that the genitive marker is in fact a variant of allomorphs, that is, it is a morpheme that is contextually realized rather than structurally assigned (An, 2008). Therefore, if it were the case that the genitive case in Korean is not structurally licensed, there is no reason to assume that the pronoun element *caki* in *cackicasin* undergoes movement.

In what follows, I will discuss an alternative analysis that can capture the observed data in Korean without appealing to the notion of movement. The two potential analyses, namely the movement analysis and the non-movement analysis will be examined in the context of conjoined nominals. By doing so, I will provide a piece of evidence that supports for the movement of *caki*.

## 4. Case Drop

The core observation from the Korean data was that the pronominal part *caki* can bear two morphological forms when there are no adjectives, but only the genitives forms are

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6) This aligns with the proposals made in the literature that the occurrence of Korean genitive marker is based on the structural configuration (Kang, 1986; Bak, 2006; Choi 2009).

7) This indicates that adjectival modification should not be as restricted in Korean as in English.

possible when it is separated by adjectives. This can be described as in (14).

- (14) a. Caki-(GEN) Casin  
 b. Caki-(\*GEN) Adj Casin

The movement analysis proposed explains the distributional facts about reflexive expression: *caki* can be genitive marked only when it moves to the higher phrase. The presence of the adjective in (14b) indicates that the pronoun is in the moved position and as a result it must be genitive-marked.

However, (14) can also be explained by an independent factor. For example, it is argued that Korean genitive marker has no bearing with Case licensing (in the sense of GB theory), rather it is a variant of allomorph that is contextually realized as a prenominal modifier suffix (An, 2014). In this view, the genitive marked *caki* is not necessarily in the position that is governed by a genitive licenser. As such, the genitive-marked *caki* in (14a-b) do not necessarily suggest that it undergoes movement.

In his work, it is shown that Korean genitive markers can be dropped with some restriction. For example, possessive phrases allow the genitive drop as in (15a), whereas non-possessives do not allow the genitive drop as shown in (15b).

- (15) a. Chelswu-(uy) chayk  
 Chelswu-GEN book  
 'Chelswu's book.'  
 b. Kongpo-\*(uy) swunkan  
 Terror-GEN moment  
 'A moment of terror.'

The optionality of the genitive marker in (14a) in possessives then can be explained by the fact that the genitive markers can be dropped in possessives.

Furthermore, it is also shown that the genitive drop has an adjacency restriction. Essentially, the genitive drop is possible only when the NP hosting the genitive marker is adjacent to the head noun (16a), but it is blocked when there is an intervener (16b).

- (16) a. Kongsandang-uy namhan(-uy) chimlyak. (data from An (2008))  
 Communist-GEN South.Korea-GEN invasion  
 'The communist army's invasion of South Korea.'

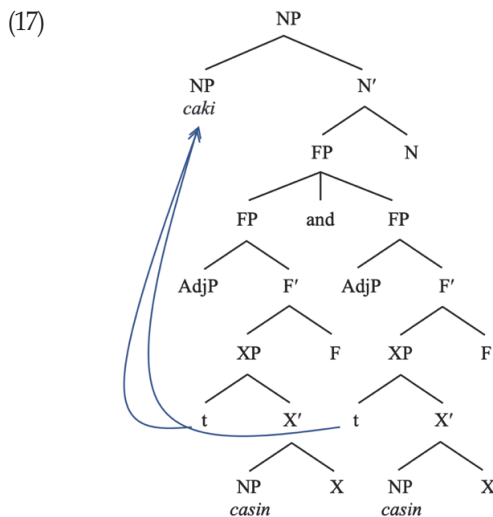
- b. Kongsandang(\*-uy) namhan-uy chimlyak.  
 Communist-GEN South.Korea-GEN invasion  
 'The communist army's invasion of South Korea.'

Setting aside the debate over the exact nature of the adjacency condition on the genitive drop, the adjacency condition can also correctly capture the ungrammaticality of (14b) - the genitive marker cannot be dropped because the adjective intervenes the genitive marked *caki* and the head N *self*. If this independent constraint on the genitive drop can capture the observed data, the claim regarding the fully-fledged structure of Korean reflexives remains unclear.

In the next section, I will provide additional piece of evidence that supports the movement analysis.

## 5. Coordinated Construction and Word Order

In the proposed analysis (13), the nominal *caki* can undergo NP-internal movement to Spec\_NP. In this view, if a node between the launching site and the landing site is coordinated, e.g., FP and FP, the movement should occur in Across-The-Board (ATB) fashion as represented in (17).



This analysis makes some interesting predictions. First, if the conjoined reflexives have the structure of (17), the grammar should allow the "caki-adj-casin & adj-casin" word order, but ban the "adj-casin & caki adj-casin". This is so because, in (17), the ATB movement of *caki* involves leftwards movement to Spec\_NP. As a result of the leftwards ATV movement of *caki*, the *caki-adj-casin* & *adj-casin* order should be possible. On the other hand, the *adj-casin* & *caki-adj-casin* order is predicted to be impossible because there is no position for *caki* to ATB move rightwards. The contrast in (18) confirms this. Crucially, the English counterparts also exhibit the same pattern further supports the movement analysis.

- (18) a. John-i        caki-uy    canhokhan    casin-kwa    pichamhan    casin-ul    poasse.  
           John-NOM    one-GEN    brutal        self-and     misearble    self-ACC    saw  
           'John saw his brutal and miserable self.'
- b. \*John-i        anhokhan    casin-kwa    caki-uy     pichamhan    casin-ul    poasse.  
           John-NOM    brutal        self-and     one-GEN    misearble    self-ACC    saw  
           '\*John saw brutal self and his miserable self.'

In (18a), *caki* appears to the left of the coordinated conjuncts, and the leftward ATB movement analysis correctly captures it. On the other hand, in (18b) *caki* appears inside the second conjunct. This order is not possible because it would involve the rightward movement of *caki* and there is no landing site, e.g., Spec\_NP, in the second conjunct.<sup>8)9)</sup>

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8) While I advocate ATB movement analysis for the "[caki-uy]-[adj]-[casin] & [adj]-[casin]" configuration, thus argue for (ia) as its derivation, the configuration can potentially be derived by ellipsis as shown in (1b) where *caki* in the second conjunct is simply elided.

- (i) a. [caki-uy]<sub>i</sub> [adj [t<sub>i</sub> [casin]]] and [adj [t<sub>i</sub> [casin]]]  
       b. [[caki-uy] adj casin] and [[caki-uy] adj casin]

However, there is a reason to think that the ellipsis analysis is not tenable. Ellipsis is assumed to be licensed under identity conditions. Thus, if the ellipsis of adjective expressions is a licit operation, (iiB) should yield the reading that Bill also criticized John's brutal self, where the pronoun *caki* is bound by *John*. However, to my own judgment, (iiB) does not yield such an interpretation, but only yields the reading that Bill also criticized Bill's brutal self, where the pronoun is bound by *Bill*. In other words, in (iiB) the identity condition is not met. Therefore, the ellipsis of adjective expressions is not an licit syntactic operation in Korean and (ib) is not the right derivation.

- (ii) A: John-un        caki-uy    canhokhan    casin-ul    pinanhayssta.  
           John-TOP    one-GEN    brutal        self-ACC    criticized  
           'John criticized his (John's) brutal self.'

One may argue that the example of (18a) does not necessarily show the ATB movement of *caki* because Korean allows the "adj-casin" form as a variant of reflexive expressions independently. Thus, it is possible to analyze the structure of (18a) as [caki-adj-casin & adj-casin] rather than [caki-adj-casin &  $t_i$  adj-casin]. However, if that were the case, it is not clear why (18b) is bad since the conjoined phrase should also be analyzed as the conjunction of two independent phrases, i.e., [adj-casin & caki-adj-casin], rather than [ $t_i$ -adj-casin & caki-adj-casin].

The proposed analysis also predicts that when there are more than two conjuncts the second and subsequent conjuncts must have the same form, e.g., adj-*casin*. This prediction is borne out in (19). (19b) is ungrammatical because the ATB movement of *caki* must leave traces on its movement path.

- (19) a. John-i            caki-uy   picamhan \_ casin-kwa,    canhokhan \_ casin,  
          John-NOM   one-GEN miserable   self-and            brutal            self,  
          kuliko            akhan \_ casin-ul            pinanhayssta  
          and                evil            self-ACC            criticized  
          ‘John criticized his miserable self, brutal self, and evil self.’
- b. \*John-i            caki-uy   picamhan \_ casin-kwa,    canhokhan \_ casin,  
          John-NOM   one-GEN miserable   self-and            brutal            self,  
          kuliko caki-uy akhan   casin-ul            pinanhayssta.  
          and                one-GEN evil            self-ACC            criticized  
          ‘\*John criticized his miserable self, brutal self, and his evil self.’

The crucial point of the examples is that the contrasts are predicted solely by the movement analysis independently from the alternative hypothesis based on the constraints on the genitive drop.<sup>10)</sup>

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B: Bill-to        ~~caki-uy~~    canhokhan   casin-ul    macuhaysse.  
 Bill-also      one-GEN    brutal            self-ACC    faced  
 ‘Bill also criticized Bill’s/\*John’s brutal self.’

- 9) A similar ATB-based analysis has been adopted to the English counterparts (Davenport et al. In progress).
- 10) The ATB-movement analysis for the conjoined reflexive constructions could potentially predict that the constructions to exhibit the Coordinated Structure Constraints (CSC) and ATB movement constraints (Ross, 1967; Williams, 1978) as shown in (i).
- (i) a. This is the book that [John bought ] and [Mary didn’t buy \_].

So far, I have discussed the distribution of the reflexive pronoun *cakicasin* and claimed that it has a complex possessive NP structure and the *caki-adj-casin* order is derived by NP-internal movement of *caki*. This analysis predicts that when the two reflexive expressions are coordinated, the movement of *caki* will occur in ATB fashion and to support this analysis we showed consequences of ATB movement.

## 6. Implication: Non-Reflexives

I have shown that the reflexive expression separated by an adjective has complex structure of possessives and it is derived by movement. One implication of this conclusion is that other types of nominal expressions separated by an adjective could have the same structure and derivation. In other words, the nonreflexive expression in (20a) should have the structure of (20b).

- (20) a. Bill-uy      calsayngkin      chinkwu  
          Bill-GEN    handsome      friend  
          ‘Bill’s handsome friend.’  
       b. Bill-(GEN)<sub>i</sub>    handsome      t<sub>i</sub> friend

- 
- b. \*This is the book that [John bought \_ ] and [Mary bought the book],  
 However, Korean examples do not appear to be sensitive to these constraints as shown in (ii).  
 (ii) a. John-i      caki-uy    [canhokhan \_\_casin kwa pichamhan    **cakicasin-ul**] macuhayssta.  
       John-NOM one-GEN brutal                    self and miserable      self-ACC      faced  
       \*‘John faced his brutal self and miserable himself.’

- b. John-un      caki-uy    canhokhan \_ casin-ul [pp pichamhan \_ casin-uy apeyse] macuhayssta.  
       John-NOM one-GEN brutal                    self-ACC    miserable      self-GEN before      faced  
       \*‘John faced his brutal self before (his) miserable self.’

It should be noted that the acceptability of the Korean examples can be attributed to independent factors. For example, (iia) could be analyzed as a conjunction of ‘his brutal self’ and ‘miserable self’, both of which are both licit phrases on their own. In such case, the pronoun *his* is only moved within the first conjunct, thus the example does not involve the ATB movement. Similarly, (iib) could be analyzed as a conjunction of the two individually licit conjuncts, and as a result, the example does illustrate the ATB movement. Consequently, these examples do not serve as counterexamples to the ATB movement analysis. Instead, the examples show the challenges of testing the CSC/ATB movement constraints in Korean.

First of all, the morphological constraint observed for the reflexives is also observed with the non-reflexive example. In (21a), the possessor noun *Bill* can be optionally marked with the genitive, but when an adjective intervenes *Bill* and *friend* as in (21b) *Bill* must be marked with the genitive. This is also predicted if the underlying structure was (17): *Bill* and *friend* form a possessive phrase, and *Bill* bears the genitive morphology when it undergoes movement to Spec\_NP while it remains unmarked when it stays in-situ, as shown in (21a). When the adjective separates the expression, as in (21b), *Bill* moves to Spec of higher phrase, as a result, the genitive case must be assigned.

- (21) a. Bill(-uy) chinkwu  
 Bill-GEN friend  
 'Bill's friend'  
 b. Bill\*(-uy) calsayngkin chinkwu  
 Bill-GEN handsome friend  
 'Bill's handsome friend'

Furthermore, the following data supports the movement analysis. (22) shows that when the nonreflexive expression is conjoined. In (22a), *Bill's* is in the leftmost position from the conjoined phrase which yields the interpretation that Bill's handsome friend and Bill's beautiful friend. On the other hand, such interpretation is not available when *Bill's* appears in the second conjunct as shown in (22b).<sup>11)</sup>

- (22) a. John-i Bill-uy calsayngkin chinkwu-wa yeppun chinkwu-lul  
 John-NOM Bill-GEN handsome friend-and beautiful friend-ACC  
 sokayhayssta.  
 introduced  
 'John introduced his handsome friend and his beautiful friend.'  
 b. \*John-i calsayngkin chinkwu-wa Bill-uy yeppun chinkwu-lul  
 John-NOM handsome friend-and Bill-GEN beautiful friend-ACC  
 sokayhayssta.

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11) The examples can also be captured by the ellipsis approach: the ellipsis (of the genitive marker) generally requires an preceding element (antecedent) which cannot be the target of ellipsis. I do not claim the ellipsis-approach is not tenable. The examples show that the ATB-movement analysis also predicts the contrast between the two examples.



introduced

‘Intended., John introduced his handsome friend to his beautiful friend.’

The contrast is clearly predicted if *Bill* undergoes leftward ATB-movement from each conjunct: (21a) is acceptable because it involves the leftward ATB movement from each conjunct to Spec\_NP, whereas (22b) is not acceptable since there is no landing site for the rightward ATB movement.

## 7. Conclusion

In this work, I have preliminarily investigated the internal structure of Korean reflexive *cakicasin* and argued for the internal structure of possessive NP whose Spec can be occupied by the NP-internal (leftward) movement of *caki*. This analysis is supported by the observation that such expression can be separated by an adjective and the word order of the conjoined phrase of such expression.

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