A Base Generation Approach to the Pro-form Replacement Leaving Remnants

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ABSTRACT

This paper deals with kulehkey replacement facts in Korean mit-type constructions, with a special focus on the seemingly remnant leaving replacement cases. It has been widely believed that no movement is possible out of the replacement site, but the relevant Korean construction seems to show otherwise. However, this paper claims that this apparent movement out of a replacement site does not involve real movement but can be explained in an alternative way. More precisely, it will be shown that the remnant phrase does not move to its surface position but is base-generated there and there is pro inside the replacement site. Ample sets of data supporting this view will be provided and the implications of this analysis will be discussed regarding the mit-type construction. (Hannam University)

Keywords: kulehkey, mit-type construction, substitution after movement, major object, base generation

1. Introduction

It is usually believed that nothing can move out of the pro-form replacement site. The examples in (1) show that the English pro-form so, just like other pro-forms, do not allow extraction out of its target.

A: The professor believes [IP a male student to be a genius].

B: a. I believe so, too.
   b. *I believe a female student so. (so=[IP t to be a genius])
   c. *Which male student does the professor believe [IP so]?

But in Korean, we have some examples which seem to indicate that movement out of the replacement site is possible. The relevant examples come from Korean...
kulehkey replacement construction, shown in (2),\(^1\)

(2) A: ku kyoswu-nun [i namhaksayng-ul chencay-la-ko] mit-e/sayngkakhay  
the professor-Top this male student-Acc genius-be-comp believe/think  
‘The professor believes/thinks this male student to be a genius.’

B: a. na-to kulehkey mit-e/sayngkakhay  
I-also so believe/think  
‘I believe/think so, too.’  (*kulehkey=[i namhaksayng-ul chencay-la-ko]*)

b. na-nun ce yehaksayng-ul kulehkey mit-e/sayngkakhay  
I-Top that female student-Acc so believe/think  
‘(Lit.) I believe/think that female student so.’ (*kulehkey=[t chencay-la-ko]*)

c. etten namhaksayng-ul ku kyoswu-nun kulehkey mit-ni/sayngkakha-ni  
Which male student-Acc the professor-Top so believe-Q think-Q  
‘(Lit.) Which female student the professor believe/think so?’

\(^{(2Ba)}\) shows that kulehkey, the Korean counterpart of English so, can replace the whole embedded clause complement of mit-/sayngkakha-(believe/think) type verbs. What is not expected is that kulehkey seems to be allowed to replace the embedded clause even when some element moves out of it, as shown in \((2Bb)\) and \((2Bc)\). Hence unlike in English, kulehkey seems to allow replacement leaving remnants, at least superficially.

Another interesting phenomenon noted in relation to this kulehkey construction is that there is a strong Acc-Nom contrast in the replacement contexts, as exemplified in (3).

(3) A: ku kyoswu-nun [i namhaksayng-ul/i chencay-la-ko] mit-e/sayngkakhay  
the professor-Top this male student/Acc/Nom genius-be-Comp believe/think  
‘The professor believes/thinks that this male student is a genius.’ or  
‘The professor believes/thinks this male student to be a genius.’

B: a. na-to kulehkey mit-e/sayngkakhay  
I-also so believe think  
‘I believe/think so, too.’

b. na-nun ce yehaksayng-ul kulehkey mit-e/sayngkakhay  
I-also that female student-Acc so believe think  
‘(Lit.) I believe/think that female student(Acc) so.’

that female student-Nom  
‘(Lit.) I believe/think that female student(Nom) so.’

\(^1\) There has been lots of fruitful discussion on CP-ellipsis phenomena in Korean mit- type construction (Ahn and Cho 2009, 2010, Park 2009, Sohn 2012, etc.), but there is not much discussion on CP replacement in the same construction.
This paper focuses on these two issues and tries to provide a principled account for them. This paper is organized in the following way; Section 2 introduces a previous analysis (Park’s (2013) substitution-after-movement (SAM) analysis) for the given phenomena and points out the problems for this analysis. Section 3 provides an alternative account — the base generation analysis and Section 4 discusses Nom-Acc contrast under the base generation view. Section 5 concludes the paper.


2.1 Park’s (2013) analysis

As briefly exemplified in the previous section, in Korean mit constructions, it seems possible to replace a target after some of its element has moved out of it. Park (2013) takes this seriously and literally claims that it is possible to peep into a pro-form. To instantiate this idea, he takes up an assumption that in kulehkey construction, what is replaced is not CP, but TP and the replacer is kuleh-, not the whole form kulehkey. Under his account, -key is added as a matching indicative complementizer after the TP replacement of kuleh-. Let us check how this account can derive the Acc-NP remnant example.

(4) Deriving an Acc-NP remnant in (3Bb)

na-nun [CP ce yehaksayng-ul, [TP ti chencay-la] key] mit-e kuleh-

① ce yehaksayng-ul moves to CP spec
② kuleh- replaces embedded TP, combining with the indicative closer -key in C.

Park assumes that the Acc-NP ce yehaksayng-ul is generated in TP Spec and moves into CP-spec where its Acc Case is licensed. That is, CP spec is the locus where Acc Case is assigned. According to this account, then, the Acc-NP in the mit-/sayngkakha- type construction always has to move to CP spec to have its Case checked and after this Case driven movement, kuleh- replacement of TP can occur, which later combines with the indicative closer -key in C eventually resulting in the kulehkey replacement of the embedded clause.

The idea that CP spec is where Acc Case is assigned is crucial in explaining the Acc-Nom contrast introduced in (3) previously. It has been observed that a Nom-NP remnant is not allowed in this construction while an Acc-NP remnant is. This contrast is captured with recourse to the idea of Case conflict now. A Nom-NP must move to CP Spec to create a proper replacement target as shown in (5). But when it does, its Nom Case comes into conflict with Acc Case assigned by C and this is why there can be no Nom NP remnant.

(5) Matrix Subject [CP NP-Nom, [TP VP] key] mit-e

Case conflict kuleh-

After giving an account for the Nom-Acc contrast, Park goes on to claim that it is possible to have a remnant which is
not an Accusative subject and that this supports his SAM analysis. The relevant examples are of the following sort:

(6) a. A: na-nun i chayk-ul, [Sue-ka t, ilkesstako ] mit-e
   I-Top this book-Acc Nom read believe
   ‘(Lit) I believe of this book that Sue read it.’
   B: ani, na-nun i chayk-ul kylehkey mitci anha
   no, I-Top this book-Acc so believe not
   ‘(Lit) No, I don’t believe/think this book so.’

b. A: na-nun Chelswu-eykey, [Sue-ka t, i kurim-ul poyecwuessta-ko] mit-e
   I-Top Dat Nom this picture-Acc show-Comp believe
   ‘I believe that to Chelswu, Sue showed this picture.’
   B: ani, na-nun Chelswu-eykey [ kuray-ss-ta-ko] mitci anha

(6a) shows that not just an Acc subject NP, but an Acc object NP can be a remnant. (6b), according to Park, also shows that Dat-NP can be a remnant in the *kulehkey* replacement construction.2)

2.2 Problems for the SAM analysis

2.2.1 Only Acc-NP as a remnant

Although the SAM analysis is quite interesting, there are many non-trivial problems in this analysis. First of all, it should be noted that there is a quite severe restriction on the nature of the possible remnants. Although Park claims that many different types of phrases can be a remnant, a careful examination of the relevant data shows that it is only an Acc-NP that is natural as a remnant in this *kulehkey* construction. Consider the following examples.

   I-Top Nom with together traveled-Comp believe
   ‘I believe that Tom travelled (together) with Bill.’
   B: ?*na-nun Sue-wa hamkkey kulehkey mit-e
   I-Top with together believe
   ‘(Lit) I believe so (together) with Sue.’

   I-Top Dat Nom apologized-Comp believe
   ‘I believe that to Mary, Bill apologized.’
   B: ?*na-nun Tom-eykey kulehkey mit-e3)

2) (6a) seems to show clearly that not just an Acc-NP subject, but an Acc-NP object can be a remnant. But (6b), although it looks grammatical, should be treated differently because the replacer used here is not *kulehkey*, but *kuraysstako*, which behaves radically differently from *kulehkey* and is compatible with both Nom- and Acc-NP.

3) A reviewer points out that (8b) becomes perfect when *kulehaystsako* (did so) is used instead of *kulehkey* and this should be accounted for.
I agree with the reviewer and suggest that this difference comes from the fact that *kuleha-* is a VP replacer while *kulehkey* is a...
The remnants are Sue-wa hamkey (together with Sue), Tom-eykey (to Tom), respectively, and neither of these examples is acceptable. Given the impossibility of the subject extraction out of the replacement site, the genuine generalization seems to be that no expression other than NP-Acc can be extracted out of the replacement site.

2.2.2 The behavior of NPIs as remnants

Another problem for SAM comes from the behavior of NPIs. It is now well known that Korean NPIs are locally licensed (clausemate condition (Choe, 1988) government (Takahashi, 1990), overt checking (Sohn, 1995; etc.).

(9) a. na-nun [CP wuri ban namhaksayng cwung amwuto chencay-ka ani-la-ko] sayngkakhay
   I-Top our class male student among anyone genius-Nom not-be-Comp think
   ‘I think none of the male students in my class is a genius.’
   b. [wuri ban namhaksayng cwung amwuto] na-nun [CP ti chencay-ka ani-la-ko] sayngkakhay
   c. *na-nun [wuri ban yehaksayng cwung amwuto] kulehkey sayngkakhay
   female student
   ‘(Lit) I think none of the female students in my class so.’

(9a) shows that an NPI subject is allowed within the complement clause of the verb sayngkakh-
and (9b) shows that this NPI subject can move out of the embedded clause without causing any degradation. It is now widely believed that an NPI can have its Neg feature checked within the embedded clause (through checking, for instance) and can move out of it later for a different purpose.

But if this is the case, there is a question arising immediately under Park’s analysis. If a phrase can move out of the replacement site as Park claims, then why is the NPI remnant in (9c) not licensed? There seems to be at least one legitimate derivation involving this NPI. First, the NPI in (9c) has its Neg feature checked within the embedded clause and moves out of it later. Now kuleh- can replace the embedded TP and then combine with key in C. This derivation is depicted in (10) below.

(10) na-nun [CP wuri ban yehaksayng cwung amwuto, [ti chencay-ka ani la] key] mit-e
      ↑ ___NPI moves after licensing___  kuleh- replacement

There seems to be nothing wrong with this derivation and thus no reason for (9c) to be degraded. Hence the contrast

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4) This sentence becomes perfect when the pro-form changes from kulehkey to kulehtako, which is analyzed as kuleha – ta- ko. But this cannot be regarded as a case of SAM since kulehtako involves VP substitution (by kuleha-) and the seeming remnant (NP-Nom) is outside of the replacement site from the start.

5) Why an Acc-NP that is not a subject is allowed as a remnant is discussed later.
between (9b) and (9c) forms strong evidence against Park’s SAM analysis.

2.2.3 Why no multiple remnants?

Another significant fact not discussed so far about this kulehkey construction is that no multiple remnants are allowed. Consider the following examples.

   I-Top Nom with English-Acc studied-Comp believe/think
   ‘I believe/think that John studied English together with Mary.’
   I-Top with French-Acc Nom studied-Comp believe/think
B2: *na-nun Sue-wa pwule-lul kulehkey mit-e/sayngkakhay
   I-Top with French-Acc so believe/think

(11B1) shows that multiple movement is possible from the embedded clause. If the multiple extraction out of the replacement site is possible, then (11B2) is predicted to be acceptable, but this prediction is not fulfilled. Consider the derivation given in (12).

(12) na-nun [CP Sue-wa, pwule-lul, [John-i t i t j kongpwuhayssta] key] mit-e

kuleh- replacement of TP occurs after the movement of the two separate phrases Sue-wa and pwule-lul out of the replacement site and again there seems to be nothing wrong with this derivation under the SAM analysis. Hence this impossibility of multiple remnants serves as another piece of evidence against the SAM analysis.

2.2.4 How can the Acc-subject be included in the replacement site?

There is also an unexpected technical difficulty in executing Park’s idea to account for the behavior of Acc-NP cases. Notice that the Accusative subject can be either included in the replacement site (=3Ba) or can be outside of it (=3Bb). What is at issue here is how we can account for the former case under Park’s system. Park assumes that Acc-NP moves to CP Spec for Case checking, which means that it is forced to be outside of the replacement site, TP. In other words, as shown in (13), there are two conflicting requirements for Acc-NP, which seem hard to be satisfied at the same time: it should move to CP Spec for Case checking while it is also required to stay within TP to be included in the replacement site.

(3) A: ku kyooswu-nun [i namhaksayng-ul/i chencay-la-ko] mit-e
   B: a. na-to kulehkey mit-e
      b. Na-nun ce yehaksayng-ul kulehkey mit-e
3. Base Generation Analysis

To overcome the problems the movement approach faces and to account for the various interesting properties of this *kulehkey* replacement construction leaving remnants, the base generation approach is proposed. The guiding assumptions for this approach are as follows:

(14) a. Just as in English pro-forms, there is no internal structure in the pro-form *kulehkey* S (and hence you cannot peep into this pro-form)
   b. The remnant phrase does not move out of the target, but is base generated outside of the target.
   c. $[X \text{ NP-Acc} [Y \text{ pro} \cdots \text{ ko} ]]$

This set of assumptions allow us to provide a natural account for the properties that caused much difficulty for the SAM analysis.

3.1 No NPI remnant

First of all, this approach naturally explains the impossibility of NPI remnants. The relevant examples are reintroduced below.

(15)(=9a) na-nun [wuri ban namhaksayng cwung amwuto chencay-ka ani-la-ko] sayngkakhay
   NPI and negation both in embedded clause

(16)(=9b) wuri ban namhaksayng cwung amwuto na-nun [t; chencay-ka ani-la-ko] sayngkakhay
   NPI moves after checking with negation
Recall that under the SAM type approach, the NPI outside the replacement site is not supposed to result in any degradation, contrary to the fact. However this is not a problem at all for the base generation approach. In this approach, the remnant NPI does not undergo upward movement, but is base generated in the position higher than the replacement target. Then, there is no way for this NPI to be licensed as it is outside the domain of negation within the replacement site.

3.2 Why severe restriction on the type of remnants?

Also, the severe restriction on the type of remnants can be explained naturally. It is observed that the remnant phrase, remaining after the deletion, has to carry Acc-Case. If any kind of phrase can move out of the replacement site before deletion, as claimed in the SAM approach, then this restriction on the type of remnant is really hard to explain.

However, under the base generation approach, there is a very plausible account for this restriction. As is well observed in the literature, there is a sort of aboutness relation in the so called major object and the embedded clause in the mit-type construction (Kuno (1973, 1976), Hoji (1991, 2005), and many others). Also it has been observed both in Korean and Japanese that not just an embedded subject but an embedded object can serve as a major object (J. Yoon (2007), etc.). Thus the base generation approach can accommodate Park’s observation that not just an Accusative subject but an Accusative object can be a remnant in the construction in concern.

3.3 Why no multiple remnants?

The non-existence of multiple remnants can also be explained naturally because only one major object is possible. Simply, the aboutness relation has been observed to be one to one relationship such that one concept is matched with one proposition. Hence the structure like (18B2) will not be allowed, from the start.

3.4 Unified account for Korean and English

Once we accept the idea that the remnant phrase is base generated, we don't have to worry about the asymmetrical behavior of pro-forms in Korean and English. They are not different at all and no movement is possible from the replacement site in these languages.

So far, we have explained all the observations we made before, except for the kulehkey replacement construction leaving no remnants, which caused a problem for the SAM approach. This is discussed in the next section.
4. The Derivation of *kulehkey* without Remnants and Its Implications

We have seen that the substitution of the whole embedded clause by *kulehkey* is hard to explain under the SAM approach. Then how can the base generation approach account for the same case?

   I-Top Nom/Acc genius-be-Comp think  
   ‘(Lit) I think Mary(-Nom/Acc) is a genius’ or  
   ‘(Lit) I think Mary(-Nom/Acc) to be a genius.’

B: na-to kulehkey sayngkakhay  
   I-also think  
   ‘I think so, too.’

The traditional structure devised for the major object construction cannot easily accommodate the Accusative object containing replacement fact. This is because in the usual major object analysis, the major object is assumed to be located outside of the embedded clause. Naturally it is not possible for this major object to form a replacement target (i.e. a constituent) together with the embedded clause.

(20) \[ \text{[TP Subject major object \{[CP \text{[TP ... pro...]} ko] V \}} \]  
   \[ \text{↑ non-constituent ↑} \]

To resolve this rather intriguing state of facts, I take up an assumption that combines the basic spirit of the major object with Park’s idea. What is proposed for this *mit-* type construction is that the Acc-NP is base generated in CP-spec, not in the matrix clause, and have its Case checked there, hence departing from the Hoji type major object analysis. The structure then will be of the following shape;\(^6\)

(21) a. \[ \text{[TP ... [CP NP-Acc \{C' [TP pro ...] [c ko ] ] V T ]} \]  
   \[ \text{1) C' replacement} \]

b. \[ \text{[TP ... [CP [C' [TP NP-Nom ...] [c ko ] ] V T ]} \]  

(21a) is the structure for an Accusative subject and (21b) for a Nomnative subject. Given that NP-Acc is inside CP, we can say that remnantless substitution targets CP in both cases, giving examples like (19B). How about the substitution with a remnant phrase? In that case, it is claimed that we can target the smaller constituent here, that is, C’.

The two possibilities entertained in *kulehkey* replacement are depicted below;

(22) \[ \text{[TP ... [CP NP-Acc \{C' [TP pro ...] [c ko ] ] V T ]} \]  
   \[ \text{1) C’ replacement} \]
   \[ \text{2) CP replacement} \]

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\(^6\) This structure then reminds us of Yoon (2007), although not his subsequent analysis, based on this structure.
One immediate objection to this kind of account comes from the common belief that non-maximal projection cannot be a target of a linguistic operation. It has been persistently shown that non-maximal projection (or a bar-level category) cannot be dislocated. However, there seem to be a couple of ways out in this situation.

One way to do that is to distinguish movement from replacement. Suppose that a bar level category cannot be a target of movement for some independent reason, but it can be a target of replacement. If this is the case, we can find a way to accommodate the Nom-Acc contrast under the base generation analysis.\(^7\)

Another way to overcome the current situation is to adopt a more elaborated structure for mit-type constructions, for example, as claimed in Yoon (2007). Yoon, in his analysis for ECM adopts an embedded Major subject position for Acc-NP, which is base generated in XP spec as a sister of another maximal projection ZP.

\[(23) \[ VP \[ XP \ NP-\text{Acc} [ ZP \text{Op}_{i} [ Z \ldots t \ldots ] \] ] V \]

If we borrow this kind of structural configuration, the issue of non-maximal projection will simply go away because now we can say that *kulehkey* either targets XP or ZP for replacement. Which option to take between the two alternatives considered above is not an easy decision and we will leave this open as it requires more careful empirical and theoretical considerations. For now, I will just suggest these two possibilities as a tentative solution.

## 5. Conclusion

In this paper, I have argued that it is not possible to peep into a pro-form in any language and the seeming counterexamples to this thesis in Korean *kulehkey* constructions have to be explained not by a substitution after movement account, but by a base generation analysis, which is in line with this no-peeping-into a pro-form thesis. I have compared the former analysis (SAM) with the latter (base generation analysis) and demonstrated that the latter has much broader empirical coverages. In discussing the construction in concern, we are led to a specific view on the Korean mit-type construction, a kind of modified major object type view for this construction and a further research on this structural orientation is needed.

## References


\(^{7}\) One of the reviewers suggests, correctly, that this approach can be supported by the fact that although there is no movement of a bar-level category in English, the bar level replacement such as N’-replacement (by the pro-form *one*) is allowed in English. This is also true of N’-replacement phenomenon involving no, reported in Japanese.

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