Multi-Faceted Aspects of Reconstruction in Korean Scrambling

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ABSTRACT
This paper investigates reconstruction in Korean long-distance scrambling. Saito (1989) argues that in long-distance scrambling, a wh-phrase is undone or radically reconstructed to its underlying position. In this paper, adapting Keine and Poole's (2018) analysis for the reconstruction of long-distance scrambled universal noun phrases (NPs) and indefinite NPs in Hindi-Urdu, we use Binding Condition (C) as a probe to test the validity of Saito's (ibid.) thesis regarding the reconstruction of such NPs as well as wh-phrases in Korean. We show that both universal quantificational phrases and wh-phrases in Korean have their quantificational and wh-licensing element/features reconstructed, with the rest of the parts staying in their surface positions and thus being outside the scope of Condition (C). On the contrary, all the indefinite NPs in the language at issue can optionally undergo radical/total reconstruction, thus interacting with Condition (C).

Keywords: reconstruction, undoing, Condition (C), scope interpretation, wh-licensing

1. Introduction

Since Saito's (1989) earlier study of scrambling in Japanese, one of the outstanding features of scrambling in Korean as well as Japanese has been characterized by the following property: A phrase preposed by scrambling is subject to radical (total) reconstruction. One case making a point for radical reconstruction of a scrambled phrase to its underlying position can be illustrated in (1b) vs. (1a) of Korean.

(1) a. [Cheli-ka [[Yengi-ka enu chayk-ul ilkessnun]ci] alko siphehanta]]].
Cheli-NOM Yengi-NOM which book-ACC read-Q know want
'[Cheli wants to know [Q [Yengi read which book]]]'

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(= 'Cheli wants to know which book Yengi read')

b. Enu chayk-ul$_1$ [Cheli-ka [[Yengi-ka t_1 ilkessnun]ci] alko siphehanta]]].
'[Which book$_1$, Cheli wants to know [Q [Yengi read t_1]]]'
(= 'Cheli wants to know which book Yengi read')

(2) *Which book$_1$, John wonders [Q [Mary read t_1]]?

Saito (1989) argues that, while the topicalized/focalized wh-phrase in (2) of English cannot be, a scrambled phrase in Korean is undone to its underlying position before it undergoes interpretation at LF. This is called 'radical reconstruction',[1] diametrically opposite to 'anti-reconstruction' of the topicalized/ focalized wh-phrase in (2). Since a scrambled wh-phrase undergoes radical reconstruction, it follows that the reconstructed wh-phrase meets the LF condition, which dictates that a wh-phrase must be contained within the CP where it takes scope. When it is reconstructed to the embedded object position, *enu chak-ul* 'which book' in (1b) is contained within the embedded question CP at LF.

Despite radical reconstruction of a scrambled wh-phrase, it is a question whether other scrambled phrases also behave the same way. Keine and Poole (2018) recently report that in Hindi-Urdu which is also a scrambling language like Korean/Japanese, a universal quantified phrase (QP) is subject to radical reconstruction for scope interpretation, but the NP minus the universal quantifying expression stays in its overt position for Binding Condition (C). Since this also holds in Korean, we make a case using the examples of Korean in (3):

(3) a. Cheli-nun kunye$_1$-eykey [etten haksayng-i ecey [Yengi$_1$-ka
Cheli-TOP she-DAT some student-NOM yesterday Yengi-NOM
cohaha-nun motun chayk-ul] kacyekasstako] malhayssta.
like-REL every book-ACC took said
'Cheli said to her that some student yesterday took with him every book that Yengi liked.'

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1) 'Radical reconstruction' is distinguished from 'partial reconstruction.' The latter applies to pied-piped elements that have experienced operator movement in English, as in (ib), While part of the wh-phrase has reconstructed, the wh-word is interpreted in its higher position, thereby allowing the pronoun as part of the reconstructed NP to be bound by the quantifier in subject position.

(i) a. [Which relative of hers$_2$]$_1$ did every student$_2$ invite t_1?
b. [Which [~~relative of hers~~]$_1$] did every student$_2$ invite [relative of hers$_2$]$_1$?

b. [Yengi$_1$-ka cohaha-nun motun chayk-ul]$_2$ Cheli-nun kunye$_1$-eykey [etten haksayng-i ecey t_2 kacyekasstako] malhayssta.

In (3a), as the R-expression 'Cheli-ka' is c-commanded by the co-indexed pronominal 'ku-eykey', a violation of Condition (C) arises. However, when the embedded object universal QP is scrambled before the matrix subject as in (3b), it unambiguously takes scope in its initial position, but the NP (relative head NP plus the following modifying relative clause) in it can resist reconstruction, thereby obviating a violation of Condition (C). In other words, like the wh-element the universal quantificational element apparently undergoes mandatory reconstruction for scope interpretation, but the NP excluding it stays in its surface position, being outside the purview of Condition (C).

By contrast, if the NP part of a scrambled phrase interacts scope-wise with an opaque predicate,[2] we can predict that the whole NP part is subject to reconstruction, taking narrow scope below such an opaque verb. Keine and Poole (2018) report that this prediction is achieved in Hindi-Urdu. The following examples in Korean[3] illustrate the point at issue:

(4) a. Yengi-nun Cheli-ka kanpam-ey [kunye-lul salangha-nun
Yengi-TOP Cheli-NOM last night-in she-ACC love-REL
yulyeng-ul] poasstako sayngkakhanta.
ghost-ACC saw think
'Yengi thinks that Cheli saw a ghost that loved her,'

b. [Kunye$_1$-lul salangha-nun yulyeng-ul] Yengi$_1$-nun [Cheli-ka kanpamey t_2 poasstako] sayngkakhanta.

c. [Yengi$_1$-lul salangha-nun yulyeng-ul]$_2$ kunye$_1$-nun [Cheli-ka kanpamey t_2 poasstako] sayngkakhanta.

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2) We assume the following characterization of (referentially) opaque predicates in Zimmermann (1993):

(i) Referentially opaque predicates denote (not necessarily decomposable) attitudes of individuals toward intensional quantifiers.

3) The embedded indefinite object in (4a) and (4b) can be interpreted opaquely, and (4a) and (4b) are true in the scenario of (i) (which is adapted from Kleine and Poole (2018)), but (4c) is not judged as true.

(i) *Scenario:*
Yengi incorrectly believes that there exists a ghost in his backyard that is in love with Yengi. One day, Cheli sees some animal out of the corner of her eye in Yengi's backyard. Upon reporting this incident to Yengi, Yengi is convinced (incorrectly) that what Cheli saw was the ghost that he believes lives in his backyard.

In the baseline example of (4a), 'yuryeng-ul' as an indefinite NP in the scope of the matrix opaque verb 'sayngkaha-' is construed opaquely or referentially. When the containing NP is scrambled and its reconstruction induces a Condition (C) violation, 'yulyeng-ul' as in (4c) is only construed referentially, entailing the actual existence of the ghost. If its reconstruction does not, 'yulyeng-ul' as in (4b) is ambiguously interpreted, just like that in (4a). Thus, unlike in (3), where the NP excluding the universal quantificaitonal element undergoes interpretation in its surface position, the indefinite NP in (4) can undergo scope reconstruction, but when its reconstruction does not invite a violation of Condition (C).

This paper is to provide a more thorough investigation into the reconstruction aspects of universal QPs and indefinite NPs as well as wh-phrases. The rest of the paper is organized as follows. The next section reviews previous studies of reconstruction in Korean scrambling. Section 3 tackles the main theme of this paper, several distinctive facets of different types of scrambled phrases in light of reconstruction, and explores how they are accommodated into the theory of grammar. Section 4 finishes with a summary and conclusion.

2. Previous Studies of Scrambling and Reconstruction

In the study of scrambling in Hindi and Japanese, Mahajan (1990) and Saito (1992) argue that long-distance scrambling (out of a finite clause) is an instance of A'-movement, whereas short-distance scrambling (to TP-adjoining position) can be either an A' or A movement. One crucial phenomenon that distinguishes short from long distance scrambling is QP scope interaction. When the object universal QP undergoes short-distance scrambling over the subject existential QP as in (5a), they give rise to scopally ambiguous interpretations. By contrast, when the embedded object universal QP undergoes long-distance scrambling in front of the matrix subjet as in (5b), it cannot take scope in its surface position, thus the former only taking narrow scope below the embedded subject existential QP.

(5) a. Motun sensayngnim-ul$_1$ etten haksayng-i t_1 pinanhayssta.
every teacher-ACC some student-NOM like
(√∃>∀;√∀>∃)
'Some student likes every teacher.'
b. Motun sensayngnim-ul$_1$ Cheli-ka [etten haksayng-i

every teacher-ACC Cheli-NOM some student-NOM
t_1 pinanhaysstako] sayngkakhanta. (√∃>∀; *∀ >∃)
criticized think
'Cheli thinks that some student criticized every teacher.'

Saito (1992) attributes the contrast between (5a) and (5b) to the A and A' properties of short and long distance scrambling. When the universal QP undergoes short distance A-scrambling as in (5a), it can stay in the surface position, taking wide scope over the subject existential QP. On the other hand, when it undergoes long distance A'-scrambling as in (5b), not being able to stay in its surface position the universal QP undergoes radical (total) reconstruction to its underlying position, thus taking narrow scope below the embedded subject existential QP.

The QP scope interaction in short-distance scrambling renders convincing evidence for the analysis of short-distance scrambling as an instance of A-movement, but this type of scrambling is not necessarily such an instance. The crucial evidence to this effect comes from radical reconstruction of a complex-type anaphor 'caki-casin' that has undergone scrambling to TP-adjoined position as in (6b):

(6) a. Cheli-ka caki-casin-ul piphanhayssta.
Cheli-NOM him-self=ACC criticized
'Cheli criticized himself.'
b. Caki-casin-ul$_1$ Cheli-ka$_1$ t_1 piphanhayssta.

(7) *Mary believes [himself]$_1$ to seem to [John]$_1$ to be lazy.

If it only underwent A-scrambling to sentence-intial position, the sentence would be ruled out, like the sentence in English of (7). Saito (1992) takes the acceptability of sentences like (6b) to suggest that short-distance scrambling can be an instance of A'-movement.

We saw that in (5b), the long distance scrambled universal QP obligatorily undergoes reconstruction. Unlike it, the short or long distance-movement pronoun does not, as in (8a) and (8b).[4] The pronoun scrambled before the subject can be

4) It has been proposed in such works as Choi (2013) that what is known as the Korean pronoun 'ku' in contexts involving binding relation as in (8a) and (8b) is ruled out by the Precedence Constraint. A quick response to this proposal is that it cannot accommodate backward pronominalization in sentences like (i) below.

a new binder for the co-referential R-expression subject or the co-referential R-expression inside the subject, thus bringing about a Condition (C) violation.

(8) a. *Kunye-lul$_i$ Yengi-ka$_i$/Yengi-uy$_i$ namtongsayng-i cohahanta.
She-ACC Yengi-NOM/Yengi-GEN brother-NOM like
'Yengi/Yengi's brother likes her.'
b. *Kunye-lul$_i$ Yengi-ka$_i$/Yengi-uy$_i$ namtongsayng-i
she-ACC Yengi-NOM/Yengi-GEN brother-NOM
[Cheli-ka t_i cohahantako] sayngkakhanta.
Cheli-NOM like think
'Yengi/Yengi's brother thinks that Cheli likes her.'

(9) a. *Him$_i$, John likes t_i,
b. Him$_i$, John$_i$, thinks that Mary likes t_i, Barss (1986)

Since the A'-scrambled pronoun in (8a-b) of Korean/Japanese is different from the A'-moved pronoun in (9b) of English, Tada (1990) argues that scrambling is not a genuine type of A'-movement, but an instance of non-operator, non-A movement.

The characterization of long-distance scrambling in such a way makes room for allowing a long-distance scrambled phrase to serve the role of a new binder in weak cross-over as well as anaphor binding of Korean, as in (10b) vs. (10a) and in (11b) vs. (11a) (cf. Saito (1992) for Japanese; Cho (1994) for Korean):

(10) a. ?* Selo-uy$_i$ emma-nun [sensayngnim-i [Cheli-wa Yengi-lul]$_i$
each other-GEN mother-TOP teacher-NOM Cheli-and Yengi-ACC
chingchanhaysstako] sayngkakhanta.[5)]

(i) Ku+nye-uy$_i$ namtongsayng-i Yengi-lul$_i$ hwanakey hayssta.
she-GEN brother-NOM Yengi-ACC angry made
'Her brother made Yengi angry.'

Though a bit awkward, backward pronominalization seems to be allowed in this sentence. Thus instead of the Precedent Constraint, the approach using Binding Conditions coupled with the assumption that 'ku' or 'ku-nye' is a pronoun or pronoun-like element seems to be more effective in accounting for its distribution, as in the text.

Likewise, it has also been noted that the use of the Korean pronoun 'ku' in WCO contexts is subject to bimodal speaker variation; some Korean speakers allow bound variable use of 'ku', and others do not. The author concurs with Kang (1988) and Cho (1994) in allowing such a use.

5) (10b) is constructed in the same fashion as the example in (i) below taken from Cho (1994).

praised think
'Each other's mother thinks that the teacher praised Cheli and Yengi.'

b. [Cheli-wa Yengi-lul]$_1$ selo-uy$_1$ emma-nun [sensayngnim-i t_1 chingchanhaysstako] sayngkakhanta.

(11) a. *Ku-uy$_1$ nwui-nun [Cheli-ka nwukwu-lul$_1$ mannasstako] sayngkakha-ni?
he-GEN sister-TOP Cheli-NOM who-ACC saw think-Q
'Who does his sister think that Cheli saw?'

b. Nwukwu-lul$_1$ ku-uy$_1$ nwui-nun [Cheli-ka t_1 mannasstako] sayngkakha-ni?

Now we turn to the main theme of the paper, examining the case where reconstruction of (the constituent containing) a R-expression results in violating Condition (C). One well-known case is the following contrast where as noted in Tada (1990), matrix verbs affect the reconstruction of a Condition (C) effect-inducing constituent.[6)]

(12) a. ?? [Yengi-uy$_1$ sensayngnim-ul]$_2$ kunye-ka$_1$ t_2
Yengi-GEN teacher-ACC she-NOM
piphanhayssta. (Ahn et al. 1990: 281[7)]; Lee 1994: 523)
criticized
'She criticized Yengi's teacher.'

b. ? [Yengi-uy$_1$ sensayngnim-ul]$_2$ kunye-ka$_1$ t_2

(i) kutul$_i$-ul [selo$_i$-uy chinkwu-ka] [John-i t_i kosohayssta ko] malhayssta
they ACC each.other-GEN friend-NOM J.-NOM sued C said
'Each other$_i$'s friends said that John sued them$_i$.' (Cho 1994: 263)

6) Following the general convention on symbol representing grammaticality/acceptability, the symbol ?? in front of a sentence indicates that this sentence is marginal in grammaticality/acceptability; it is taken as on the ungrammatical/unacceptable side. By contrast, the symbol ? in front of a sentence indicates that this sentence is a bit degraded but is taken as grammatical/acceptable. We acknowledge that as one of the anonymous reviewers points out, the grammaticality/acceptability of a sentence is influenced by various factors such as grammar, pragmatic/discourse context, processing burden, etc.

7) As stated in the text, Tada (1990) claims using the Japanese counterparts of (12a) and (12b) that matrix verbs affect the reconstruction of a Condition (C) effect-inducing constituent. Meanwhile, Ahn et al. (1990) rates the sentence like (12a) grammatical/acceptable (or at least marginally acceptable with ?). However, Lee (1994: 523) rates the similar type of sentences ungrammatical/unacceptable. Based on these empirical claims on (12a), Ahn and Cho go on to assert that sentences like (12a) are subject to speaker variation. Sentences like (12a) and (12b) derived via short-distance scrambling are outside of the scope of study in this paper, but these celebrated examples are cited to offer a perspective on the issue of reconstruction involving a Condition (C) effect-inducing constituent.

Yengi-GEN teacher-ACC she-NOM
sokayhayssta.
introduced (Tada (1990) for Japanese)
'She introduced Yengi's teacher (to someone)'.

The contrast between (12a) and (12b) evidently resists a simple analysis. What interests us is the following examples where the embedded objects underwent long distance scrambling. Both of them invite a Condition (C) violation.

(13) a. ?? [Yengi-uy$_1$ sensayngnim-ul]$_2$ kunye-nun$_1$ [Cheli-ka t$_2$
Yengi-GEN teacher-ACC she-TOP Cheli-NOM
piphanhaysstako] malhayssta.
criticised said
'She said that Cheli criticized Yengi's teacher.'
b. ?? [Yengi-uy$_1$ sensayngnim-ul]$_2$ kunye-nun$_1$ [Cheli-ka t$_2$
Yengi-GEN teacher-ACC she-TOP Cheli-NOM
sokayhaysstako] malhayssta.
introduced said
'She said that Cheli introduced Yengi's teacher (to someone).'

Closely relating to the sensitivity of the R-expression inside a scrambled phrase to Condition (C) here are the following examples:

(14) a. ?? [Yengi-uy$_1$ posekham-ey]$_2$ kunye-ka$_1$ t$_2$ panci-lul nehessta.
Yengi-GEN jewelry box-in she-NOM ring-ACC put
'She put the ring in Yengi's jewelry box.'
b. [Cheli-ka Yengi-eykey$_1$ senmwul-lo cwu-n posekham-ey]$_2$
Cheli-NOM Yengi-DAT present-as give-REL jewelry box-in
kunye-ka$_1$ t$_2$ panci-lul nehessta.
she-NOM ring-ACC put
'She put the ring in the jewelry box that Cheli gave Yengi as a present.'

Using the paradigm in (15) of English as reported in Reinhart (1976), Saito (1985) notes that in their Japanese counterparts, more embedded R-expressions scrambled sentence-initially as in (14b) in contrast to (14a) can obviate a violation of Condition (C):

(15) a. ?* [In Ben$_1$'s box]$_2$, he$_1$ put his cigars t_2.
b. [In the box that Ben$_1$ brought from China]$_2$, he$_1$ put cigars t_2.

The following examples constructed based on (14a) and (14b) do not change in grammaticality. In (16b) where the R-expression within the scrambled phrase is relatively more embedded than that in (16a), the Condition effect does not arise.

(16) a. ??[Yengi-uy$_1$ posekham-ey]$_2$ kunye-nun$_1$ [Swuni-ka t_2
Yengi-GEN jewelry box-in she-TOP Swuni-NOM
panci-lul nehesstako] sayngkakhanta.
ring-ACC put think
'She put the ring in Yengi's jewelry box.'
b. [Cheli-ka Yengi-eykey$_1$ senmwul-lo cwu-n posekham-ey]$_2$
Cheli-NOM Yengi-DAT present-as give-REL jewelry box-in
kunye-nun$_1$ [Swuni-ka t_2 panci-lul nehesstako] sayngkakhanta.
she-TOP Swuni-NOM ring-ACC put think
'She thinks that Swuni put the ring in the jewelry box that Cheli gave Yengi as a present.'

Bear in mind that in the next section, when testing Condition (C) reconstruction effects we are going to use the structure of a scrambled phrase as in (16b) rather than as in (16a). According to Reinhart (1976), (15a) is degraded because the R-expression within the fronted PP is m-commanded by the co-indexed pronoun subject. (13a-b), (14a), and (16a) in Korean would be taken to be degraded for the same reason.

Meanwhile, more directly relevant to the issue in this paper are the following examples in (17) and (18), taken from Choi (2004). It is noted in Choi (ibid.) that there is a contrast between (17a) and (18b) in grammaticality: the former is marginal, but the latter is slightly degraded but acceptable.

(17) a. ?*[Yengi-uy$_1$ enu sacin-ul] **kunye-nun$_1$** [ney-ka t_2 ceyil
Yengi-GEN which picture-ACC she-TOP you-NOM the most
silhehantako] sayngkakha-ni?
dislike think-Q
'Which of Yengi's pictures does she think that you dislike the most?'

b. ?[Yengi-uy$_1$ enu sacin-ul] ne-nun [**kunye-ka$_1$** t_2 ceyil silhehantako] sayngkakhani?
'Which of Yengi's pictures do you think that she dislikes the most?'

(18) a. ?[Yengi-uy$_1$ elin sicel(-uy) sacin-ul]$_2$ na-nun [**kunye-ka$_1$** t_2
Yengi-GEN childhood-GEN picture-ACC I-TOP she-NOM
ceyil silhehantako] sayngkakhanta.
the most dislike think
'I think that she dislikes Yengi's childhood picture the most.'
b. ?[Yengi-uy$_1$ elin sicel(-uy) sacin-ul]$_2$ **kunye-nun$_1$** [nay-ka t_2 ceyil silhehantako] sayngkakhanta.
'She thinks that I dislike Yengi's childhood picture the most.'

Pointing out that the contrast between (17a) and (18b) in grammaticality lies in the types of scrambled phrases, Choi goes on to argue that when a wh-phrase is scrambled as in (17), it needs to be reconstructed to the periphery of the embedded clause. When reconstructed, it can now be unselectively bound by the matrix verb-final Q particle that in turn marks its scope. When a non-wh-phrase is scrambled as in (18), it is not subject to reconstruction to the periphery of the embedded clause. In this regard, the contrast between (17a) and (18b) follows from the availability of reconstruction to the periphery of the embedded clause, depending on the type of a phrase that has been scrambled. We will come back to this issue below.

3. Reconstruction of Universal QPs vs. Indefinite NPs vs. Wh-Phrases

Before plunging into the account for the reconstruction of scrambled phrases in Korean, let us first specify the nature of scrambling in this language which is a reason for posing the issue of reconstruction in syntactic derivation. Since this paper starts with questioning the validity of radical reconstruction for a wh-phrase couched in Saito's theory of scrambling in the late 1980s and early 1990s, we assume particularly Saito's (1992) view on scrambling that either short or long-distance scrambling is initially an instance of non-operator, non-A movement.

According to Saito (1992), however, in the derivation to LF (viz. at LF) short and long-distance scrambling are subject to different modes of reconstruction. Long-distance scrambled phrases undergo radical reconstruction, but short-distance optionally do; the latter can stay in their overt landing sites as they can be 'reanalyzed' as in A-position. The following discussions revolve around this view of scrambling, but to anticipate the conclusion of this paper, we argue that Saito's analysis of long-distance scrambling as undergoing total reconstruction is a bit too strong, which means that some instances of the long-distance scrambled phrases can stay in their landing sites.

The nature of reconstruction interacting with scrambling also needs to be described as a background for the following discussions. Why does reconstruction apply? In the grammar model (i.e. T/Y model) we assume, the LF representation of a sentence serves an input for its interpretation of a sentence; thus an element dislocated for a syntactic/formal reason returns or reconstructs to its launching site where it is 'interpreted'. But reconstruction finds its reason in a scrambled site: According to Saito (1992), a phrase in the landing site of scrambling (in his assumption, a non-operator, non-A position) is not a legitimate object in the sense of Chomsky (1995), thus the scrambled phrase undergoing LF reconstruction or reanalysis.[8] Still, another important issue is reconstruction to intermediate positions that movement goes through (See Fox (1999) and Agüero-Bautista (2007), among others, for the detailed discussion of reconstruction in English). We are also in keeping with Saito's (1992) thesis that scrambled phrases do not reconstruct to such intermediate positions; According to Saito (1992), since for example, unlike wh-movement in English, scrambling does not involve feature-checking, its intermediate positions do not count for reconstruction.[9]

We are now back to the empirical issue on scrambling and reconstruction in Korean. In the introduction we saw that as in (3b), when a universal QP undergoes long distance scrambling, its quantificational element/feature undergoes scope reconstruction to its underlying position, but the R-expression contained in it can

8) Following Chomsky (1995), in this paper we assume a copy deletion analysis for reconstruction in tandem with the copy theory of movement. Thus, reconstruction is executed via deletion of a higher copy. In addition, following Kim (1993), what undergoes LF reconstruction can be either the whole phrase scrambled overtly or the feature(s) part of it such as quantificational or wh feature, contingent on where they are interpreted. In other words, total reconstruction is a deletion of the whole upper copy, whereas partial reconstruction is a deletion of only the relevant feature/features in it.

9) Building on Oka's (1990) empirical claim on the inability of the long-distance scrambled universal QP to take wide scope over the existential embedded subject QP as in (3b), Saito (1992) in fact argues that a scrambled phrase cannot reconstruct to its intermediate position.

stay in its overt position, obviating a Condition (C) violation. In contrast, when a non-quantificational NP is scrambled, it either can in (4b) or cannot reconstruct in (4c), depending on whether its reconstruction results in obviating or inviting a Condition (C) violation, ultimately the non-quantificational NP at hand being construed either opaquely or referentially with respect to the matrix opaque verb. The examples in (3) and (4) are repeated below:

(3) a. Cheli-nun kunye$_1$-eykey [etten haksayng-i ecey [Yengi$_1$-ka
Cheli-TOP she-DAT some student-NOM yesterday Yengi-NOM
cohaha-nun motun chayk-ul] kacyekasstako] malhayssta.
like-REL every book-ACC took said
'Cheli said to her that some student yesterday took with him every book that Yengi liked.'

b. [Yengi$_1$-ka cohaha-nun motun chayk-ul]$_2$ Cheli-nun kunye$_1$-eykey [etten haksayng-i ecey t_2 kacyekasstako] malhayssta.

(4) a. Yengi-nun Cheli-ka kanpam-ey [kunye-lul salangha-nun
Yengi-TOP Cheli-NOM last night-in she-ACC love-REL
yulyeng-ul] poasstako sayngkakhanta.
ghost-ACC saw think
'Yengi thinks that Cheli saw a ghost that loved her,'

b. [Kunye$_1$-lul salangha-nun yulyeng-ul] Yengi$_1$-nun [Cheli-ka kanpamey t_2 poasstako] sayngkakhanta.

c. [Yengi$_1$-lul salangha-nun yulyeng-ul]$_2$ kunye$_1$-nun [Cheli-ka kanpamey t_2 poasstako] sayngkakhanta.

Keine and Poole (2018) use two ideas to account for the independence of Condition (C) and scope interpretation in (3b) as well as the correlation of Condition (C) with referential opacity in (4c). One is reconstruction or *neglecting the higher copy* of scrambling in their terms. The other idea is higher-type trace copy. Creti (1995) and Rullmann (1995) propose that on top of a type-*e* variable that the typical trace left behind by movement is translated into, there is another type of trace that may be translated into a type-<*et, t*> variable 'Q', which is the type of generalized quantifier. Thus, when a certain phrase undergoes long distance scrambling as in (19a), the scrambled phrase is represented in two ways as in (19b) and (19c):

(19) a. DP_1 ... pronoun/Opaque V [$_{CP}$ . . . DP_1

↑_____|

b. *Neglecting the higher copy*:

~~DP_1~~ ... pronoun/Opaque V . . . DP_1

c. *Leaving a higher-type trace*:

[DP_1 [$\lambda Q_{<et,t>}$ [... pronoun/Opaque V [$_{CP}$ . . . $Q_{<et,t>}$

They crucially assume that a long-distance scrambled (indefinite) NP takes the option of reconstruction and its world variable is bound by the λ-binder over worlds at the edge of the embedded clause, yielding an opaque interpretation, whereas it can alternatively take the option of non-reconstruction and its world variable is bound by the λ-binder over worlds at the edge of the matrix clause (but not in the scope of a modal operator provided by an opaque preciate/verb). Using these ideas, Keine and Poole rely on the strategy of (19c) to account for the independence of Condition (C) and scope relation in (3b). The long-distance scrambling in (3b) leaves a higher-type trace as in (19c), thus this higher-type trace counting for scope interpretation, while the sentence-initial scrambled phrase counting for Condition (C). Since the sentence-initial scrambled phrase is interpreted at LF in its landing site, the R-expression that it contains is not c-commanded by the co-indexed pronoun c-commanding the launching site, and hence no Condition (C) violation arises.

The sentences in (4b-c) also employ the higher-type trace strategy. But unlike the scrambled phrase in (4c), that in (4b) can be reconstructed to its underlying position via the 'neglecting the higher copy' strategy in (19b). In (4b-c), the scrambled phrases can possibly be reconstructed to their launching positions, but their reconstruction depends on whether or not it invites a Condition (C) violation. If it does, it is not allowed. It it does not, it is.

Keine and Poole's (2018) account for the independence of Condition (C) and scope interpretation in (3b) as well as the correlation of Condition (C) with referential opacity in (4c) is intriguing, but their account stops short of explaining why scope interpretation and referential opacity diverge vis-à-vis Condition (C). The former does, but the latter does not, call for total reconstruction of a long distance scrambled phrase.

Getting directly to the point, the divergence of scope interpretation and referential opacity in relation to Condition (C) is attributed to the two different types of quantificational and non-quantificational/indefinite phrases. The independence of

Condition (C) and scope interpretation in (3b) follows from the fact that quantificational expressions take scope at the smallest propositional constituent prior to undergoing long-distance scrambling (see Fox (1995; 2000) for the economy condition on quantifier raising and see also Murasugi and Saito (1992) for the similar idea), and that since scrambling in Korean as well as Hindi-Urdu creates a new binder, a Condition (C) violation is obviated when the constituent containing a R-expression is scrambled outside the scope of the co-indexed pronoun c-commanding its launching site. On the other hand, the correlation of Condition (C) with referential opacity in (4c) follows from the fact that indefinite NPs (or non-quantificational NPs in the sense of Heim (1982)) scope-interact with opaque predicates like 'think' or 'seem', and total/literal reconstruction of the indefinite NPs below opaque predicates is in need, with the R-expression inside the resulting reconstructed indefinite NPs likely being subject to Condition (C).[10)]

Along the similar line of analysis, the distinction between quantificational and non-quantificational/indefinite expressions in English has been noted and discussed in great details by Lasnik (1998). The following examples in English make a case:

(20) Every friend of mine is (quite) likely to attend. ($\forall$ > likely) *(likely > $\forall$)[11)]

(21) One of my friends is (quite) likely to attend. ($\exists$ > likely) (likely > $\exists$)

When in A-position, the universal QP 'every friend of mine' in the so-called 'Lowering' context of (20) takes scope at the next lower propositional phrase, which is the matrix vP. This accounts for the absence of the narrow scope that the universal QP has below the opaque verb 'likely'. The universal QP in (20) is in sharp contrast to the non-quantificational indefinite NP 'one of my friends' in (21).

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10) In this regard, we are not concerned with the comparative syntactic analysis of Korean and Hindi-Urdu based Keine and Poole's (2018) Hindi-Urdu counterparts of (3) and (4) in Korean. Rather, we are to employ the newly couched diagnostics based on the universal QP vs. indefinite NP distinction in reconstruction as noted in Keine and Poole (2018), to shed lights on reconstruction phenomena in Korean.

11) Mayr and Spector (2011) provide counter-examples refuting Lasnik's (1998) claim, noting that a universal QP can take narrow below the negation or the negative predicate, as in (i) and (ii).

(i) Every student of mine didn't show up on time. ($\forall$ > $\neg$) ($\neg$ > $\forall$)
(ii) Every healthy child in this country is unlikely to die old. ($\forall$ > 'unlikely') ('unlikely' > $\forall$)

These cases can be accommodated when a universal QP can take scope at the next lower phase periphery, which will be below the matrix negation.

The latter's scope interpretation points to the fact that non-quantificational indefinite NPs are reconstructed below the opaque verb 'likely'.[12)]

In addition, indefinite wh-phrases can take scope more flexibly. As noted by Longobardi (1987), Cinque (1990), and Murasugi and Saito (1992), wh-indefinites in English take scope in their underlying position or in their landing position as in (22a) and (23a). However, when they cross the wh-island or the Neg island, they are construed specifically, only taking scope at their landing site as in (22b) and (23b).

(22) a. [How many books]$_1$ does John think that everyone bought t_1?
b. ??[How many books]$_1$ does John wonder whether everyone bought t_1?

(23) a. [How many patients]$_1$ do you think that every one of the doctors can visit t in one hour?
b. ?[How many patients]$_1$ don't you think that every one of the doctors can visit t_1 in one hour?

Romero (1998) tested the interaction of scope interpretation with Condition (C). She notes that, like the referential vs. opaque interpretation distinction of indefinite NPs in (4b) and (4c) in Korean, the wh-indefinite in (24a) can only take wide scope at the landing site when the relative clause modifying the relative head wh-nominal invites a violation of Condition (C). Otherwise, however, the wh-indefinite in (24b) can take either narrow or wide scope in its underlying or in its landing position; in other words, it allows either the reading in (24i) or the reading in (24ii):

(24) a. [How many pictures that John$_1$ took in Sarajevo]$_2$ does he$_1$ want the editor to publish t_2 in the Sunday Special? √Wide-scope reading
b. [How many pictures that he$_1$ took in Sarajevo]$_2$ does John$_1$ want the editor to publish t_2 in the Sunday Special? Ambiguous (Romero, 1998: 96)

12) Since in English 'raising' constructions, a universal QP cannot take scope at the embedded clause, the only empirical point to test is the correlation of Condition (C) with referential opacity of an indefinite as in (i):

(i) [Pictures of John$_1$]$_2$ seem to him$_1$ [t_2 to be fuzzy].

The plural indefinite subject in (1) only allows for a referential reading, which in turn supports Keine and Poole's (2018) thesis on the correlation of Condition (C) with referential opacity in English 'raising' constructions involving A-movement.

i. Wide-scope reading
For what number n: There are n-many particular pictures x that John took in Sarajevo such that John wants the editor to publish x.
ii. Narrow-scope reading
For what number n: John wants the editors to publish in the Sunday Special (any) n-many pictures that John took in Sarajevo.

Now returning to Korean, indefinite (wh-)NPs also may or may not be subject to scope reconstruction. In (25), the wh-indefinite can stay in its surface position to yield a matrix wh-question or reconstruct to its underlying position to give rise to an embedded wh-question. Even in the latter case, a BC (C) violation does not arise, which implies that like a universal quantifier as seen above, only the wh-licensing element/features independently of the NP part (i.e., the relative head nominal plus the relative clause) can reconstruct. By contrast, since the indefinite NP in (26) moves out of the NPI-NEG domain, it is only construed specifically, resisting reconstruction to its underlying position.

(25) [Appa-ka Yengi-eykey$_1$ sa cwu-n enu os-ul]$_2$
father-NOM Yengi-DAT buy give-REL which clothes-ACC
ney-ka kunye-eykey$_1$ [Swuni-ka t_2 sako sipheha-nunci] mwuless-ni?
you-NOM she-DAT Swuni-NOM buy want-Q asked-Q
'[Which clothes that her father bought for Yengi] did you ask her whether Swuni wanted to buy?'

(26) [Appa-ka Yengi-eykey$_1$ sa cwu-n os-ul]$_2$ amwuto
father-NOM Yengi-DAT buy give-REL clothes-ACC anyone
kunye-eykey$_1$ [Swuni-ka t_2 sako siphehantako] malhaci anhassta.
she-DAT Swuni-NOM buy want say didn't
'No one said to her that Swuni wanted to buy [(a) clothes that her father bought to Yengi].'

Unlike that in (25), the wh-indefinite scrambled to the matrix clause in (27a-b) can enter into wh-licensing with the matrix Q-marker. Thus, (27a) where if reconstructed, the scrambled phrase would invite a Condition (C) violation is ruled in, just like (27b) with the R-expression and the pronoun switched.

(27) a. [Appa-ka **Yengi-eykey**$_1$ sa cwu-n enu os-ul]$_2$ ney-ka
father-NOM Yengi-DAT buy-REL which clothes-ACC you-NOM
kunye-eykey$_1$ [Swuni-ka t_2 sako siphehantako] malhayss-ni?[13)]
she-DAT Swuni-NOM buy want said-Q
'[Which clothes that her father bought for Yengi] did you say to her that Swuni wanted to buy?

b. [Appa-ka **kunye-eykey**$_1$ sa cwu-n enu os-ul]$_2$ ney-ka **Yengi-eykey**$_1$ [Swuni-ka t_2 sako siphehantako] malhayss-ni?

The situation is the same with the non-wh-indefinites as in (28a-b), which can stay in its surface position when they are scrambled in a long distance manner.

(28) a. [Cheli-ka **Yengi-eykey**$_1$ senmwulha-n etten chayk-ul]$_2$ **kunye-nun**$_1$
Cheli-NOM Yengi-DAT give-REL some book-ACC she-TOP
[Swuni-ka t_2 ecey phalasstako] malhayssta.
Swuni-NOM yesterday sold said
'She said that Swuni sold [some book that Cheli gave to Yengi as a present].'

b. [Cheli-ka **kunye-eykey**$_1$ senmwulhan etten chayk-ul]$_2$
Yengi-nun$_1$ [Swuni-ka t_2 ecey phalasstako] malhayssta.

The following Korean examples constructed in the same fashion as (24a-b) of English taken from Romero (1998) illustrate the interaction of Condition (C) with referential opacity of the wh-indefinite. Unlike (29b), (29a) only allows the wide

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13) As mentioned above, Choi (2004) notes that there is a contrast in acceptability between (17a) and (18b). According to Choi (ibid.), the former that involves a wh-expression fronted via scrambling is more acceptable than the latter that involves a non-wh-expression scrambled.

(17) a. ?*[Yengi-uy$_1$ enu sacin-u$_1$] **kunye-nun**$_1$ [ney-ka t_2 ceyil
Yengi-GEN which picture-ACC she-TOP you-NOM the most
silhehantako] sayngkakha-ni?
dislike think-Q
'[Which of Yengi's pictures] does she think that you dislike the most?'

(18) b. ?[Yengi-uy$_1$ elin sicel(-uy) sacin-ul]$_2$ **kunye-nun**$_1$ [nay-ka t_2 ceyil
silhehantako] sayngkakhanta.
'She thinks that I dislike [Yengi's childhood picture] the most.'

However, our own survey of the contrast between (17a) and (18b) with Korean native speakers reveals that (17a) is in fact more acceptable than (18b). We conjecture that as pointed out in the text, (17a) sounds better than (18b), as the former involves the matrix Q marker, which in turn precludes the reconstruction of the scrambled wh-indefinite.

scope reading of the wh-indefinite with respect to the matrix opacity verb *wonha-* 'want'. If the wh-indefinite took narrow scope below the opacity verb, a Condition (C) violation would arise. Thus, Condition (C) bleeds the narrow scope of the wh-indefinite with respect to the matrix opacity verb.

(29) a. [**Yengi-ka**$_1$ phali-eyse ccikun elmana manhu-n sacintu-lul]$_2$
Yengi-NOM Paris-in took how many-REL picutres-ACC
kunye-nun$_1$ [phyencipcang-i capci-ey t_2 sitki-lul] wenha-ni?
she-TOP editor-NOM magazine-in put-ACC want-Q
'[How many pictures that Yengi took in Paris] did she want the editor to put in the magazine?'

b. [**Kunye-ka**$_1$ phali-eyse ccikun elmana manhu-n sacintu-lul]$_2$ **Yengi-nun**$_1$ [phyencipcangi capci-ey t_2 sitki-lul] wenha-ni?

Now, an important question arises: how Condition (C) interacts with indefinite wh-phrases as in (1a-b), repeated as (30a-b). Saito (1989) argued that those wh-phrases that undergo long-distance scrambling are subject to 'undoing' to their underlying positions at LF.

(30) a. [Cheli-ka [[Yengi-ka enu chayk-ul ilkessnun]ci]
Cheli-NOM Yengi-NOM which book-ACC read-Q
alko siphehanta]]].
know want
'[Cheli wants to know [Q [Yengi read which book]]]'
(= 'Cheli wants to know which book Yengi read')

b. Enu chayk-ul$_1$ [Cheli-ka [[Yengi-ka t_1 ilkessnun]ci] alko siphehanta]]].
'[Which book$_1$, Cheli wants to know [Q [Yengi read t_1]]]'
(= 'Cheli wants to know which book Yengi read')

The relevant examples representing the interaction of undoing with Condition (C) will be as follows. (31a) is fine. If, as argued in Saito (1989), the whole scrambled phrase were reconstructed for wh-scope interpretation, this sentence would be ruled out owing to a Condition (C) violation. This implies that reconstruction effects of a wh-licensing element/feature are independent from those of a Condition (C)-inducing phrase.

(31) a. [Sensayngnim-i **Yengi-eykey**$_1$ chwuchenha-n enu chayk-ul]$_2$
teacher-NOM Yengi-DAT recommend-REL which book-ACC
kunye-nun$_1$ [Cheli-ka t ilkess-nunci]$_2$ alko siphehanta.
she Cheli-NOM read-Q know want
'She wants to know [which book that her teacher recommended to Yengi] Cheli read.'

b. [Sensayngnim-i **kunye-eykey**$_1$ chwuchenha-n enu chayk-ul]$_2$ **Yengi-nun**$_1$ [Cheli-ka t_2 ilkess-nunci] alko siphehanta.

As pointed out above, in (31) only the wh-licensing element/feature minus the NP part is subject to undoing.

The more concrete examples illustrating the severance of Condition (C) and wh-licensing are as follows. In (32a-b), the embedded wh-phrases underwent long distance scrambling outside the NPI-NEG chain. As saw above, they cannot reconstruct to their underlying positions. But since these sentences are fine, it follows that wh-licensing in the embedded clause is successfully achieved only through the reconstruction of the wh-licensing element/feature.

(32) a. [Sensayngnim-i **Yengi-eykey**$_1$ chwuchenha-n enu chayk-ul]$_2$
teacher-NOM Yengi-DAT recommend-REL which book-ACC
amwuto **kunye-eykey**$_1$ [Cheli-ka t_2 ilkess-nunci] mwutci anhassta.
anyone he-DAT Cheli-NOM read-Q ask didn't
'No one asked her [which book that her teacher recommended to Yengi] Cheli read.'

b. [Sensayngnim-i **kunye-eykey**$_1$ chwuchenhan enu chayk-ul]$_2$ amwuto **Yengi-eykey**$_1$ [Cheli-ka t_2 ilkess-nunci] mwutci anhassta.

Leaving this paper, let us finish with a remark on the complement vs adjunct distinction in Condition (C) reconstruction effects. The following contrast makes a case for such a distinction in English:

(33) a. *[Whose characterization of [the typical male viewer]$_1$]$_2$ does he$_1$ resent t_2?
b. [Whose survey describing [the typical male viewer]$_1$]$_2$ does he$_1$ resent t_2?

This contrast is typically taken to reflect a complement vs. adjunct asymmetry (See van Riemsdijk and Williams, 1981, Freidin, 1986, Lebeaux, 1988, 1991, 1998,

2009; however, see the more recent work by Bruening and Khalaf, 2019 for the denial of this contrast in English). The offending description in (33a) is part of a pied piped complement of the pied piped head N of the wh-phrase, while it is part of the adjunct (the relative clause) to the pied piped head N of the wh-phrase in (33b).

However, as argued by Bruening and Khalaf (2019) for English, in Korean there is no complement vs. adjunct asymmetry in Condition (C) reconstruction effects. Through this paper, R-expressions are embedded in relative clauses modifying the NPs scrambled sentence-initially. In Korean they tend not to exhibit Condition (C) reconstruction effects. In addition, the following examples show that embedded inside the complement clauses, the R-expressions are fine; they do not display Condition (C) reconstruction effects.

(34) [Cheli-ka hakkyo-eyse Yengi-lul$_1$ pinanhaysstako]$_2$ kunye-nun$_1$ t_2 tulessta.
Cheli-NOM school-at Yengi-ACC criticized she-TOP heard
'She heard that Cheli criticized Yengi in the school.'

(35) [Cheli-ka hakkyo-eyse Yengi-lul$_1$ pinanhayssum-ul]$_2$ kunye-nun$_1$
Cheli-NOM school-at Yengi-ACC criticized-ACC she-TOP
t_2 mollassta.
didn't know
'She didn't know that Cheli criticized Yengi in the school.'

Both (34) and (35) illustrate scrambling of '-tako' and '-um' complement clauses. The scrambled complement clauses do not need reconstruct, thus the R-expressions in them not inviting a Condition violation in relation to the coreferential pronoun in matrix subject position.

4. Summary and Conclusion

This paper started with Saito's (1989) thesis that a long-distance scrambled phrase is subject to radical reconstruction, the whole phrase returning to their launching position. Saito demonstrates that what undergoes radical reconstruction is a wh-phrase that needs to reconstruct to their underlying position for wh-licensing with the embedded Q marker at LF. To verify the generality of Saito's

thesis, in line with Keine and Poole's (2018) study of long-distance scrambling in Hindi-Urdu we use the interaction of scope reconstruction with Condition (C) to examine the reconstruction aspects of universal quantificational phrases and indefinite NPs as well as wh-phrases. The emerging generalization on their reconstruction in Korean is that universal quantificational phrases have their quantifiational element/ features reconstructed, but the rest parts of them remain in their overt positions and are outside the purview of Condition (C). Wh-phrases behave in the parallel fashion as quantificational phrases, but when associated with the matrix Q-marker the former do not undergo reconstruction and when reconstructed, they involve a reconstruction of a wh-element/wh-features. Unlike these two types, the whole of indefinites NPs can optionally undergo radical/total reconstruction, thus scopally interacting with scope sensitive elements like opaque predicates. Since the reconstructed indefinite NP may contain a R-expression, the lower co-indexed pronoun may invite a violation of Condition (C), which in turn bleeds the reconstruction itself. To the extent that this generalization is correct, it is evident that the minimum grammatical element from a scrambled element undergoes reconstruction, while the rest of it stays in its overt landing position.

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