

The Syntax of Multiple Fragments in Korean: Overt Absorption, Max-Elide, and Scrambling*

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Park, Myung-Kwan. (2016). The Syntax of Multiple Fragments in Korean: Overt Absorption, Max-Elide, and Scrambling. *Language Research*, 52.3, 421-450.

In a multiple question and answer pair, the answer sentence in Korean (as in other languages) is composed of the two or more fragment(ary) answer phrases. Following Choe (1987), when an answer phrase is embedded and trapped within an island-forming structure, the unmarked option is to utilize the pied-piping strategy to move the larger constituent of island structure containing the answer phrase. Since multiple fragment (MF) answers to multiple questions are assumed to be calculated anyway via post-QR absorption at the interpretive component (May and Higginbotham (1981)), the syntactic formation of MFs involving (TP) ellipsis is achieved by movement of the answer phrase via an overt instantiation of post-QR absorption (cf. Sohn (1994)). After the syntactic formation of MFs via pied-piping and absorption-accompanied movement, MF answer phrase remnants undergo two additional processes. First, the final larger remnant constituent has its right periphery 'stripped' away. We propose that Max-Elide (cf. Merchant (2008)) comes into play in this 'stripping' process, eliding both TP and an additional right periphery of the final larger remnant constituent. Second, the answer phrase surviving from the first larger remnant constituent may take the hanging topic strategy, being base-generated at the left edge without a Case-marker/postposition. To boot, we show that in addition to word-order preserving MF formation via absorption-accompanied movement, the potential second or third remnant answer phrase from a non-island structure can scramble over the potential first or second one, feeding into word-order changing MF formation.

Keywords: multiple fragment (MF), answer remnant, pied-piping, overt absorption, Max-Elide, scrambling

* I am grateful to the three anonymous reviewers of this journal for the helpful comments, criticisms, and suggestions. Some of them cannot be incorporated into the revision of the paper because of time constraints. I also thank Jun Abe for his comments and suggestions on the earlier version of the paper.

1. Introduction

So-called multiple Fragmenting leaving behind more than one remnant/survivor in the question sentence of the question-answer dialogue has recently drawn a great deal of attention (cf. B. Park (2005); Choi and Yoon (2009); B. Park (2013); Ku and Cho (2014); Park and Shin (2014)). One representative example of the multiple fragment (MF) construction that the operation of Fragmenting yields is as follows:

- (1) Q: *i senmwul-ul nwu-ka nwukwu-lopwuthe patass-ni?*
 this present-Acc who-Nom who-from received-Interr
 ‘Who received this present from whom?’

A1: a. *yengi-ka cheli-lopwuthe./* b. (?)*yengi-ka cheli./*
 Yengi-Nom Cheli-from/ Yengi-Nom Cheli

b. ?**yengi cheli-lopwuthe./* b. **yengi cheli.*
 Yengi Cheli-from/ Yengi Cheli

A2: *cheli-lopwuthe yengi(-ka).*
 Cheli-from Yengi-Nom
 ‘Yengi, from Cheli.’

In (A1) and (A2), the two answer phrase remnants are derived from the same clause, and as noted by the authors mentioned above, the acceptability of the variant forms of MF answer sentence depends on the presence/absence of the Case marker or postposition on the two answer phrase remnants. Roughly speaking, the first answer remnant obligatorily carries the same Case marker or postposition as its correlate element in the antecedent question sentence does,¹⁾ but the second answer remnant optionally does so.

Departing from the initial observation that multiple Fragmenting applies in Korean, with the afore-mentioned restriction on Case/postposition marking for answer phrase remnants, in this paper we turn to examine the locality issue of multiple Fragmenting in this language. Particularly

1) However, when the first answer phrase remnant without a Case marker or postposition is accompanied with a rather long pause/intonational break, the resulting sentence becomes acceptable. This option is often taken by using the so-called hanging topic strategy, which we will return to below in the text.

we show that both scrambling and pied-piping & overt absorption-accompanied movement are ready to be available to Korean, and they play a pivotal role in accounting for locality that holds between answer phrase remnants in a variety of forms of MF answers.

2. The First Challenge to the Clause-Mate Condition on Multiple Remnants/Survivors

As seen in (1) above, the MF answer sentence composed of the two answer phrase remnants responding to the two question phrases in the same clause of the question sentence is acceptable. However, the answer phrase remnants derived from the different clauses yield a substantially degraded MF sentence, as follows (Park and Shin (2014); cf. B. Park (2005)):

- (2) Q: nwu-ka [cheli-ka nwukwu-lul ttaylyess-ta-ko] malhayss-ni?
who-Nom Cheli-Nom who-Acc hit-Decl-Subord said-Interr
'Who said Cheli hit who?'
- A: *yengi-ka cinswu(-lul).
Yengi-Nom Cinswu(-Acc).
'(Lit.) Yengi said that Cheli hit Cinswu.'

This contrast between (1) and (2) points to the fact that the formation of MF is subject to the well-known clause-mate condition. That is, the answer phrase remnants that form an MF sentence are derived from the same clause.

The two empirical challenges to this clause-mate condition on MF formation in Korean are posed by Park and Bae (2014) and Chung (2015). The first of them attributed to Park and Bae (2014) is that as the question phrases are in different clauses, their corresponding answer phrase remnants forming the MF sentence come from different clauses only when the second of them is at the edge of the embedded clause, as in (3-4) ((3Q) and (3A1) are directly taken from Park and Bae (2014), and the other examples are new additions):

- (3) Q: Max-ka **nwukwu-ekey** [_{CP} **nwu-ka** ppang-ul mekess-ta-ko] malhayss-ni?
 Max-Nom who-to who-Nom bread-Acc ate-Dec-C say-Q
 ‘Who did Max tell who ate bread?’
 A1: Bill-ekey John(-i). Park and Bae (2014)
 Bill-to John(-Nom)
 ‘(Lit.) Max told Bill John ate bread.’
 A2: ?(?)John-i Bill-ekey
 John-Nom Bill-to
 ‘(Lit.) Max told Bill John ate bread.’
- (4) Q: cheli-ka **nwukwu-eykey** [PRO **mwues-ul** ilk-ulako] malhayss-ni?
 Cheli-Nom who-Dat what-Acc read-Decl-Subor said-Q
 ‘Who did Cheli tell to read what?’
 A1: yengi-eykey Preminger-uy chayk(-ul)
 Yengi-Dat Preminger-Gen book-Acc
 ‘(Lit.) Cheli told Yengi to read Preminger’s book.’
 A2: ?Preminger-uy chayk-ul yengi-eykey
 Preminger-Gen book-Acc Yengi-Dat
 ‘(Lit.) Cheli told Yengi to read Preminger’s book.’

As in (A1) of (3)/(4), the Dative + Nominative/Accusative sequence MF sentence that reflects the word order of the two question phrases in the preceding question sentence is acceptable as noted by Park and Bae (2014). In addition, the Nominative/Accusative + Dative sequence MF sentence that is derived via scrambling as in (A2) of (3)/(4) is also acceptable²⁾ (though as Park and Bae (2014) note, it is slightly degraded).

In addition, in the formation of an MF sentence the second answer phrase remnant at the left edge of the embedded clause may be followed by an additional answer phrase remnant in the same clause, as follows:

- (5) Q: cheli-ka **nwukwu-eykey** [**nwu-ka mwues-ul** mekess-tako] malhayss-ni?
 Cheli-Nom who-Dat who-Nom what-Acc ate-Decl-Subor said-Q
 ‘Who did Cheli tell who ate what?’
 A1: minswu-eykey swuni-ka phica(-lul). Park and Bae (2014)
 minswu-Dat swuni-Nom pizza-Acc
 ‘(Lit.) Cheli told Minswu Swuni ate pizza.’

2) However, one of the anonymous reviewers [A] rates (3A2) as pretty degraded, so we add (??) to ?, the grammatical status of this example reported in the previous version of the paper. We will return to the (un)acceptability of this example shortly.

A2: ?{swuni-ka phica-lul / phica-lul swuni-ka} minswu-cykey
 swuni-Nom pizza-Acc pizza-Acc swuni-Nom minswu-Dat
 '(Lit.) Cheli told Minswu Swuni ate pizza.'

Recall that as shown in (2), the matrix subject answer remnant and the embedded object one cannot form the MF sentence. As in (5), however, the clause-edge embedded subject answer remnant acts as a mediator/linker, successfully connecting and grouping together with the other two remnants.

The most striking aspect of what Park and Bae (2014) note concerning MF formation in Korean is that (2A) (or 6A), which was ruled out by the clause-mate condition on MF formation, is improved by reversing the word order of the answer phrase remnants that reflects that of the question phrases, as in (6A2):³⁾

- (6) Q: **nwu-ka** [cheli-ka **nwukwu-lul** ttaylyess-ta-ko] malhayss-ni?
 who-Nom Cheli-Nom who-Acc hit-Decl-Subord said-Interr
 'Who said Cheli hit who?'
 A1: *yengi-ka cinswu-lul
 Yengi-Nom Cinswu-Acc
 '(Lit.) Yengi said Cheli hit Cinswu.'
 A2: ?cinswu-lul yengi-ka
 Cinswu-Acc Yengi-Nom
 '(Lit.) Yengi said Cheli hit Cinswu.'

3) In English, there are multiple *wh*-questions where a single-pair reading is, in fact, forced. The following multiple *wh*-questions, taken from Dayal (2002), have that property: they can only be requesting a single pair.

- (i) a. Which student read the book that which professor wrote? Dayal (2002: 515)
 b. Which student got a headache after she read which book? Dayal (2002: 515)
 c. Which linguist will be offended if we invite which philosopher? Dayal (2002: 512)
 d. Which student believes that Mary read which book? Dayal (2002: 617)

In these examples, the two question phrases underlined are separated from and therefore not scopally interacting with each other.

However, as Dayal (2002) notes, the additional *wh*-phrase at the left edge of the embedded clause allows for a multiple-pair reading for otherwise unrelated two *wh*-phrases, as in (ii).

- (ii) Which student knows where Mary bought which book?

In this regard, there seems to be a striking parallelism in structural environment between the availability of a multiple-pair interpretation in English and the formation of MF sentences in Korean. We, however, leave it for future research to examine this parallelism.

To account for the acceptable MF formation in (6A2), Park and Bae propose that this example is derived as in (6A2') below, where in their analysis, the whole embedded clause is moved in front of the matrix subject and undergoes CP deletion after the extraction of the embedded object out of it.

- (6) A2': ?_{[X/FP cinswu-lul]₃ [_{X/FP} [_{CP} cheli-ka t₃ ttaylyess-ta-ko]₂ [_{X/FP} yengi-ka]₁ [_{TP} t₁—t₂ malhayss-e.]]]]}

The derivation in (6A'2), however, has a couple of drawbacks. Note that it involves so-called 'scattered' occurrences of ellipsis. One occurrence of ellipsis is CP deletion before the matrix subject now in [Spec,X/FP], and the other is TP deletion after it. As will be seen below, the scattered application of ellipsis will over-generate in the cases to be discussed in the next section, such as (20A3) and (20A4). Besides, it would incorrectly rule in (6A1) with the following derivation:

- (6) A1': *_{[X/FP yengi-ka]₁ [_{X/FP} cinswu-lul]₃ [_{X/FP} [_{CP} cheli-ka t₃ ttaylyess-ta-ko]₂ [_{TP} t₁—t₂ malhayss-e.]]]]}

In (61A1'), the embedded CP first moves to the matrix [Spec,X/FP], then allowing the embedded object to escape out of it, and the matrix subject moves to the outmost layer of X/FP. Analogously to the derivation in (6A'2), the embedded CP and the matrix TP would undergo ellipsis, wrongly ruling in (61A1').

We thus argue that this option, namely scrambling of the whole clause, followed by CP ellipsis leaving behind one remnant from it, would over-generate and thus is not part of the operations involved in the formation of MF in Korean. We rather suggest that (6A2) is derived by simply scrambling the embedded object remnant in front of the matrix subject remnant.

Taking the *direct scrambling* analysis for the embedded object remnant in (6A2), we propose the following 'revised' clause-mate condition that governs the formation of MF in Korean:

(7) 'revised' clause-mate condition

Two or more question/focus phrases are in the same clause, but the left edge of a clause but not its elsewhere domain is also accessible to a question/focus phrase in the immediately higher clause (having a flavor of the phase impenetrability condition (PIC). (cf. Chomsky (2001))

Why does this condition hold in the formation of MF in Korean? We suppose that this is because the multiple question phrases that the corresponding MF answer phrases respond to are, in nature, quantificational. Following May (1977, 1985) and Fox (2000), we assume that multiple questions phrases as quantificational elements take scope at the smallest propositional constituent dominating them, thereafter undergoing absorption (May and Higginbotham (1981)). As a consequence, post-QR absorption governed by the (revised) clause-mate condition in (7) fails to combine together two quantified elements that are properly in different clauses, particularly being separated by the overt Nom-marked embedded subject element. It is also known that the remnants in ellipsis are restricted in their extraction out of it by their correlates (question phrases in our examples) in the antecedent clause (Fox and Lasnik (2003); Merchant (2008), among others). In other words, the remnants and their correlates meet the so-called scope parallelism.

We are ready to account for the contrast between (6A1) and (6A2). The former involves post-QR absorption both in the antecedent question clause and the MF answer clause. The two question phrases in the antecedent clause are quantificational and thus have to be clause-bounded, but they are not, violating the condition (7). However, (6A2) does not involve absorption in the antecedent question clause nor in the MF answer clause. In this case, the two question phrases in the antecedent clause are not both quantificational, not being fed further into absorption, thus not inviting a violation of the condition (7). The second question phrase in (6Q) is (covertly) moved over the first one in the question clause, in the same way that the second answer phrase in (6A2) is scrambled over the first one, in compliance with scope parallelism. In passing, note that

the difference between post-QR absorption-driven and scrambling-driven MF sentences lies in whether they retain word order in question-answer phrase correspondence.

Returning briefly to (3A2) (though (4A2) & (5A2) are analyzed on a par with (6A2)), this MF sentence is derived by the scrambling strategy. However, as one of the anonymous reviewers [A] notes, it is rather degraded, compared to (6A2). We attribute this degradedness of (3A2) to the general ban on long-distance subject scrambling (cf. Kuno (1973); Saito (1985)). In contrast, speaking of the Korean speakers who judge (3A2) as acceptable, it seems to be ruled in by virtue of the admissibility of subject scrambling (cf. Sohn (1995); Ko (2005) for their arguments in favor of (long-distance) subject scrambling in Korean). Meanwhile, both (4A1) and (5A1) are ruled in because the question phrase(s) occur at the left edge of the embedded clause, thus being fed into post-QR absorption meeting the condition in (7).

Before moving on, we recapitulate the two components for the analysis of MF formation in Korean. We have argued that the key operation that derives MF in Korean is an overt instance of post-QR absorption⁴) that applies in a parallel fashion to multiple question phrases in the antecedent sentence (cf. Sohn (1994)), and as Saito (1994) and Sohn (1994) show, it is subject to the clause-mate condition or, specifically to the revised one in (7). On top of it, another operation of scrambling readily available to Korean which is at work as shown in (1A2) and (3A2)-(6A2) may feed MF formation.

- (8) a. Multiple remnants/survivors are formed by movement via an overt instantiation of post-QR absorption (cf. Sohn (1994)), which is subject to the 'revised' clause-mate condition in (7).
 b. Scrambling may feed a formation of fragment remnants/survivors.

4) The operation of absorption was originally conceived to apply to the construction containing multiple *wh*-question phrases (May and Higginbotham (1981); See also Saito (1994) and Sohn (1994) in the corresponding construction in Japanese and Korean). We assume, as stated in the text, that multiple answer phrases that are argued to take parallel scope to multiple *wh*-question phrases (cf. Merchant (2004)) also undergo the operation of absorption prior to feeding the ellipsis operation of Fragmenting.

In the next section we examine more data on MF formation in Korean, showing how they are argued to be derived by such operations as post-QR absorption-accompanied movement and scrambling.

3. The Second Challenge on the Clause-Mate Condition on Multiple Remnants/Survivors

The second empirical challenge for the clause-mate condition in the formation of MF in Korean is that, as noted by Chung (2015), the second answer remnant may apparently be derived even from the island-forming structure, contrary to the prediction made by the Island Boundary Condition⁵⁾ in Park (2005, 2013): this condition prohibits two answer phrases from being separated by an island boundary. This challenge is illustrated by (9), taken from Chung (2015):

- (9) Q: Cheli-ka **nwukwu-eykey** [eti-ey sa-nun chinkwu-lul] sokayha-ess-ni?
Cheli-Nom who-Dat where-at live-PNE friend-Acc introduce-Pst-QE
'To whom did Cheli introduce the friend who lives where?'
A1: Yengi-eykey [Seoul-ey sa-nun chinkwu-lul].
Yengi-Dat Seoul-at live-PNE friend-Acc
'(Lit.) Cheli introduced to Yengi the friend who lives in Seoul.'
A2: Yengi-eykey [Seoul-ey sa-nun chinkwu].
A3: Yengi-eykey [Seoul-ey sa-nun].
A4: Yengi-eykey [Seoul-ey].⁶⁾
A5: Yengi-eykey [Seoul].
A4': *[Seoul-ey] Yengi-eykey.

The two things are worth mentioning concerning an array of ques-

5) The name of this condition was coined by Chung (2015).

6) One of the anonymous reviewers [B] disagrees in the acceptability status marked before (9A4) and (9A5), claiming that (9A4), (9A5), and (9A4') are equally bad to him/her. As noted in the text, the examples in (9) except for (9A4') with the acceptability judgments on them are directly cited from Chung (2015). We acknowledge that there are Korean speakers who make different claims on the acceptability of the examples in the text. But we just report reviewers' disagreements on the acceptability of some examples in the text, without going further to account for why the disagreements arise. See also Chung (2015) for the discussion of some speaker variation in Korean MF sentences.

tion-answer pairs in (9). One is that the island-forming relative clause plus the following NP after replacing the question phrase with the answer phrase may be the second large fragment remnant as in (9A1), but the right periphery of this remnant may undergo ‘Stripping’ (whose exact nature of operation we will return to below) linearly from right to left, yielding (9A2)-(9A5). Note that in (9A4) and (9A5), the apparent second remnant looks as if it was moved out of the relative clause island. However, it is not. In MF formation, both the first small and the second large fragment remnant as in (9A1) undergo QR and enter into absorption meeting the condition in (7), thereafter the right periphery of the latter being fed further into ‘Stripping.’ The other is that when the second remnant is reversed in word order with the first one, the resulting MF sentence as in (9A4’) (in contrast to (9A4)) becomes substantially degraded in acceptability. The unacceptability of (A4’) points to the fact that the word order change between remnants in the formation of MF in Korean is made by scrambling. Recall that in (1A2) & (3A2)-(5A2) and particularly in (6A2), scrambling may feed MF formation in Korean. However, scrambling of the embedded PP out of the relative clause island over the matrix Dative argument in (9A4’) is to blame for the resulting illegal formation of MF.

The following question and answer pairs display the same pattern of behaviors as (9):

- (10) Q: *cheli-ka nwukwu-eykey* [[*nwu-ka* *ssun chayk-i*] *choyko-lako*] *malhayss-ni*?
 Cheli-Nom who-Dat who-Nom wrote book-Nom the best-Subor said-Q
 ‘Who did Cheli tell the book who wrote was the best?’
- A1: *yengi-cykey* [*chomsukhi-ka* *ssun chayk-i*].
 Yengi-Dat Chomsky-Nom wrote book-Nom
 ‘To Yengi, the book Chomsky wrote.’
- A2: *yengi-cykey* [*chomsukhi-ka* *ssun chayk*].
- A3: *yengi-cykey* [*chomsukhi-ka* *ssun*].
- A4: *yengi-cykey* [*chomsukhi-ka*].
- A5: *yengi-cykey* [*chomsukhi*].
- A4’: *[*chomsukhi-ka*] *yengi-cykey*.

The second remnant in (10A1) is also the island-forming relative clause plus the following NP after replacing the question phrase with the answer

phrase, and it is derived from the subject position at the left edge of the embedded finite clause. Note that it undergoes QR and enters into absorption with the first remnant, meeting the condition in (7). In this respect, (10A1) is analogous to (3A1), except that the second remnant in the former is structurally complex, while that in the latter is simple.

It is to be noted that in the preceding question sentence the first question phrase is not required to be immediately adjacent to the second question phrase embedded inside the island-forming structure, as in (11):

- (11) Q: nwu-ka [minswu-eykeyse] [mwues-ul cal mantunun yolisa-lul]
 who-Nom Minswu-Dat what-Acc well make cook-Acc
 chwuchenpatass-ni?
 recommended-Q
 ‘Who recommended to Minswu a cook that is good at making what?’
- A1: cheli-ka [phica-lul cal mantunun yolisa-lul].
 Cheli-Nom pizza-Acc well make cook-Acc
 ‘(Lit.) Cheli recommended to Minswu a cook that is good at making pizza.’
- A2: cheli-ka [phica-lul cal mantunun yolisa].
- A3: cheli-ka [phica-lul cal mantunun].
- A4: cheli-ka [phica-lul cal].⁷⁾
- A5: cheli-ka [phica-lul].
- A6: cheli-ka [phica].
- A5’: *phica-lul cheli-ka.

As in (11A1), there is no problem with combining together the first ‘simple’ remnant with the second ‘complex’ remnant in the formation of the MF sentence, as meeting the condition in (7), they are in the same clause. The latter also undergoes subsequent ‘Stripping’ from right to left, yielding (11A2) through (11A6).

It is not possible, however, to form the MF sentence by putting together the first ‘simple’ remnant and the second ‘complex’ remnant that do not meet the (revised) clause-mate condition. The following sentence makes a point:

7) One of the reviewers [A] notes that (11A4) with the clitic-like adverb *cal* ‘well’ surviving after the answer remnant sounds pretty degraded. It seems that this kind of light lexical element is part of the portion to be elided by Max-Elide.

- (12) Q: cheli-ka **nwukwu-eykey** [minswu-ka [**nwu-ka** ssun chayk-ul]
 Cheli-Nom who-Dat Minswu-Nom who-Nom wrote book-Acc
 ilkesstako] malhayss-ni?
 read-Decl-Subor said-Q
 ‘Who did Cheli tell Minswu read a book who wrote?’
- A1: ?*yengi-eykey [chomsukhi-ka ssun chayk-ul].
 Yengi-Dat Chomsky-Nom wrote book-Acc
 ‘Cheli told (to) Yengi a book Chomsky wrote.’
- A2: *yengi-eykey [chomsukhi-ka ssun chayk].
- A3: *yengi-eykey [chomsukhi-ka ssun].
- A4: *yengi-eykey [chomsukhi-ka].⁸⁾
- A5: *yengi-eykey [chomsukhi].
- A4’: *[chomsukhi-ka] yengi-eykey.

Note that (12A1) is ruled out because, like those in (6A1), the two remnants (though the second remnant in (12A) is a complex one) do not meet the (revised) clause-mate condition in (7), as they are properly in the different clauses. As (12A1) is ruled out, the other variant forms of MF sentence in (12A2~12A5) where the right edge of the second remnant constituent has undergone ‘Stripping’ are ruled out. In other words, the application of ‘Stripping’ is contingent on the legal formation of MF at the beginning. This renders conclusive evidence showing that ‘Stripping’ applies after the initial assembly of ‘bigger’ remnants, if any.

We now provide a more concrete analysis for MF formation in Korean, as follows:

(13) The proposed analysis

A pied-piped larger constituent including an answer phrase undergoes an overt instantiation of absorption,⁹⁾ and the final remnant undergoes optional Max-Elide.

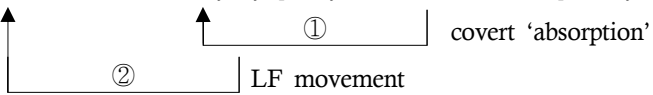

8) As one of the anonymous [B] reviewers points out, when the embedded object in (12Q) scrambles and occurs in front of the embedded subject, the MF sentence in (12A4) becomes acceptable, since the second large remnant now at the left edge of the embedded clause is accessible to enter into absorption with the first large remnant in the matrix clause, meeting the condition in (7).

9) One of the anonymous reviewers [B] suggests that attachment of one (pied-piped) phrase to another (pied-piped) phrase in syntax is better described not as overt absorption but as what Takano (2002) calls ‘surprising constituent formation.’ This paper sticks to the previous one coined chronologically earlier by Sohn (1994).

also a preferred option in Chinese, as in (16):

- (16) Q: ni xihuan [shei xie de shu]?
 you like who write REL book
 '(Lit.) Do you like the book that who wrote?'
 A1: wo xihuan [Zhangsan xie de shu].
 I like Zhangsan write REL book
 A2: Zhangsan xie de shu
 Zhangsan write REL book
 A3: ??Zhangsan. Fiengo et al. (1988)
 Zhangsan

We suggest that when the answer phrase is included in an island-form structure, the 'larger' pied-piped answer constituent always feeds MF formation in Korean. Otherwise, the non-pied-piped answer phrase would undergo scrambling out of the containing larger constituent, inviting a violation of an island constraint. We go further to suggest that MF formation is achieved by an overt instantiation of post-QR absorption (Saito (1994) and Sohn (1994); See also May and Higginbotham (1981)) or 'Turk-In movement' (Richards (2001) that preserves word/phrase order. For example, the MF sentences in (9) are derived in the following way.

- (17) Q: Cheli-ka nwukwu-eykey [eti-ey sa-nun chinkwu-lul] sokayha-ess-ni?

 A: Cheli-ka yengi-eykey [Seoul-ey sa-nun chinkwu-lul] sokayha-ess-ni?


Pied-piping and overt absorption/Turk-In-accompanied movement initially conspire to derive the structure that deletion feeds. The second answer phrase *Seoul-ey* 'in Seoul' within the island cannot move alone out of it. As an alternative to this illegal movement, however, it may undergo pied-piping along with a constituent including it. Post-QR overt absorp-

tion/Turk-In leftward movement of the two remnants to the periphery of TP then converts (17A) to (18):

(18) (17A) converts to the following structure:

[[yengi-cykey]₁ [Seoul-ey sa-nun chinkwu-lul]₂ [_{TP} Cheli-ka t₁ t₂ sokayha-css-ni]]?
 ↑ Optional Max-Elide

When TP undergoes ellipsis, it yields (9A1), where the remnants retain the structure of one question phrase and that of the constituent containing the other question phrase. However, we have seen that the second remnant has its right periphery ‘stripped’, as indicated in (18). Specifically, this ‘stripping’ that is understood as ‘peripheral ellipsis’ (ellipsis that occurs at the periphery of a clause) is named Max-Elide (following the similar concept of the operation *Max-Elide*¹¹) in Merchant (2008)), which applies in the following mode:

(19) Optional Max-Elide

Max-Elide applies not only to the TP where remnants/ survivors move out of, but also optionally to the right periphery of the final remnant/survivor immediately preceding the elided TP.

11) Merchant’s (2003) original proposal of Max-Elide is to account for the obligatory elision of the larger TP instead of the smaller VP as in (i):

(i) Mary was kissing someone, but I don’t know who (*[she is]).

However, Lasnik and Park (2013) show that the version of (i) with the smaller VP elided is accounted for independently of Max-Elide, arguing that the general ideas such as the chain uniformity condition and the parallelism/identity condition on VP ellipsis do the same job as Max-Elide.

Takahashi and Fox (2005), on a different ground, extend Max-Elide to account for the vanishment of a sloppy reading in the second sentence of (ii) where the smaller VP instead of the larger VP is elided:

(ii) John said Mary hit him. Bill said she did [e] too. ([e] = hit John/*hit Bill)

To the extent that Takahashi and Fox’s (2005) application of Max-Elide to this case is right, two things are worth mentioning as to the VP ellipsis in the second sentence of (ii). First, Max-Elide applies to the case at hand where the larger VP is NOT elided obligatorily. Second, it applies to the structure that does not contain a variable, differently from what is dictated by Merchant’s (2003) original formulation of Max-Elide.

The conception of Max-Elide in this paper is that as can be seen in VP ellipsis of English as in (iia-b), ellipsis may be maximal as well as being minimal.

(iii) a. Mary said you would arrive, and Sue also said you would.
 b. Mary said you would arrive, and Sue also did.

We turn now to examine the validity of the predictions our analysis makes. First, when both pied-piping & post-QR overt absorption/Turk-In movement and optional Max-Elide come into play in the formation of MF in Korean, extraction of a remnant/survivor out of an island is prohibited except for ‘apparent’ extraction of an answer remnant/survivor out of the final remnant/survivor constituent that may have an island structure. This prediction is fulfilled, as shown by (20), taken from Kim and Park (2015, (37)). We add (20Q1) to a battery of their question-answer pairs:

- (20) Q1: **nwu-ka** [**mwues-ul** kacin salam-ul] chacko iss-ni?
 who-Nom what-Acc have person-Acc ook for-Q
 ‘Who is looking for a person that has what?’
- Q2: [**mwues-ul** kacin salam-ul] **nwu-ka** chacko iss-ni?
 what-Acc have person-Acc who-Nom look for-Q
 ‘Who is looking for a person that has what?’
- A1: [master key-lul kacin salam-ul] cheli-ka
 master key-Acc have person-Acc -Nom
 ‘(Lit.) Cheli is looking for a person who has a master key.’
- A2: [master key-lul kacin salam] cheli-ka
- A3: *[master key-lul kacin ~~salam-ul~~] cheli-ka
- A4: ?*[master key-lul ~~kacin salam-ul~~] cheli-ka
- A5: (*)[master key-lul ~~kacin salam-ul~~] cheli-ka
 (Kim and Park (2015), (37), which is a set of Q2 & A1-A5 above)

In the question (20Q1) and its MF answer (20A1), the latter involves scrambling of the second pied-piped answer constituent over the first answer phrase. Since the scrambling strategy in Korean is not susceptible to the Superiority condition, word order reversing of the first with the second remnant via scrambling is not pernicious. In the question (20Q2) and its MF answer (20A1), by contrast, the latter employs post-QR overt absorption/Turk-In movement of the first pied-piped answer constituent together with the second answer phrase. Regardless of which is a source question sentence corresponding to (20A1), Max-Elide cannot apply to the right periphery of the resulting first (i.e., non-final) pied-piped answer constituent. Recall that if we applied the scattered occurrences of ellipsis as in Park and Bae’s (2014) analysis of (6A2) as represented in (6A2’),

we would incorrectly rule in such MF sentences as (20A3) and (20A4). It is also to be noted that scrambling cannot apply to extract the answer phrase out of the resulting first pied-piped answer constituent because scrambling is simply island-sensitive (cf. Saito (1985)).¹²⁾

12) What the contrast between (9A2~A5) and (20A3~A4) shows is that the right edge of the final pied-piped remnant constituent is part of ellipsis, but that of the non-final one is not. In addition, (9A4') apparently involving the scrambling of the second answer remnant over the first one is not acceptable, unlike (6A2) involving the same operation. These two empirical facts which are important topics to be investigated in this paper have also drawn ample attention from Korean scholars. We will briefly review the three recent works one by one in the following paragraphs (though more thorough comparisons of the analysis in the text with those in these works are left for the future work).

Chung (2015: 583) proposes the c-command condition between focus elements in multi-focused fragment answers, as in (i):

- (i) The focus element (including a WH-correlate) in the non-final position pied-pipes the minimal node that dominates it and c-commands the focus element(s) that follows, while the focus element in the final position optionally pied-pipes its dominating node(s).

In Chung's analysis based on the condition (i), the contrast between (9A2~A5) and (20A3~A4) is attributed to the obligatory application of piped piping to the non-final answer remnant(s). However, though he argues that the final answer remnant is derived not via ellipsis but the non-application of pied-piping, he does not explicitly take on the question of why (9A4') is not acceptable, while (6A2) is.

Kim and Park (2016) take a PF repair-by-ellipsis approach, suggesting that "any intervening lexical items (interveners)" between the extracted answer remnant(s) and the island are offending elements in PF. For example, (9A3) is ruled out because in Kim and Park's analysis, it is derived as follows, crucially via extraction of the answer remnant(s) out of TP ellipsis:

- (ii) = (9A3) *[master key-lul kacin]₂ [cheli-ka]₁ [_{TP} t₁ [_{island} t₂ salam-ul] chacko iss-ta]

Note that violating a left branch condition, the first (i.e., non-final) remnant in (ii) is moved out of the island within TP ellipsis. However, the repair-by-ellipsis effect does not arise in this case because of the presence of the offending intervener *cheli-ka*. Kim and Park's suggested idea accounts for both the contrast between (9A2~A5) and (20A3~A4) and the unacceptability of (9A4'), but it is merely stipulative to state that the intervener like *cheli-ka* in (ii) "break the 'dependency relation'" between the answer remnant and the island.

An (2016) takes a quite similar approach to the one in the text based on Max-Elide (Yoo YongSuk (perl. comm.) informed us in July of 2015 that the analysis developed at that time and now reported in the text is similar to An's analysis that was presented in one conference at the University of York in England in June of 2015). An's (2016) analysis is based on what he calls Extra Deletion that applies in PF. This operation has two distinctive features. One is that it applies subsequently to TP ellipsis that allegedly yields a fragment sentence, being extended further to the final remnant phrase. The other is that it is not constituent-based, but string-based, thus only applying to the right edge of the final remnant phrase up to the recoverability condition. An's (2016) analysis accounts for the contrast between (9A2~A5) and (20A3~A4), by simply saying that it does not apply to the non-final remnant constituent(s), but only to the final one. But it seems that his analysis cannot account for the contrast in acceptability between (9A4') and (6A2).

Before moving on, it is also worth commenting on the acceptability of (20A5) as well as (20A2) when the Case marker of the answer remnant is dropped. Recall that an answer phrase without a Case/postposition marker is allowed when it is base-generated as a left-dislocated hanging topic (Hong (2012a, b); Hong and Kim (2013)). In the parallel fashion to (20A5), (21A2) unlike to (21A1) seems to be fine where the first remnant *chomsukhi* 'Chomsky' is interpretively (not via a movement) associated with a position within the subject island:

- (21) Q: [**nwu-ka** ssun chayk-i] **nwukwu-eykey** centaltoyess-ni?
 who-Nom wrote book-Nom who-Dat was sent-Q
 'Who was a book who wrote sent to?'
 A1: *chomsukhi-ka yengi-eykey.
 Chomsky-Nom Yengi-Dat
 '(Lit.) A book that Chomsky wrote sent to Yengi.'
 A2: chomsukhi yengi-eykey.¹³⁾

In a nutshell, in the formation of MF in Korean there are two ways of apparently rescuing answer phrases from island structures. The one is to apply Max-Elide to the final pied-piped constituent of island structure in the MF answer sentence, saving the answer phrase from it by eliding the rest of it. However, the first answer remnant in (21A) cannot be derived via Max-Elide because it is not part of the final but of the non-final larger constituent; it involves an extraction out of an island, thus being ruled out. The other is to employ the hanging topic strategy, base-generating the Case/postposition-less answer phrase outside of the island structure. Note that neither option involves any literal movement out of an island, thus not inviting a violation of any island constraint.

13) One of the anonymous reviewers [C] notes that the hanging topic strategy applies successfully to (21A2), but not to (1A1c). If his/her claim is right, this contrast points to the fact that this strategy is employed only when the (hanging topic) remnant is associated with a gap within an island. He/She also points out that there are speakers that reject the application of the hanging topic strategy to the first answer remnant in (21A2). We conjecture that these speakers use a hanging topic for the NP informationally construed not as new, but as old, thus disallowing it for the informationally new fragment answer remnant.

When the second remnant is the final one, it is subject to the almost same strategy as the first remnant, as shown by the question and answer pairs in (22), taken from Chung (2015):

- (22) Q: John-i **nwukwu-eykey** [**eti-ey** sal-nun chinkwu]-lul **encey** sokayha-ess-ni?
 John-Nom who-Dat where-at live-PNE friend-Acc when introduce-Pst-QE
 '(Lit.) To whom did John introduce the friend who lives where?'
 A1: Mary-eykey [Seoul-ey sal-nun chinkwu]-lul ecey
 Mary-Dat Seoul-in live-PNE friend-Acc yesterday
 '(Lit.) the friend who lives in Seoul, to Mary, yesterday'
 A2: *Mary-eykey [Seoul-ey sal-nun chinkwu] ecey
 A3: *Mary-eykey [Seoul-ey sal-nun] ecey
 A4: *Mary-eykey Seoul-ey ecey¹⁴
 A5: *Mary-eykey Seoul ecey (Chung (2015))

In these question and answer pairs, the second pied-piped answer constituent does not allow extraction/scrambling of the answer phrase from it nor rescue the answer phrase from it by virtue of Max-Elide. Note, however, that unlike the first remnants in general, the answer phrase inside the second large constituent in (22) cannot capitalize on the hanging topic strategy that would yield (22A5) because the strategy presumably applies

14) One of the anonymous reviewers [B] notes that when the Accusative-marked object occurs after the temporal question phrase *eti-ey* 'where' as in (i), according to the analysis in the text, (iA) would be fine, but it sounds bad to him/her.

- (i) Q: John-i **nwukwu-eykey** **encey** [**eti-ey** sal-nun chinkwu]-lul sokayha-ess-ni?
 John-Nom who-Dat when where-at live-PNE friend-Acc introduce-Pst-QE
 '(Lit.) To whom did John introduce the friend who lives where?'
 A: *Mary-eykey ecey [Seoul-ey sal-nun chinkwu]-lul
 Mary-Dat yesterday Seoul-in live-PNE friend-Acc
 (Lit.) 'the friend who lives in Seoul to Mary yesterday'

It seems that the badness of (i) is due to garden path effects. The time adverbial *Seoul-ey* in (iA) is prone to be analyzed as part of the matrix clause, rather than part of the intended relative clause.

When we change (i) into (ii) to avoid garden path effects, the MF sentence in (iiA) improves substantially in acceptability.

- (ii) Q: John-i **nwukwu-eykey** **encey** [**nwu-ka** manna-n chinkwu]-lul sokayha-ess-ni?
 John-Nom who-Dat when who-Nom meet-PNE friend-Acc introduce-Pst-QE
 '(Lit.) To whom did John introduce the friend that who met, when?'
 A: Mary-eykey ecey [Bill-i manna-n chinkwu]-lul
 Mary-Dat yesterday Bill-Nom meet-PNE friend-Acc
 (Lit.) 'the friend who Bill met, to Mary, yesterday'

to the leftmost answer remnant, not to the medial answer remnant nor to the final answer remnant.

What happens to the Genitive-marked answer phrases having the Genitive-marked question phrases as their correlates in the question sentences? They will be immobile because their movements would violate the Left Branch Condition, and thus, as noted by Park (2013) and Chung (2014; 2015), they may occur as remnants/survivors when they are part of the final pied-piped remnant/survivor as in (23):

- (23) Q: Cheli-ka **mwues-ul** [**nwukwu-uy** oppa-eykey] cwu-ess-ni?
 Cheli-Nom what-Acc who-Gen brother-Dat give-Pst-QE
 ‘What did Cheli give to whose brother?’
 A1: sakwa-lul [Yengi-uy oppa-eykey].
 apple-Acc Yengi-Gen brother-Dat
 ‘(Lit.) Cheli gave an apple to Yengi’s brother.’
 A2: sakwa-lul [Yengi-uy oppa]
 A3: sakwa-lul [Yengi-uy]
 A4: sakwa-lul [Yengi]¹⁵⁾

Since the second (i.e., the final) pied-piped constituent may have its right periphery elided via Max-Elide, the apparent violation of the Left Branch Condition does not arise whatsoever, thereby ruling in (23A3) and (23A4).

When the Genitive-marked answer phrase is part of the first pied-piped remnant, it seems to take advantage of the hanging topic strategy, yielding the acceptable MF answer in (24A4):

- (24) Q: Cheli-ka [nwukwu-uy oppa-eykey] mwues-ul cwu-ess-ni?
 Ch.-Nom who-Gen brother-Dat what-Acc give-Pst-QE
 ‘What did Cheli give to whose brother?’

15) One of the anonymous reviewers [B] consistently rejects the application of Max-Elide to the Genitive-marked answer phrase, yielding the Genitive Case-ending answer remnant like the second one in (23A3) or the Case-less answer remnant like the second one in (23A4). See the relevant discussion in Chung (2015: 581, fn. 5). He/She also disallows the application of the hanging topic strategy to the Genitive-marked question phrase, producing the Case-less answer remnant like the first one in (24A4).

- A1: [Yengi-uy oppa-eykey] sakwa-lul
 Yengi-Gen brother-Dat apple-Acc
 ‘(Lit.) Cheli gave an apple to Yengi’s brother.’
- A2: [Yengi-uy oppa-eykey] sakwa
- A3: *[Yengi-uy] sakwa-lul
- A4: [Yengi] sakwa-lul

Recall that the hanging topic strategy that yields (24A4) does not involve any movement, thus not inducing a violation of the Left Branch Condition. Note, however, that the Genitive-marked answer phrase as in (24A3) is ruled out owing to a violation of the Left Branch Condition. This confirms the thesis that both extraction out of and application of Max-Elide to the first larger remnant constituent are illegal.

We have seen that the answer phrase surviving from the final pied-piped answer constituent occurs at the left edge of the latter. Now we turn to examine how much the answer phrase corresponding to the question phrase can be embedded within the final remnant constituent. First of all, the following two examples in (25) and (26) show that it can be. In other words, it does not have to be at the left edge of the final pied-piped remnant constituent:

- (25) Q: cheli-nun **nwukwu-eykey** [minswu-ka] **etten umsik-ul**
 Cheli-Top who-Dat Minswu-Nom which food-Acc
 mekessten kos-ul] sokayhayss-ni?
 ate-Rel place-Acc recommended-Q
 ‘To whom did Cheli recommend a place where Minswu ate which food?’
- A: yengi-eykey pwulkoki-lul.
 Yengi-Dat grilled beef-Acc
 ‘Chel recommended to Yengi a place where Minswu had eaten grilled beef.’
- (26) Q: cheli-nun **nwukwu-eykey** [sensayngnim-i] **eti-eyse** palphyohasin
 Cheli-Top who-Dat professor-Nom where-in presented-REL
 nonmwun-ul] chwuchenhayss-ni?
 paper-Acc recommended-Q
 ‘To whom did Cheli recommend a paper that his professor presented where?’
- A: minswu-eykey SICOOG-eyse
minswu-Dat SICOOG-at
 ‘Cheli recommended to Minswu a paper that his professor presented at SICOOG.’

These examples show that the Nominative Case-marked phrase does not constitute an intervener within an island when the answer phrase is moved to the left edge of the island. After its movement, meeting the condition in (7) the first answer phrase in (25) and (26) undergoes post-QR absorption with the second pied-piped larger constituent, which in turn is fed into Max-Elide.

However, when the answer phrase is embedded further into the embedded clause within the final pied-piped remnant constituent, the resulting MF sentence becomes degraded substantially, as in (27) and (28).

- (27) Q: ?cheli-nun **nwukwu-eykey** [minswu-ka] [sensayngnim-i] **eti-eyse**
 Cheli-Top who-Dat Miswu-Nom professor-Nom where-in
 palphyohasyesstako] malhan nonmwun-ul chwuchenhayss-ni?
 presented-Subord said paper-Acc recommended-Q
 ‘To whom did Cheli recommend a paper that Miswu said that his professor presented where?’
 A: * yengi-eykey SICOGG-eyse.
 Yengi-Dat SICOGG-at
 ‘Cheli recommended to Yengi a paper that Miswu said that his professor presented at SICOGG.’
- (28) Q: ?tamtangkemsanun **nwukwu-eykey** [[[yongcwuni-ka]
 prosecutor-in-charge-Top who-Dat Yongcwun-Nom
 [nwukwu-wa kyelhonhantanun] kisa-lul yuphohan]
 who-with get married-REL article-Acc circulated-REL
 salam-ul chacko issnun] kyengchalkwan-ul mannakey hayss-ni?
 person-Acc look for-REL policeman-Acc meet did-Q
 ‘For whom did the prosecutor in charge arrange to meet the policeman who was looking for the person who circulated the newspaper article that Yongcwun was going to get married to whom?’
 A: * maynice-eykey swucin-iwa.
 manager-Dat Swucin-with
 ‘The prosecutor in charge arranged for the manager to meet the policeman who was looking for the person who circulated the newspaper article that Yongcwun was going to get married to Swucin.’

Since the preceding question clause in (27) and (28) itself is hard to process, it is not easy to determine why the resulting MF sentence in (27) and (28) becomes worse in acceptability. It suffices to note that the answer

phrase inside the final pied-piped remnant constituent does not have to be at the left edge of the latter, but it has to occur inside the highest clause of the latter. We suggest that, like its corresponding question phrase, the answer phrase inside the final pied-piped remnant constituent is also quantificational, thus being clause-bounded (cf. May (1977, 1985); Reinhart (1991); Fox (2000)).

Taking into account this line of analysis for MF formation in Korean, we now return to (6), which is repeated as (29):

- (29) Q: *nwu-ka [cheli-ka nwukwu-lul ttaylyess-ta-ko] malhayss-ni?*
 who-Nom Cheli-Nom who-Acc hit-Decl-Subord said-Interr
 ‘Who said Cheli hit who?’
- A1: **yengi-ka cinswu-lul*
 Yengi-Nom Cinswu-Acc
 ‘(Lit.) Yengi said Cheli hit Cinswu.’
- A2: [*yengi-ka*] [*cheli-ka cinswu-lul ttaylyesstako*]
- A3: [*yengi-ka*] [*cinswu-lul cheli-ka ttaylyesstako*]

The problematic aspect of (29A1) is as follows. Suppose that the matrix subject phrase and the embedded complement clause are combined together to form the MF sentence as in (29A2). Remember at this point that the embedded object answer phrase could survive as a remnant after the right periphery of the embedded complement clause gets elided by Max-Elide, as in (29A3). If these steps of operations were allowed, (29A1) would be ruled in.

To overcome this problem, we suggest following Higginbotham and May (1981)¹⁶ that two (or more) standardly adjoined DP’s including pied-piped DP’s that have undergone QR are fed further into syntactic absorption, but an embedded complement clause cannot be quantificational, thus being unable to be fed subsequently into absorption. This

16) Higginbotham and May (1981) propose a mechanism that generates at LF an “absorbed” DP that binds two trace positions. Schematically, syntactic absorption generates one DP from two adjoined DP’s at LF. This syntactic operation is illustrated in (i) below.

(i) Syntactic Absorption: ... [DP_i [DP_j ... ==> ... [DP_i DP_j]_{i, j} . . .

means that there is a crucial difference between a pied-piped question/answer DP/PP (such as the ones that have been seen in the examples throughout the paper) and a pied-piped CP (such as the embedded complement clause in (29Q) and (29A2)). The former (i.e., the relative head DP) may receive a quantificational feature via percolation from the question/answer phrase embedded within the relative clause. However, the latter fails to do so from the one embedded within it. This failure is presumably rooted in the mismatch between the question/answer phrase and the embedded complement clause in terms of semantic denotation. The question/answer phrase denotes an entity, but the embedded complement clause denotes a proposition. However, no mismatch of such kind arises between the relative head DP and the question/answer phrase embedded within the relative clause, both of which are entity-denoting. Note that feature percolation also has a consequence on the application of Max-Elide. Since feature percolation makes a syntactic connection between the question/answer phrase within the relative clause with the relative head DP, only the former phrase realized in the resulting MF answer sentence is sufficient enough to recover (the content of) the latter. Thus, in compliance with the recoverability condition on ellipsis, the latter and its neighboring elements may be included in the portion undergoing Max-Elide.

Recall, however, that though percolation-accompanied Max-Elide cannot apply to derive (29A1) (namely 29A3), the following MF answer responding to (29Q) improves substantially in acceptability:

- (30) ? cinswu-lul yengi-ka
 Cinswu-Acc Yengi-Nom
 '(Lit.) Yengi said Cheli hit Cinswu.'

We have argued that (30) where the first potential remnant is reversed in word order with the second one is derived by scrambling the embedded object answer phrase in front of the first remnant as the embedded complement clause of non-island structure permits it.

Before closing, one word is in order regarding the application of Max-Elide

in the single fragment construction. The following examples show that it applies to the single remnant, apparently obviating the island effects.

- (31) Q: cheli-ka [nwukwu-lul piphanha-n chayk-ul] ilkess-ni?
 Cheli-Nom who-Acc criticize-Rel book-Acc read-Q
 ‘Did Cheli read a book that criticized who?’
 A: [khullinthen-ul ~~piphanha-n chayk-ul~~]
 Clinton-Acc criticize-Rel book-Acc
 ‘Cheli read a book that criticized Clinton.’
- (32) Q: mina-ka [sensayngnim-i nwukwu-lopwuthe patu-n chayk-ul] ilkess-ni?
 Mina-Nom teacher-Nom who-from receive-Rel book-Acc read-Q
 ‘Did Mina read a book that the teacher received from whom?’
 A: [yengi-lopwuthe sensayngnim-i patu-n —chayk-ul]
 Yengi-from teacher-Nom receive-Rel book-Acc
 ‘Mina read a book that the teacher received from Yenghi.’

Though the percolation-accompanied, pied-piped larger remnant constituent is moved to the left edge of a clause, its right periphery optionally undergoes Max-Elide, thereby yielding the so-called ‘short’ answer.

Chinese seems to display the same pattern of behavior in regard to Max-Elide.

- (33) Q: Zhangsan du-le piping [shei de shu]?
 Zhangsan read-Past criticize who REL book
 ‘Did Zhangsan read a book that criticized who?’
 A1: piping Lisi de—shu
 criticize Lisi REL book
 ‘A book that criticized Lisi.’
 A2: Lisi
- (34) Q: Zhangsan du-le [laoshi cong shei nali shoudao de shu]?
 Zhangsan read-Past teacher from who there receive Rel book
 A1: [laoshi cong Lili nali shoudao—de—shu]
 teacher from Lili there receive Rel book
 A2: cong Lili nali
 from Lili there
 A3: Lili.

Recall that in Korean (and in Chinese), the answer remnant does not have to occur at the left edge of the island-forming structure like the relative clause. It suffices that it occurs at the highest clause, accounting for the answer remnants in (32A) and (34A2-3).

However, Jun Abe (perl. comm.) draws attention to the fact that unlike MF answer sentences as in (27) and (28), the single fragment answer sentence as in (35) may respond to the question phrase not at the highest clause, but at the further embedded clause:

- (35) Q: ?cheli-nun Yengi-eykey [minswu-ka [sensayngnim-i **eti-eyse** Cheli-Top Yengi-Dat Miswu-Nom professor-Nom where-in palphyohasyesstako] malhan nonmwun-ul] chwuchenhayss-ni? presented-Subord said paper-Acc recommended-Q
 'Cheli recommended to Yenghi a paper that Miswu said that his professor presented where?'
- A1: [minswu-ka [sensayngnim-i SICOGG-eyse palphyohasyesstako] malhan nonmwun-ul]
 A2: SICOGG-eyse.
 SICOGG-at
 'Cheli recommended to Yengi a paper that Miswu said that his professor presented at SICOGG.'

Note that the answer phrase underlined in (35A1) is not at the highest clause, but at the further embedded clause. This points to the fact that unlike MF constructions where the quantificational feature of the question/answer phrase is percolated to the dominating node (i.e., the node projected from, for example, the relative head), the single fragment answer like (35A2) involves literal extraction from the containing structure like (35A1), which afterwards goes through Max-Elide. In other words, (35A2) is a run-of-the-mill example that is derived via extraction out of an island, followed by repair-by-ellipsis.

However, English differs from Korean and Chinese, in that (the right periphery of) the final remnant in this language does not undergo Max-Elide. In the following examples, the question sentence contains two wh-phrases in order to include the second within an island structure (cf. Merchant (2004)):

(36) Q: Who likes books that criticize who?

A1: John, books that criticize Noam.

A2: *John, ~~books that criticize~~ Noam.

(37) Q: Who read a book that Mary received from whom?

A1: John, a book that Mary received from Noam.

A2: *John, ~~a book that Mary received~~ from Noam.

The MF answers A2's of (36) and (37) are unacceptable, which points to the fact that Max-Elide cannot apply to the second pied-piped remnant constituents in these examples. To reiterate, since Max-Elide applies to the right periphery of the final pied-piped remnant constituent, the answer phrase surviving from the latter must occur at the highest left-edge clause of the latter. Since unlike Korean and Chinese, English has the relative clause after the relative head, the requirement cannot be met by Max-Elide that applies to the A2's of (36) and (37).

4. Conclusion

This paper has provided an analysis of Korean MF sentences, showing that multiple answer phrases initially undergo overt absorption, and the rest of the sentence that they escape from undergo the subsequent TP ellipsis. Meanwhile, since QR feeding into absorption is clause-bounded, when an answer phrase is embedded within an island structure like a relative clause, it takes a pied-piping strategy, thus the larger constituent containing it enters into post-QR absorption with another answer phrase remnant. This is the usual derivation of MF sentences in Korean, but two more operations apply and change the resultant forms of Korean MF sentences. One is Max-Elide, which applies to the final answer phrase constituent, stripping away its right periphery. As generally assumed, Fragmenting is an operation of eliding TP, but it may involve the elision of additional elements to the left of the elided TP. The other option is the hanging topic strategy, which applies to the leftmost first answer phrase

remnant. The hanging topic strategy enables the answer phrase remnant to survive without a Case-marker/postposition, as it is base-generated at the left edge of MF sentence. Incidentally, we have also showed that scrambling which is readily available to Korean may be utilized in the formation of MF sentences in Korean. One feature that distinguishes scrambling from absorption-accompanied movement in forming Korean MF sentences is that unlike the latter that retains the word/phrase order of answer phrases, the former permutes it. In addition, though scrambling is island-sensitive, it is not governed by the clause-mate condition. All in all, absorption-accompanied movement and scrambling combine together (the constituents containing) answer phrases, and the first and the final answer phrases are subject to the hanging topic strategy and Max-Elide, respectively.

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Received: October 23, 2016

Revised version received: December 10, 2016

Accepted: December 28, 2016