

ELLIPSIS AND REPAIR EFFECTS *

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1. Introduction

It has been observed since Ross (1969) that sluicing shows the effects of island repair. More specifically, it allows *wh*-phrases to move out of islands when the relevant island becomes phonetically null. The following contrast illustrates this repair effect.

- (1) a. They want to hire someone who speaks a Balkan language, but I don't remember which.
- b.*They want to hire someone who speaks a Balkan language, but I don't remember which (Balkan) language they want to hire someone who speaks.

A common approach to obtain the structure of (1a) is to assume that the *wh*-phrase moves out of TP into the spec of the embedded CP and then the TP is deleted at PF. This is schematically shown in (2).

- (2) ... but I don't know [_{CP} which_i [_{TP} ~~they want to hire someone [who speaks *t_i]*~~]]

The basic idea behind this analysis is that the records of island violations are illicit at PF and the illicitness can be repaired by the deletion of the relevant island. In both sentences in (1), a *wh*-phrase 'which' or 'which (Balkan) language' moves out of a relative clause into the spec of the embedded CP. In (1a) the deletion applies to the TP in the second conjunct, eliminating all records of island violation. Thus the sentence (1a) is considered to be grammatical even though the *wh*-phrase moves across the island. On the other hand, no deletion applies to (1b), yielding no effect of island repair. The contrast between (1a) and (1b) shows that the deletion of TP can repair the island violation.

It has been observed that Japanese allows a construction similar to sluicing in English. A run-of-the-mill example of so-called sluicing in Japanese, cited from Takahashi (1994), is shown in (3).

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- (3) John-wa zibun-ga naze sikarareta ka wakattenai ga, Mary-wa [naze ka]
 -TOP self -NOM why scolded-was Q know-not but -TOP why Q
 wakatteiru
 know

‘John doesn’t know why he was scolded, but Mary knows why.’

In spite of their superficial similarity, sluicing phenomena in English and Japanese exhibit different properties. Saito (2004) argues that sluicing-like construction in Japanese does not exhibit the effects of island repair. His analysis of the construction is based on two assumptions; Japanese allows a novel type of ellipsis, which is dubbed argument ellipsis (Oku (1998) and Kim (1999)), and apparent sluicing in Japanese has a structure of cleft (Nishiyama et al. (1996), Kizu (1997), Kuwabara (1997)). Based on these assumptions, he argues that apparent sluicing in Japanese is best analyzed as having the structure of cleft with its CP subject elided. This analysis is schematically shown in (4).¹

- (4) ... Mary-wa [_{CP} Op_i [_{TP} zibun-ga ~~t_i~~ sikarareta] ~~no~~]-ga naze_i (da) ka]
 wakatteiru

In (4) the bracketed part has a structure of cleft and its presuppositional CP subject is elided. Nothing prevents the CP subject in (4) from being elided, since arguments ellipsis is possible in Japanese. The analysis that ellipsis is involved in the derivation of (3) is supported by the fact that (3) allows a sloppy reading as well as a strict reading as shown in (5).

- (5) ✓ a. Mary knows why he (= John) was scolded. (strict reading)
 ✓ b. Mary knows why she (= Mary) was scolded. (sloppy reading)

A question is naturally raised as to why it is that argument ellipsis does not repair island violations. The argument put forward in the following sections utilizes the notion of identity condition on ellipsis at LF to give an account for the lack of the repair effects. More specifically, I argue that the elided portion and its antecedent should be identical at LF. In the run-of-the-mill example of English sluicing, as shown in (1), the correlate in the first conjunct is an indefinite DP. According to Heim’s (1982) theory, indefinite DPs can be bound in-situ by existential closure. This derives a structure of the first conjunct which is identical to that of the second conjunct.

- (6) $\exists x$ [_{TP} ... x ...], but [_{CP} wh_j ... [_{TP} ... t_j ...]]

Even in the case where the first conjunct has an island within the clause, it is predicted that no island violation is observed, since there is no movement in the first place.

In the case of sluicing-like construction in Japanese, I claim, following Saito (2004), that

¹ Hoji (1990) and Murasugi (1991) argue that there is an empty operator movement in the derivation of cleft constructions to establish a relation between the presuppositional CP and the focus phrase by coindexation. The optional presence of the copula ‘da’ will be discussed in section 2.

movement, more specifically, operator movement, takes place in the first conjunct. This yields an LF representation in which the first conjunct and the second one are identical. I argue that if the operator moves out of the island in the first conjunct, this movement is a source of illicitness of the sentence. Thus the LF movements in the first conjuncts that cross the islands are responsible for the lack of repair effects.

Fox and Lasnik (2003) reports an interesting data of sluicing in which the correlate in the first conjunct is a focused DP. When the focused DP is placed within an island, the sentence becomes illicit. This is illustrated in (7b), which makes a contrast with a typical example of sluicing in (7a).

- (7) a. The detective ruled out the possibility that Fred killed someone, but I don't know who else [~~the detective ruled out the possibility that Fred killed~~].
- b. *The detective ruled out the possibility that Fred killed ABBY, but I don't know who else [~~the detective ruled out the possibility that Fred killed~~].

The focused DP cannot be bound in-situ, since it is not a variable. Fox and Lasnik (2003) argue that focus movement is forced to satisfy the identity condition and this movement is responsible for the illicitness of (7b). This is illustrated in (8).

- (8) [CP ABBY_i ... [TP...[island ... t_i ...]], but [CP wh_j ... [TP... t_j ...]]]

The situation is parallel to that of sluicing-like construction in Japanese in the sense that the correlate is required to move to create a variable, satisfying the identity condition at LF.

This paper is organized as follows. Section 2 reviews the arguments for the cleft analysis of Japanese sluicing-like constructions, providing data that show Japanese cleft constructions and sluicing-like constructions share some properties. And the arguments that Japanese allows a novel type of ellipsis, which is dubbed argument ellipsis, is reviewed. Then the data and arguments put forward by Saito (2004), whose argument is based on the cleft analysis and the availability of argument ellipsis in Japanese, are provided to show that there are no repair effects in the case of argument ellipsis. Section 3 gives an analysis of how argument ellipsis lacks repair effects. I argue, capitalizing on the idea that the identity condition works at LF, that this identity condition forces an operator in the first conjunct to move to bind its trace. It is also pointed out that the case of argument ellipsis can be analyzed in much the same way as in the case of sluicing in English where the focus movement is involved in the first conjunct. Section 4 concludes the paper.

2. Argument Ellipsis and the Lack of Repair Effects

2.1. Sluicing in Japanese as Ellipsis

Takahashi (1994) observes that sluicing constructions in English and Japanese share some properties that are considered to be diagnostic of ellipsis. Sluicing in both languages,

for example, requires linguistic antecedents in the sense of Hankamer and Sag (1976).

(9) Hankamer: Someone's just been shot.

Sag: Yeah, I wonder who.

(10) [Context: Hankamer produces a gun, points it off stage and fires, whereupon a scream is heard.]

Sag:#Jesus, I wonder who.

The example in (10) sounds odd when it is compared with (9). The oddness of (10), in which there is no overt linguistic antecedent for the ellipsis indicates that sluicing requires a linguistic antecedent. Japanese sluicing patterns with English one.

(11) Smith: Celtics-no sukauto-ga dareka-o sagasiteiru mitaida
 -GEN scout -NOM someone-ACC is looking for seems

'It seems that the scout from the Celtics is looking for someone.'

Jim: Boku-wa dare-o ka wakaranai
 I -TOP who-ACC Q know-not

'I don't know who.'

(12) [Context: The Huskies are practicing in the Gampel Pavilion. They see the scout from the Celtics hanging around there.]

Jim:#Boku-wa dare-o ka wakaranai
 I -TOP who-ACC Q know-not

'I don't know who.'

Compared with (11), in which there is an overt antecedent for the ellipsis, Jim's utterance in (12) sounds odd. This contrast supports Takahashi's claim that sluicing in English and Japanese shares a property of surface anaphora. Hankamer and Sag (1976) argue that other ellipsis phenomena such as VP-ellipsis, Gapping, and so on also have the same property.² So it is reasonable to consider sluicing to form a natural class with other ellipsis phenomena.

Another property shared by the two languages is the availability of so-called sloppy interpretation. First consider the English example.

(13) John_i knows why he_i was scolded, and Mary knows why, too.

² It is controversial whether ellipsis is involved in the derivation of Gapping. Johnson (2003) argues that Gapping is not an instance of ellipsis, but the gaps in the construction are traces of the across-the-board movement of the constituent shared by the two clauses conjoined with a coordinator.

The second conjunct allows two interpretations as shown in (14).

(14) ✓ a. Mary knows why John was scolded. (strict reading)

✓ b. Mary know why Mary was scolded. (sloppy reading)

The same pattern holds for sluicing in Japanese. Consider the following example.

(15) John-wa zibun-ga naze sikarareta ka wakattenai ga, Mary-wa [naze ka]
 -TOP self-NOM why scolded-was Q know-not but -TOP why Q
 wakatteiru
 know

‘John doesn’t know why he was scolded, but Mary knows why.’

The second conjunct allows the two interpretations. One is the strict reading: ‘Mary knows why John was scolded,’ and the other is the sloppy reading: ‘Mary knows why Mary was scolded.’

The fact that the sloppy interpretation is available indicates that ellipsis is involved in the derivation of (15). Takahashi (1994) argues that so-called sluicing in Japanese is an instance of ellipsis and proposes that its derivation is parallel to that of sluicing in English. That is, sluicing in Japanese is derived by the combination of two operations: movement of the remnant *wh*-phrase into the spec of the embedded CP and the deletion of the TP out of which the *wh*-phrase moves.³ Under this analysis, the second conjunct of the sentence in (15) has the following structure.

(16) ... Mary-wa [CP naze_i [TP ~~zibun-ga t_i sikarareta~~] ka] wakatteiru

In (16) the *wh*-phrase ‘naze’ moves to the spec of CP and after that, TP is elided. In the following subsections, we see that sluicing is an instance of ellipsis, but the source of the second conjunct is quite different from that of English sluicing.

2.2. The Cleft Analysis of Sluicing in Japanese

This subsection introduces arguments that the source of the second conjunct of apparent sluicing in Japanese is not derived from *wh*-movement and TP deletion, but it has the structure of clefts (Nishiyama et al. (1996), Kuwabara (1996), and Kizu (1997)). One argument against the analysis based on *wh*-movement comes from the sentence like the following:

³ Takahashi also argues that this movement satisfies the licensing condition on ellipsis proposed by Lobeck (1990) and Saito and Murasugi (1990), which requires the spec-head agreement to be established by the movement of a *wh*-element into the spec of CP.

- (17) John-wa dareka -ni atta ga, boku-wa Mary-ni kadooka wakaranai
 -TOP someone-DAT met but I -TOP -DAT whether know-not
 ‘John met someone, but I don’t know whether it was Mary.’

It is argued in Ross (1969) and Lobeck (1990) that in sluicing the spec of CP should be filled with a *wh*-phrase.⁴ If a *wh*-phrase does not occupy the spec of CP, sluicing is not allowed. This is illustrated in (18).

- (18) a. *John told me that he would do this for me, but I’m not sure [_{CP} whether [_{IP} e]].
 b. *John says that Red Sox will win the World Championship again in 2009, but I don’t believe [_{CP} that [_{IP} e]].

Sluicing-like construction in Japanese departs from English sluicing in this respect. The sentence in (17) has no *wh*-phrase in the spec of CP, failing to meet the licensing condition on sluicing. The fact that non-*wh*-phrase can appear in (17) is unexpected under Takahashi’s analysis and suggests that these two constructions derive in a different way.

Another argument comes from the optional presence of copula ‘da’ in sluicing-like construction in Japanese.

- (19) John-wa kinoo dareka -ni atta ga, boku-wa [dare -ni (da) ka]
 -TOP yesterday someone-DAT met but I -TOP someone-DAT COP Q
 wakaranai
 know-not
 ‘John met someone yesterday, but I don’t know who.’

Remember that Takahashi (1994) argues, as is reviewed in the preceding subsection, that the second conjunct is derived by *wh*-movement and TP deletion (See (16)). A potential problem for Takahashi’s analysis is that it cannot give an account for the fact that the copula does not appear in embedded questions, as is pointed out in Nishiyama et al. (1996).

- (20) Boku-wa dare -ni [_{TP} John-ga atta] (*da) ka wakaranai
 I -TOP someone-DAT -NOM met COP Q know-not
 ‘I don’t know who John met.’

If the second conjunct in (19) has a structure of (20) as its source and it is derived by TP deletion in (20), the presence of the copula in (19) is unexpected. Cleft analysis, on the other hand, can give a straightforward account for the presence of the copula. The copula appears in the embedded cleft sentence, as shown in (21).

⁴ See also Saito and Murasugi (1990) for how the licensing condition works on N’-ellipsis in Japanese.

- (21) Boku-wa [John -ga kinoo atta no wa dare -ni (da)]ka siranai
 -TOP -NOM yesterday met that -TOP someone -DAT COP Q know-not
 ‘I don’t know it was who that John met yesterday.’

It has also been observed that non-*wh*-phrase can appear in sluicing-like construction in Japanese. This property is shared with cleft, which allows non-*wh*-phrase in the focus position. This is illustrated in (22).

- (22) a. *Sluicing-like Construction*
 John-wa dareka -ni atta ga, boku-wa Mary-ni ka wakaranai
 -TOP someone-DAT met but I -TOP -DAT Q know-not
 ‘John met someone, but I don’t know whether it was Mary (that John met).’
- b. *Cleft*
 [[John -ga e_i atta] no]-wa Mary_i -ni desu ka
 -NOM met that-TOP -DAT is Q
 ‘Is it Mary that John met?’

The analysis based on *wh*-movement cannot handle the situation in (22a), in which no *wh*-phrase is in the spec of CP in the elided portion of the second conjunct.

Furthermore, multiple foci are allowed in sluicing-like construction and clefts. This is illustrated in (23).

- (23) a. *Sluicing-like Construction*
 John-ga dareka -ni nanika -o ageta ga, boku-wa dare -ni
 -NOM someone-DAT something-ACC give but I -TOP someone-DAT
 nani -o (da) ka siranai
 something-ACC COP Q know-not
 ‘John gave something to someone, but I don’t know what to whom.’
- b. *Cleft*
 [[John-ga e_i e_j ageta] no]-wa dare_i -ni nani_j -o desu ka
 -NOM gave that -TOP someone-DAT something-ACC is Q
 ‘What to whom is it that John gave?’

These data indicate that sluicing-like construction and clefts are closely related. Nishiyama et al. (1996) argue that the source for the sluice has the structure of a cleft as shown in (24).

- (24) sore / *pro* -wa XP-da

In this analysis, the presuppositional part of a cleft is pronominalized, and it is realized overtly (‘sore’) or covertly (‘*pro*’). This analysis can explain why the sentence like (17) is

acceptable in Japanese. Under this analysis, the second conjunct of the sentence (17) is derived from a cleft sentence like (25).

- (25) John-wa dareka -ni atta ga, boku -wa [(sore-ga) Mary-ni (da) kadooka]
 -TOP someone-DAT met but I -TOP it -NOM -DAT COP whether
 wakaranai
 know-not

‘John met someone, but I don’t know whether it was Mary.’

The bracketed part has the structure of a cleft sentence with overt/covert pronominal subject.

In this subsection, factual data are provided to support the cleft analysis of sluicing in Japanese. However, the cleft analysis, as it stands, faces a problem when we take into the consideration the fact that sluicing is an instance of ellipsis, as shown in the preceding subsection. Under the cleft analysis in (24), the sentence in (17) is analyzed as having a *pro* subject. Given this analysis, it seems hard to give an explanation for the fact that the sloppy reading is available in the sluicing constructions. As shown in (26), an overt pronoun does not allow sloppy interpretation.

- (26) John-wa zibun-ga naze sikarareta ka wakattenai ga, Mary-wa [sore-ga
 -TOP self -NOM why scolded-was Q know-not but -TOP it -NOM
 naze ka] waketteiru
 why Q know

The available reading of the second conjunct in (26) is that ‘Mary knows why John was scolded.’ A cleft analysis based on the assumption that the source for sluicing-like construction in Japanese is something like in (24) need to give an account for the contrast between (17) and (26).

To summarize, it has been shown that sluicing-like construction in Japanese allows sloppy interpretation and this fact indicates that it should be an instance of ellipsis. The deletion analysis put forward by Takahashi (1994) can handle the situation, but at the same time this analysis cannot give a straightforward account for some properties which are unexpected under the analysis that assumes *wh*-movement in the derivation. The cleft analysis, on the other hand, can account for these properties. The drawback to this analysis is that it cannot give an account for the availability of sloppy interpretation, since it does not assume any deletion operation in the derivation of the elided clause. The issue to be addressed here is how to maintain cleft analysis and the availability of the sloppy interpretation at the same time.⁵

⁵ Nishiyama et al. (1996) argue that *pro* can be a source of the sloppy interpretation. They point out that the sloppy interpretation of *pro* can be derived by the operation of LF copying, which is similar to the operation assumed for interpreting empty VPs in VP ellipsis. See Williams (1977) for the details of this operation.

2.3. Japanese Sluicing as an Instance of Argument Ellipsis

As shown in the preceding subsection, it has been controversial how to derive the second conjunct in sluicing-like constructions in Japanese. A full analysis of the source for the second conjunct should give an account for the seemingly conflicting data. That is, on the one hand, the sloppy interpretation is available, which indicates that ellipsis is involved in the derivation and, on the other hand, apparent sluicing in Japanese shares some properties with clefts, in which no ellipsis is assumed. Saito (2004) offers a solution to this conflicting situation. Based on the hypothesis, put forward by Oku (1998) and Kim (1999), that Japanese allows arguments to be elliptical, Saito (2004) argues that sluicing in Japanese is best analyzed as having the structure of cleft constructions with the presuppositional CP subjects elided.

Oku (1998) and Kim (1999) argue that Japanese and Korean allow arguments to be elliptical. Then DP and CP can be phonetically null in these languages. The following example from Oku (1998) is a case in point, where an argument, the subject in this case, is elided.

- (27) a. Mary-wa [_{CP} [_{DP} zibun-no ronbun]-ga saiyo-sareru-to] omotteiru
 -TOP self -GEN paper -NOM accepted-is -COMP think

‘Mary thinks that her paper will be accepted.’

- b. John-mo [_{CP} [_{DP} e] saiyo-sareru-to] omotteiru
 -also accepted-is -COMP think

Lit. ‘John also thinks that [e] will be accepted.’

(27b) allows the two interpretations shown in (28).

- (28) ✓ a. John thinks that her (= Mary’s) paper will be accepted. (strict reading)
 ✓ b. John thinks that his (= John’s) paper will be accepted. (sloppy reading)

The fact that (27b) allows the sloppy reading affords grounds for an ellipsis analysis. And VP or TP ellipsis cannot derive the desired structure. VP ellipsis cannot be responsible for the deletion of the subject, since the subject is out of the VP. TP deletion cannot target the subject only. The operation that derives the desired structure is the one that just deletes the subject DP. Under the hypothesis that arguments can be elided, the second conjunct in (27b) should have the following structure.

- (29) John-mo [_{CP} [_{TP} [~~_{DP} zibun-no ronbun~~]-ga saiyo-sareru] to] ommoteiru

Once it is confirmed that argument ellipsis is one of the possible operations in Japanese, there is nothing that prevents this operation from being applied to the CP subject of the cleft sentence. If the elided clause is analyzed as having the structure of a cleft construction, the

sentence (15), which is reproduced here in (30), can be analyzed as follows:

(30) *Saito's (2004) analysis: cleft + the subject CP deletion*⁶

- a. John-wa zibun -ga naze sikarareta ka wakattenai ga, Mary-wa
 -TOP self -NOM why scolded-was Q know-not but -TOP
 [naze (da) ka] wakatteiru.
 why COP Q know

‘John doesn’t know why he was scolded, but Mary knows why.’

- b. ... Mary-wa [_{CP} Op_i [_{TP} zibun-ga ~~t_i sikarareta~~] ~~no~~]-ga naze_i (da) ka]
 -TOP self -NOM scolded-was that -NOM why COP Q
 wakatteiru
 know

In (30b) an empty operator moves out of TP and establishes a relation between the CP and the focus in the cleft by coindexation, as proposed by Hoji (1990) and Murasugi (1991). Then the subject CP is deleted. This analysis makes it possible to give an account of the presence of the copula ‘da,’ which naturally follows under the cleft analysis, and the availability of the sloppy interpretation, for which the deletion operation is responsible.

2.4. No Island Repair

The preceding subsection showed that arguments can be elided in Japanese and this novel type of ellipsis offers a solution to the long-standing issue of how to derive the second conjunct in so-called sluicing in Japanese. Once it is confirmed that argument ellipsis is a possible operation in Japanese, then a question theoretically challenging arises as to whether argument ellipsis shares properties with other well-studied ellipsis like sluicing or VP ellipsis. As was shown in section 1, sluicing in English exhibits the effects of island repair. The example relevant to the repair effects is repeated here as (31).

- (31) a. They want to hire someone who speaks a Balkan language, but I don’t remember which.
 b. *They want to hire someone who speaks a Balkan language, but I don’t remember which (Balkan) language they want to hire someone who speaks

The second conjunct has the following structure.

- (32) They want to hire someone who speaks a Balkan language, but I don’t remember
 [_{CP} which_i [_{TP} ~~they want to hire someone who speaks t_i~~]].

In (32), the *wh*-phrase moves across the relative clause and the TP out of which the *wh*-phrase

⁶ Strictly speaking, the structures of the first conjunct and the second one are not identical enough for the deletion operation to work in (30). I will discuss how the identity is established in section 3.2.

moves is deleted. The contrast in (31) indicates that once the offending island is elided as is in (32), the illicitness of the sentence disappears.

In the case of the phenomena called sluicing in Japanese discussed in this paper, it is the subject CP in the cleft construction that is elided. The relevant example (30) is repeated here as (33).

- (33) John-wa zibun-ga naze sikarareta ka wakattenai ga, Mary-wa
 -TOP self -NOM why scolded-was Q know-not but -TOP
~~[[CP-Op_i [TP-zibun-ga t_i sikarareta] no]-ga~~ naze_i (da) ka] wakatteiru
 self -NOM scolded-was that-NOM why COP Q know

The representations of English sluicing case and Japanese argument ellipsis are schematically shown below.

- (34) a. *Sluicing in English*
 ... [CP Wh_i [TP... t_i ...]]
- b. *Argument Ellipsis in Japanese*
 ... [CP-Op_i [TP... t_i ...]]-ga XP-da ka ...

Notice that the target of ellipsis in (34b) is larger than that in (34a) and all of the traces and even the moved element, Operator in this case, is deleted in the case of argument ellipsis. If the deletion ameliorates island violations, then it is predicted that argument ellipsis also exhibits island repair effects like English sluicing, since it targets a CP, which is large enough to delete all the history of violations.

This prediction is not borne out, however. Consider the following examples.

- (35) A: Dareka -ga dareka -ni kaita tegami-ga mitukatta sooda
 someone-NOM someone-to wrote letter -NOM found-was I-heard
 ‘I heard that they found a letter that someone wrote someone.’
- B:#Demo, boku-wa [(sore-ga) Tanaka-san-ga Nakasone-san-ni kadooka]-wa
 but I -TOP it -NOM -NOM -to whether -TOP
 siranai
 know-not
 ‘But I don’t know whether it was Mr. Tanaka to Mr. Nakasone.’
 (Saito 2004: 47)

As shown in section 2.2, Japanese cleft allows multiple foci and non *wh*-phrase to be in the subject position of the cleft sentence. If the second conjunct is derived from the cleft construction with the CP subject elliptical on a par with the case in (33), the elided clause has the following representation.

- (36) *Demo, boku-wa [_{CP}[_{TP}[_{CP}Op_iOp_j[_{TP}[_{NP}[_{t_i} -_{t_j}kaita] tegami] ga mitukatta] no]
 but I -TOP wrote letter -NOM found-was that
 -ga Tanaka-san-ga_i Nakasone-san-ni_j] kadooka]-wa siranai
 -NOM -NOM -to whether -TOP know-not

In (36), the empty operators move out of a complex NP to the spec of the CP subject of the cleft. After the movements take place, the relevant CP is elided, yielding (35B). This situation is problematic for the analysis of ‘repair by deletion,’ since all the history of the movements are elided by the CP deletion. Nonetheless, (35B) is still illicit.

So far it has been shown that no repair effects are found in the case of argument ellipsis. However one might argue against this conclusion based on the observation of a case where the pronominal subject occurs in the place of the CP subject of the cleft.

- (37) A: [_{DP} Dokoka -no ginkoo-kara okane -o nusunda doroboo]-ga taihosareta
 somewhere-GEN bank from money-ACC stole thief -NOM arrested-was
 sooda
 I-heard

‘I heard that they arrested the thief that stole money from a bank somewhere.’

- B: Demo, boku-wa [(sore-ga) Tokyoo Ginkoo-kara kadooka]-wa siranai
 but I -TOP it -NOM from whether -TOP know-not

‘But I don’t know whether it is from the Bank of Tokyo.’

(Saito 2004: 47)

The sentence in (37) appears to avoid an island violation. Saito (2004) argues that there are two distinct sources available for sluicing-like construction. One is what he calls ‘bare NP cleft,’ which has the structure presented in (24), repeated here as (38).

- (38) sore / *pro* -wa XP-da

The other is the cleft with the elided CP subject, whose structure was given in (34b), reproduced here as (39).

- (39) ... [_{CP}Op_i[_{TP}... _{t_i} ...]]-ga XP-da ka ...

In (39) there is an operator movement and this movement induces a Subjacency violation when there is an island within TP. On the other hand, if the source in (38) is available, it shows the lack of a Subjacency violation.

If (37B) is derived from a cleft with the elided subject, it has the following structure as its source.

- (40) *[[_{CP} Op_i [_{DP} t_i okane -o nusunda doroboo]-ga taihosareta no]-wa
 money-ACC stole thief -NOM arrested-was that-TOP
 Tokyo Ginkoo-kara_i kadooka]-wa siranai
 from whether -TOP know-not

The sentence in (40) is ruled out because the operator movement violates Subjacency. In contrast to this, if a pronominal subject or *pro* is put in the subject position like (37B), the sentence becomes quite natural. Furthermore, (37B) can be interpreted into what (40) intends to mean. Thus it is reasonable to assume that the source for (37B) is ‘bare NP cleft.’ It follows that what (37B) exhibits is not the effects of island repair. This is because there is no movement in (37B) in the first place. On the other hand, the pronominal subject is not available somehow in (35B). If the pronominal subject is not allowed, the only source available is the one in (39). It follows that if operator moves out of an island, this movement results in a Subjacency violation.

In this section, it was shown that argument ellipsis does not exhibit island repair effects, which are observed in English sluicing. The story of ‘repair by deletion’ cannot handle this situation, since all the offending islands in the subject CP in the second conjunct are deleted. So nothing would prevent the sentence like (35) from being licit, contrary to the fact. In the next section, I provide an answer to the question as to why the CP ellipsis cannot repair island violations.

3. LF Movement and Repair Effects

In this section, I first present interesting data reported by Fox and Lasnik (2003), examining their analysis and its consequences. The data they provide are English sluicing examples in which the correlate DP is not an indefinite but a focused DP. Then I examine the sluicing-like constructions in Japanese and show how the LF identity condition works in these examples. More specifically, I propose that the identity condition requires operator movement in the first conjunct and if the operator moves across an island, it results in an island violation.

3.1. LF Focus Movement and No Repair Effects

Chung et al. (1995) argue that what licenses sluicing is the presence of a free variable in the first conjunct. A typical example of sluicing thus requires the presence of an indefinite DP in the first conjunct. An example in (41) illustrates this.

- (41) John met someone, but I don’t know who.

It has been acknowledged that indefinite DPs seem to take wide scope over other quantifiers, ignoring any syntactic constraints. Even put in the island, indefinites can take wide scope over islands. If scopal relations are the reflects of syntactic movement, this situation is problematic. One way to solve the problem is to assume that indefinite DPs can be bound in-

situ by existential closure, so they don't need to move (Heim (1982), Reinhart (1997)). Under this analysis LF representation of the first conjunct in (41) is as follows:

(42) $\exists x$ [_{TP} John met x (x is a person)]

Existential closure in the first conjunct is crucial to create a variable in the first conjunct, which as a consequence, yields the structure identical to that of the second conjunct. Chung et al.'s analysis predicts that if something that cannot be a variable is placed in the first conjunct, sluicing is not allowed. This prediction is borne out. Consider the following example.

(43) Joan ate dinner with $\left\{ \begin{array}{l} *John \\ *them \\ *most\ first\ year\ students \end{array} \right\}$ and we're all wondering (with) who.

Referential expressions such as names or demonstratives and quantificational DPs which function as a generalized quantifier cannot be free variables. As a consequence, sluicing containing these expressions fail to satisfy the identity condition, since there is no variable in the first conjunct. Based on these observations, I define the identity condition as follows:

(44) *The Identity Condition on Sluicing*
The elided portion and its antecedent should be identical.

In the case of sluicing in English, what is elided is TP, so the Identity Condition on Sluicing requires TPs in both conjuncts to be identical in the sense that both of the conjuncts contain variables in a parallel position. An illustration of this is given below.

(45) a. *The First Conjunct*
 $\exists x$ [_{TP} . . . x . . .]
b. *The Second Conjunct*
[_{CP} wh_{*j*} . . . [_{TP} . . . t_j . . .]

Fox and Lasnik (2003) report as a remaining issue a slightly different case in which the correlate DP in the antecedent clause is not an indefinite DP but a focused DP. Consider the following example.

(46) a. He likes ABBY, but I don't know who else.
b. He said he likes ABBY, but I don't know who else.

The focused DP is different from an indefinite DP in the sense that it cannot be a variable. So it is impossible to appeal to the analysis in which the focused DP is licensed in-situ by the existential closure in the same way as an indefinite DP. The only way to derive identical structures for the deletion operation to apply is to force the focused DP to move to the

position parallel to the *wh*-phrase in the second conjunct at LF.⁷ Thus the LF structures of (46a) and (46b) should be the ones as depicted in (47a) and (47b) respectively.

(47) a. $ABBY_i$ he likes t_i , but I don't know who else _{j} [he likes t_j].

b. $ABBY_i$ he said he likes t_i , but I don't know who else _{j} [he said he likes t_j].

When the focused DP is placed in the island, interestingly enough, there are no island repair effects observed even though the relevant island is deleted at PF.

(48) a. The detective ruled out the possibility that Fred killed someone, but I don't know who else [~~the detective ruled out the possibility that Fred killed~~].

b.*The detective ruled out the possibility that Fred killed *ABBY*, but I don't know who else [~~the detective ruled out the possibility that Fred killed~~].

The crucial difference between (48a) and (48b) is the nature of DP placed in the island in the first conjunct. In the case of (48b), a focused DP is placed in the position instead of an indefinite DP. The focused DP cannot be bound in situ by existential closure, since it is not a variable. The only way, Fox and Lasnik (2003) argue, to derive a structure parallel to the second conjunct is to move the focused DP at LF. So the sentence (48b) should have the following LF representation.

(49) * $[ABBY]_i$ the detective ruled out [_{NP} the possibility [_{CP} that Fred killed t_i]], I don't know [who else] _{j} [the detective ruled out [_{NP} the possibility [_{CP} that Fred killed t_j]].

The focused DP *ABBY* must move to the position which is parallel to that of the *wh*-phrase *who else*. This movement causes a Subjacency violation, since the focused DP moves across a complex NP. Fox and Lasnik assume that this LF focus movement is responsible for the illicitness of (48b). The contrast in (48) implies that covert LF movement is in fact sensitive to island constraints in the same way as other syntactic movements.

The island in the second conjunct is deleted in both (48a) and (48b), so appealing to this operation is not a promising way of providing an account for the contrast between them. I argue, following Fox and Lasnik (2003) in part, that what differentiates (48b) from (48a) is whether the DP moves out of an island in the first conjunct or not. In the case with an indefinite correlate, no movement is required, since the identity of the two conjuncts is established by the structure in which the indefinite DP is bound by existential closure. In the case with a focused DP, the movement of the DP is forced to create a variable in the first conjunct. The focus movement violates island constraints and the violation is not repaired by PF deletion. This is because the violation is committed in the first conjunct, which is not the

⁷ Fox and Lasnik (2003) assume that the two conjuncts should be identical in terms of the positions of traces and operators. As a result, each variable should be bound from parallel positions. What is defined in (44) is looser in the sense that it refers only to the structure of the elided portion and its antecedent.

target of deletion. The important consequence following from this analysis, if correct, is that island repair does not show up when a Subjacency violation takes place in the first conjunct.

3.2. Argument Ellipsis Revisited

In this subsection, I argue that the lack of repair effects in the case of argument ellipsis can be accounted for in a way similar to the case with the focus correlate in English, which was examined in the preceding subsection. As was shown in section 2.4, argument ellipsis does not exhibit the effects of island repair. Crucial data discussed there is repeated here as (50).

(50) A: Dareka -ga dareka -ni kaita tegami-ga mitukatta sooda
 someone-NOM someone-to wrote letter -NOM found-was I-heard

‘I heard that they found a letter that someone wrote someone.’

B: #Demo, boku-wa [(sore-ga) Tanaka-san-ga Nakasone-san-ni kadooka]-wa
 but I -TOP it -NOM -NOM to whether -TOP
 siranai
 know-not

‘But I don’t know whether it was Mr. Tanaka to Mr. Nakasone.’

What is proposed in the analysis of English sluicing with a focused correlate is that the focused DP is forced to move at LF in order to obtain the identical structures for the first conjunct and the second one. By this movement, the identity of the two clauses is established. The focused DP in the first conjunct binds its trace in a way parallel to the *wh*-dependency between the *wh*-phrase and its trace in the second conjunct. Furthermore, if the focus movement takes place across an island, a Subjacency violation is expected. As a consequence, the structure of the first conjunct at LF is crucial for whether the relevant sentence exhibits the effects of island repair or not.

I claim that the example in (50) can be analyzed in almost the same way. Let me first examine what takes place in the second conjunct. As shown in section 2.3, sluicing-like construction is best analyzed as having structure of a cleft construction. Then the second conjunct of (50B) has the following structure.

(51) *Demo, boku-wa $\{_{CP}[_{TP}[_{CP} Op_i Op_j [_{TP}[_{NP}[_{t_i} -t_j \text{ kaita}] \text{ tegami}] \text{ ga} \text{ —} \text{ mitukatta}] \text{ no}]$
 but I -TOP wrote letter -NOM found-was that
~~ga~~ Tanaka-san-ga_i Nakasone-san-ni_j] kadooka]-wa siranai
 -NOM -NOM to whether -TOP know-not

In (51), the empty operator movements take place in order to establish a relation between the subject CP and the focus DPs by coindexation.

Notice that in the case of argument ellipsis, it is the subject CP that is elided. The

Identity Condition defined in (44) requires the two CPs to be identical in both conjuncts. Argument ellipsis departs from sluicing in English in this point in the sense that TP is elided in sluicing in English. The first conjunct, as it stands, is not identical to the CP subject of the cleft in the second conjunct. The relevant parts of the two conjuncts are schematically shown in (52).

(52) a. *The First Conjunct*

[_{CP} [_{TP} Dareka -ga dareka -ni kaita tegami-ga mitukatta]]
 someone-NOM someone-to wrote letter -NOM found-was

b. *The Second Conjunct*

[_{CP} Op_i Op_j [_{TP} [_{NP} [_i t_j kaita] tegami]-ga mitukatta] no]
 wrote letter -NOM found-was that

Saito (2004) appeals to the operation of “vehicle change” and argues that the structures in (52) can be made identical to each other. The original proposal on vehicle change put forward by Fiengo and May (1994) is to offer an analysis for a coreferential interpretation between R-expressions and pronouns. Consider the following example.

(53) Mary loves John_i, and he_i thinks that Sally does [e], too.

It is not straightforward to get the coreferential interpretation, considering the fact that the antecedent of the elided VP is *loves John*. The sentence in (54) shows that if strict identity is required for deletion, the example should be in violation of the Binding Condition C.

(54) Mary loves John_i, and he_i thinks that Sally does [loves John_i], too.

Fiengo and May (1994) propose that R-expression can be turned into a pronoun as shown in (55) and the identity requirement is met after the operation of vehicle change.

(55) Mary loves John_i, and he_i thinks that Sally does [loves him_i], too.

Vehicle change is the operation that turns a name into a pronoun, which is less specific. It is then plausible to suppose that *wh*-phrases, quantifiers, and focused DPs can also be turned into less specific elements. In the first conjunct, I claim, following Saito (2004), that quantifier ‘dareka’ can be turned into an empty operator by the operation of vehicle change. The structure to which vehicle change is applied is schematically shown in (56).

(56) [_{CP} [_{TP} [_{NP} [_{TP} Op Op kaita] tegami]-ga mitukatta]] sooda
 wrote letter -NOM found-was I-heard

And then these operators move to the spec of CP, crossing the island.

(57) [_{CP} Op_i Op_j [_{TP} [_{NP} [_{TP} t_i t_j kaita] tegami]-ga mitukatta]] sooda
 wrote letter -NOM found-was I-heard

The operation of vehicle change and the empty operator movement yield (57), which is

identical to the second conjunct in (52b). The relevant structures are repeated here as (58).

(58) a. *The First Conjunct*

[_{CP} Op_i Op_j [_{TP} [_{NP} [_{TP} t_i t_j kaita] tegami]-ga mitukatta]]

b. *The Second Conjunct*

[_{CP} Op_i Op_j [_{TP} [_{NP} [_{TP} t_i t_j kaita] tegami]-ga mitukatta]]

The representation for (50) is as follows:

(59) A: [_{CP} Op_i Op_j [_{TP} [_{NP} [_{TP} t_i t_j kaita] tegami]-ga mitukatta]] sooda
 wrote letter -NOM found-was I-heard

B: *Demo boku-wa [_{CP} [_{TP} [_{CP} Op_i Op_j [_{TP} [_{NP} [_{TP} t_i t_j kaita] tegami]-ga mitukatta]]
 but I -TOP wrote letter -NOM found-was
~~no~~-ga Tanaka-san-ga Nakasone-san-ni] kadooka]-wa siranai
 that -NOM -NOM to whether -TOP know-not

In (59), the identity condition forces empty operators to move across an island in the first conjunct. This movement is the source of the illicitness of (59). If this line of analysis of argument ellipsis is on the right track, then it provides evidence that the LF structure of the first conjunct is relevant to the licitness of sluicing-like construction in Japanese. It is concluded that the same analysis hold for some sluicing cases in English and argument ellipsis in Japanese in a parallel fashion. Especially, it should be emphasized that the Identity Condition induces a movement in the first conjunct and this movement is the source of the lack of repair effects. What is deduced from this conclusion is that the lack of repair effects is not a by-product of some special syntactic operations, but it is induced by the application of syntactic operations already assumed for the analysis of ellipsis.

4. Conclusion

I argued in this paper that the lack of repair effects in argument ellipsis can be accounted for under the analysis that the Identity Condition forces empty operator movement in the first conjunct at LF. If the operator moves across an island, it causes an illicitness of the sentence. When the correlate is an indefinite DP, the island repair is expected, since indefinite DPs are bound by existential closure in their original positions. As a result, no movement takes place in the first conjunct, yielding no Subjacency violation. In the case of sluicing in English with the focused correlate, the island repair effects are not expected due to a Subjacency violation in the first conjunct. The same is true for the argument ellipsis case. No repair effects are obtained due to the Subjacency violation caused by the empty operator movement in the first conjunct. It follows that the lack of repair effects is not a peculiar syntactic phenomena, but it is induced by syntactic operations already assumed for the analysis of ellipsis.

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