Island (In)sensitivity in Japanese Sluicing and Stripping and Some Implications

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1. Introduction

Sluicing is an elliptical interrogative clause in which all the elements except the wh-phrase are missing, as illustrated in the second conjunct in (1a).

(1) a. Somebody just left--guess who.
   b. Cf. Somebody just left--guess who just left. (Ross 1969: 252)

For ease of reference, I will refer to the wh-phrase in the second conjunct (who in (1a)) as the remnant and to the element in the first conjunct that corresponds to the remnant (somebody in (1a)) as the correlate.1

Following Ross (1969), many researchers maintain that the wh-phrase has undergone regular wh-movement followed by IP deletion. Under this approach, (2a), for example, is expected to induce an island violation as its non-elliptical counterpart in (2b) does, but (2a) is in fact acceptable.

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

(Merchant 2001: Ch. 3 (5))

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1. The correlates will be put in a box throughout this paper.

In (2a), the correlate is contained in an island, and the second conjunct appears to give rise to the matrix reading, which can be paraphrased as "I don't remember which Balkan language is such that they want to hire someone who speaks it." In more general terms, if the structure in (3) obtains in the first conjunct and sluicing is acceptable with the matrix reading, it has been taken to be the evidence that there are no island effects. The most recent proposals have attributed island insensitivity in sluicing examples like (2a) to island effects being PF phenomena. They propose that the effects result from ill-formed PF representations and that elimination of the offending elements by PF deletion nullifies the effects.

(3)  \[ \text{correlate} \]

In this paper, I will examine sluicing and stripping in Japanese, as illustrated in (4) and (5), respectively, and demonstrate that complex NP island effects are indeed detectable in these constructions, although they appear to be missing on the first inspection.

(4)  John-wa \text{[dareka-o]} \text{suisensita ga},
    \-TOP someone-ACC recommended but,
     boku-wa [dare-o \text{ka}] siranai.
  I-TOP who-ACC Q know: not
  'John recommended someone, but I don't know who.'

(5)  Tom-wa John-ga \text{Susan-o} \text{suisensita to itteita ga},
    \-TOP -NOM -ACC recommended that said but
     boku-wa Mary-o (da) to omotteita.
  I-TOP -ACC (COP) that thought
  '(lit.) Tom said that John recommended Susan, but I thought Mary.'

I will then claim that the complex NP island is to be regarded as an LF island in Japanese and that the apparent lack of island effects in these constructions can be accounted for by adopting a version of Merchant's (2001: Ch. 5) analysis of the apparent island insensitivity in sluicing. I will also re-examine island sensitivity in English sluicing in the light of the findings in Japanese. I will show that complex NP island effects persist in 'contrast' sluicing with a prepositional remnant and suggest that the complex


NP island in English is not to be regarded as a PF representational island that can be nullified by PF deletion, contra recent proposals in the literature (cf. Lasnik 2001, Fox & Lasnik 2003, and Merchant to appear).

2. Island (in)sensitivity in Japanese sluicing

As in the case of English sluicing, Japanese sluicing appears to exhibit no island effects, as can be seen in (6).\(^4\) The first conjuncts in these examples have the structure in (3), and yet the second conjuncts are acceptable with relevant matrix readings.

(6) a. [indefinite as the correlate]
keisatu-wa [\[ISL \pro_2 \text{Los Angeles-de [aru yuumee zin]-n] mayaku-o police-TOP LA-at a celebrity -to drug-ACC utta] ota tikhosita rasii ga, boku-wa [dare-ni ka] siranai.
sold man -ACC arrested seem but I-TOP who-to Q know:not 'I heard the police arrested the man who had sold drugs to a celebrity in LA, but I don't know to whom.'

b. [name as the correlate]
man -ACC arrested but -TOP which Rep.-to Q knew:not seem 'The police arrested the man who gave a bribe to Rep. Tanaka, but it seems that Bill didn't know to which Representative.'

On the basis of these observations, one might conclude that Japanese sluicing does not exhibit island effects. Examples like (7), however, show that the picture is not as simple as that.\(^5\)

(7) boku-wa keisatu-ga [\[ISL \pro_2 \text{[Tanaka giin]-n] wairo-o okutta] I-TOP police-NOM Rep. Tanaka-to bribe-ACC gave otoko]-o taihosita no -wa sitteiru ga,
man-ACC arrested that-TOP know but
[[hoka-no dono giin]-ni ka]-wa siranai,
other-GEN which Rep.-to Q -TOP know:not

\(^4\) Takahashi (1994) and Fukaya & Hoji (1999) discuss sluicing with an indefinite correlate and claim that island effects are observed in such cases, but for many speakers examples like (6a) seem to be acceptable.

\(^5\) The example in (7) was inspired by Merchant to appear: (52).
'I know that the police arrested the man who gave a bribe to Rep. Tanaka, but I don't know to which other Representative.'

If there were no island effects, one would expect (7) to give rise to the reading that is available in its overt counterpart in (8).

(8)  boku-wa keisatu-ga [ISL [Tanaka giin]-ni wairo-o okutta otoko]-o I-TOP police-NOM Rep. Tanaka-to bribe-ACC gave man-ACC taihosita no -wa sitteiru ga. [[ISL [hoka-no dono giin]-ni arrested that-TOP know but other-GEN which Rep.-to wairo-o okutta otoko]-o taihosita ka]-wa siranai. bribe-ACC gave man -ACC arrested Q -TOP know:not 'I know that the police arrested the man who gave a bribe to Rep. Tanaka, but I don't know which other Representative the police arrested the man who gave a bribe to him.'

The reading available in (8) is as follows: the person who gave a bribe to Representative Tanaka was arrested, and another person who gave a bribe to a different politician was also arrested, but the speaker does not know who that second politician is. Note that different bribers are involved for different politicians on this reading. But contrary to the expectation, such a reading is not available in (7).

The reading we get for (7) seems to be the one that is available for the non-elliptical sentence in (9). With *sono hito* 'that person' referring to the man who the police arrested, (9) gives rise to a reading where the person who the police arrested had given a bribe to Representative Tanaka and another politician and the speaker does not know who that second politician is. Crucially, there is only one briber involved on this reading. For ease of exposition, let us refer to the readings available in (8) and (9) as the non-local and the local readings, respectively.

(9)  boku-wa keisatu-ga [ISL [Tanaka giin]-ni wairo-o okutta otoko]-o I-TOP police-NOM Rep.Tanaka-to bribe-ACC gave man-ACC taihosita no-wa sitteiru ga. [[sono hito]-ga arrested that-TOP know but that person-NOM [hoka-no dono giin]-ni wairo-o okutta ka]-wa siranai. other-GEN which Rep.-to bribe-ACC gave Q -TOP know:not 'I know that the police arrested the man who gave a bribe to Representative Tanaka, but I don't know which other Representative he gave a bribe to.'

Now three questions come to mind regarding the examples in (7)-(9): (i) how (8) can have the non-local reading, i.e., the "different bribers for
different politicians" reading; (ii) why (7) lacks the reading that (8) has; (iii) how (7) can have the local reading that (9) has, i.e., the "same briber for different politicians" reading. Before addressing these issues, let us make a quick overview of the theory of ellipsis resolution assumed in this paper.

3. Ellipsis resolution in Japanese sluicing

In the following discussion, I will assume the analysis of ellipsis resolution in Japanese sluicing (and stripping) proposed in Fukaya & Hoji 1999, which is summarized in (10) and schematically illustrated in (11).

(10) a. The remnant in Japanese sluicing is base-generated in a position adjoined to an empty IP. (See (11b).)
   b. In order for the remnant to receive an interpretation, an IP available in the discourse is copied onto the empty IP at LF. (See (11b).)
   c. The copied IP must have an empty slot in it so that the remnant can be syntactically related to the position.
   d. A constituent within the antecedent IP can optionally undergo an LF operation Constituent Raising (CR), which raises and adjoins the constituent to an IP (cf. Reinhart 1991). As a result, an IP with an empty slot is created. (See (11a).)
   e. CR is sensitive to syntactic islands (cf. Reinhart 1991).

(11) a. The 1st Conjunct at LF:  
   b. The 2nd Conjunct until LF:  

As indicated in (11a), the correlate raises and adjoins to an IP at LF in the first conjunct. Then, as in (11b), the underlined lower IP of the first conjunct is copied onto the empty IP in the second conjunct at LF. This copied IP eventually becomes a λ-predicate with the trace within it turned
into a variable. The remnant will then be the argument of this $\lambda$-predicate. In this way, the ellipsis site receives interpretation.\(^6\)

4. Local vs. non-local resolutions

4.1. The answers to the questions

Let us now address the questions raised in Section 2, starting with the first one: how (8) can have the non-local reading. I assume that the Q-morpheme $ka$ binds the in-situ wh-phrase and that this binding relation enables the wh-phrase to take scope at the position of the Q-morpheme, as proposed in works like Baker 1970. Since the Q-marker resides higher than the complex NP, this allows the wh-phrase to take scope over the complex NP, thereby giving rise to the non-local reading.

Let us turn to the second question: why (7) lacks the non-local reading that (8) has. Consider the structures in (12).

6. Another implementation would be by deletion, which we did not adopt for Japanese on the basis of conceptual considerations. We assume that Japanese lacks overt syntactic movement altogether because it lacks uninterpretable inflectional features that trigger such movement. See Fukui 1986 and his subsequent works.

7. There is another type of sluicing in Japanese, where the remnant is not case-marked. Fukaya & Hoji (1999:148) propose a different derivation for that type of sluicing. The relevant part of the second conjunct is assumed to have a regular copula structure as in (i) with the subject being an empty category. Then, this $ec$ refers to a concept retrievable from the context. Note that nothing is required to be copied onto this structure and that no movement is involved in its derivation.

(i) $[CP \{IP \ ec \{VP \ NP \ (be) \} \ I \} \ Q \}$
In order to obtain the non-local reading, the remnant has to take scope over
the complex NP in the second conjunct. In order for the remnant to take
scope over the complex NP, the second conjunct needs to have the structure
in (12b). However, (12b) would obtain only if the operation in (12a) were
possible in the first conjunct, but (12a) is not a legitimate operation because
the movement crosses a syntactic island.

Now let us turn to the third question: how (7) can have the local
reading that (9) has. This is because CR can raise and adjoin the correlate to
any IP. As indicated in (13a), CR can raise the correlate within the relative
clause without moving it across the island and adjoin it to the relative
clause.8 Then, as in (13b), the underlined lower IP is copied onto the empty
IP at the ellipsis site. The details of the relevant parts are given in (14).

(13) a. 1st conjunct:

b. 2nd conjunct:

(14) a. The relevant portion of the first conjunct after CR at LF:

b. The second conjunct after LF copying:

8. This is a different implementation of Merchant’s (2001: Ch. 5) local-movement
account of the apparent island insensitivity in sluicing. He proposes that wh-
movement takes place within an island in the second conjunct because he adopts a
deletion analysis.
I assume here that the Japanese relative clause, unlike its English counterpart, has an empty pronominal element within it in place of a trace of a relative operator and that this empty element is co-indexed with the head noun of the relative clause via predication (cf. Kuno 1973: Ch. 21, Haig 1976, and McCawley 1976, among others). I then assume that this empty pro is interpreted as an E-type pronoun, along the lines of Merchant (2001: Ch. 5). In the case of (14b), it is interpreted as "the man who the police arrested." This gives rise to the reading for the second conjunct that the speaker does not know which other Representative the man who the police arrested gave a bribe to. This is how the local reading obtains in (7).

4.2. Illusory non-local readings

Now another question arises: why (6a) and (6b) yield the non-local reading, if the non-local resolution is blocked because of syntactic islands. I propose, following Merchant (2001: Ch. 5), that this is due to the local reading being indistinguishable from the non-local reading in those cases. Let us illustrate this, using two potential derivations for (6b), given in (15) and (16).

(6) b. [name as the correlate]
   keisatsu-wa [pro2 [Tanaka giin]-ni wairo-o okutta] police-TO Rep. Tanaka-to bribe-ACC gave
   otoko-2-o taihosita ga, Bill-wa [dono giin-ni ka] siranakatta rasii.
   man-ACC arrested but -TO which Rep.-to Q knew:not seem
   'The police arrested the man who gave a bribe to Rep. Tanaka, but
   it seems that Bill didn't know to which Representative.'

(15) a. The relevant portion of the first conjunct after CR at LF:
   NP [IP [Tanaka giin]-ni] [IP pro2 t2 wairo-o okutta] otoko2-2-o ...
   Rep. Tanaka -to bribe-ACC gave man -ACC
   'lit.) the man2 who, to Representative Tanaka]2, he2 gave a bribe t3'
   b. The second conjunct after Copy at LF:
      Bill-wa [(dono giin-ni] [IP pro2 t2 wairo-o okutta] ka]
      -TO which Rep.-to bribe-ACC gave Q
      siranakatta rasii.
      knew:not seem
      'it seems that Bill didn't know to which Representative he gave a
      bribe t'

(16) a. The relevant portion of the 1st conjunct after CR at LF:
   [IP [Tanaka giin]-ni] [IP keisatsu-ga [ISL pro2 t2 wairo-o okutta]]
   Rep. Tanaka -to police-NOM bribe-ACC gave
[153x627]man     - ACC arrested
'(lit.) [to Representative Tanaka], the police arrested the man who
gave a bribe t1'
b. The 2nd conjunct after Copy at LF:
Bill-wa [[IP [dono giin]-ni [IP keisatu-ga [ISL pro2 t1, wairo-o
-TOP which Rep.-to police-NOM bribe-ACC
okutta otoko2]-o taihosita] ka] siranakatta rasii.
gave man -ACC arrested Q knew: not seem
'it seems that Bill didn't know to which Representative the police
arrested the man who gave a bribe t1'

In the previous subsection, we have seen that a derivation as in (16) is
blocked because of the island constraint. Thus, the only available derivation
is (15). As in the case of (14b), the pro in (15b) functions as an E-type
pronoun and is interpreted as "the man who the police arrested." With this
interpretation of the pro, the second conjunct yields the interpretation as in
(17a). (17b) is a reading that the non-local (across-the-island) resolution as
illustrated in (16) would give rise to. Notice that (17a) and (17b) are
indistinguishable.

(17) a. Bill didn't know to which Representative the man who the police
arrested gave a bribe.
b. Bill didn't know which Representative is such that the police
arrested the man who gave a bribe to him.

This is why we appear to get the non-local reading for (6b). The same line
of account holds of (6a) as well.

5. Island (in)sensitivity in Japanese stripping

Japanese stripping exhibits the same pattern of island sensitivity. It
appears to be insensitive to syntactic islands, but once we modify the
examples so that the local and the non-local readings will be distinguishable,
island effects emerge. (18), for example, does not seem to exhibit island
effects.

(18) Bill-wa [[BIL tariya ryoori-o] tukuru hito]-ga
-TOP Italian cuisine-ACC make person-NOM
yoku [kono mise]-ni kuru to] itteita ga,
often this shop-to come that said but
boku-wa [[huransu ryoori]-o da to] omotteita.
I-TOP French cuisine-ACC COP that thought
'(lit.) Bill said that those who make Italian cuisine often come to this shop, but I thought French cuisine.'  
(Based on Hoji 1990: Ch. 5 (114) and (116))

But if *mo* 'also' is attached to the remnant as in (19), the local and the non-local readings become distinguishable, and the non-local reading is not available for (19).

(19)  
\[
\begin{array}{l}
[\text{Italian cuisine-ACC make person-NOM often this shop-to come seem but I-TOP French cuisine-ACC-also COP that thought } (\text{lit.) I hear that those who make Italian cuisine often come to this shop, but I thought French cuisine as well.' }]
\end{array}
\]

(Based on Hoji 1990: Ch. 5 (114) and (116))

Although the reading in (20a) is available for (19), the one in (20b) is not.

(20) a. I hear that those who make Italian cuisine often come to this shop, and I thought that they (= those who often come to this shop (under discussion)) also make French cuisine. [The same group of people make both Italian and French cuisine. = the local reading]

b. I hear that those who make Italian cuisine often come to this shop, and I thought those who make French cuisine also often come to this shop. [Different groups of people make Italian and French cuisine. = the non-local reading]

In the case of (18), where *mo* 'also' is not attached to the remnant, the local resolution gives rise to an interpretation indistinguishable from the one that the non-local (across-the-island) resolution would yield. Note that the local reading in (21a) and the non-local reading in (21b) are not distinguishable because one group of people is under discussion.

(21) a Bill said that those who make Italian cuisine often come to this shop, but I thought they (= those who often come to this shop (under discussion)) make French cuisine.

b. Bill said that those who make Italian cuisine often come to this shop, but I thought those who make French cuisine often come to this shop.

These facts are as expected if stripping is the same syntactic phenomenon as sluicing in Japanese, as claimed in Hoji & Li 1994 and Fukaya & Hoji 1999.
6. Revisiting English sluicing

In this section, I will examine what Merchant calls 'contrast' sluicing in English, corresponding to examples like (7), and suggest that the complex NP island is not to be regarded as a PF representational island (which can be nullified by PF deletion) under Merchant's (to appear) analysis of 'contrast' sluicing. Merchant claims that locality effects emerge in 'contrast' sluicing as in (22), and stipulates that the effects are due to island-escaping focus-movement in the first conjunct being unable to target the highest clause node.  

(22) *Abby wants to hire someone who speaks **Greek**, but I don't remember what **other** languages <she wants to hire someone who speaks>. (Merchant to appear: (52))

According to his analysis, scopal parallelism must be established between the first and the second conjuncts in order for the IP in the latter to be deleted. To establish the scopal parallelism, the correlate must raise to the position parallel to that of the remnant. Since the remnant in the second conjunct resides above the IP corresponding to the first conjunct (i.e., above the IP she wants to hire someone who speaks) as a result of wh-movement, the focused DP **Greek** in the first conjunct must raise to the position above the entire IP. Because of the stipulation mentioned above, however, the focused DP can only raise to the highest VP (wants to hire someone who speaks). Hence, the deletion of the IP in the second conjunct is not licensed.

It would then be expected that (22) improves if we add an extra IP on top of the first conjunct so that the focused DP can raise to the position parallel to that of the remnant (i.e., to the position above the IP Abby wants to hire someone who speaks). Such indeed appears to be the case.

(23) I remember Abby wants to hire someone who speaks **Greek**, but I don't remember which **other** languages.

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9. I assume that overt wh-movement followed by IP deletion is involved in English sluicing, following most of the work on this construction.
10. Merchant adopts the widely-accepted assumption that focus movement does not respect islands.
11. Italics in the examples signify stress.
12. The indicated judgments on (22)-(24) are those for the non-local readings. Local readings are available in these examples.
13. Some speakers seem to accept (22) with the non-local reading. See footnote 15.
(23) is acceptable with the non-local reading, i.e., the reading where the speaker does not know which other languages are such that Abby wants to hire someone who speaks them (the "different people speak different languages" reading). One might take this to indicate that the island violation by the wh-movement in the second conjunct is ameliorated by deletion.

However, if we take a closer look, a different picture emerges. In cases where a preposition is pied-piped with the wh-phrase remnant, the island effects re-emerge even when the first conjunct has an extra IP, as illustrated in (24). It disallows the non-local reading (i.e., the "different people work on different languages" reading).

(24) *I remember Abby wants to hire someone who works on Greek, but I don't remember on which other languages.

If we adopt Merchant's assumption about focus movement as well as his proposal that focus movement is involved in the first conjunct in 'contrast' sluicing, it follows that the locality effect indicated by the unavailability of the non-local reading in (24) cannot be attributed to the correlate being unable to move to the position parallel to that of the remnant. This is because the extra IP in the first conjunct allows the correlate to move to a position as high as the matrix VP. The only source of the locality effect would then be the second conjunct, as in its non-elliptical counterpart in (25).

(25) *I don't remember on which other languages she wants to hire someone who works t.

14. For those speakers who find the pied-piping of a preposition in (24) not to be readily available in the first place, the island effects under discussion seem to show up more clearly in cases where pied-piping is obligatory as in (i).

(i) I remember Abby wants to talk to a person who took the stand for John's sake, but I don't remember for who else's sake.
   a. ok on the local reading: I don't remember for who else's sake that person took the stand [the one-witness reading]
   b. * on the non-local reading: I don't remember who else is such that Abby wants to talk to a person who took the stand for his sake [the multiple-witnesses reading]

I am grateful to Chris Potts (p.c. March 2003) for bringing obligatory pied-piping cases to my attention.
It would thus follow that the complex NP island is not nullified by PF deletion, contra the recent proposals in the literature (cf. Lasnik 2001, Fox & Lasnik 2003, and Merchant to appear).15

7. Summary

In this paper, I have investigated Japanese sluicing and stripping, and demonstrated that these constructions are indeed sensitive to the complex NP island. I have claimed that the complex NP island is an LF island in Japanese, assuming Fukaya & Hoji's proposal on ellipsis resolution in Japanese sluicing and stripping. I have then shown that a version of Merchant's (2001: Ch. 5) local-movement strategy is necessary in order to account for the apparent lack of island sensitivity in some instances of Japanese sluicing and stripping. Finally, I have re-examined English 'contrast' sluicing and suggested that the complex NP island in English is not to be regarded as a PF representational island that can be ameliorated by PF deletion, which is in accordance with the result obtained in our study of Japanese sluicing and stripping.

References


15. A question arises regarding (23): why is it acceptable with the non-local reading? If the account of the unavailability of the non-local reading in (24) is on the right track, then the non-local reading is also expected to be unavailable in (23). I speculate that sluicing with a bare wh-phrase remnant in English may have a different type of representation analogous to the one for the non-case-marked sluicing in Japanese mentioned in footnote 7. To be more specific, the sluice in (23) may have a representation corresponding to "which other languages are like that" or "which other languages that is true of" with that referring to a concept available in the discourse (the property of Abby wanting to hire someone who speaks it in this case). Note in this connection that the distinction between bare and prepositional remnants also seems to be observed in English stripping. In Fukaya & Hoji 1999: fn. 20, we reported, "in [(i-B)] the sloppy reading (i.e., the 'Bill's students also often talk to Bill' reading) seems to be readily available for many speakers.... In [(i-B')], however, the sloppy reading is not possible even for those speakers."

(i) A: His students often talk to John.
   B: Bill, too. / Well, Bill, too. (≈ That is true of Bill, too.)
   B': To Bill, too. / Well, to Bill, too.

Regarding (22), I speculate that the fact that some speakers accept it with the non-local reading as reported in footnote 13 is also due to the availability of the representation mentioned above for those speakers.


Hoji, Hajime (1990) "Theories of Anaphora and Aspects of Japanese Syntax." Ms. USC.


