

‘Genuine’ Sluicing in Japanese*

Kensuke Takita
 Nanzan University/University of Connecticut/JSPS Research Fellow

1 Introduction

This paper is concerned with the so-called sluicing construction, illustrated by the English example given in (1a).¹

- (1) a. John bought something, but I don’t know [what Δ]
 b. ... I don’t know [_{CP} what_i [_{TP} ~~John bought t_i~~]]
- 

As shown in (1b), *wh*-movement followed by TP-deletion gives rise to the desirable surface string (see Ross 1969 and Merchant 2001, among many others).

A similar construction is found in Japanese, as in (2).

- (2) Taroo-wa [Ziroo-ga nanika-o katta to] itteita ga,
T.-Top Z.-Nom something-Acc bought that said but
 boku-wa [nani-o Δ (da) ka] sir-anai
I.-Top what-Acc Cop Q know-not
 ‘(lit.) Taroo said that Ziroo bought something, but I don’t know [what Δ]’

Although (2) is quite similar to (1a), there is an interesting difference between them; the copula *da* can appear in (2). Thus, this construction is referred to as the sluicing-like construction (SLC).

There has been some controversy as to how to analyze the SLC. Takahashi (1994) proposes that the SLC has essentially the same structure as the sluicing construction in English. That is, it results from *wh*-movement followed by TP-deletion.² Under this view, the second clause of (2) has a structure like that in (3). Let us call this view the *genuine sluicing analysis* of the SLC.

- (3) *Genuine sluicing analysis of the SLC*
 ... boku-wa [_{CP} nani-o_i [_{TP} ~~Ziroo-ga t_i katta~~] ka] sir-anai
- 

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¹ Sluicing remnants and their correlates are boxed. Deleted parts are indicated by strike-through. The symbol Δ is used to indicate a gap without any theoretical commitment.

² Although Japanese is a *wh*-in-situ language, Takahashi (1994) assumes that scrambling of *wh*-phrases count as *wh*-movement, following Takahashi (1993).

On the other hand, it has been argued that the SLC has a different structure from sluicing. According to this view, the relevant part of (2) is analyzed either as a copula construction with a null pronominal subject as in (4a), or as a cleft construction with ellipsis of the presupposition CP as in (4b) (see Shimoyama 1995, Nishiyama, Whitman & Yi. 1996, Kuwabara 1997, Kizu 1997, 2005, Sakai 2000, Hiraiwa & Ishihara 2002, and Saito 2004, among many others).

(4) *Pseudo-sluicing analysis of the SLC*

- a. ... boku-wa [*pro* nani-o (da) ka] sir-anai
I-Top what-Acc Cop Q know-not
 ‘(lit.) ... I don’t know [what it is]’
- b. ... boku-wa [_{CP} ~~Ziroo ga katta no~~] ga nani-o (da) ka] sir-anai
I-Top Z.-Nom bought C-Nom what-Acc Cop Q know-not
 ‘(lit.) ... I don’t know [what it is [that Ziroo bought]]’

Adopting Merchant’s (2001) terminology, let us call this type of analysis the *pseudo-sluicing* analysis of the SLC.

As will be reviewed in the next section, one of the major sources of controversy is the optional presence of the copula. As far as I can tell, all previous studies on the SLC in Japanese mentioned above have examined sentences containing predicates like ‘know’, which take finite clausal complements. These predicates can also take the copula and cleft constructions as their complements. Thus, it is far from clear whether Japanese allows genuine sluicing. This state of affairs undermines the basis of the theoretical implications of Takahashi’s (1994) work; evidence for *wh*-movement and for the functional category that licenses TP-deletion, namely C^0 (Lobeck 1990, Saito & Murasugi 1990) in Japanese, contra, for instance, Fukui (1986).

Note at this point that the copula and cleft constructions are never allowed as complements of control predicates like *mayotteiru* ‘hesitate’, as shown in (5).³

- (5) a. Taroo-wa [PRO doko-e ik-oo (*da) ka] mayotteiru / kimekaneteiru
T.-Top where-to go-Inf Cop Q hesitate cannot.decide
 ‘(lit.) Taroo hesitates/cannot decide [where to go]’
- b. *Taroo-wa [(sore-ga) doko-e da ka] mayotteiru / kimekaneteiru
T.-Top it-Nom where-to Cop Q hesitate cannot.decide
 ‘(lit.) Taroo hesitates/cannot decide [where it is]’
- c. *Taroo-wa [[iku no]-ga doko-e da ka] mayotteiru / kimekaneteiru
T.-Top go C-Nom where-to Cop Q hesitate cannot.decide
 ‘(lit.) Taroo hesitates/cannot decide [where it is [to go]]’

Hence, this kind of predicate allows us to examine whether Japanese has genuine sluicing without the interference of pseudo-sluicing. The main goal of this paper

³ See Fujii (2006) and references cited therein for the control properties of the clauses whose predicates have the infinitive marker *-(y)oo*.

is to show that Japanese does indeed have genuine sluicing, based on a novel set of data regarding the SLC with non-finite (namely, control) complements (hereafter SLC_{NFC}). Meanwhile, I also show that the SLC with finite complements (hereafter SLC_{FC}) is best analyzed as pseudo-sluicing, contrasting it with the SLC_{NFC}. Therefore, our results support Takahashi’s (1994) idea and consequently its aforementioned theoretical implications from a slightly different angle, simultaneously maintaining the pseudo-sluicing analysis of the “standard” examples, that is, of the SLC_{FC}.

This paper is organized as follows: Section 2 provides a brief background on the genuine sluicing and pseudo-sluicing analyses. In Section 3, I show that the SLC_{NFC} exhibits the properties of genuine sluicing, while the SLC_{FC} behaves quite differently. Section 4 extends the present perspective to Chinese and Korean, which are also analyzed as having pseudo-sluicing. Section 5 concludes the paper.

2 Background on the SLC_{FC}

Let us start with one of Takahashi’s (1994) arguments for the genuine sluicing analysis. He observes, as shown in (6), that the SLC_{FC} allows the sloppy reading given in (6bii) (Ross 1969; see also Sag 1976 and Williams 1977 for VP-ellipsis), in addition to the strict reading given in (6bi).⁴

- (6) a. Taroo-wa [zibun-ga doko-de sikarareru ka] sitteiru ga,
T.-Top self-Nom where-at is.scolded Q know but
 ‘(lit.) Though Taroo knows [where he will be scolded],’
 b. Hanako-wa [doko-de Δ (da) ka] sir-anai
H.-Top where-at Cop Q know-not
 (i) ‘Hanako doesn’t know [where he (= Taroo) will be scolded]’
 (ii) ‘Hanako doesn’t know [where she (= Hanako) will be scolded]’

Since the availability of the sloppy reading is a hallmark of ellipsis/deletion, Takahashi (1994) argues that (6b) results from *wh*-movement of *doko-de* ‘where’ followed by deletion of the TP, which contains the anaphor *zibun* ‘self’ (cf. (2)).

The genuine sluicing analysis, however, cannot deal with the presence of the copula, as Takahashi (1994) himself notes. If the alleged TP-deletion did not apply, (6b) would be like (7), in which the copula *da* cannot appear.

- (7) Hanako-wa [_{CP} doko-de_i [_{TP} zibun-ga *t*_i sikarareru] (*da) ka] sir-anai
H.-Top where-at self-Nom is.scolded Cop Q know-not

Thus, the copula should be disallowed if (7) is the underlying source of (6b).

Let us now turn to the pseudo-sluicing analysis, which treats the SLC_{FC} as a

⁴ Merchant (2001) notes that sluicing in English does not easily allow the sloppy reading, contrary to Ross’s (1969) observation. As will be shown in Section 3, the SLC_{NFC} in Japanese, which I claim to be an instance of genuine sluicing, also allows the sloppy reading. I leave the difference between English and Japanese for future research.

copula construction with a null pronominal subject (cf. (4a)). Suppose that (6a) above is followed by (8), whose embedded clause is a copula construction with the overt pronominal subject *sore* ‘it’.

- (8) Hanako-wa [sore-ga doko-de (da) ka] sir-anai
H.-Top it-Nom where-at Cop Q know-not
 ‘(intended) Hanako doesn’t know [where he/*she will be scolded]’

As seen in (8), the copula is optional in this construction. If the overt pronominal subject *sore* ‘it’ in (8) is replaced with *pro*, the surface string of (6b) results. In this way, the presence of the copula can be accounted for. However, the sloppy reading is not available for (8), as indicated by the translation. Therefore, the availability of the sloppy reading fails to be captured if (6b) is derived from (8).

To solve this problem, Saito (2004) proposes a version of the pseudo-slicing analysis, arguing that the cleft construction underlies the SLC_{FC} (cf. (4b)). According to Saito (2004), (6b) would be analyzed as having a structure like (9), whose embedded clause is a cleft construction.

- (9) Hanako-wa [~~$_{CP}$ zibun-ga sikarareru no~~]-ga doko-de (da) ka] sir-anai
H.-Top self-Nom is.scolded C-Nom where-at Cop Q know-not
 ‘(lit.) Hanako doesn’t know [where it is [that self will be scolded]]’

Note that the copula also appears in the cleft construction, and it is optional. Note further that the presupposition CP in the Japanese cleft construction qualifies as a subject; for instance, it can be marked by the nominative Case marker *-ga*, as in (9). Then, adopting Oku’s (1998) hypothesis that Japanese allows arguments, including subjects, to be directly deleted, Saito (2004) argues that the surface string of the SLC_{FC} derives from deletion of the presupposition CP subject and omission of the copula.⁵ Thus, this analysis can explain not only the presence of the copula but also the availability of the sloppy reading, since it involves deletion.

To sum up, the pseudo-slicing analysis seems to be promising, as far as the SLC_{FC} is concerned. However, this state of affairs does not necessarily exclude the possibility of genuine slicing in Japanese. In the next section, I examine the SLC_{NFC} , to determine whether genuine slicing is available in Japanese.

3 Observations

As we have seen in the previous section, the predicates of the SLC_{FC} examined in previous studies can take the copula and cleft constructions as their complements, as well as the normal interrogative complements. Thus, to see whether Japanese allows genuine slicing, it is necessary to find a syntactic context where the copula and cleft constructions cannot appear. By using the control predicates that select interrogative non-finite complements, we can satisfy

⁵ Space limitations prevent me from reviewing Oku’s (1998) arguments, but see Kim (1999), Saito (2007), Takahashi (2008), and Takita (to appear) for more evidence for Oku’s hypothesis.

this requirement, as pointed out in Section 1 (see (5)).

Now, let us consider (10). Note that the first clause has a control complement.

- (10) Taroo-wa [PRO dono zyaanaru-ni] zibun-no ronbun-o das-oo ka]
T.-Top which journal-to self-Gen paper-Acc submit-Inf Q
 kimeta ga, Hanako-wa [dono zyaanaru-ni] Δ (*da) ka] kimekaneteiru
decided but H.-Top which journal-to Cop Q cannot.decide
 ‘(intended) Though Taroo decided [to which journal [to submit his
 paper]], Hanako cannot decide [to which journal [to submit her paper]]’

Crucially, we can leave only the *wh*-phrase and the Q-marker in the second clause, and the sloppy reading is available. Furthermore, the copula cannot appear in this construction. This fact already suggests that Japanese does have genuine sluicing. In the rest of this section, I illustrate that the SLC_{NFC} , instantiated by (10), exhibits the characteristic properties of genuine sluicing, while the SLC_{FC} exhibits those of pseudo-sluicing. Based on these observations, I argue that Japanese has the genuine sluicing as far as the SLC_{NFC} is concerned, whereas the SLC_{FC} unambiguously has the pseudo-sluicing structure.⁶

3.1 SLC_{NFC} vs. SLC_{FC} (I): Clause-types

The first property has to do with the types of clauses. We have already seen that the SLCs are possible with *wh*-remnants, irrespective of whether the complements are finite or not. Let us first consider the SLC_{NFC} examples whose remnant is a non-*wh*-phrase. (11a) is the antecedent, followed by sentences containing a yes/no-question complement (= (11b)) and a declarative one (= (11c)).

- (11) a. Taroo-wa [PRO LI-ni] ronbun-o das-oo to] kimeta ga,
T.-Top LI-to paper-Acc submit-Inf that decided but
 ‘(lit.) Though Taroo decided [to submit a paper to LI],’
 b. Hanako-wa [NLLT-ni] *(ronbun-o das-oo) kadooka] mayotteiru
H.-Top NLLT-to paper-Acc submit-Inf whether hesitate
 ‘(lit.) Hanako hesitate [to NLLT whether [to submit a paper]]’
 c. Hanako-wa [NLLT-ni] *(ronbun-o das-oo) to] kimeta
H.-Top NLLT-to paper-Acc submit-Inf that decided
 ‘(lit.) Hanako decided [to NLLT that [to submit a paper]]’

The ungrammaticality of (11b-c) indicates that the SLC_{NFC} does not allow non-*wh*-remnants (note that (11b-c) are totally acceptable without ellipsis). Given that sluicing is compatible only with *wh*-questions in many languages (Ross 1969; see also Lobeck 1990 and Saito & Murasugi 1990), this observation suggests that the SLC_{NFC} does have the genuine sluicing structure.

⁶ See Takita (in prep.) for more observations in support of this conclusion, which I have not included in the present paper for reasons of space.

On the other hand, it has been observed that the SLC_{FC} freely allows non-*wh*-remnants (see, e.g. Nishiyama et al. 1996). Relevant examples are given in (12).

- (12) a. Taroo-wa [Ziroo-ga $\boxed{LI-ni}$ ronbun-o dasita to] itteita ga,
T.-Top Z.-Nom LI-to paper-Acc submitted that said but
 ‘Though Taroo said that Ziroo submitted a paper to LI,’
 b. Hanako-wa [$\boxed{NLLT-ni}$ Δ (da) kadooka] siritakatta
H.-Top NLLT-to Cop whether wanted.to.know
 ‘(lit.) Hanako wanted to know [to NLLT whether Δ]’
 c. Hanako-wa [$\boxed{NLLT-ni}$ Δ (da) to] itteita
H.-Top NLLT-to Cop that said
 ‘(lit.) Hanako said [to NLLT that Δ]’

The grammaticality of (12b-c) follows under the pseudo-slucing analysis of the SLC_{FC} , because their cleft counterparts are also grammatical, as in (13).

- (13) a. Hanako-wa [[$_{CP}$ Ziroo-ga ronbun-o dasita no]-ga $\boxed{NLLT-ni}$
H.-Top Z.-Nom paper-Acc submitted C-Nom NLLT-to
 (da) kadooka] siritakatta (cf. (12b))
Cop whether wanted.to.know
 ‘(lit.) Hanako wanted to know [whether it is to NLLT [that Ziroo submitted a paper]]’
 b. Hanako-wa [[$_{CP}$ Ziroo-ga ronbun-o dasita no]-ga $\boxed{NLLT-ni}$
H.-Top Z.-Nom paper-Acc submitted C-Nom NLLT-to
 (da) to] itteita (cf. (12c))
Cop that said
 ‘(lit.) Hanako said [that it is to NLLT [that Ziroo submitted a paper]]’

Thus, the contrast between (11) and (12) supports the claim that the SLC_{NFC} has the genuine sluicing structure while the SLC_{FC} is an instance of pseudo-slucing.

3.2 SLC_{NFC} vs. SLC_{FC} (II): Case-marker/postposition drop

The second property concerns the so-called P-stranding generalization (Merchant 2001), which roughly states that P-stranding is allowed under sluicing in a language iff it allows P-stranding under regular movement. As shown in (14), Japanese disallows Case-markers/postpositions from being stranded.

- (14)* $NLLT_i$ Hanako-wa t_i -ni ronbun-o dasita
NLLT H.-Top -to paper-Acc submitted
 ‘(lit.) $NLLT_i$, Hanako submitted a paper to t_i ’

We expect the same to hold for sluicing if Japanese in fact has it. This expectation is fulfilled for the SLC_{NFC} , as shown in (15) below.

- (15) Taroo-wa [PRO dono zyaanaru-ni ronbun-o das-oo ka] kimeta ga,
T.-Top which journal-to paper-Acc submit-Inf Q decided but
 Hanako-wa [dono zyaanaru*(-ni) Δ ka] kimekaneteiru
H.-Top which journal-to Q cannot.decide
 ‘(lit.) Though Taroo decided [to which journal [to submit a paper]],
 Hanako cannot decide [to which journal Δ]’

As shown in (16), however, Case-markers/postpositions on the remnants can be dropped in the SLC_{FC} (see, e.g. Nishiyama et al. 1996, Fukaya & Hoji 1999).

- (16) Taroo-wa [Ziroo-ga dono zyaanaru-ni ronbun-o dasita ka] sitteiru ga,
T.-Top Z.-Nom which journal-to paper-Acc submitted Q know but
 Hanako-wa [dono zyaanaru(-ni) Δ (da) ka] sir-anai
H.-Top which journal-to Cop Q know-not
 ‘(lit.) Though Taroo knows [to which journal [Ziroo submitted a paper]],
 Hanako doesn’t know [to which journal Δ]’

The pattern in (16) can be easily accommodated under the pseudo-slucing analysis of the SLC_{FC} , since Case-markers/postpositions can be dropped from the pivot of the cleft in Japanese (Hoji 1990), as in (17).⁷

- (17) Hanako-wa [[_{CP} Ziroo-ga ronbun-o dasita no]-ga
H.-Top Z.-Nom paper-Acc submitted C-Nom
dono zyaanaru(-ni) (da) ka] sir-anai
which journal-to Cop Q know-not
 ‘(lit.) Hanako doesn’t know [to which journal it is [that Ziroo submitted a paper]]’

Hence, the difference between the SLC_{NFC} and the SLC_{FC} regarding P-stranding provides further support for the claim that the former is an instance of genuine sluicing, while the latter is a case of pseudo-slucing.

3.3 SLC_{NFC} vs. SLC_{FC} (III): Island repair

It has been observed that island violations can be repaired in English by sluicing, as exemplified by the contrast between (18a) and (18b) (see Ross 1969, Chung, Ladusaw & McCloskey 1995, and Merchant 2001, to name a few).

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

⁷ Hoji (1990) argues that when the pivot of a cleft has a Case-marker/postposition, null operator movement takes place within the presupposition CP, while *pro* appears in the presupposition when the pivot lacks a Case-marker/postposition. See Murasugi (1991) for further discussion.

I show that although island violations cannot be repaired in the SLC_{FC} (see, e.g. Takahashi 1994 and Nishigauchi 1998), but can indeed be repaired in the SLC_{NFC} . Let us start with the SLC_{FC} . The relevant examples are given in (19).

- (19) a. Taroo-wa [keisatu-ga mazu [_{NP} [_{RC} zibun-no heya-kara nani-o]
T.-Top police-Nom first self-Gen room-from what-Acc
 nusunda] otoko]-o siraberu ka] sitteiru ga,
stole man-Acc check Q know but
 ‘(lit.) Though Taroo knows [Q the police will check first [the man [who stole what from his room]]],’
- b. *Hanako-wa [nani-o_i keisatu-ga mazu [_{NP} [_{RC} zibun-no heya-kara
H.-Top what-Acc police-Nom first self-Gen room-from
_{t_i} nusunda] otoko]-o siraberu ka] sir-anai
stole man-Acc check Q know-not
 ‘(lit.) Hanako doesn’t know [what_i [the police will check first [the man [who stole _{t_i} from self’s room]]]]’
- c. Hanako-wa [nani-o Δ (da) ka] sir-anai
H.-Top what-Acc Cop Q know-not
 ‘(intended) Hanako doesn’t know [what is x such that the police will check first [the man [who stole x from his/*her room]]],’
- d. Hanako-wa [sore-ga nani-o (da) ka] sir-anai
H.-Top it-Nom what-Acc Cop Q know-not
 ‘(intended) Hanako doesn’t know [what is x such that the police will check first [the man [who stole x from his/*her room]]],’

(19a) is the antecedent of (19b-d). In (19b) the *wh*-phrase is extracted from the relative clause, so the sentence is ungrammatical. The crucial example is (19c), which is an instance of the SLC_{FC} . Note that although the sentence is grammatical, it does not have the sloppy reading for *zibun* ‘self’ contained in the relative clause of the antecedent, as its translation indicates. The only available interpretation for (19c) is the strict reading, on a par with (19d), which has the overt pronominal subject *sore* ‘it’. Hence, it is plausible to assume that (19c) with the strict reading has *pro* as its embedded subject, so that there is no island violation to begin with. Then, what is crucial is the absence of the sloppy reading in (19c).

Bearing this observation in mind, let us turn to the SLC_{NFC} . The relevant examples are given in (20) below.

- (20) a. Taroo-wa [PRO mazu [_{NP} [_{RC} zibun-no heya-kara nani-o]
T.-Top first self-Gen room-from what-Acc
 nusunda] otoko]-o sirabe-yoo ka] kimeta ga,
stole man-Acc check-Inf Q decided but
 ‘(lit.) Though Taroo decided [Q to check first [the man [who stole what from his room]]]’

- b. *Hanako-wa [nani-o_i] PRO mazu [_{NP} [_{RC} zibun-no heya-kara t_i
H.-Top what-Acc first self-Gen room-from
 nusunda] otoko]-o sirabe-yoo ka] kimekaneteiru
stole man-Acc check-Inf Q cannot.decide
 ‘(lit.) Hanako cannot decide [what_i to check first [the man [who stole
 t_i from self’s room]]]’
- c. Hanako-wa [nani-o] Δ ka] kimekaneteiru
H.-Top what-Acc Q cannot.decide
 ‘(intended) Hanako cannot decide [Q to check first [the man [who
 stole what from his/her room]]],’

(20a) is the antecedent of (20b-c), and the ungrammaticality of (20b) indicates that there is an island violation. The crucial example is (20c). Most importantly, (20c) allows the sloppy reading. Recall that the SLC_{NFC} cannot have the copula/cleft construction as its underlying source. Thus, the fact that (20c) allows the sloppy reading suggests that (20b) is the only available source of (20c), and island violations can indeed be repaired in the SLC_{NFC} .⁸ This observation further supports our view that the SLC_{NFC} is an instance of genuine sluicing.

Returning to (19c), the absence of the sloppy reading in the SLC_{FC} suggests that the construction in question unambiguously has the pseudo-sluicing structure. If the SLC_{FC} were structurally ambiguous between genuine sluicing and pseudo-sluicing, it would be unclear why the sloppy reading is not available for the SLC_{FC} with the genuine sluicing structure.⁹

One question which arises at this point is why the genuine sluicing structure is not available for the SLC_{FC} . Put differently, if Japanese allows (optional) *wh*-movement, and C^0 can license deletion of TP in non-finite clauses, why is it not the case that *wh*-movement followed by TP-deletion is also licensed in finite clauses, giving rise to the SLC_{FC} with the genuine sluicing structure? Although there might be several possible accounts, I suggest a modification of Merchant’s (2001) E-feature, which triggers TP-deletion and must be checked against a [+wh, +Q] C^0 . Specifically, I claim that in languages like Japanese, the E-feature must be checked by a [+wh, +Q, -finite] C^0 . Given this modification, the asymmetry between the SLC_{NFC} and the SLC_{FC} follows.

⁸ See, e.g. Chomsky (1972), Chung et al. (1995), Lasnik (2001), Merchant (2001), Fox & Lasnik (2003) for some accounts of island repair. As far as I can tell, any of these accounts except for Merchant’s (2001) may accommodate the Japanese data in the text. Merchant (2001) argues that relative clauses are LF-islands, unaffected by PF-deletion. He argues that in the case of the relative clause island, there is an alternative source that contains an E-type pronoun (Evans 1980) and no island to begin with. However, in the case of (20c), there seems to be no alternative source that can make use of an E-type pronoun. This puts into question Merchant’s (2001) analysis if we assume that relative clauses are universally LF-islands. See also Lasnik (2001) for some English examples that lack alternative sources.

⁹ See, for instance, Saito (2004) and Sugawa (2008) for some accounts of the lack of island repair in the SLC_{FC} .

3.4 Summary

To Summarize, I have thus far demonstrated that the SLC_{NFC} (i) disallows non-*wh*-remnants, (ii) obeys the P-stranding generalization, and (iii) exhibits island repair. These three properties are characteristic of sluicing. Thus, I conclude that the SLC_{NFC} is indeed an instantiation of genuine sluicing, namely, of *wh*-movement followed by TP-deletion. In contrast, the SLC_{FC} exhibits a quite different pattern; it always patterns with the copula/cleft constructions. This suggests that the underlying source of the SLC_{FC} is unambiguously the copula/cleft constructions, further supporting the pseudo-sluicing analysis.

4 Cross-linguistic variations of the $SLCs_{NFC}$ ¹⁰

This section examines some cross-linguistic variations of the SLC_{NFC} , focusing on Chinese and Korean. I argue that though there are certain differences among Chinese, Korean and Japanese regarding the $SLCs_{NFC}$, they can be traced back to some independently attested differences among these languages.

4.1 Chinese

Let us start with Chinese. Some examples of the SLC_{FC} in Chinese are given in (21) (based on Chui, Fujii & Sugawa 2008).¹¹

- (21) a. Lisi yujian mouren, keshi wo bu zhidao *(shi) shei
L. met someone but I not know Cop who
'Lisi met someone, but I don't know who'
- b. Lisi zuotian zaimougedifang maile dong fangzi,
L. yesterday somewhere bought Cl house
keshi wo bu zhidao (shi) zai-nail
but I not know Cop at-where
'Lisi bought a house yesterday somewhere, but I don't know where'

Much like the Japanese SLC_{FC} , the copula-like element *shi* appears in the Chinese SLC_{FC} . As shown in (21), *shi* is obligatory when the remnant is an argument, while it is optional when the remnant is an adjunct. The presence of *shi* suggests that the Chinese SLC_{FC} is also an instance of pseudo-sluicing.

The copula-like element *shi* is disallowed under control predicates like *dashuan* 'plan' in Chinese, as shown in (22).

- (22) Zhangsan dashuan (*shi) qu Taipei
Z. plan Cop go Taipei
'Zhangsan plans to go to Taipei'

¹⁰ All the Chinese and Korean examples in this section are collected from my informants unless explicitly noted. I thank Johnny H.-T. Cheng, Jungmin Kang, Jong Un Park, and Barry C.-Y. Yang for their help.

¹¹ See also Wei (2004), Chiu (2006), and Wang & Wu (2006), among many others, for discussion of the SLC in Chinese.

Now consider (23) below. In this example, the remnant is an argument *wh*-phrase.

- (23)*Zhangsan yijing jueding [PRO mingtian yao baogao shenme],
 Z. already decide tomorrow will present what
 danshi Lisi hai-meì jueding (shi) shenme
 but L. yet-not decide Cop what
 ‘(intended.) Zhangsan has already decided what to present tomorrow, but
 Lisi hasn’t decided what’

The ungrammaticality of (23) indicates that ellipsis is not allowed, irrespective of whether *shi* is present or not.¹² Recall that the fact that Japanese has the genuine sluicing structure implies that the language has *wh*-movement, at least optionally. The difference between Japanese and Chinese with respect to the possibility of the SLC_{NFC} follows if argument *wh*-phrases do move in the former but stay in-situ in the latter (Huang 1982, Watanabe 1992, Takahashi 1993, Tsai 1994, 1999, to name a few; see also Takita & Yang 2007).¹³

4.2 Korean

Let us now turn to Korean. The SLC_{FC} in Korean obligatorily requires the copula *i-n* between *wh*-remnants and the Q-marker *ci*, as shown in (24) below (based on Nishiyama et al. 1996).¹⁴ In this respect, Korean differs slightly from Japanese.

- (24) John-un nukunka-loputhe pyenci-lul patass-ciman,
 J.-Top someone-from letter-Acc received-though
 na-nun [nuku-loputhe] *(i-n)-ci] molunta
 I-Top who-from Cop-Q know.not
 ‘John received a letter from someone, but I don’t know from whom’

¹² For some speakers, (23) seems to be acceptable. Barry C.-Y. Yang (p.c.) suggested that these speakers may allow the relevant predicates to take finite complements more easily than those who do not accept (23). Since Chinese does not realize finiteness morphologically, it seems to be necessary to ensure that the embedded clauses are indeed non-finite in a more unambiguous way.

¹³ As for *wh*-adjuncts, the situation is more complicated. First, *weishenme* ‘why’ cannot appear in sluicing with non-finite complements, even in English (see Ross 1969). Moreover, Wang & Wu (2006) observe that *zenme* ‘how’ is not possible, either. PP-adjuncts like *zai-nali* ‘where’ seem to be possible, as shown in (i) below. In this case, *shi* is prohibited.

- (i) Zhangsan yao jueding yao zai-nali maile dong fangzi, dan Lisi hai-meì
 Z. already decide will at-where buy Cl house but L. not-yet
 jueding (*shi) zai-nali
 decide Cop at-where

‘Zhangsan has already decided where to buy a house, but Lisi hasn’t yet decided where’

This observation seems to suggest that Chinese has genuine sluicing in SLC_{NFC} with *wh*-PP-adjuncts, implying that they can undergo overt *wh*-movement. The PP-adjuncts, however, pattern with *wh*-arguments in terms of island sensitivities, indicating that they do not undergo *wh*-movement (cf. Huang 1982, Tsai 1994, 1999). I leave this issue for future research.

¹⁴ See, for example, J.-S. Kim (1997), Sohn (2000), M.-K. Park (2001), and B.-S. Park (2005) for discussion of the SLC_{FC} and related constructions in Korean.

A further difference between Japanese and Korean exists when it comes to the SLC_{NFC}. Let us consider the examples in (25).

- (25) a. John-un imi [PRO mwues-ul] ilk-ul-ci]-lul kyelceng-hayss-ta
J.-Top already what-Acc read-Fut-Q-Acc decide-did-Decl
 ‘(lit.) John has already decided [what to read]’
- b. Kulena Bill-un [PRO mwues-ul] ilk-ul-ci]-lul
but B.-Top what-Acc read-Fut-Q-Acc
 kyelceng-ha-ci-mos-hayss-ta
decide-do-Noml-cannot-did-Decl
 ‘(lit.) But Bill cannot decide [what to read]’
- c. *Kulena Bill-un [mwues-ul] Δ (i-n)(-ci)](-lul)
but B.-Top what-Acc Cop-Q-Acc
 kyelceng-ha-ci-mos-hayss-ta
decide-do-Noml-cannot-did-Decl
 ‘(lit.) But Bill cannot decide [what Δ]’

(25a) is the antecedent of (25b-c). (25b) involves no ellipsis. As shown in (25c), it is not possible to construct a sentence similar to the SLC_{NFC}, no matter how we retain the copula, the Q-marker, and the Case-marker of the clausal complement. Thus, it appears that Korean disallows the SLC_{NFC}, on a par with Chinese.

Further examination suggests a different possibility, however. In (26a) below, the anaphor *caki* ‘self’ is contained in an adjunct, and there is no adjunct in (26b).

- (26) a. John-un LGB-ul [_{Adj} caki bang-eyseo] ilkass-ta
J.-Top LGB-Acc self room-Loc read-Decl
 ‘(lit.) John read LGB [in his room]’
- b. ?*Kulena Mary-nun LGB-lul an-ilkass-ta
but M.-Top LGB-Acc Neg-read-Decl
 ‘(intended) But Mary didn’t read LGB in her room’

(26b) does not have the sloppy reading for the missing adjunct (see Oku 1998 for a similar observation in Japanese). Bearing this observation in mind, let us consider (27), where *wh*-infinitival complements are involved.

- (27) a. John-un [PRO mwues-ul] [_{Adj} caki bang-eyseo] ilk-ul-ci]
J.-Top what-Acc self room-Loc read-Fut-Q
 kyelceng-hayss-ta
decide-did-Decl
 ‘(lit.) John has already decided [what to read [in his room]]’
- b. Kulena Mary-nun [mwues-ul] ilk-ci-an-ul-ci] kyelceng-hayss-ta
but M.-Top what-Acc read-CI-Neg-Fut-Q decide-did-Decl
 ‘(intended) But Mary has decided [what not to read [in her room]]’

Surprisingly, (27b) allows the sloppy reading for the missing adjunct. As shown in (28), if the embedded infinitival clauses are not *wh*-questions, the sloppy reading is not allowed, on a par with (26).

- (28) a. John-un [PRO LGB-lul [_{Adj} caki bang-eyseo] ilk-ul-rye-ko]
J.-Top LGB-Acc self room-Loc read-Fut-C
 noryek-hayss-ta
try-did-Decl
 ‘(lit.) John tried [to read LGB [in his room]]’
- b. ?*Kulena Mary-nun [LGB-lul ilk-ci-an-ul-rye-ko] noryek-hayss-ta
but M.-Top LGB-Acc read-CI-Neg-Fut-C try-did-Decl
 ‘(intended) But Mary tried [not to read LGB [in her room]]’

Thus, it seems to be the case that the sloppy reading for missing adjuncts is available only with *wh*-infinitival complements.

I propose that in Korean, a [+*wh*, +*Q*, -finite] C^0 can license TP-deletion, on a par with Japanese, but verbs must move to C^0 before ellipsis takes place. That is, I claim that (27b) is indeed an instance of the SLC_{NFC} , which has a schematic structure like that in (29). In this structure, the *wh*-phase and the verb (together with T^0) have evacuated the TP before deletion applies.

- (29) ... [_{CP} *wh*_i [_{TP} ... [_{VP} ... [_{Adj} *in self's room*] ... *t*_i ... *t*_v] *t*_{TP}] [_C⁰ V-T-C]] ...
-

It follows that missing adjuncts allow the sloppy reading only in *wh*-infinitival complements, because they can be elided together with the TP, and the TP-deletion in question can be licensed only in the *wh*-infinitival clauses whose C^0 head can host the E-feature, but not in the other environments.

Under this proposal, the main difference between Korean and Japanese regarding the SLC_{NFC} is that the former requires verb movement while the latter does not. Recall at this point that in the case of the SLC_{SFC} , the copula is obligatorily required in Korean (see (24)) but is optional in Japanese (see (2)). Suppose that the Q-marker, which is presumably C^0 , has the [+V] feature in Korean, which forces some verbal elements including the copula to support it, while it is specified as [-V] in Japanese. The two differences between Korean and Japanese, that is, the fact that the former requires the copula to appear in the SLC_{FC} and verbs to move in the SLC_{NFC} while the latter does not, can be captured at the same time.

To sum up this section, I have examined SLCs with finite and non-finite complements in Chinese and Korean, reaching the following conclusions: (i) Chinese completely lacks genuine sluicing, suggesting that Chinese argument *wh*-phrases never undergo *wh*-movement; (ii) Korean does have genuine sluicing, on a par with Japanese, and the apparent differences between Korean and Japanese follow from the different specifications of the V-feature of C^0 .

5 Conclusion

In this paper, I argued that Japanese does indeed have genuine sluicing, namely *wh*-movement followed by TP-deletion, based on a novel set of data regarding the sluicing-like construction with non-finite complements. Meanwhile I also illustrated that the sluicing-like construction with finite complements exhibits the properties of copula/cleft constructions. Hence, our results support Takahashi's (1994) idea that Japanese has genuine sluicing, simultaneously maintaining the pseudo-sluicing analysis of the sluicing-like construction with finite complements. Furthermore, the fact that Japanese, which has been treated as a typical "pseudo-sluicing language," does have both types of structures calls for further re-examination of other pseudo-sluicing languages such as Malagasy (Potsdam 2007). Finally, I also examined some cross-linguistic variations of the sluicing-like constructions with non-finite complements, suggesting some possible sources of the observed differences. Although more work seems to be necessary, I believe that this paper provides a step toward a deeper understanding of sluicing in *wh*-in-situ languages and its cross-linguistic variations.

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