

Sprouting: A key to unifying Japanese sluicing

Introduction: There are two subtypes of sluicing, merger (1) and sprouting (2) (Chung et al. 1995).

- (1) A: John-ga nanika-o tabeteru yo. B: Nani-o?
 John-nom something-acc is.eating prt what-acc
 lit. ‘John is eating something.’ ‘What?’
- (2) a. A: John-ga tabeteru yo. B: Nani-o? b. A: John-ga naite-i-ru yo. B: Doko-de?
 John-nom is.eating prt what-acc John-nom cry-be-Pres prt where-at
 ‘John is eating.’ ‘What?’ lit. ‘John is crying.’ ‘Where?’

Merger has an overt correlate like *something* in the antecedent clause, whereas sprouting does not. This paper investigates the structure of matrix sprouting in Japanese such as (2), which has not been studied in literature. The previous studies of matrix sluicing have looked at only merger-type and argue that matrix sluicing is derived differently from embedded sluicing in Japanese (Abe 2015; Hasegawa 2006; Hiraiwa and Ishihara 2012) based on the difference between matrix and embedded sluicing in island sensitivity. However, this study reveals that matrix sprouting is island sensitive and that it is derived by clefts like embedded sluicing. Furthermore, I argue that Japanese sprouting is derived by PF-deletion, not by LF-copying (Chung et al. 1995, 2010; Oku 1998; Saito 2007; Sakamoto 2017) based on the novel finding that the remnant *wh*-phrase in sprouting cannot drop its morphological case.

Previous studies: A cleft-based approach was proposed in the literature (Hiraiwa and Ishihara 2012; Kizu 2005; Kuwabara 1996; Saito 2004) though only for embedded sluicing like (3).

- (3) John-ga nanika-o tabe-ta kedo, boku-wa [nani-o (da) ka] siranai.
 John-nom something-acc eat-past but I-top what-acc cop Q not.know
 ‘John ate something, but I don’t know what.’

Under the cleft approach, sluicing is analyzed as having a structure like (4), where the embedded clause is a cleft and its presupposed CP undergoes deletion. This approach can explain the optionality of copula in (3) because it is also optional in cleft.

- (4) ..., boku-wa [_{CP} John-ga *t_i* tabeta no]_{-ga} nani-o_i (da) ka] siranai.
 I-top John-nom ate C-nom what-acc cop Q not.know
 ‘..., I don’t know what it is that John ate.’

According to Hiraiwa and Ishihara (2002), the pivot of clefts moves out of the presupposed CP. Clefts exhibit island sensitivity as shown in (5) (Fukaya and Hoji 1999; Hiraiwa and Ishihara 2002; Takahashi 1994). Importantly, (6) shows that embedded merger is also sensitive to islands unlike English sluicing.

- (5) *_{[CP1} Hanako-ga [_{CP2} Taro-ga *t* tabeta kara] okotta no]_{-wa} keeki-o (desu).
 Hanako-nom Taro-nom ate because got.angry C-top cake-acc cop.polite
 ‘It is a cake that Hanako got angry because Taro ate.’
- (6) *Hanako-wa Taro-ga nanika-o tabeta kara okotta kedo, [nani-o (da) ka] siranai.
 Hanako-top Taro-nom something-acc ate because got.angry but what-acc cop Q not.know
 ‘Hanako got angry because Taro ate something, but I don’t know what.’

However, Hasegawa (2006) observes that matrix sluicing is not sensitive to islands as shown in (7).

- (7) A: Hanako-wa [Taro-ga nanika-o tabeteru kara] okotteru yo. B: Nani-o?
 Hanako-top Taro-nom something-acc is.eating because is.angry prt what-acc
 ‘Hanako is angry because Taro is eating something.’ ‘What?’

Based on this, she proposes that Japanese matrix sluicing involves overt *wh*-movement and TP deletion like English sluicing, which ameliorates the island-violation (Ross 1969; Merchant 2001). Abe (2015), on the other hand, pursues the in-situ deletion approach, where TP undergoes deletion except for the remnant *wh*-phrase, which carries a focus feature (the remnant does not move out of the TP under his analysis). Their proposals are summarized in (8).

- (8) a. English-type sluicing: [_{CP} What_i [_{TP} Hanako [_{CP} Taro *t_i* ate because] angry] C_Q]
 b. in-situ approach: [_{CP} [_{TP} Hanako [_{CP} Taro WHAT_[FOC] ate because] angry] C_Q]

Matrix sprouting: In contrast to the previous studies, I argue that matrix sprouting as well as merger is derived from clefts. Compare sprouting in (9) with merger in (7). The former exhibits island sensitivity, which is consistent with the cleft approach since clefts exhibit island sensitivity (cf. 5).

- (9) A: Hanako-wa [Taro-ga tabeteru kara] okotteru yo. B: *Nani-o?
 Hanako-top Taro-nom is.eating because is.angry prt what-acc
 ‘Hanako is angry because Taro is eating.’ ‘What?’

Given that English sprouting is also island sensitive in contrast to merger (Chung et al 1995), the unacceptability of (9B) may not be taken as a support for the cleft approach to sprouting.

However, as shown in (10), copula can optionally appear in sprouting. This suggests that matrix sluicing is also derived from clefts because copula is also optional in clefts (cf 4).

- (10) A: John-ga tabeteru yo. B: Nani-o (desu ka)?
 John-nom is.eating prt what-acc cop.polite Q
 ‘John is eating.’ ‘What?’

This is not unique to sprouting. Copula can also appear in merger as shown in (11).

- (11) A: John-ga nanika-o tabeteru yo. B: Nani-o (desu ka)?
 ‘John is eating something.’ ‘What?’

The previous approaches cannot explain the presence of the copula in matrix sluicing.

In addition, both subtypes of sluicing disallow the NPI *sika* as a remnant as shown in (12).

- (12) A: John-wa {dareka-ni-sika / \emptyset } awanakatta yo. B: *Dare-ni-sika? [merger/ sprouting]
 John-top someone-dat-NPI not.met prt who-dat-NPI
 ‘John met (nobody except someone).’ ‘Except who?’

Note that the NPI *sika* also cannot appear in the pivot of cleft sentences (Hiraiwa and Ishihara 2012).

- (13) *[_{CP} John-ga t_i awanakatta no]-wa Mary-ni-sika_i desu. [cleft]
 John-nom not.met C-top Mary-dat-NPI cop
 ‘John met nobody except Mary.’

This is also problematic for the previous approaches since the *wh*-NPI can be licensed in (14) regardless of whether the *wh*-NPI undergoes movement or not.

- (14) {Dare-ni-sika} John-wa {dare-ni-sika} awanakatta no?
 Who-dat-NPI John-top who-dat-NPI not.met Q
 ‘John met nobody except who?’

From the data above, I conclude that matrix sluicing is derived from cleft like embedded sluicing.

One may wonder why the *wh*-remnant in matrix merger (7) is insensitive to islands. I argue that it avoids island-violation with a copula structure like (15). In (15), a null pronoun occupies the subject position and it refers to the overt correlate “*nanika*” in A’s utterance. However, crucially, this structure cannot be used in sprouting in (9) because *pro* ends up being unspecified when there is no overt correlate in A’s utterance.

- (15) *pro* nani-o (desu ka)?
pro what-acc cop Q
 ‘What was it?’

Thus, matrix merger can avoid island-violation with a structure like (15), whereas sprouting cannot.

PF-deletion vs LF-copy: A question that I will address is whether ellipsis in sluicing involves PF-deletion (Merchant 2001) or LF-copying (Chung et al. 1995, 2010). Particularly interesting in this regard is the fact that case-drop is disallowed in sprouting as shown in (16). It has been well-known since Saito (1983) that the same constraint applies to overtly moved items as in (17). If the *wh*-phrase moves, its case cannot be dropped, if it stays in situ, it can be (this also means that case-drop is not incompatible with LF *wh*-movement). Saito (2014) argues that movement itself raises a problem for case drop in (17a), i.e. he attributes the unacceptability of (17a) to a general constraint with movement.

- (16) A: John-ga tabeta yo. ‘John ate.’ B: Nani*(-o)? ‘What?’

- (17) a. Nani*(-o)_i John-ga t_i tabeta no? ‘What did John eat?’
 b. John-ga nani(-o) tabeta no? ‘What did John eat?’

Under the PF-deletion approach, the *wh*-remnant has moved in overt syntax so that it is possible to attribute the impossibility of case drop in sprouting to a general constraint on overt movement, as in Saito’s analysis. However, it is difficult to explain the impossibility of case drop in sprouting under the LF copy approach. Since this approach assumes that there is no relevant internal structure in overt syntax, we cannot attribute it to the general constraint on overt movement, as in Saito’s approach. It appears that in order to account for (16) under the LF copy approach, one would have to assume some LF operation which is sensitive to the presence/absence of case markers, which is undesirable given that morphological cases like *-o* are semantically vacuous. Thus, the impossibility of case-drop in sprouting provides support for PF-deletion approach.

Implication: Under the cleft approach, sluicing in Japanese is derived by CP-deletion, not by TP-deletion. This is a desirable result given that it has been independently shown that argument ellipsis, an ellipsis process which targets arguments and is allowed in Japanese (Oku 1998; Saito 2007), can target CPs (Shinohara 2006). Thus, the cleft approach opens the possibility to unify sluicing with argument ellipsis, a possibility which will be discussed in more detail in the talk.