

## Sprouting: A key to unifying Japanese sluicing

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**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?’ ‘John is crying.’ ‘Where?’

Merger has an overt correlate like *something* in the antecedent clause, while sprouting does not. This paper investigates the structure of matrix sprouting in Japanese, which has not been studied in literature. The previous studies of matrix sluicing have looked at only merger-type sluicing and argue that matrix sluicing is derived differently from embedded sluicing in Japanese because matrix sluicing is island-insensitive in contrast to embedded sluicing (Abe 2015; Hasegawa 2006). However, this study shows that matrix sprouting is island-sensitive, and 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 such as (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[<sub>CP</sub> John-ga <sub>t<sub>i</sub></sub> tabeta no]<sub>-ga</sub> nani-o<sub>i</sub> (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. (5) illustrates that clefts exhibit island sensitivity (Fukaya and Hoji 1999; Hiraiwa and Ishihara 2002; Takahashi 1994). Importantly, embedded sluicing is also sensitive to islands as shown in (6).

(5) \*<sub>CP1</sub>Hanako-ga [<sub>CP2</sub> Taro-ga <sub>t</sub> 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 argues that Japanese matrix sluicing is derived in the same way as English sluicing because English sluicing ameliorates the island-violation as can be seen in (8) (Merchant 2001).

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

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. Under his approach, the island insensitivity in (7) is expected since the remnant does not move out of the adjunct-island. Their proposals are summarized in (9).

(9) a. English-type sluicing: [<sub>CP</sub> What<sub>i</sub> [<sub>TP</sub> Hanako [<sub>CP</sub> Taro <sub>t<sub>i</sub></sub> ate because]angry] C<sub>Q</sub>]  
 b. in-situ approach: [<sub>CP</sub> [<sub>TP</sub> Hanako [<sub>CP</sub> Taro WHAT<sub>[FOC]</sub> ate because]angry] C<sub>Q</sub>]

**Matrix sprouting:** In contrast to the previous studies, I argue that matrix sprouting and even merger is derived from clefts. Compare sprouting in (10) with merger in (7). The former exhibits island sensitivity, which is consistent with the cleft approach since cleft is also island sensitive (cf. 5).

(10) 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?’

Moreover, as shown in (11), copula can optionally appear in sprouting. This suggests that matrix sprouting is also derived from clefts because copula is also optional in clefts (cf. 4).

(11) A: John-ga tabeteru yo. B:Nani-o (desu ka)? [sprouting]  
 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 matrix merger as shown in (12).

(12) A: John-ga nanika-o tabeteru yo. B:Nani-o (desu ka)? [merger]  
 ‘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 (13).

(13) 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).

(14) \*[<sub>CP</sub> John-ga  $t_i$  awanakatta no]-wa Mary-ni-sika<sub>i</sub> 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 non-cleft sentences like (15) regardless of whether it undergoes movement or not.

(15) {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 matrix merger can avoid island-violation with a copula structure like (16). In (16), a null pronoun occupies the subject position and it refers to the overt correlate “*nanika*” in A’s utterance. However, crucially, when there is no overt correlate in A’s utterance like sprouting, the structure in (16) cannot be used because *pro* ends up being unspecified. (17) illustrates this point with an overt pronoun. The unacceptability of (17B) shows that the overt pronoun in (17B) cannot refer to the implicit object in the antecedent clause in (17A).

(16) *pro* nani-o? (17) A: Taro-ga tabeteru yo. B:\*Sore-wa nani-o?  
*pro* what-acc Taro-nom is.eating prt it-top what-acc  
 ‘What was it?’ ‘Taro is eating.’ ‘What is it?’

Thus, matrix merger can avoid island-violation with a structure like (16), 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 (18).

(18) A: John-ga tabeta. B:Nani\*(-o)?  
 John-nom ate what-acc

It has been well-known since Saito (1983) that the same constraint applies to overtly moved items as in (19). If the *wh*-phrase moves, its case cannot be dropped (19a), if it stays in situ, it can be (19b). Saito (2014) argues that movement itself raises a problem for case drop in (19a), i.e. he attributes the unacceptability of (19a) to a general constraint on movement.

(19) a. Nani\*(-o)<sub>i</sub> John-ga  $t_i$  tabeta no? b. John-ga nani(-o) tabeta no?  
 what-acc John-nom ate Q John-nom what-acc ate Q’

Under the LF copy approach, it is difficult to explain the impossibility of case drop in sprouting. Since this approach assumes that the *wh*-remnant is base-generated and there is no relevant internal structure in the ellipsis site in overt syntax, we cannot attribute the unacceptability in (18B) to the general constraint on overt movement, as in Saito’s approach. It appears that in order to account for (18) 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. On the other hand, 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 the general constraint on overt movement, as in Saito’s analysis. Thus, the impossibility of case-drop in sprouting favors the PF-deletion approach over the LF copy approach.

**Implication:** The current study has shown that matrix sluicing is derived from cleft like embedded sluicing. Under the cleft approach to sluicing, sluicing in Japanese involves CP-deletion, not 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.



We argue that for (5), the only possible source is an isomorphic wh-question (6a) followed by NP-ellipsis (NPE), as shown in (6b). Note that in Hungarian, number and case marking in non-elliptical sentences only shows up on the noun, yet they obligatorily occur on the last remnant of the elliptical site (i.e. the adjective) when NPE applies (Saab & Lipták, 2016):

- (6) a. ...milyen magas lány-ok-at (ismer)?      b. ...milyen magas-ak-at ∅ (ismer)?  
       how tall girl-PL-ACC he.knows            how tall-PL-ACC he.knows  
       (lit.) ‘How tall girls does he know?’      (lit.) ‘How tall (girls) does he know?’  
       ‘... how tall are the girls that he knows.’    ‘... how tall are the girls that he knows.’

Further evidence for this comes from the fact that (6a) is perfectly grammatical (even without sluicing), making it unnecessary to posit a derivation that involves a violation of the Left Branch Condition.

**4. APPARENT CASE MISMATCHES ARE NOT ELLIPTICAL.** We argue that cases like (1) arise from the combination of a null subject (Dalmi, 2014) and a null copula, giving the illusion of an ellipsis configuration:

- (7) J. ismer néhány magas lány-t, de nem tudom milyen magas-ak *pro* NULL-COPULA.  
       J knows some tall girl-ACC, but not know.I how tall-PL

Further support for our analysis comes from structures in which the copula needs to be spelled out. Hungarian copula drop is known to be restricted to 3rd person and present tense (see i.a. É. Kiss, 2002). Thus, as can be seen in e.g. adjectival questions, copulas are absent in the present tense (8a), but obligatory in the past tense (8b) and other persons (we omit these latter examples because of space restrictions):

- (8) a. Milyen magas-ak (\***van-nak**) a lány-ok?      b. Milyen magas-ak \*(**volt-ak**) a lány-ok?  
       how tall-PL be.PRES-PL the girl-PL            how tall-PL be.PAST-PL the girl-PL  
       ‘How tall are the girls?’                            ‘How tall were the girls?’

The presence/absence of the copula in the non-elliptical wh-question determines whether apparent adjectival sluices without case-matching are allowed. This correctly predicts that patterns change when a past reading is enforced: either accusative marking (9a) or the copula (9b) is obligatory (contrasting with 1):

- (9) a. J. megölt néhány magas lány-t 1945-ben, de nem tudom milyen magas-ak-**at**.  
       J killed some tall girl-ACC 1945-INESSIVE, but not know.I how tall-PL-ACC  
       b. J. megölt néhány magas lány-t 1945-ben, de nem tudom milyen magas-ak \*(**voltak**).  
       J killed some tall girl-ACC 1945-INESS., but not know.I how tall-PL be.PAST.PL  
       ‘John killed some tall girls in 1945 but I don’t know how tall.’

Similarly, a null copula is not allowed in some other cases such as possessed locatives (10a). Crucially, this correlates with the availability of the *pseudosluicing* configuration, which is not possible in this context (10b). Null copulas in *pseudosluicing* configurations are only allowed if they are allowed in regular questions:

- (10) a. Hol \*(**van**) János ház-a?  
       where is John house-POSS ‘Where is John’s house?’  
       b. János ház-á-hoz megyünk, de nem tudom hol \*(**van**).  
       John house-POSS-ALL we.go, but not know.I where is  
       ‘We’re going to John’s house, but I don’t know where it is.’

**5. CONCLUSIONS.** In this paper we show that **non-isomorphic sources are not possible in Hungarian ellipsis**. (Apparent) adjectival sluices can arise from **two different configurations**, yielding different number and case marking. On the one hand, true cases of clausal ellipsis arise only from isomorphic wh-questions (see 5 and 6b). These show case-matching and number/case marking on the adjective, as is predicted by properties of NPE in Hungarian. On the other hand, apparent mismatching sluices are not in fact derived from ellipsis, but from the combination of two independent properties of the language: pro drop and copula drop (see 7). Thus our proposal dispenses with the need to posit two different sources of ellipsis within the same language, and contributes to the discussion about the structure inside the ellipsis site, showing that copular sources cannot be sources for ellipsis.

**(Im)possible constituent orders: Nominal, numeral, classifier and ordinal marker**

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**Observation:** Our typological survey shows that a nominal (N) cannot intervene between a numeral (#) and an ordinal marker (Ord). The main observation is summarized in (1). There are six mathematically possible combinations of three items (factorial  $3 = 3 \times 2 \times 1 = 6$ ). However, the last two combinations in (1) are not attested in our sample.

(1)

	Order	Languages
✓	#-ORD-N	English, Italian, Spanish, English, Italian, Spanish, Greek, Turkish, Breton, Hindi, Russian, Serbian, Kana, Lezgian, Dutch, Basque, Itzaj, Boko, Eastern Khanty, Bilua, Meithei, Kashmiri, Welsh, Turkish, Mam
✓	N-#-ORD	Wutun (mixed Mandarin-Bonan), Sumerian (Isolate), Kove (Austronesian), Koromfe, Kurmanji, Persian
✓	N-ORD-#	Abui (Papuan), Amanuban, Sawu, Crow, Gikuyu, Tobelo, Western Pantar, Sawila, Helong, Choctaw, Indonesian
✓	ORD-#-N	Belep (Austronesian), Ahan (Niger-Congo, Yoruboid)
*	#-N-ORD	None
*	ORD-N-#	None

Importantly, the last two combinations correspond to Greenberg's (1972) unattested constituent orders of N, #, and Cls (classifier) (i.e. \*#-N-CL and \*CL-N-#).

**Previous analysis:** Her (2017) argues that Greenberg's (1972) unattested constituent orders can be captured by assuming that Cls and # form a constituent, before combining with N. However, this assumption seems to be incompatible with other data about classifier constructions. First of all, classifiers can appear without a numeral in some classifier languages (Simpson 2005). Moreover, classifiers in Vietnamese can be elided along with the modified noun phrase while leaving a numeral, as shown in (2b).

- (2) a. *Nguyễn có năm con trâu, còn Khanh có [ba con trâu] .*  
 Nguyen have five CLS buffaloes, but Khanh have three CLS buffaloes  
 'Nguyễn has five buffaloes, but Khanh has three buffaloes' [Vietnamese]
- b. *Nguyễn có năm con trâu, còn Khanh có [ba Δ] .*  
 Nguyen have five CLS buffaloes, but Khanh have three  
 'Nguyễn has five buffaloes, but Khanh has three buffaloes' [Vietnamese]

The acceptability of (2b) is not expected if # and Cls form a constituent, excluding N. Based on the acceptability of (2b), Nguyen (2004) argues that the numeral projects its own projection taking the classifier phrase (ClsP) as its complement. If we adopt Her's (2017) assumption about constituency of # and Cls, we will face a problem regarding the nominal ellipsis in Vietnamese. On the other hand, if we adopt Nguyen's (2004) analysis, a constituent consisting of N and Cls should be available, and we fail to derive Greenberg's observation about constituent order of N, # and Cls. The same is true for our observation in (1).

**Proposal:** I argue that our observation in (1) and Greenberg’s observation about constituent order of N, # and Cls can be captured by assuming a modified version of Sheehan et.al. (2017) analysis. Following previous analyses, I make the assumptions in (3). Importantly, I adopt the anti-locality condition proposed by Abels (2003) (see also Babaljik & Thráinsson (1998)).

- (3) a. all (relevant) movements move a subtree containing  $\sqrt{N}$ ;  
 b. all movements target a c-commanding position;  
 c. all movements are to the left;  
 d. a complement phrase cannot recombine with a projection of its selecting head.

As for the underlying structure of numeral classifier constructions, I propose that there are four possibilities, as illustrated in (4).

- (4) a.  $[_{QP} Q [_{nP} \#P [_{n'} [Cls]_n [_{\sqrt{NP}} \sqrt{N} ]]]]$                       b.  $[_{QP} \#P [Q' Q [_{nP} [Cls]_n [_{\sqrt{NP}} \sqrt{N} ]]]]$   
 c.  $[_{QP} [Cls]_Q [_{nP} \#P [_{n'} n [_{\sqrt{NP}} \sqrt{N} ]]]]$                       d.  $[_{QP} \#P [Q' [Cls]_Q [_{nP} n [_{\sqrt{NP}} \sqrt{N} ]]]]$

Following Sheehan et.al. (2017) suggestion, I assume here that classifiers can occur in two different positions. In (4a,b), the classifier is in the head of nP. In (4c,d), the classifier appears in the head of QP. I also assume that numerals can occur in Spec,QP or in Spec,nP. Without movement, these structures result in the constituent order #-Cls-N and Cls-#-N. Moreover, the anti-locality condition in (3d) rules out the unattested constituent orders (i.e. #-N-Cls and Cls-N-#). The anti-locality condition allows for NP-movement to Spec,QP, and the resulting structures will be N-#-Cls and N-Cls-#. Importantly, our observation in (1) that ordinal markers behave like classifiers with respect to their possible constituent orders can be accounted for if I assume that ordinal markers can appear in the same position as classifiers.

**Ordinal markers in classifier languages:** A question will immediately arise concerning ordinal numerals in classifier languages. I found five combinations of N, #, Ord, and Cls, as in (5).

(5)

	Order	Languages
✓	#-Cls-Ord-N	Japanese, Korean, Chontal, Chol
✓	Ord-#-Cls-N	Chinese, Xong
✓	N-Cls-Ord-#	Thai, Abun
✓	N-Ord-#-Cls	Mokilese
✓	N-Cls-#-Ord	Atong

These attested constituent orders can be captured under the current analysis, in which there are two available positions for ordinal markers and classifiers. The attested combinations in (5) can be derived from one of the following underlying structures.

- (6) a.  $[_{QP} [Ord]_Q [_{nP} \#P [_{n'} [Cls]_n [_{\sqrt{NP}} \sqrt{N} ]]]]$                       b.  $[_{QP} \#P [Q' [Ord]_Q [_{nP} [Cls]_n [_{\sqrt{NP}} \sqrt{N} ]]]]$   
 c.  $[_{QP} [Cls]_Q [_{nP} \#P [_{n'} [Ord]_n [_{\sqrt{NP}} \sqrt{N} ]]]]$                       d.  $[_{QP} \#P [Q' [Cls]_Q [_{nP} [Ord]_n [_{\sqrt{NP}} \sqrt{N} ]]]]$

**Selected references:** Greenberg. 1972. Numeral classifiers and substantival number: problems in the genesis of a linguistic type. *Working Papers on Language Universals* 9. Sheehan et al. *The Final-Over- Final Condition: A syntactic universal*. Cambridge, MA: MIT Press.

## Pseudo-slucing in Turkish: A *pro*-form Analysis

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Pseudo-slucing is a type of sluicing attested in *wh*-in-situ languages (Kizu, 1998; Merchant, 1998). I argue that Turkish has both genuine sluicing (1) and pseudo-slucing (2).

- (1) Cem-Ø biri-**nden** kaç-ıyor-du ama KİM-DEN(-Ø-di) bil-mi-yor-um.  
Cem-Nom s.o-**Abl** escape-Prs-Pst.3sg but who-**Abl**(-Cop-Pst) know-Neg-Prs-1sg  
'Cem was escaping from someone, but I don't know who (Cem was escaping from).'
- (2) Cem-Ø biri-**nden** kaç-ıyor-du ama KİM-Ø-Ø(-di) bil-mi-yor-um.  
Cem-Nom s.o-**Abl** escape-Prs-Pst.3sg but who-**Nom**-Cop(-Pst) know-Neg-Prs-1sg  
'Cem was escaping from someone, but I don't know who (that was).'

Even though certain TAM (Tense-Aspect-Modality) markers can attach to the remnant in both (1) and (2), these two are fundamentally different. İnce (2006) investigates pseudo-slucing in Turkish and considers examples as in (1) as pseudo-slucing without discussing structures like (2). Contra İnce, I propose that all structures where *wh*-remnant carries the same case as its correlate should be categorized as genuine sluicing (1), whereas the lack of case connectivity is the indication of pseudo-slucing (2). I focus on the structure of pseudo-slucing in Turkish (as in (2)) in this study<sup>1</sup> and claim that it can be best accounted for by a *pro*-form analysis as proposed in Adams (2004) and Adams and Tomioka (2012) for Chinese.

**Properties of Pseudo-slucing in Turkish.** Pseudo-slucing in Turkish differs from sluicing structures. First, the remnant exhibits case connectivity in sluicing (1), yet the *wh*-word is always nominative in pseudo-slucing as in (2) and further illustrated with a dative correlate in (3).

- (3) Cem-Ø biri-**ne** kız-mış ama KİM-Ø-Ø sor-ma-dı-m.  
Cem-Nom s.o-**Dat** get.angry-Ev.3sg but who-**Nom**-Cop ask-Neg-Pst-1sg  
'Cem got angry at someone, but I didn't ask who (that is).'

Another difference is observed with sprouting. Sluicing structures allow sprouting (4-a), but it is ungrammatical with pseudo-slucing (4-b).

- (4) a. Ali-Ø aşık ol-muş ama Ece-Ø KİM-E bil-mi-yor.  
Ali-Nom love be-Ev.3sg but Ece-Nom who-DAT know-Neg-Prs.3sg  
'Ali fell in love, but Ece doesn't know with who.'
- b. \*Ali-Ø aşık ol-muş ama Ece-Ø KİM-Ø-Ø bil-mi-yor.  
Ali-Nom love be-Ev.3sg but Ece-Nom who-Nom-Cop know-Neg-Prs.3sg  
Int: 'Ali fell in love, but Ece doesn't know with who.'

**Pseudo-slucing ≠ Reduced Clefts.** Pseudo-slucing in Japanese, a structurally similar language to Turkish, is analyzed as reduced cleft (Kizu, 1998; Merchant, 1998, Hiraiwa and Ishihara, 2012). One can argue that a cleft analysis also applies to Turkish. The pivots in clefts are always nominative in Turkish (5) like the *wh*-word in pseudo-slucing (2, 3), and both are followed by a copula<sup>2</sup> and (optional) TAM markers.

- (5) Pelin-in e<sub>1</sub> hediye al-dığ-ı Ece-Ø<sub>1</sub>-y-di.  
Pelin-Gen present buy-Rel-Poss Ece-**Nom**-Cop-Pst.3sg  
'That was Ece who Pelin bought a present for.'

Accordingly, a reduced cleft analysis of pseudo-slucing (2) would look like (6).

- (6) Cem-Ø biri-**nden** kaç-ıyor-du ama [<sub>CP</sub> Cem-in e<sub>1</sub> kaç-tığ-ı] KİM<sub>1</sub>-Ø-Ø(-di)  
Cem-Nom s.o-**Abl** escape-Prs-Pst.3sg but who-**Nom**-Cop(-Pst)  
hatırla-mı-yor-um.  
remember-Neg-Prs-1sg  
'Cem was escaping from someone, but I don't remember who (that was).'

<sup>1</sup> Discussion of the genuine sluicing as in (2) is beyond the scope of this study. See İnce (2009), Şener (2013) and Palaz (to appear) for different accounts of sluicing in Turkish.

<sup>2</sup> The copula *-i* is realized as either *-y* or *-Ø* when it is a suffix in Turkish depending on the preceding sound (Keleşir, 2007).

However, I argue that pseudo-sludging cannot be analyzed as reduced clefts in Turkish as pseudo-sludging is not island sensitive (7) whereas clefts are (8).

- (7) Cem-Ø Pelin-in biri-nden hoşlan-dığ-ı söylentisi-ni duy-muş ama KİM-Ø-Ø  
Cem-Nom Pelin-Gen s.o-Abl like-Nmlz-Poss rumor-Acc hear-Ev.3sg but who-Nom-Cop  
bil-mi-yor-um.

know-Neg-Prs-1sg

‘Cem heard the rumor that Pelin likes someone, but I don’t know who (that is).’

- (8) \* Cem-in Pelin-in  $e_1$  hoşlan-dığ-ı söylentisi-ni duy-duğ-u KİM<sub>1</sub>-Ø-Ø?  
Cem-Gen Pelin-Gen like-Nmlz-Poss rumor-Acc hear-Rel-Poss who-Nom-Cop

Int: ‘Who is it that Cem heard the rumor that Pelin likes?’

Impossibility of sprouting (4-b) would also need further stipulation since a cleft analysis cannot rule it out; pronouncing the presuppositional part of a cleft makes sprouting grammatical.

- (9) Ali-Ø aşık ol-muş ama Ece-Ø [<sub>CP</sub> Ali-nin  $e_1$  aşık ol-duğ-u] KİM<sub>1</sub>-Ø-Ø  
Ali-Nom love be-Ev.3sg but Ece-Nom Ali-Gen love be-Rel-Poss who-Nom-Cop  
bil-mi-yor.

know-Neg-Prs.3sg

‘Ali fell in love, but Ece doesn’t know who is it that Ali fell in love with.’

**Proposal.** I suggest that a *pro*-form analysis can account for the Turkish facts without stipulation. Pseudo-sludging in Turkish behaves more like Chinese in that sprouting is ungrammatical and there is no island effect. Adams (2004) and Adams and Tomioka (2012) suggest *pro*-form analysis for Chinese for similar reasons, and I argue that Turkish facts also follow naturally if we adopt their analysis as opposed to reduced clefts. Such an analysis assumes the existence of a null pronoun which is coreferential with the indefinite in the antecedent clause (10-a). Note that *pro* can also be phonologically realized as in (10-b).

- (10) a. Cem-Ø biri-nden<sub>1</sub> kaç-ıyor-du ama  $pro_1$  KİM-Ø-Ø(-di) bil-mi-yor-um.  
Cem-Nom s.o-Abl escape-Prs-Pst.3sg but who-Nom-Cop(-Pst) know-Neg-Prs-1sg  
‘Cem was escaping from someone, but I don’t know who (that was).’

- b. Cem-Ø biri-nden<sub>1</sub> kaç-ıyor-du ama  $o_1$  KİM-Ø-Ø(-di) bil-mi-yor-um.  
Cem-Nom s.o-Abl escape-Prs-Pst.3sg but that who-Nom-Cop(-Pst) know-Neg-Prs-1sg  
‘Cem was escaping from someone, but I don’t know who (that was).’

Island insensitivity of pseudo-sludging (7) no longer requires assuming extra mechanisms in this approach as nothing moves out of the island. As for the ungrammaticality of sprouting, it is independently shown that *pro* or an overt pronoun cannot be coreferential with an implicit argument in the previous clause (cf. Adams, 2004; Adams and Tomioka, 2012). This is true for Turkish as well.

- (11) Ali-Ø aşık ol-muş. \* O / *pro* doktor-Ø-muş.  
Ali-Nom love be-Ev.3sg. She/*pro* doctor-Cop-Ev.3sg  
Int: ‘Ali fell in love. She is a doctor.’

Hence, it is truly predicted that sprouting will be ungrammatical with pseudo-sludging as in (4-b), repeated below for convenience with *pro* and an overt pronoun.

- (12) \*Ali-Ø aşık ol-muş ama Ece-Ø *pro* / o KİM-Ø-Ø bil-mi-yor.  
Ali-Nom love be-Ev.3sg but Ece-Nom *pro* / that who-Nom-Cop know-Neg-Prs.3sg  
Int: ‘Ali fell in love, but Ece doesn’t know with who.’

**Implications.** I have discussed that a *pro*-form analysis can naturally explain the facts in Turkish as it is argued to do so in Chinese. This suggests that pseudo-sludging cannot be captured by a reduced cleft analysis in all *wh*-in-situ/*pro*-drop languages. Further research is needed to examine what strategy other languages use, and why different strategies are implemented in structurally similar languages.

**Selected References.** Adams, P. W. and S. Tomioka (2012). Sluicing in Mandarin Chinese: An instance of pseudo-sludging. In J. Merchant and A. Simpson (eds.), *Sluicing: Cross-linguistic perspectives*, pp. 219-247., Ince, A. (2006). Pseudo-sludging in Turkish. In N. Kazanina, U. Minai, P.J. Monahan and H.L. Taylor (eds.), *University of Maryland Department of Linguistics Working Papers in Linguistics (UMWPIl)*, Volume XIV, pp. 111-126.