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Hee-Don Ahn & Sungeun Cho. 2011. Notes on the Absence of CP Ellipsis in Japanese and Korean. Studies in Modern Grammar This paper explores absence or presence of CP ellipsis in Japanese and Korean. Saito (2007) argues that in Japanese and Korean, arguments such as DPs and CPs can undergo ellipsis unlike in English since agreement is optional in these languages. He further puts forward a LF copying analysis of argument ellipsis. A couple of puzzles, however, need to be resolved. First, no extraction out of CP ellipsis should be explained. Second, the fact that CP ellipsis is sensitive to selection of matrix verb should be explained. We suggest that apparent DP and CP ellipsis in Korean are all instances of null pro-X, the so-called pro. We reanalyze the apparent instances of DP and CP ellipsis discussed in Saito (2007), and propose that they indeed involve deep anaphora pro but not surface anaphora ellipsis.

Key words: CP ellipsis, pro, LF copying, deep anaphora, surface anaphora

1. Introduction

Some previous literature on ellipsis argues that Japanese and Korean allow argument ellipsis (such as DP and CP), as shown in (2) and (4) while English doesn’t, as shown in (1) and (3).

(1) a. John brought [DP his friend].  
   b. *But Bill did not bring ___.  

(2) a. Taroo-wa [DP zibun-no tomodati-o] turetekita.  
   T.-Top self-Gen friend-Acc brought

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‘Taroo brought his friend.’
b. Demo Hanako-wa ____ turete konakatta.
   but H.-Top brought-not
   ‘But Hanako did not bring her friend.’

(3) *John says [CP that she is a genius], but Bill doesn’t think__.
(4) a. Hanako-wa [CP zibun-no teian-ga saiyoosareu to]
   H.-Top self-Gen proposal-Nom accepted-be that
   omotte iru ga        Taroo-wa ____ omotte inai.
         think        though T.-Top         think not
   ‘Hanako thinks that her proposal will be accepted, but
   Taroo does not think that his/her proposal will be
   accepted.’
b. Taroo-ga [CP Hanako-ga hon-o katta to] itta si,
   T.-Nom H.-Nom book-Acc bought that said and
   Ziroo-mo ____ itta.
   Z.-too said
   ‘Taroo said that Hanako bought a book, and Ziroo also said that
   she bought a book.’

According to Saito (2007), the absence and presence of DP & CP argument ellipsis in English and Japanese is due to Kuroda’s (1988) agreement parameter which basically says that agreement is obligatory in English but not in Japanese.

He further puts forward a LF copying analysis of argument ellipsis. Under Saito’s (2007) LF copying analysis of argument ellipsis, what is copied at the ellipsis sites is an LF object in the previous discourse. In English, where agreement is obligatory, the DP ‘his friend’ has agreed with its v in (1a) and its uninterpretable Case feature is deleted. Hence, if the LF object ‘his friend’ is copied onto ellipsis site in (1b), v is left with its uninterpretable Case and phi-features in (1b) and the derivation crashes. In Japanese, however, the corresponding derivation converges since Japanese lacks obligatory agreement, that is, v in Japanese need not have uninterpretable Case and phi-features to check out after LF-copying.

Saito (2007) further assumes that CPs in English participate in agreement in contrast to CPs in Japanese. Hence, presence or absence of agreement licensing accounts for the contrast of CP ellipsis in (3) and (4).
on a par with DP ellipsis in (1) and (2). In other words, in English, not only DPs but also CPs cannot be elided because agreement is obligatory. In Japanese, as he argues, agreement is optional, so not only DPs but also CPs can be elided.

Saito's (2007) argument, however, leaves us several empirical and conceptual puzzles which we will clarify and resolve in this paper. This paper is organized as follows. Section 2 explores the puzzles related to no scrambling out of CP ellipsis and selection restriction in CP ellipsis in Japanese and Korean. Section 3 resolves the puzzles under Ahn & Cho's (2009, 2010b) analyses. Section 4 discusses remaining puzzles such as sloppy interpretation and pro–CP that refers to a clause. Concluding remarks are presented in Section 5.

2. Puzzles

2.1 Puzzle 1: No scrambling out of CP ellipsis

Shinohara (2006) observes that CP ellipsis becomes illicit when a phrase is scrambled out of the relevant CP, as shown in (5).

(5) *Sono hon-oi Taroo-wa [CP Hanako-ga ti kata to] itta si,  
That book-Acc T.-Top H.-Nom bought that said and  
sono hon-o Ziroo-mo _______itta.  
that book-Acc Z-also said  
'Taroo said that Hanako bought that book, and Ziroo also said that she bought that book.'

As pointed out by Shinohara (2006), if argument ellipsis is derived by PF deletion, the ill-formedness of (5) is hard to account for. Consider the following representation:

(6) * Sono hon-oi Taroo-wa [CP Hanako-gati kata to] itta si.,  
That book-Acc T.-Top H.-Nom bought that said and  
that book-Acc Z-also H.-Nom bought that said  
'Taroo said that Hanako bought that book, and Ziroo also said that she bought that book.'
In (6), the PF deletion operation applies to a CP that is identical to its antecedent. Note that the presence of a trace within the CP isn’t the cause of the ill-formedness as shown in well-known English sluicing (7).

(7) He bought something, but I don’t know what(= \text{CP} \text{ what, TP he bought t})]

Hence, Shinohara indicates that the ill-formedness of (5) is puzzling under the PF deletion analysis. Saito (2007) further shows that an LF copying analysis can account for the ill-formedness of (5). Saito assumes that scrambling is subject to total reconstruction, and hence the antecedent clause of (5) has the LF representation like (8).

(8) Taroo-wa \text{CP} Hanako-ga sono hon-o kata to \text{CP} itta
T-Top H-Nom that book-Acc bought that said
‘Taroo said that Hanako bought that book.’

He further indicates that when the embedded CP is copied into the ellipsis site of (5), the second conjunct will be as in (9).

(9) *Sono hon-o Ziroo-mo \text{CP} Hanako-ga sono hon-o kata to \text{CP} itta.
that book-Acc Z-also H.-Nom that book-Acc said that said
‘Taroo said that Hanako bought that book.’

Saito finally claims that (9) is ungrammatical as it contains two “instances” of the embedded object. The gist of his analysis concerning the ungrammaticality of scrambling out of CP ellipsis site hinges on the ill-formed LF representation of (9) after LF copying of CP from the previous sentence.

This analysis, however, has non-trivial conceptual problems. First of all, the definition of “instances” as termed in Saito (2007) is obscure. The representation of (9) seems to be formally identical to two copies of one lexical item under the copy theory of movement. We are not sure why one instance of the embedded object cannot be deleted and the other can be properly interpreted in a similar way to legitimate chains. In other words, in LF representation (9), scrambled \textit{sono hon-o} and in-situ \textit{sono}
kon-o seem to form a legitimate A’-chain under standard copy theory of movement.

2.2 Puzzle 2: Variation of CP ellipsis in Korean

CP ellipsis in Korean seems to be sensitive to selection of matrix verbs. When the matrix verb is sayngkakha- ‘think’, CP ellipsis doesn’t seem to be allowed, as shown in (10B).¹

    I-Top Y.-Nom T.-Acc love-Pres-Dec-C think-Pres-Dec
    'I think Yenghi loves Toli.'
B: *na-to __ sayngkakha-n-ta. 
    I-also think-Pres-Dec
    'Lit. I also think.'

In contrast, when the matrix verb is mit- ‘believe’, CP ellipsis seems to be allowed, as shown in (11B).²

¹ chwuchukha- 'guess' seems to be another type of verb that doesn't allow apparent CP ellipsis, as seen in the following:
    I-Top he-Nom yesterday have come-may-Dec-C guess-Pres-Dec
    'I guess he may have come yesterday.'
B: *na-to __ chwuchukha-n-ta.
    I-also guess-Pres-Dec
    'Lit. I also guess.'

² malha- 'say' is another kind that allows apparent CP ellipsis:
    M.-Top Y.-Nom T.-Acc love-Pres-Dec-C say-Past-Dec
    'Mary said Yenghi loves Toli.'
B: John-to __ malhay-ss-ta.
    J.-also say-Past-Dec
    'Lit. John also said.'
   I-Top   Y.-Nom   T.-Acc   love-Pres-Dec-C   believe-Pres-Dec
   'I believe Yenghi loves Toli.'
B: na-to __ mit-nun-ta.
   I-also   believe-Pres-Dec
   'Lit. I also believe.'

Then, the puzzle is why CP ellipsis is possible in (10), but not in (11). Note in particular that under LF copying argument ellipsis or ellipsis analysis in general, it is not clear how the idiosyncratic property of verb selection concerning apparent CP ellipsis phenomena can be accommodated.

3. Toward an explanation: Pro analysis

We argue that both English and Korean do not allow DP and CP ellipsis altogether and show that absence of CP and DP ellipsis can be accounted for in both languages in a unified way.

We propose that ellipsis of DP and CP is not possible since they are not complements of functional heads such as C, T, and D which can bear an [E] feature (cf. Merchant 2001, Ahn & Cho 2009, 2010b). Since DP and CP are arguably complements of a theta-role assigning lexical category like V (or v) which cannot have an [E] feature, DP or CP ellipsis cannot occur. Here we only treat CP ellipsis (see Ahn & Cho 2011 for detailed discussion of pro analysis of DP ellipsis).

(12) *

Yenghi-ka Toli-lul salangha-n-ta-ko  Ellipsis is barred
The ellipsis feature [E] instructs the post-PF phonological interpretative component not to parse its complement. Since lexical V/v doesn't have the [E] feature by assumption, CP ellipsis isn't possible, hence (11B) repeated here as (13B) is ruled out correctly.

   I-Top Y.-Nom T.-Acc love-Pres-Dec-C think-Pres-Dec  
   'I think Yenghi loves Toli.'
B: *na-to __ sayngkakha-n-ta.  
   I-also think-Pres-Dec  
   'Lit. I also think.'

We further suggest that apparent DP and CP ellipsis in Korean are all instances of null pro-X, the so-called pro. We reanalyze the apparent instances of DP and CP ellipsis discussed in Saito (2007), and propose that they indeed involve pro but not ellipsis. In what follows, we also resolve the major puzzles that we have discussed in Section 2.

3.1 Revisit Puzzle 2: Variation of CP ellipsis in Korean

Consider (11) repeated here as (14):

   I-Top Y.-Nom T.-Acc love-Pres-Dec-C believe-Pres-Dec  
   'I believe Yenghi loves Toli.'
B: na-to __ mit-nun-ta.  
   I-also believe-Pres-Dec  
   'Lit. I also believe.'
Ahn & Cho (2009, 2010b) argue that the missing constituent is in fact a pro, but not a CP complement. Note that the perceived interpretation of (14B) is the same as the DPs in (15a). Thus, the missing constituent in (14B) can be pro as in (15b) which is equivalent to pro-DP.

(15) a. na-to ku kes/sasil-ul mit-nun-ta.
   I-Top that thing/fact-Acc believe-Pres-Dec
   ‘I also believe that fact.’

   b. na-to pro mit-nun-ta.

In contrast, where pro is not allowed, the embedded constituent cannot be replaced by DP complements, as shown in (16b).

   I-too Y.-Nom T.-Acc love-Pres-Dec-C think-Pres-Dec
   ‘I also think that Yenghi loves Toli.’

   b. *na-to ku kes/sasil-ul sayngakahaci-n-ta.
   I-too that thing/fact-Acc think-Pres-Dec
   ‘I also think the fact.’

   c. *na-to pro sayngkakha-n-ta.
   I-too think-Pres-Dec
   ‘I also think the fact.’

Thus, the selectional possibility of DP complements correlate with the presence or absence of CP complements, which strongly supports the pro analysis of CP ellipsis.

Our pro analysis also accounts for another example whose matrix verb is chwuchukha- ‘guess’, as noted in fn. 1.

I: Top he-Nom yesterday have come-may-Dec-C guess-Pres-Dec
'I guess he may have come yesterday.'
B: *na-to __________ chwuchukha-n-ta.
I-too guess-Pres-Dec
'I also guess that he may have come.'

(18) a. *na-to ku kes/sasil-ul chwuchuk-n-ta.
I-too that thing/fact-Acc think-Pres-Dec
'I also guess the fact.'

b. *na-to pro chwuchukha-n-ta.
I-too guess-Pres-Dec
'I guess the fact.'

As shown in (18), chwuchukha- 'guess' doesn't take neither a pro nor a DP complement, so apparent CP ellipsis in (17) is predicted to be disallowed.

The argument/adjunct asymmetries in apparent PP ellipsis further support the hypothesis that the apparently elided element is not actually deleted, but rather some sort of null pro-form. In addition to arguments, locative PPs in Japanese can be elided as shown in (19), as observed by Saito (2007):

(19) a. Taroo-wa [zibun-no oya-no ie-ni] sunde iru
T-Top [self-Gen parent-Gen house-in live
'Taroo lives in his parents’ house.’

b. Demo, Hanako-wa, _______ sunde inai
but H.-Top live-not
‘But Hanako does not live in his/her parents’ house.’

By contrast, as he observes, reason and manner adjuncts cannot be elided.
(20) a. (Watashi-wa) [Taroo-ga [zibun-no sippai-de] kubi-ni natta to] kite iru
   I-Top T.-Nom self-Gen mistake-for was-fired that hear
   'I hear that Taroo was fired because of his mistakes.'

b. *Demo, [Hanako-ga _______kubi-ni natta to] kite inai
   but H.-Nom was- fired that hear-not
   'But I have not heard that Hanako was fired because of her mistakes.'

As discussed in Murasugi (1991), pro can stand not only for argument DPs but also locative and temporal PPs in Japanese.

(21) Hanako-ga pro, sunde iru-o sitte iru mati,
    H.-Nom live person-Acc know town
    'the town that Hanako knows a person who lives in it.'

(22) *Hanako-ga pro, kubi-ninatta hito-o sitte iryu
    H.-Nom was-fired person-Acc know reason
    'the reason that Hanako knows a person who was fired for it.'

Thus, pro analysis of PP ellipsis gains support from the fact that only locative and temporal PPs can be elided but not reason PPs. The plausibility of pro analysis of PP ellipsis indirectly supports pro analysis of CP (and presumably DP) ellipsis.\(^3\)

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\(^3\) A similar phenomenon is observed in Korean. Locative PPs can be elided as shown in (i), while reason PPs cannot, as shown in (ii).

(i) a. Chelswu-ka [caiki-uy pwomonim-uy cip-eyse sa-n-ta
    C.-Nom self-Gen parent-Gen house-in live
    'Chelswu lives in his parents’ house.'

b. kulena, Yenghi-nun salci anh-nun-ta
   But, Yenghi-Top live not-Pres-Dec
   'But Yenghi does not live in her parents’ house.'
By contrast, Saito (2007) stipulates that DPs, CPs and only locative and temporal PPs participate in agreement. Assuming both agreement and pro parameter. Saito himself acknowledges that a further research is necessary to find out why only such elements (namely, arguments but not adjuncts) undergo ellipsis—hence, the term argument ellipsis.

3.2 Revisit Puzzle 1: No scrambling out of CP ellipsis

Extraction out of an elided element is sensitive to the nature of the elided material. When an element is missing, one might wonder whether this is actually ellipsis.

Some instances of apparently elided elements may not be actually deleted, but rather some sort of null pro-form, which may belong to deep anaphora (Hankamer & Sag 1976). It is generally assumed that deep anaphora has no internal structure. Ellipsis is an example of surface anaphora, which has syntactic material inside of it.

This distinction is clearly observed with presence or absence of extraction out of the relevant anaphora.

(ii) a. (Na-nun) [Chelswu-ka caki-uy silswu-ttaemwuney haykotoy-ess-ta-ko]
   I-Top C.-Nom self-Gen mistake-for was-fired-Past-Dec-C
   tul-ess-ta.
   hear-Past-Dec
   ‘I hear that Chelswu was fired because of his mistakes.’

   b. *Kwulena Yenghi-ka ________ haykotoy-ess-ta-ko tutci mos hay-ss-ta
   But Y.-Nom was-fired-Past-Dec-C hear not do-Past-Dec
   ‘But I have heard that Yenghi was fired because of her mistakes.’

Pro stands for locative PPs but it cannot stand for reason PPs, as shown in (iii).

(iii) a. Chelswu-ka pro, sal-koiss-nun salam-ul a-nun tongnay, t
   C.-Nom live-Pres-Rel person-Acc know-Rel town
   ‘the town that Chelswu knows a person who lives in it.’

   b. *Chelswu-ka pro, haykotoy-n salam-ul a-nun iyu, t
   C.-Nom was-fired-Rel person-Acc know-Rel reason
   ‘the reason that Chelswu knows a person who was fired for it’
(23) Extraction out of surface anaphora

The movie, I loved. The play, I didn’t like.

In (23), a DP *the play* moves out of the ellipsis site via topicalization. By contrast, in (24), it is not possible to extract something out of the deep anaphora.

(24) No extraction out of deep anaphora

*The movie I never saw. The play, I did it.

If our *pro* analysis of CP ellipsis is right, no scrambling out of CP ellipsis in Japanese can be explained in a similar vein since *pro* is an instance of deep anaphora that resists extraction.


that book-Acc Z.-also said

‘Taroo said that Hanako bought that book, and Ziroo also said that she bought that book.’

A similar phenomenon is observed in Korean.

(26) *ce chayk-ul, Chelswu-ka Yenghi-ka t, sa-ss-ta-ko That book-Acc C.-Nom Y.-also buy-Past-Dec-C malhay-ss-ta kuliko ce chayk-ul Yengswu-to _____


say-Past-Dec
'Chelswu said that Yenghi bought that book, and Yengswu also said that she bought that book.'

Under the analysis advanced here, (25-26) have the LF structure like (27a, b), respectively.

(27) a. Taroo-wa [CP Hanako-ga sono hon-o kata to] itta si, T.-Top H.-Nom that book-Acc bought that said and sono hon-o Ziroo-mo pro itta. that book-Acc Z-also said

These two sentences are ruled out since sono hon-o and ce chayk-ul ‘that book’ don’t get their theta roles, which violates the principle of full interpretation.

4. Remaining Puzzles

4.1 Pro-CP

Lee (2010) raises a question as to how a pro can refer to a clause in Korean. Radford (1981) points out the fact that syntax is autonomous of semantics, so that any adequate description of proforms must include both a syntactic and a semantic characterization of their function, as shown in (28).
(28) A: Mary has finished her assignment.
    B: I don’t believe it.

Semantically, the proform it refers to the clause Mary has assigned her assignment. However, there is an example showing that it occurs only in NP position, as shown in (29).

(29) A: I hope [you will come].
    B: *I hope it.

In (29B), it cannot occur in the complement position of the verb hope. Note that its ill-formedness results not from semantics but from syntax. The proform it can occur only in a NP position, but hope doesn’t select an NP complement as shown in (30).

(30) *I hope [the pen on the table].

Thus, syntactically, it is an NP, while semantically it can have a clause as its antecedent. In the same reasoning, syntactically the deep anaphora pro in Korean occurs only in NP position, and semantically pro can have a clause as its antecedent.

4.2. Sloppy interpretation

Another puzzle is the existence of sloppy interpretation. Lee & Kim (2010) argue that the example in (31) can be problematic under the pro analysis advanced by Ahn & Cho (2009, 2010b). They claim that the sloppy interpretation of (31B) is possible, and it may not be explained under the analysis assuming the pro with no internal structure for ellipsis site.
    Y.-Top self-Gen paper-Nom great-Dec-C believe-Pres-Dec
′Yenghi believes that her paper is great.’
B: Toli-to
    T.-also believe-Pres-Dec
′Lit. Toli also believes.’ (Lee & Kim 2010:1015)

However, first of all, it is not clear whether (31B) yields genuine sloppy interpretation. To our ears, sloppy reading is less prominent than strict reading. Note that unlike (31B), sloppy interpretation is easily obtained in relatively plausible candidates in ellipsis, as shown in (32B) (see Ahn & Cho 2010a and references cited in for ellipsis analysis of fragments in Korean).

    Y.-Top self-Gen paper-Nom great-Dec-C believe-Pres-Dec
′Yenghi believes that her paper is great.’
B: Toli-to.
    T.-also

This contrast is reminiscent of the one in comparative deletion (CD) and comparative ellipsis (CE) in English, as shown in (33a, b), respectively.

(33) a. Jones published more papers than Smith published
b. Jones published more papers than Smith did.

Kennedy & Merchant (1999) suggest that comparative deletion constructions involve movement of a null (pro)nominal expression from the base position of the missing constituent.

This analysis provides the basis for an explanation of an old puzzle involving the interpretation of comparatives. Bach, Bresnan and Wasow
(1974) observe that comparative deletion disallows “sloppy identity” interpretations of pronouns, but comparative ellipsis does not.

(34) a. Sue took more pictures of her children than Jen took. [⋯of *?Jen’s/Sue’s children] CD  
b. Sue took more pictures of her children than Jen (did) [⋯of Jen’s/Sue’s children] CE

Kennedy & Merchant (1999) suggest that comparative deletion involves a pronominal expression (null operator), hence the difficulty of obtaining a sloppy reading in (34a) can be explained in terms of general properties of pronouns as shown in (35).

(35) a. Stan died her hair blue before Jerome died it red. [Stan’s hair/*Jerome’s hair]  
b. Sue carried Julio’s picture of her children in her wallet, and Jen carried it in her pocket. [??Jen’s children/Sue’s children]

Interestingly, however, they point out that the sloppy interpretation becomes better in generic contexts.

(36) a. Stan publishes more of his manuscripts than Jerome publishes.  
b. Sue takes more picture of her children than Jen takes.

They further indicate that the same is true of pronouns:

(37) Stan dies his hair blue; Smith dies it red.  
(38) Sue carries Julio’s picture of her children in her wallet, and Jen carries it in her pocket.

They note that this parallelism is expected if the “missing” expression in
CD is in fact pronominal.

Similarly, we may reconsider the sloppy-like interpretation of (31B). For those who can get sloppy(-like) reading in (31B), the following sentence as a reply to (31A) may also yield sloppy(-like) reading (perhaps the sloppy(-like) reading is more easily obtained in generic or “paycheck” contexts).

(39) Toli-to kulen kes/sasil-ul mit-nun-ta.
    T.-also that thing/fact-Acc believe-Pres-Dec
    ‘Lit. Toli also believes that (fact).’

Then, the sloppy(-like) reading in (31B) can be derived from the pro interpretation of (31B) that is equivalent to kulen kes/sasil-ul 'that thing/fact' in (39).

Note further that even standard deep anaphora in English sometimes may give rise to sloppy reading as noted in Fiengo & May (1994:248, fn.13):

(40) a. Max hit his friend, and Oscar did it, too.
    b. Jordan was happy to help her mom in the greenhouse, but
        Jacqueline refused Ø.

Thus, it seems that the availability of sloppy interpretation cannot be crucial evidence for ellipsis or surface anaphora per se.

5. Concluding Remarks

We suggest that apparent CP ellipsis in Korean (and presumably in Japanese, as discussed in Saito 2007) are all instances of null pronoun, the so-called pro. We have resolved the major puzzles discussed in Section 2 under the pro analysis. Only certain verbs in Korean can
license CP ellipsis because they allow pro as their complements. Scrambling is not possible out of CP ellipsis site in Japanese and Korean because apparent CP ellipsis is actually deep anaphora that has no internal structure. We further indicate that sloppy reading may not be a reliable diagnostic for ellipsis phenomena.

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