

On the Nature of Zero Realization of Arguments: A Reply to Lee (2011)*

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Ahn, Hee-Don & Cho, Sungeun. 2012. On the Nature of Zero Realization of Arguments: A Reply to Lee (2011). *Linguistic Research* 29(1), 1-20. This paper aims to show how well Ahn & Cho's (2009, 2010, 2011b,c) *pro* analysis accounts for various interpretations the null argument constructions have. By exploring the cases Lee (2011) points out, we show how far the possible interpretation of *pro* is stretched. More specifically, our analysis accounts for polarity mismatch examples without postulating additional device like partial feature copying. We further show that our *pro* analysis is conceptually as well as empirically superior to the DP ellipsis advocated in Lee (2011).

Keywords null argument, sloppy(-like) interpretation, *pro*, DP ellipsis, polarity mismatch

1. Introduction

In Korean, arguments can be phonologically unrealized, as shown in (1), unlike English, as shown in (2).

- (1) A: na-nun John-uy hyeng-ul poa/manna-ss-ta.
I-Nom J.-Gen brother-Acc see/meet-Pst-Dec
'I saw/met John's brother.'
B: na-to ___ poa/manna-ss-ta.
I-too see/meet-Pst-Dec
'Lit. I also saw/met.'
- (2) A: I saw/met John's brother.
B: I also saw/met *(him).

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Ahn & Cho (2009, 2010, 2011b,c,d) in their series of papers propose that zero realization of arguments exemplified in (1B) involves *pro* (see also Park 1994, Hoji 1998, Moon 2010 *inter alia*); that is, Ahn & Cho argue that null arguments such as (1B) involve deep anaphora (null pronoun) *pro* but not surface anaphora ellipsis in the sense of Hankamer & Sag (1976).¹ Hence (1B) should be represented as:

- (1') na-to *pro* poa/manna-ss-ta.
 I-too see/meet-Pst-Dec
 'Lit. I also saw/met.'

Many researchers (Oku 1998, Kim 1999, Saito 2007, Um 2011 and others) claim that a certain interpretation like sloppy interpretation is a direct challenge to the *pro* analyses of null arguments. More specifically, Lee & Kim (2010) and Lee (2011) argue that sloppy interpretation, as shown in (3) can be explained only under the DP ellipsis analysis.

- (3) A: na-nun amwuto an manna-ss-e.
 I-Top anyone neg meet-Pst-Dec
 'I did not meet anyone.'
 B: na-to ___ an manna-ss-e.
 I-too neg meet-Pst-Dec
 'I did not meet anyone, either.'

They point out the fact that when the null argument is replaced by an overt pronoun as shown in (4B), the sloppy interpretation (i.e., negative polarity reading) is absent.

- (4) A: na-nun amwuto an manna-ss-e.

¹ Ahn & Cho (2011a) indicate that Korean has phenomena involving surface anaphora. For example, case-marked fragments in Korean are instances of genuine ellipsis phenomena, i.e., surface anaphora. However, Ahn & Cho (2009, 2010, 2011b,c,d) argue that DP ellipsis isn't allowed in Korean and that the null argument phenomena that might be considered as DP ellipsis involve *pro*, deep anaphora. The notable semantic difference between fragments (surface anaphora) and null argument (deep anaphora) is discussed in Section 2 and 3. See Ahn & Cho (2011d) and Ahn (2011) for further discussion on this issue.

I-Top anyone neg meet-Past-Dec

‘I did not meet anyone.’

B: na-to ku-lul an manna-ss-e.

I-too he-Acc neg meet-Past-Dec

‘I did not meet him, either.’

They indicate that (4B) which lacks NPI reading is not semantically equivalent to (3B). Hence, Lee & Kim (2010) and Lee (2011) claim that the zero argument in (3B) cannot be an instance of null pronoun *pro* but must be an instance of DP ellipsis as shown in the structure like (5).

(5) na-to amwuto an manna-ss-e.

Under the DP ellipsis analysis, the NPI *amwuto* directly undergoes deletion to obtain the sloppy reading in (3B).

As already discussed in Ahn & Cho (2011b, d), this issue, however, seems to be related to the possible interpretation of *pro*. By exploring the counter-examples for the *pro* analysis to stand, we show how far the possible interpretation of *pro* is stretched. In this paper we discuss more convincing pieces of evidence to show that zero realization of argument involves *pro* not ellipsis. Following Hoji (1998) and Ahn & Cho (2011, b,c,d), we also argue that the interpretations considered to be sloppy identity readings in null argument constructions in Korean are not in fact genuine sloppy interpretations but more or less similar to “sloppy-like” readings, and can well be accounted for under Ahn & Cho’s (2009, 2010, 2011b,c,d) *pro* analysis.

This paper is organized as follows: Section 2 explores interesting cases that might be problematic under *pro* analyses and shows how well our *pro* analysis can account for the putative interpretations. Section 3 discusses further issues related to polarity mismatch, as noted in Lee (2011), and shows that our *pro* analysis is superior to DP ellipsis analyses. Concluding remarks are presented in Section 4.

2. A Reply to Lee (2011)

In this section, we explore examples Lee (2011) claims Ahn & Cho’s (2009,

2010, 2011b,c) *pro* analysis doesn't seem to explain.² First, let us consider the case where the antecedent is a negative polarity item.

- (6) A: na-nun amwuto an manna-ss-e.
I-Top anyone neg meet-Pst-Dec
'I did not meet anyone.'
B: na-to ___ an manna-ss-e.
I-too neg meet-Pst-Dec
'I did not meet anyone, either.'

Lee and Kim (2010) note that (6B) is problematic under the *pro* analysis since (7), an expected paraphrase under *pro* analysis according to them, cannot be semantically equivalent to (6B).

- (7) na-to ku-lul an manna-ss-e.
I-too he-Acc neg meet-Past-Dec
'I did not meet him, either.'

Ahn & Cho (2011b:466) argue that missing object in (6B), however, can be construed as *pro_{arb}* (arbitrary *pro*) which is roughly equivalent to *salam-tul-ul* 'people-Pl-Acc' in Korean. Then, the interpretation of (6B) can be semantically "similar" to 'I didn't meet anyone' (although it is not identical with the NPI reading).

However, Lee (2011) claims that Ahn & Cho's (2011b) argument faces a conceptual problem. Conceptually, it isn't a plausible claim that *pro* has arbitrary interpretation when it clearly has a linguistic antecedent like *amwuto*. Lee (2011) argues that *pro_{arb}* is possible only when it doesn't have linguistic antecedents as exemplified in (8).

- (8) a. ipen yelum-ey ___ swuhay-lul emchengnakey ip-ess-e.
this summer-in *pro_{arb}* rain.damage-Acc unbelievably get-Pst-Dec
'This summer we/they have got a lot of damage due to heavy rain.'

² Here some arguments are based on Ahn & Cho (2011b,d) but only partially as indicated in the text.

b. ku mau-eyse ____ nokcha-lul cwulo caypayha-y.
 the village-in *pro*_{arb} green.tea-Acc mainly grow-Dec
 'They/we grow green tea in the village.' (Lee 2011:1040)

Lee (2011) seems to be correct in that arbitrary *pro* or arbitrary pronouns *per se* in general cannot occur if there are linguistic antecedents available in the previous utterances. Note, however, that *pro* analysis does not necessarily have to postulate the arbitrary *pro* in (6B). Ahn & Cho (2011b:466) simply indicate that the missing object's interpretation in (6B) is "semantically" equivalent to *salam-tul-ul* 'people-Pl-Acc', which is roughly similar to the interpretation of the arbitrary *pro*.

In fact, as discussed in Ahn & Cho (2011d:483), the null argument in (6B) need not be an instance of arbitrary *pro*. Rather than the arbitrary *pro*, Ahn & Cho (2011d) propose that the null argument is closer to the indefinite *pro*. Ahn & Cho (2011d) note the possibility that the *amwuto* 'anybody' in (6A) can be paraphrased as *salam-tul-ul amwuto* 'people-Pl-Acc anybody' in Korean. The null object in (6B) is indefinite *pro* counterpart of *salam-tul-ul* 'people-Pl-Acc', and hence the interpretation of (6B) can be semantically similar to 'I didn't meet anyone, either'.³ ⁴ Thus, it is not necessary to assume the NPI *amwuto* deletion to account for the seemingly sloppy reading in (6B); it is indeed another instance of sloppy-like readings in our sense.

The interpretation of *pro* in (6B) is similar to the one of (9B).

(9) A: nwukwuna Cheli-lul cohaha-y.
 Everyone Cheli-Acc like-Dec
 'Everyone likes Cheli.'

³ Precisely speaking, the interpretation of (6B) is identical to 'I didn't meet people, either'.

⁴ Ko (2005:204) suggests that *amwuto* 'anybody' may be a secondary predicate of a null argument *pro*. Then she further proposes that the *pro* associated with *amwuto* 'anybody' might be interpreted as generic people or salient group of people in the preceding discourse. Kawashima & Kitahara (1992) suggest that NPs (which can be a *pro*) and negative polarity items form a constituent QP. Shi (1997) advances that associated nominals can be *pro* and negative polarity items are ADVPs. Lee & Um (2004) suggest that associated NPs and negative polarity items make ADVP constituents. All these analyses are compatible with our analysis. On these four views, we can say that *pro* in (6B) refers to *pro* in (6A) which is interpreted as generic people or salient group of people in the preceding discourse, as noted in Ko (2005). It is not unnatural that *pro* refers to *pro* because overt and covert pronouns differ only in phonological realization and overt pronoun often refers to overt pronoun.

B: ___ Tongswu-to cohaha-y.
 T.-also like-Dec
 'Everyone likes Tongswu, too.'

The universal quantifier *nwukwuna* 'everybody' in (9A) can be analyzed as a complex nominal *salam-tul-i nwukwuna* 'people-Pl-Nom everybody' on a par with the NPI in Korean.

- (10) A: (Salamtul-i) nwukwuna Cheli-lul cohaha-y.
 (People-Nom) everyone Cheli-Acc like-Dec
 'Everyone likes Cheli.'
- B: pro(=salamtul-i) Tongswu-to cohaha-y.
 T.-also like-Dec
 'Lit. People like Tongswu, too.'

The property of the NP preceding the quantifier *nwukwuna* 'everybody' is determined by an appropriate context that the universal quantifier is employed (cf. Ko 2005). Here the default NP preceding the quantifier can be interpreted as *salam-tul-ul* 'people-Pl-Acc'. Thus, (9B) in fact conveys the reading like the following (A) which under this particular context, can be further understood as (B).⁵

- (A) People like Tongswu, too.
 (B) Everyone likes Tongswu, too.

Thus, here too, the universal quantifier *nwukwuna* deletion need not be assumed to account for the seemingly sloppy reading in (9B); it is another instance of sloppy-like readings on a par with (6B). We suggest that the reading (B) is equivalent to the “explicature” of (A) in the context of (9).⁶ According to the relevance theory (Sperber & Wilson 1986), the explicature is recovered from three pragmatic processes: disambiguation, reference assignment and enrichment. With

⁵ Note that the appropriate context plays an important role here; (A) can be understood as (B) with the help of context. Thus, the presence of the preceding sentence, *nwukwuna Cheli-lul cohaha-y* 'Everyone likes Cheli.' forces (9B) to be understood as 'Everyone likes Tongswu, too'.

⁶ We thank Seungho Nam (p.c.) who has brought the term “explicature” to our attention. All misunderstandings for our adaptation, however, are solely ours.

these pragmatic adjustments, (A) can yield the interpretation like (B). Given that the explicature reading is pragmatically determined (like implicatures), it is cancellable unlike semantic entailments.⁷ The following examples support our claim.

- (11) A: (Salamtul-i) nwukwuna Cheli-lul cohaha-y.
 (People-Nom) everyone C.-Acc like-Dec
 'Everyone likes Cheli.'
- B: pro(=salamtul-i) Tongswu-to cohaha-y. kulentey
 T.-also like-Dec but
 nwukwuna ta Tongswu-lul cohahanunkey ani-ya.
 everyone all T.-also like not-Dec
 'People like Tongswu, but it's not everyone who likes him.'

As shown in (11B), the explicature reading of 'Everyone likes Tongswu.' is cancellable, which is captured by our *pro* analysis, but not by DP ellipsis analysis. Note that under the DP ellipsis analysis, (9B) is semantically identical to (12).⁸

⁷ Sperber & Wilson (1986:182) suggest that an explicature is a combination of linguistically encoded and contextually inferred conceptual features. Consider (i-ii):

- (i) a. He is meeting a woman this evening.
 b. He is meeting a woman [who is not his wife, mother, or sister] this evening.
 (ii) a. I have had breakfast.
 b. I have had breakfast [today] (Agerri & Korta 2004:15)

(ib) and (iib) are the explicature of (ia) and (iia), respectively. (ib) and (iib) are the development of the logical form encoded by the utterance or the result of the process of the reference assignment and enrichment to the logical form.

⁸ An anonymous reviewer suggests that vehicle change advanced in Fiengo & May (1994) can be utilized in this context. However, it is unclear that vehicle change can occur with respect to quantificational force. If it occurs, the LF representation of (9B) is the same as *salamtul-i Tongswu-to cohahay* 'People like Tongswu, too'. Such reading may account for the cancellation of the interpretation 'Everyone likes Tongswu, too'. However, such an approach cannot account for the following examples.

- (i) A: Chelswu-ka nwukwu-lul manna-ss-ni?
 C.-Nom who-Acc meet-Pst-Q
 'Who did Chelswu meet?' or 'Did Chelswu meet anyone?'
- B: Kulssey, kulem Yenghi-nun manna-ss-ni?
 Well, then Y.Top meet-Pst-Q
 'Well, then, did Yenghi meet anyone?' *'Well, then, who did Yenghi meet?'

- (12) *nwukwuna Tongswu-to cohaha-y.*
 everyone T.-also like-Dec
 'Everyone likes Tongswu, too.'

However, in the case of (12), the reading of 'Everyone likes Tongswu' is not cancellable, as shown in (13) (# indicates semantic ill-formedness).

- (13) #*nwukwuna Tongswu-to cohaha-y. kulentey*
 Everyone T.-also like-Dec but
nwukwuna ta Tongswu-lul cohahanunkey ani-ya.
 everyone all T.-Acc like not-Dec
 'Everyone likes Tongswu, too, but everyone doesn't like Tongswu.'

Thus, the contrast between (11) and (13) further strengthens our *pro* analysis of null argument in (9B).

A similar case is observed in (14).^{9 10}

In Korean, the pronoun *mwukwu* is ambiguous between indefinite interpretation 'someone' and *wh*-interpretation 'who'. Hence, (iA) is interpreted as either yes-no interrogative or *wh*-interrogative. However, the null argument in (iB) is interpreted as indefinite pronoun and (iB) is only yes-no question. The vehicle change analysis cannot explain why vehicle change is obligatorily forced and only indefinite interpretation is possible in (iB). By contrast, our *pro* analysis can account for this fact. Under our analysis, (iB) has the structure like (ii).

- (ii) *Yenghi-nun pro manna-ss-ni?*

Here *pro* cannot be interpreted as *wh*-pronoun, but it can be interpreted as indefinite nominal. Hence, (iB') is interpreted only as yes-no question, which cannot be captured under ellipsis analyses of null arguments along with vehicle change operation.

⁹ Ko (2005) makes a proposal similar to ours. She notes that floating quantifiers may appear in a sentence even without an (overt) host NP, as shown in (i-iii).

- (i) a. *Sey-myeng-i Mary-lul manna-ss-ta.*
 3Cl-Nom Mary-Acc meet-Pst-Dec 'Three (people) met Mary.'
 b. *John-i seymyeng-ul ttaly-ess-ta.*
 John-Nom 3Cl-Acc hit-Pst-Dec 'John hit three (people).'
- (ii) a. *Motwu-(ka) Mary-lul manna-ss-ta.*
 All-Nom Mary-Acc meet-Pst-Dec 'All of (them) met Mary.'
 b. *Mary-ka motwu-(lul) manna-ss-ta*
 Mary-Nom all-Acc meet-Pst-Dec 'Mary liked all (of them).'
- (iii) a. *Amwuto Mary-lul mos manna-ss-ta.*
 anyone Mary-Acc not meet-Pst-Dec 'No one (none of them) met Mary.'

(14) A: (Salamtul-i) motwu Cheli-lul cohaha-y.

People-Nom all Cheli-Acc like-Dec

'Everyone likes Cheli.'

B: pro(=salamtul-i) Tongswu-to cohaha-y.

T.-also like-Dec

'People like Tongswu, too.' → Explicature: 'Everyone likes Cheli.'

The literal reading of (14B) is 'People like Tongswu, too'. However, under this particular context, it gives rise to an explicature 'Everyone likes Cheli', namely, the sloppy-like reading which is cancellable, as shown in (15).^{11 12}

b. Mary-nun amwuto mos manna-ss-ta.

Mary-Top anyone not meet-Pst-Dec 'Mary met no one (none of them).'

Ko (2005:204) proposes that floating quantifiers in (i-iii) may all be a secondary predicate of a null argument *pro*, and the *pro* associated with a quantifier might be interpreted as generic people or salient group of people in the preceding discourse in (i-iii). Our analysis minimally differs from hers in that the target phrases directly modified by the floating quantifiers are either lexical NPs or *pro*.

¹⁰ The following example can be accounted for in a similar way.

(i) A: Chelswu-ka yel myeng-ul manna-ss-ta.

C.-Nom ten Cl-Acc meet-Pst-Dec 'Chelswu met 10 people.'

B: Yengswu-to ___ manna-ss-ta.

Y.also meet-Pst-Dec 'Yengswu also met 10 people.'

(i) is analyzed as (ii).

(ii) A: Chelswu-ka (salam-tul-ul) yel myeng-ul manna-ss-ta.

C.-Nom people-Pl-Acc ten Cl meet-Pst-Dec

B: Yengswu-to pro(=salam-tul-ul) manna-ss-ta.

Y.also meet-Pst-Dec

With the help of the context, (iB) has the interpretation 'Yengswu also met 10 people'. Such interpretation can be cancelled as shown in (iii).

(iii) Yengswu-to manna-ss-ta. kulentey yetel myeng-ul manna-ss-e.

Y.-also meet-Pst-Dec but eight Cl-Acc meet-Pst-Dec

'Yengswu also met people, but he met 8.'

¹¹ Explicature is part of meaning linguistic items have, so explicature isn't considered as an additional device. By contrast, vehicle change occurs in special circumstances, which is considered as an additional device. Thus, the *pro* analysis based on less additional devices like ours is superior to the ellipsis analyses based on more additional ones like vehicle change.

¹² The limited distribution of *pro* in English is related not to the range of interpretation of *pro* but

- (15) Tongswu-to cohaha-y. kulentey motwu-ka ta Tongswu-lul
 T.-also like-Dec but all-Nom all T.-Acc
 cohahanunkesun ani-ya.
 like not-Dec
 'People like Tongswu, but not all the people like Tongswu.'

Again, the DP ellipsis analysis cannot capture the cancellability of the interpretation the null argument constructions have.

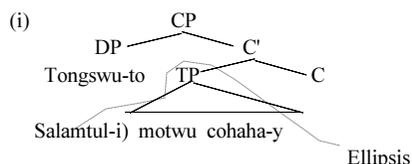
- (16) #Motwu Tongswu-to cohaha-y kulentey motwu-ka ta Tongswu-lul
 all T.-also like-Dec but all-Nom all T.-Acc
 cohahanunkesun ani-ya.
 like not-Dec
 'All the people like Tongswu, but not all the people like Tongswu.'

As indicated by Ahn & Cho (2011d), case-marked fragments (analyzed as an instance of surface anaphora in Ahn 2011) and null arguments (analyzed as an instance of deep anaphora here) show different behavior with respect to cancellability of interpretations. We assume that unlike the null argument constructions, fragments such as (17B) are derived from movement of remnants followed by PF-deletion on a par with fragments in English put forward in Merchant (2004).¹³

- (17) A: (Salamtul-i) motwu Cheli-lul cohaha-y.
 People-Nom all Cheli-Acc like-Dec
 'Everyone likes Cheli.'

to the *pro* drop parameter.

¹³ Thus, (17B) can be analyzed as follows under the move-and-delete approach to fragments:



Here the fragment *Tongswu-to* originates from the object position of the verb *cohaha-y*, and subsequently moves to Spec-C prior to TP ellipsis.

B: Tongswu-to.
T.-also
'Tongswu, too.' (=Everyone likes Tongswu, too.)

Unlike the readings in null argument constructions, we consider the sloppy reading observed with the fragment as genuine sloppy reading. The contrast between (11B) and (18) supports our claim.

(18) A: (Salamtul-i) motwu Cheli-lul cohaha-y.
People-Nom all Cheli-Acc like-Dec
'Everyone likes Cheli.'
B: #Tongswu-to. Kulentey motwu-ka ta Tongswu-lul
T.-also but all-Nom all T.-Acc
cohananunkesun ani-ya.
like not-Dec
'Tongswu, too. But not all the people like Tongswu.'

As shown in (18), in the case of fragments, the sloppy interpretation 'Everyone likes Tongswu, too.' is not cancellable. Thus, unlike null argument constructions as we have observed above, the intended sloppy interpretation in fragments is not sloppy-like interpretation derived from the explicature of the sentence.

The contrast between null arguments and fragments is also observed in examples containing reflexives.

(19) A: Chelswu-ka casin-uy emma-lul manna-ss-ta.
C.-Nom self-Gen mother-Acc meet-Pst-Dec
'Chelswu met his mother.'
B: Yenghi-to _____ manna-ss-ta
Y.-also meet-Pst-Dec
'Lit. Yenghi met, too.'
B': Yenghi-to.
Y.-also
'Lit. Yenghi, too'

Again, null argument (19B) and fragment (19B') behave differently with respect to cancellability of sloppy-(like) interpretation, as shown in (20).

- (20) a. Yenghi-to manna-ss-ta kulenteY Yenghi-nun nam-uy
 Y.also meet-Pst-Dec but Y.-Top others-Gen
 emma-lul manna-ss-ta.
 mother-Acc meet-Pst-Dec
 'Lit. Yenghi met, too. But Yenghi met others' mother.'
- b. #Yenghi-to. kulenteY Yenghi-nun nam-uy emma-lul
 Y.also but Y.-Top others-Gen mother-Acc
 manna-ss-ta.
 meet-Pst-Dec
 'Lit. Yenghi, too. But Yenghi met others' mother.'

As shown in (20b), in the case of fragment, the interpretation 'Yenghi met her own mother.' is not cancellable. By contrast, in the case of null argument, as shown in (20a), the same reading is pragmatically induced as an explicature, and hence is cancellable.

A similar contrast is observed in the following examples.

- (21) A: Sensayngnim-un motun il haknyen haksayng-eykey
 teacher-Top all first grader student-Dat
 caki-uy kong-ul chakey ha-yess-ta.
 self-Gen ball-Acc kick make-Pst-Dec
 'The teacher let all the first-graders kick their own balls.'
- B: I haknyen haksayng-eykey-to ___ chakey ha-yess-ta.
 second grader student-Dat-also kick make-Pst-Dec
 'Lit. she/he also let the second-graders kick.'
- B': i haknyen haksayng-eykey-to.
 second grader student-Dat-also
 'Lit. To the second-graders, too.'

The intended sloppy reading 'she/he also let the second-graders kick their own balls.' isn't a genuine sloppy reading in (21B), while it is in (21B'). As a result of

an explicature, (21B) may have the sloppy-like reading that the teacher also let the second-graders kick their own balls. This reading is also cancellable, as shown in (22).

- (22) i haknyen haksayng-eykey-to ___ chakey ha-yess-ta.
second grade student-Dat-also kick make-Past-Dec.
kulentey sam haknyen haksayng-uy kong-ul chakey
but third grade student-Gen ball-Acc kick
hay-ss-ta.
make-Pst-Dec
'Lit. She/he also let the second-graders kick. But she/he let them kick
the third graders' balls.'

By contrast, such cancellation doesn't occur with the fragment in (21B'), as shown in (23).

- (23) #i haknyen haksayng-eykey-to. kulentey sam haknyen
second grade student-Dat-also but third grade
haksayng-uy kong-ul chakey hay-ss-ta.
student-Gen ball-Acc kick make-Pst-Dec
'Lit. To the second-graders kick balls, too. But she/he let the third
grader students's balls kick other people's balls.'

In sum, fragments pattern differently with null arguments in that only the former may display genuine sloppy readings. The latter may yield sloppy-like readings which are pragmatically induced by the explicature that can be cancelled unlike genuine sloppy readings in fragments.

3. Polarity Mismatch of Null Arguments

In some cases polarity items in the null argument construction and its antecedent seem to show mismatch with respect to polarity features. Lee (2011) argues that the following examples further support Lee & Kim's (2010) DP ellipsis analysis of null

arguments.

- (24) A: ne amwukesto an mek-ess-ni?
 you anything not eat-Pst-Q
 'Didn't you eat anything?'
 B: Ani, (na mwuesinka-lul) mek-ess-e.
 no, I something-Acc eat-Pst-Dec
 'Yes, I ate something.'
- (25) A: ne amwuto an/mos manna-ss-ni?
 You anyone neg meet-Pst-Q
 'Didn't you meet anyone?'
 B: ani, (na nwukwunka-lul) manna-ss-e.
 no I someone-Acc meet-Pst-Dec
 'Yes, I meet someone.'

Interestingly, the question-answer pairs in (24-25) seem to involve polarity mismatch if the given intended interpretations are right. Lee indicates that the questions contain negative polarity items but the null arguments in the answers are interpreted as positive polarity items. In order to account for the mismatch, Lee (2011:1047) proposes that feature copying occurs selectively. More specifically, she suggests that the semantic features of the antecedent *amwuto*, or *amwukesto* except negative polarity features are copied and filled in the empty position of the argument slots of the target, yielding the intended interpretation *nwukwunka-lul* or *mwuesinka-lul*. This is based on the assumption that the canonical or default value of polarity is positive polarity (Huddleston & Pullum 2007).

Note, however, that our *pro* analysis doesn't need an additional device like selective feature copying in order to account for polarity mismatch observed in zero realization of arguments. We suggest that NPIs in Korean can be analyzed as a complex nominal; namely, NP + NPI. The property of the preceding NP is determined by an appropriate context that the modifying NPI is employed. Then, *amwukesto* 'anything' in (24A) can be analyzed as *umsik-ul amwukesto* 'food-Acc anything' as shown in (26).

- (26) A: ne (umsik-ul) amwukesto an mek-ess-ni?

you (food-Acc) anything not eat-Pst-Q
 'Didn't you eat anything?'

B: Ani, pro(=umsik-ul) mek-ess-e.
 no, (=food-Acc) eat-Pst-Dec
 'Yes, I ate food.'

Thus, *pro* can refer to *umsik-ul* 'food-Acc' as an indefinite null pronoun. Consequently, the interpretation of (24B) 'I ate food' can be semantically similar to 'I ate something', the putative sloppy-like reading that may arise as an explicature. Note that *pro* cannot refer to quantifiers or quantifier-like expressions such as NPIs, and hence under this analysis, *pro* cannot directly refer to the NPI *amwukesto* in (26B).

Negative mismatch in (25) is also well-accounted for under our *pro* analysis along the similar lines. As shown in (27A), *amwuto* can be analyzed as *salamtul-ul amwuto* and *pro* can refer to *salamtul-ul* as shown in (27B).

(27) A: ne (salamtul-ul) amwuto an/mos manna-ss-ni?
 You (people-Acc) anyone neg meet-Pst-Q
 'Didn't you meet anyone?'

B: ani, pro(=salamtul-ul) manna-ss-e.
 no (people-Acc) meet-Pst-Dec
 'Yes, I meet people.'

Further, the interpretation (27B) 'I met people' can be pragmatically understood as 'I met somebody' due to the explicature.

Let us further consider the following polarity mismatch as indicated in Lee (2011:1048) where the elements in questions have positive interpretations while the ones in answers have negative ones.

(28) A: ne cinan-pen yehayng-eyse nwukwunka-lul manna-ss-ni?
 you last-time travel-during someone-Acc meet-Pst-Q
 'Did you meet anyone during the travel?'

B: ani, na _____ an manna-ss-e.
 no, I neg meet-Pst-Dec

- 'No, I didn't meet anyone.'
- (29) A: ne cemsim-ulo mwuesinka-lul mek-ess-ni?
 you lunch-for something-Acc eat-Pst-Q
 'Did you eat anything for lunch?'
- B: ani, na _____ an mek-ess-e.
 no, I neg eat-Pst-Dec
 'No, I didn't eat anything.'

Lee (2011) suggests that the semantic features of the antecedent *nwukwunka-lul* or *mwuesinka-lul* are copied and filled in the empty position of the argument slots of the target. She further argues that for a convergent derivation, the ellipsis site needs a negative feature, which is "syntactically" filled by the clausal negator *an*, yielding the intended interpretation *amwuto* or *amwukesto*.

This selective feature copying raises the following questions: Where does the negative feature of the null arguments come from? At what environment does the selective copying process occur? If it comes from the negator *an* and the process isn't restricted in the null argument construction, Lee (2011) cannot account for the interpretational difference between (30a) and (30b), or between (31a) and (31b).

- (30) a. Na nwukwunka-lul an manna-ss-e.
 I someone-Acc neg meet-Pst-Dec
 'I didn't meet someone (=a specific person).'
- b. Na amwuto an manna-ss-e.
 I anyone neg meet-Pst-Dec
 'I didn't meet anyone.'
- (31) a. Na mwuesinka-lul an mek-ess-e.
 I something-Acc neg eat-Pst-Dec
 'I didn't eat something (=a certain food).'
- b. Na amwukesto an mek-ess-e.
 I anything neg eat-Pst-Dec
 'I didn't eat anything.'

Furthermore, if the negative feature copying occurs only in zero realization of argument, the reason for such restriction should be stipulated.

Our *pro* analysis, by contrast, can account for the seemingly polarity mismatch observed in (30-31) without positing selective feature copying or stipulative feature changing operation, as shown in (32-33).

- (32) A: ne cinan-pen yehayng-eyse (salamtul-ul) nwukwunka-lul
 you last-time travel-during (people-Acc) someone-Acc
 manna-ss-ni?
 meet-Pst-Q
 'Did you meet anyone during the travel?'
 B: ani, na pro(=salamtul-ul) an manna-ss-e.
 no, I neg meet-Pst-Dec
 'No, I didn't meet people.' → explicature: 'No, I didn't meet anyone.'
- (33) A: ne cemsim-ulo (umsik-ul) mwuesinka-lul mek-ess-ni?
 you lunch-for (food-Acc) something-Acc eat-Pst-Q
 'Did you eat anything for lunch?'
 B: ani, na pro(=umsik-ul) an mek-ess-e.
 no, I neg eat-Pst-Dec
 'No, I didn't eat food.' → explicature: 'No, I didn't eat anything.'

Given that *nwukwunka-lul* can be analyzed as a complex nominal; namely, *salamtul-ul* + *nwukwunka-lul*, the indefinite *pro* in (32B) can refer to the NP *salamtul-ul*. Furthermore, under this context the explicature of (32B) arises; namely, the NPI-like reading 'I didn't meet anyone'. In a similar way, *mwuesinka-lul* is analyzed as *umsik-ul* *mwuesinka-lul*. The indefinite *pro* in (33B), then, may refer to the NP *umsik-ul*. On a par with (32B), (33B) gives rise to the explicature: 'I didn't meet anything'.

In addition to the empirical advantages mentioned above, our *pro* analysis is conceptually superior to the hybrid analysis put forward in Lee & Kim (2010) and Lee (2011). They suggest that the null argument constructions have two sources; that is, argument ellipsis or *pro*-drop (see Saito (2004, 2007) for the hybrid analysis along the similar vein).

Our *pro* analysis of null arguments is conceptually simpler than theirs since it provides a uniform account for null arguments, and desirably reduces two devices

into one (an Occam's Razor), namely, into the pro-drop parameter which is independently needed anyway in hybrid analyses.

4. Concluding Remarks

We have shown that apparent sloppy interpretations of null argument phenomena in Korean are well accounted for under *pro* analyses that we have recently advanced in Ahn & Cho (2009, 2010, 2011b,c,d). More specifically, *pro* in this case functions similarly with the indefinite in English (the indefinite pronoun *one* or *ones* can be possible counterparts). Then, with relevant pragmatic adjustments, the apparent sloppy readings can be accommodated under sloppy-like interpretations in the sense of Hoji (1998): We further indicate that the sloppy-like reading is obtained as a result of an explicature. When the antecedent is a negative polarity item, the sloppy-like interpretation arises when the missing argument, i.e. *pro*, is roughly equivalent to the bare plural noun that serves as the target NP modified by the NPI. We suggest that it is not the NPI itself but the hidden NP (or *pro*) modified by it that the *pro* refers to, hence another instance of sloppy-like readings pragmatically induced by an explicature.

The sloppy-like readings of null arguments are possible as a result of pragmatic adjustment and they are cancellable since they are instances of pragmatic explicatures. On the other hand, genuine sloppy readings are possible without pragmatic adjustment and they cannot be cancelled. Such contrast is observed in the null argument and fragment constructions. We have argued that the contrast is captured under our *pro* analysis only but not under the DP ellipsis analysis advanced in Lee & Kim (2010), Lee (2011) and others.

We have further shown that our *pro* analysis is superior to ellipsis analyses not only in empirical perspectives but also in conceptual respects: (i) our *pro* analysis can offer a uniform account for negative polarity mismatch cases without stipulating partial feature copying or feature changing in LF; (ii) the sole *pro*-drop parameter can correctly capture the null argument phenomena in Korean.

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