On the Distribution of Missing Arguments and Adjuncts under the Pro Approach
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ABSTRACT
This paper focuses on different behaviors of missing arguments and adjuncts. More specifically, this paper shows that interpretations of missing arguments can be freely recovered regardless of their environments while those of missing adjuncts can be recovered in very restricted environments. With respect to this difference, we suggest that missing arguments are syntactically present as silent forms. Hence, their interpretations are relatively less influenced by pragmatic processes. We also suggest that missing adjuncts can be classified into two types. Adjunct reading of one type is obtained through mandatory pragmatic enrichment processes like saturation, and that of the other type is obtained through optional free pragmatic enrichment. Hence, interpretations of missing adjuncts are more influenced by context. We further show that the analysis advanced here can provide a solid explanation for the data pointed out by Yim (2020). We also discuss some advantages of pronoun analysis in comparison to argument ellipsis analyses and Verb-Stranding VP ellipsis analyses.

Keywords: missing argument, missing adjunct, pronoun analysis, argument ellipsis, saturation, free pragmatic enrichment

1. Introduction

Some languages such as Korean and Japanese allow missing arguments even in finite clauses but other languages such as English allow missing arguments in very restricted environments like subject position of nonfinite clauses. As pointed out by Murasugi (1991), Saito (2007) and Takahashi (2008), as long as PPs are selected by predicates (namely, arguments), they can be subject to elision; Hence, it is named “argument ellipsis.”

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(1) 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 [e] sunde inai
      but H.-Top live-not
      ‘But Hanako does not live in his/her parents’ house.’

As we can infer from the name “argument ellipsis,” pure adjuncts are generally not subject to elision (see Oku 1998, Takahashi 2008), as shown in (2) which is taken from Oku (1998: 172).1)

(2) a. Bill-wa kuruma-o teineini aratta.
    Bill-Top car-Acc carefully washed
    ‘Bill washed a car carefully.’

   b. John-wa ____ arawanakatta
      John-Top washed.not
      ‘lit. John didn’t wash e.’

While (2a) contains the adjunct corresponding to carefully, the interpretation of (2b) does not contain the adverb. (2b) just means that John did not wash a car, but not that John did not wash a car carefully.2)

1) Along similar lines, Park (1997: 631-632) shows that in Korean, phonetically null manner or reason adverbials cannot be recovered from a previous discourse:

   (i) a. John-i ppalli talli-ko Mary-to *(ppalli) tallinta.
       J.-Nom fast runs-and M.-also fast runs
       (intended: ‘John runs fast and Mary runs fast too.’)

   b. John-i kulen iwu-lo ttenaass-ko Mary-to *(kulen iwu-lo) ttenaassta.
       J.-Nom that reason-for left-and M.-also that reason-for left
       (intended: ‘John left for such a reason and Mary left for such a reason too.’)

2) Saito (2007: 23) shows that reason PPs (in contrast to locative PPs) in Japanese are not subject to ellision, as shown in (ib), which dictates that only argument PPs can undergo ellipsis.

   (i) 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.’

   (ib) doesn’t have the interpretation that I have not heard that Hanako was fired because of her mistakes. (ib) only means that I have not heard that Hanako was fired.
Many researchers have explored the distribution and interpretation of missing arguments in object position in generative grammar. Pro analyses suggest that missing arguments are covert pronouns (Ahn & Cho 2009, 2011a,b, 2012a,b,c, 2013, 2019, 2020a,b, Hoji 1998, Moon 2010, 2015, 2017, 2019, Park 1994, 2014). On this view, only pro drop languages allow missing arguments in finite clauses. Argument ellipsis (AE) analyses, in contrast, suggest that missing arguments result from deletion of NP, CP and PP in argument positions (Kim 1999, Lee & Kim 2010, Lee 2011, 2014, 2016, Oku 1998, 2016, Saito 2007). Verb-Stranding VP ellipsis (VVPE) analyses, on the other hand, take the view that missing arguments result from V movement and VP deletion (Otani and Whitman 1991, Funakoshi 2012, 2013). Regarding cross-linguistic difference, the AE analyses and VVPE analyses need to explain why languages like English do not have missing arguments in finite clauses if they indeed result from ellipsis of sorts.

Ahn & Cho (2009) shows that pro analyses are superior in explaining empirical data in Korean. They note the fact that missing CP is sensitive to the selection of matrix verb, as shown in (3-4).  

3) There seems to be speakers’ variation about the judgment related to (4B). A reviewer judges (4B) to be marginal. The reviewer states that the null object is possible only when the antecedent is an NP complement, as shown in (iB).

(i) A: Na-nun sin-uy concay-lul mite.
   I-Top God-Gen existence-Acc believe
   ‘I believes in the existence of God.’
B: Na-to ____ mite.
   I also believe
   ‘I believe ____ too.’

The reviewer states that when the antecedent has a clausal complement, kulehkey ‘so’ is obligatory, as shown in (iiB).

(ii) A: Na-nun [Yenghi-ka Toli-lul salanghanta-ko] mitnunta.
   I-Top Y.-Nom T.-Acc love-C believe
   ‘I believe Yenghi loves Toli.’
B: Na-to kulehkey mitnunta.
   I also so believe
   ‘Lit. I believe so too.’

Likewise, the reviewer states that all the examples including a clausal antecedent cannot take a null complement and always need kulehkey ‘so’. We speculate that for some speakers there may be some matching requirements between syntactic categories of antecedents and pro-forms. This strict category matching condition, however, can be loosened for speakers like us and others in the previous literature. Thus, the contrastive judgments noted in the text are relevant only for this population. The reviewer raises the possibility that the null argument in (4B) is a silent form of kulehkey ‘so’. This approach, however, cannot explain the grammatical contrast between (3B) and (4B). More specifically, this approach should answer to the question of why the silent form of kulehkey is not possible in (3B).
(3) A: Na-nun [Yenghi-ka Toli-lul salanghanta-ko] sayngkakhanta.  
    I-Top Y.-Nom T.-Acc love-C think  
    ‘I think Yenghi loves Toli.’
B: *Na-to ___ sayngkakhanta.  
    I-also think  
    ‘Lit. I think too.’

(4) A: Na-nun [Yenghi-ka Toli-lul salanghanta-ko] mitnunta.  
    I-Top Y.-Nom T.-Acc love-C believe  
    ‘I believe Yenghi loves Toli.’
B: Na-to ___ mitnunta.  
    I-also believe  
    ‘Lit. I believe too.’

The puzzle is why missing argument is possible in (4B), but it is impossible in (3B). Ahn & Cho (2009) notes in particular that ellipsis analyses such as AE and VVPE cannot account for the contrast without additional stipulations. Under the AE analysis, (3B) and (4B) have the structure like (5a) and (5b), respectively.

(5) a. Na-to [CP Yenghi-ka Toli-lul salanghanta-ko] sayngkakhanta  
   b. Na-to [CP Yenghi-ka Toli-lul salanghanta-ko] mitnunta

Although a notable difference is not found between (5a) and (5b), the deletion in (5a) makes the sentence (3B) ill-formed. We have to note that a similar deletion process to (5a) applies to (5b). Hence, without additional mechanism or stipulation, AE would predict (3B) well-formed, contrary to fact.

Under the VVPE, (3B) and (4B) are derived from (6a) and (6b), respectively.

(6) a. Na-to [VP Yenghi-ka Toli-lul salanghanta-ko tj] sayngkakhanta  
   b. Na-to [VP Yenghi-ka Toli-lul salanghanta-ko tj] mitnunta

Again, there is no notable difference between (6a) and (6b). Hence, like AE analyses, VVPE analyses cannot account for the contrast between (3B) and (4B).  

4) Park (1997) shows that VP ellipsis is not allowed in Korean. In this line of reasoning, VVPE analysis is not applicable for missing arguments in Korean. Oku (1998: 165) shows that VVPE analyses cannot account for the following three types of data in Japanese. First, VVPE ellipsis cannot account for the
Ahn & Cho (2009) notes licensing mechanism of ellipsis proposed by Merchant (2001): only functional heads such as C, T, and D can bear an [E] feature. In (3B) and (4B) CP is a complement of a theta-role assigning lexical category like V (or v), which cannot have an [E] feature.\(^5\) Hence, CP ellipsis is expected to be ruled out in both (3B) and (4B).

Ahn & Cho (2009) further suggests that (4B) is not derived through CP deletion but that it contains (null pronoun) pro in the complement position. Given that pro occurs in NP position, the difference between sayngkakhata ‘think’ and mitta ‘believe’ is easily accounted for since only the latter takes an NP complement, as shown in (7-8).

(7) A: Na-nun [Yenghi-ka Toli-lul salanghanta-ko] sayngkakhanta.
   I-Top Y.-Nom T.-Acc love-C think
   ‘I think Yenghi loves Toli.’
B: *Na-to kukes-ul sayngkakhanta.
   I-too it-Acc think
   ‘I think it.’

(8) A: na-to [Yenghi-ka Toli-lul salanghanta-ko] mitnunta.
   I-too Y.-Nom T.-Acc love-C believe
   ‘I believe that Yenghi loves Toli.’
B: Na-to kukes-ul mitnunta.
   I-too it-Acc believe
   ‘I believe it.’

\(^5\) In English, complements of V cannot undergo ellipsis, as shown in (i).

(i) a. *I saw John’s brother and Mary also saw [DP John’s brother].
   b. *I regret that we bought the charcoal grill and my wife don’t regret [CP that we bought the charcoal grill].
   c. *Joe can talk to Mag Wildwood and Holly can talk [PP to Mag Wildwood] too. (Johnson 2001:441)
   d. *John seems to solve the problem, and Mary also seems [TP to solve the problem]. (Johnson 2001:441)
On this view, the missing argument in (4B) is not a CP but a pro, a silent form of *kukes-ul* ‘it-Acc’. We call this type of pro analysis “pronoun analysis.” Ahn & Cho (2009, 2010, 2011a,b, 2019, 2020a,b) suggest that pro is a silent form of overt pronouns such as *ku* ‘he’, *kunye* ‘she’, *kukes* ‘it’, *kutul* ‘they\textsubscript{human}’, and *kukestul* ‘they\textsubscript{nonhuman}’. Under the pronoun analysis, (4B) is parallel to (8B) while (3B) is parallel to (7B), and hence the contrast is naturally captured.

The pronoun analysis can also account for sloppy interpretation as shown in (9) (Ahn & Cho 2009: 140).

(9) A: Chelswu-ka caki tongsayng-i tayhak-ey hapkyekha-lke-la-ko
C.-Nom self brother-Nom university-at be accept-Fut-Dec-C
mitnunta.
believe
‘Chelswu believes that his brother will be accepted by the university.’

B: Yenghi-to mitnunta.
YenghiAlso believe
‘Yenghi believes, too.’

B’: Yenghi-to kukes-ul mitnunta.
YenghiAlso it-Acc believe
‘Yenghi believes it, too.’

(9B) can be interpreted as ‘Yenghi believes that her own brother will be accepted by the university’. The sloppy reading is also possible in (9B’) which contains an overt pronoun. Under the pronoun analysis, the null argument in (9B) can be treated as a silent form of *kukes-ul*, so the parallelism between (9B) and (9B’) is well explained.

Unlike missing arguments, however, behaviors of missing adjuncts have less been focused under the generative grammar. Hence, a couple of questions arise: When an adjunct is not overtly realized, is adjunct reading impossible? If interpretation of missing adjunct is possible in some restricted cases, is interpretation of missing

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6) A reviewer judges (9B) and (9B’) to be ill-formed. The reviewer does not accept null counterpart of clausal complement and its replacement by *kukes*. The reviewer shows the same judgment about the similar examples discussed later in this paper. The speaker’s variation seems to support our claim that missing clausal complement is closely tied to the presence of pronominal replacement. As pointed out by Han et al (2020), in the case of speakers’ variation, there is a correlation between related phenomena. A speaker’s acceptance of null clausal complement seems to positively correlate with acceptance of replacement by *kukes* ‘it’.
adjuncts obtained through the same process as that of missing arguments? This paper explores not only interpretations of missing arguments but also interpretations of missing adjuncts.

Furthermore, recently, Yim (2020) argues that a wide range of missing CP/PP arguments can be well accounted for not under pro analyses but under AE analyses. This paper discusses distribution and interpretation of missing CPs and PPs including the data discussed in Yim (2020) and shows that a close examination of missing CPs and PPs can lead to a solid explanation to this phenomenon. More specifically, we show that Yim’s (2020) data cannot be arguments against Ahn & Cho’s (2009) analysis and that the interpretation of missing PPs and CPs does not result from a uniform source. We highlight the premise that pro can only occur in argument positions and that interpretation of missing adjuncts are provided through pragmatic processes like saturation and free pragmatic enrichment (cf. Recanati 1989, 2010).

This paper is organized as follows. Section 2 suggests an elaborate analysis of missing PPs. Section 3 shows that the analysis advanced for missing PPs can be extended to missing CPs. Concluding remarks are presented in Section 4.

2. Three Types of Missing PPs

This section explores missing PPs and classifies them into three types. Among them, only one type of PPs can be silent forms of proforms. The other two types are not present in syntax and are interpreted only through pragmatic processes like saturation and free pragmatic enrichment (cf. Recanati 1989, 2010).7

7) The notions of saturation and free pragmatic enrichment (otherwise known as completion and expansion) have played a central role in recent development of semantics and pragmatics. Below are a pair of representative examples taken from Depraetere and Salkie (2017:12) to show the difference:

(i) This bridge isn’t strong enough. [to support the weight of a train]
(ii) You won’t die. [soon/from that cut]

Depraetere & Salkie (2017) indicates that cases like (i) may be an instance of saturation, while (ii) is supposed to be an instance of free pragmatic enrichment: (i) can be analyzed as semantically incomplete without something like the words in brackets as a reply to clarification. By contrast, although (ii) is similar to (i) in sharing semantic incompleteness, unlike (i) it is literally false without the addition of extra information such as the information expressed by the words in brackets. To sum up, what we should note in recovery of missing adjuncts is that lexical semantics of verbs, context and world knowledge work together in the process of saturation and free pragmatic enrichment. What specific constraint works in each case is beyond the scope of this paper. We leave
Ahn & Cho (2009) shows that some PPs are complements of verbs and can be null. Under the pronoun analysis, missing PPs selected by verbs are silent versions of overt proforms. For instance, (10a) is accounted for in a parallel way with (10b).

(10) a. Chelswu-nun [pp caki choyko kilok-ey] tochenhayssta.
C.-Top self best record-to challenged
Myengswu-to ___ tochenhayssta.
M.-also challenged
Lit. ‘Chelswu challenged to self’s best record. Myengswu challenged too.’
(Yim 2020: 438)
b. Chelswu-nun [pp caki choyko kilok-ey] tochenhayssta.
C.-Top self best record-to challenged
Myengswu-to kukes-ey tochenhayssta.
M.-also it-to challenged
Lit. ‘Chelswu challenged to self’s best record. Myengswu challenged it too.’

Tocenhata ‘challenge’ selects goal PPs, and under the pronoun analysis, the complement in the second sentence of (10a) can be a silent form of kukes-ey.\(^8\)

\(^8\) This issue for future research.

Unlike tochenhata, kyengsinhata ‘break’ takes an NP complement. When the first clause contains tochenhata and the second clause contains kyengsinhata, form mismatch occurs between the antecedent and its elided element. The pronoun analysis accounts for the data containing form mismatch in (ia). (ia) is accounted for in a parallel way with (ib). Under the pronoun analysis, the complement in the second sentence of (ia) is a silent form of kukes-ul.

(i) a. Chelswu-nun [pp caki choyko kilok-ey] tochenhayssta. kulentey
C.-Top self best record-at challenged but
Myengswu-nun imi ___ kyengsinhayssta.
M.-Top already broke
Lit. ‘Chelswu challenged to self’s best record. Myengswu already broke___.’
b. Chelswu-nun [pp caki choyko kilok-ey] tochenhayssta. kulentey
C.-Top self best record-at challenged but
Myengswu-nun imi kukes-ul kyengsinhayssta.
M.-Top already it-Acc broke
Lit. ‘Chelswu challenged to self’s best record. Myengswu already broke it.’

As shown in (ib), when form mismatch of the complements is observed, missing argument in (ia) can be problematic under ellipsis analyses like AE and VVPE, as shown in (ii), since ellipsis requires syntactic identity condition particularly concerning argument structure and abstract Case (see Chung 2013).
Dative PPs can also be missing, as shown in (11-12) (Yim 2020: 440).

(11) a. Chelswu-nun CeA-lul caki pwumonim-eykey
    C.-Top       C.-Acc  self  parent-to
    sokayhayssta. Yenghi-to  Celin-ul _sokayhayssta.
introduced     Y.-also   C.-Acc  introduced
Lit. ‘Chelswu introduced Ce-A to self’s parents.
Yenghi introduced Celin __, too.’

b. Chelswu-nun CeA-lul caki pwumonim-eykey
    C.-Top       C.-Acc  self  parent-to
    sokayhayssta. Yenghi-to  Celin-ul kutul-eykey sokayhayssta.
introduced     Y.-also   C.-Acc  them-Dat introduced
Lit. ‘Chelswu introduced Ce-A to self’s parents.
Yenghi introduced Celin __, too.’

(12) a. Chelswu-nun CeA-lul chengwatay-ey chwuchenayssta.
    C.-Top       C.-Acc  Blue.House-to recommended
    Yenghi-to  Celin-ul ______chwuchenayssta.
    Y.-also    C.-Acc  recommended
Lit. ‘Chelswu recommended CeA to the Blue House.
Yenghi recommended Celin __, too.’

b. Chelswu-nun CeA-lul chengwatay-ey chwuchenayssta.
    C.-Top       C.-Acc  Blue.House-to recommended
    Yenghi-to  Celin-ul kekiey chwuchenayssta.
    Y.-also    C.-Acc  there recommended
Lit. ‘Chelswu recommended CeA to the Blue House.
Yenghi recommended Celin there, too.’

We suggest that the complement in the second sentence of (11a) is a silent form of kutul-eykey in (11b), and the complement in the second sentence of (12a) is a

(ii) a. Chelswu-nun [PP caki choyko kilok-ey] tochenayssta.
    *Myengswu-nun imi [PP caki choyko kilok-ey] kyengsinhayssta.
    b. Chelswu-nun [PP caki choyko kilok-ey] tochenayssta.
    Myengswu-nun imi [PP caki choyko kilok-ul] kyengsinhayssta.

In order to account for the categorial mismatch and case mismatch, ellipsis analyses like AE and VVPE need additional stipulation or mechanism. However, the pronoun analysis advanced here simply explains that the relevant case involves a silent form of overt pronouns.
silent form of *kekiew*.

Following Ahn & Cho (2011a,b, 2020b), we suggest that when a locative PP is selected, missing PP is a silent form of *kekiew*. The verb *salta* ‘live’ takes a locative PP as its complement, as shown in (13). (13b) has the same interpretation with (14b).\(^9\)\(^10\)

(13) a. Chelswu-nun caki-uy pwumo-uy cip-ey santa.
   C.-Top self-Gen parents-Gen house-in live
   ‘Chelswu lives in his parents’ house.’

b. kulentey Yenghi-nun ______ salciahnnunta.
   but Y.-Top live.not
   ‘But Yenghi does not live in her parents’ house.’

(14) a. Chelswu-nun caki-uy pwumo-uy cip-ey santa.
   C.-Top self-Gen parents-Gen house-in live
   ‘Chelswu lives in his parents’ house.’

b. kulentey Yenghi-nun kukosey salciahnnunta.
   but Y.-Top there live.not
   ‘But Yenghi does not live there.’

\(^9\) Yim (2020) argues that the pro analysis should postulate numerous kinds of pros in proportion to the number of postpositions in Korean and that various kinds of pros can be theoretical burden in the pro analysis. However, the existence of various kinds of pros cannot be a problem at all. In Korean, we can assume that there are various kinds of overt pronouns which may have corresponding silent forms.

We also note that in Korean, one of radical pro drop languages, pro is extremely productive. Thus, pro is needed anyways independently of apparent argument ellipsis in Korean. For example, when a teacher or a student comes into the classroom, a student can utter (ia-b) in Korean (cf. Saito 2007: 225).

(i) a. pro o-sy-ess-e.
   come-Hon-Pst-Dec

b. pro o-ass-e.
   come-Pst-Dec.

Considering Occam’s razor, pronoun analysis advanced here is better than AE and VVPE analyses because pronoun analysis can capture interpretations of missing arguments in Korean without postulating separate operations like AE and VVPE. More specifically, on missing arguments, ellipsis analyses postulate two separate mechanisms, pro and ellipsis whereas pronoun analysis postulates only pro. In this regard, pro analysis is conceptually simple.

\(^10\) Tomioka (2014: 253-254) shows that plural overt pronouns can have sloppy interpretation. Ahn & Cho (2019, 2020a,b) show that although there is speakers’ variation, overt pronoun in Korean can have sloppy reading and that strict interpretation is strongly preferred.
We further note that only some locative PPs can be served as adjuncts. Consider (15).

(15) a. Chelswu-nun caki-uy pang-eyse Hamlet-ul ilkess-ko
   C.-Top self-Gen room-at Hamlet-Acc read-and
Tongswu-nun ______ Hamlet-ul ilkciahnassta.
   T.-Top H.-Acc read not
‘Chelswu, read Hamlet in hisi room and Tongswu didn’t read Hamlet.’
(*’Dongswu didn’t read Hamlet in his room.’) (cf. Oku 2016)

b. Chelswu-nun caki-uy pang-eyse Hamlet-ul ilkess-ko
   C.-Top self-Gen room-at Hamlet-Acc read-and
Tongswu-nun ______ King Lear-lul ilkciahnassta.
   T.-Top King Lear-Acc read not
‘Chelswu, read Hamlet in hisi room and Tongswu didn’t read King Lear [i].’ (‘Dongswu didn’t read King Lear in hisi room.’)

In (15), the PP caki-uy pang-eyse ‘in his room’ is not selected by the verb ilk- ‘read’. When the adjunct locative PP is missing, the interpretation is not obtained. The second conjunct in (15a) does not mean that ‘Dongswu didn’t read Hamlet in his own room’ (adjunct reading). The second conjunct in (15b), either, does not mean that ‘Dongswu didn’t read King Lear in his own room’ (adjunct reading).

The absence of locative reading in (15a-b) contrasts with the presence of locative reading in (13b). When a locative PP in an adjunct position is not overtly present, the relevant reading disappears. By contrast, even though a locative PP in a complement position is not overtly present, the relevant reading is obtained.

If (15a) and (15b) contain a silent form of locative proform kukoseyse ‘there’, the adjunct reading should be possible, contrary to fact.

(16) a. Chelswu-nun caki-uy pang-eyse Hamlet-ul ilk-ko
   C.-Top self-Gen room-at Hamlet-Acc read-and
Tongswu-nun kukoseyse Hamlet-ul ilkciahnassta.
   T.-Top there H.-Acc read not
‘Chelswu, read Hamlet in hisi room and Tongswu didn’t read Hamlet there.’ (‘there can be hisi room.’) (cf. Ahn & Cho 2020b: 213)
Since kukoseyse is present, adjunct reading is obtained in both (16a) and (16b). The contrast between (15) and (16) leads us to the conclusion that missing adjuncts cannot be pros.

Interestingly, however, when the second conjunct doesn’t have negation, adjunct reading of missing adjunct seems to be possible, as shown in (17).

(17) a. Chelswu-nun caki-uy pang-eyse Hamlet-ul ilkess-ko  
   C.-Top self-Gen room-at Hamlet-Acc read-and  
   Tongswu-to ______ Hamlet-ul ilkessta.  
   T.-also H.-Acc read  
   ‘Chelswu read Hamlet in his room and Tongswu also read Hamlet [e].’  
   (‘[e] can be in hisj room.’)  

b. Chelswu-nun caki-uy pang-eyse Hamlet-ul ilkess-ko  
   C.-Top self-Gen room-at Hamlet-Acc read-and  
   Tongswu-nun ______ King Lear-lul ilkessta.  
   T.-Top King Lear-Acc read  
   ‘Chelswu read Hamlet in hisi room and Tongswu read King Lear [e].’  
   (‘[e] can be in hisi room.’) (Ahn & Cho 2020b: 212)  

The second conjunct in (17a) can mean that Tongswu also read Hamlet in his own room, and the second conjunct in (17b) can mean that Tongswu read King Lear in his own room. At this point, the following question arises: what controls presence or absence of interpretations of missing PPs?

In order to account for interpretations of missing PPs, it seems necessary to consider the relation between linguistic meaning and context. We have to note that the semantic content of the sentence that is uttered generally underdetermines what is said. Hence, what is said depends more on pragmatic processes such as various enrichment and adjustment processes (Clark 2013, Walczak 2016 among others). It is generally assumed that these pragmatic enrichment processes (sometimes known
as “explicature”) is a combination of linguistically encoded and contextually inferred conceptual features from implicit materials.

Recanati (2010: 83-85) notes that the location of an event is closely tied to lexical semantics of a verb. Consider the following dialogue.

(18) A: John has arrived.
    B: Where has he arrived?
    A: #I have no idea.  

(Recanati 2010: 83)

Since *arrive* includes information about location, B’s second statement is infelicitous.

According to Recanati (2010: 83-84), this test determines whether there is an argument slot in the lexical semantics of a verb: if there is one, the slot has to be filled, whether explicitly or contextually. In an arrival event the goal location is the destination of the motion which culminates in that event. When that location is not overtly specified, it must be contextually understood, as shown in (19).

(19) $\exists e [\text{ARRIVING} (e) \land \text{AGENT} (\text{John}, e) \land \text{LOCATION} (l.e)]$

(Recanati 2010: 83)

Because the location slot is given as part of lexical semantics of *arrive*, the information must be provided. In this case, unspecified location is specified as a result of saturation, which is an obligatory pragmatic enrichment process.

In contrast to *arrive*, an activity predicate *dance* does not express telic event, so the location of the dancing event need not be specified, explicitly or contextually, as the following dialogue shows:

(20) A: John has danced.
    B: Where has he danced?
    A: I have no idea.  

(Recanati 2010: 84)

Since *dance* does not carry information about a location, B’s second statement is felicitous. The first utterance in (20), which has present tense with prefect aspect, refers to non-specific event. The first utterance in (20A) may be understood in a location-indefinite manner, as shown in (21).

(21) $\exists e [\text{DANCING} (e) \land \text{AGENT} (\text{Mary}, e)]$

(Recanati 2010: 83)
Note, however, that the first utterance in (20A) contrasts with the second utterance in (22).

(22) A: Was John present at the ball?
   B: Yes. He danced all night.  

(Recanati 2010: 85)

In (22B), the predicate occurs with past tense and (22B) refers to a specific event. Hence, a location for the event may also be contextually provided as part of the interpretation of the utterance. (22B) means that John danced all night at the ball. In a case like dance, the location of the event may be contextually understood even though this is not imposed by lexical semantics of the verb. The adjunct reading is possible through free pragmatic enrichment. 11) Although there is no locative PP in the sentence ‘He danced all night.’ in (22), the speaker is understood to tacitly refer to the ball in this context.

According to Recanati (2010: 92), the free pragmatic enrichment is not mandated by the linguistic material but responds to wholly pragmatic considerations. The tacit reference to a location can be illustrated as in (23). An extra conjunct, LOCATION (the-ball, e) is contextually provided.

(23) \exists e \exists t [PAST (t) \land TIME (t,e) \land Dancing (e) \land AGENT (John, e) 
\land ALL-NIGHT (e) \land LOCATION (the-ball, e)]  

(Recanati 2010: 92)

Hence, the utterance ‘He danced all night’ is understood in a more specific sense like ‘He danced all night at the ball’.

The following example of free pragmatic enrichment can be handled similarly

Free enrichment is a pragmatic process through which the actual interpretation of an utterance is made more specific than the literal meaning of the uttered sentence. Recanati (2010: 94) suggests that verbs like dance are temporally and locationally neutral. In the case of dance, there is no temporal and locative argument in the lexical entry. Times are introduced into the logical form at the sentence level via the tense of verb. Locations can be optionally introduced into the (bare) logical form at the syntagmatic level by means of locative phrases, or they can be introduced into the (modified) logical form at the pragmatic level, via free enrichment. There’s bound to be a location for the event. (Recanati 2010: 84)

With the help of the preceding utterance (22A), the location of the dancing event in (22B) is understood if not explicitly specified in (22B).
through the addition of an extra conjunct about location. The interpretations of bracketed implicit materials in (24) are conveyed through free pragmatic enrichment (Blackmore 1987).

(24) a. He ran to the edge of the cliff and jumped. [from the cliff]  
b. John went on vacation in Austria and skied. [in Austria]

As pointed out by Carston (1988: 165), in most contexts of utterance, (24a) will be interpreted as follows: He ran to the edge of the cliff and jumped from the cliff. In (24a), the verb jump does not subcategorize the PP from the cliff. One can naturally interpret the second conjunct as expressing the proposition that he jumped from the cliff. The location of the event of jumping is contextually assumed to be the same as the location mentioned in the first conjunct. In (24b), the verb ski does not subcategorize the PP in Austria. However, one naturally understands that skiing took place in Austria although the linguistic content of the utterance does not contain the locative phrase.

As suggested by Recanati (2010), free pragmatic enrichment, namely, contextual provision of an extra locative conjunct is optional. It is perfectly okay to interpret a sentence like ‘He jumped’ as saying that he jumped from some place, without the place in question being contextually specified or specifiable. Likewise, in (24b), the event of skiing is understood as having taken place in Austria since John’s vacation to Austria has just been mentioned.

Similar phenomena are found in Korean, as shown in (25).

(25) a. Chelswu-ka celpyek-ulo tallyekassta kuliko ttwienaylyessta.  
   C.-Nom edge.of.the.cliff-to ran and jumped  
   ‘Chelswu ran to the edge of the cliff and jumped.’  
   b. Chelswu-ka Austria-lo hyuka-lul kassta kuliko ski-lul thassta.  
   C.-Nom Austria-to vacation.Acc went and ski.Acc skied  
   ‘Chelswu went on vacation in Austria and skied.

Through free pragmatic enrichment processes, the locative interpretations in the second conjuncts in (25) are conveyed; that is, (25a) can mean that Chelswu jumped from the cliff and (25b) can mean that Chelswu skied in Austria.\(^\text{12}\) Even

\(^{12}\) As pointed out by a reviewer, (iB) does not mean that Minswu was kicking ‘at the school’.

when the second conjunct contains negation, the location reading is possible, as shown in (26).\(^\text{13}\)

(26) \text{a. Chelswu-ka celpyek-ulo tallyekassta kulena}
\text{C.-Nom edge.of.the.cliff-to ran but}
\text{ttwienaylicianhassta.}
\text{jumped not}
\text{‘Chelswu ran to the edge of the cliff and didn’t jump.’}
\text{b. Chelswu-ka Austria-lo hyuka-lul kassta kulena ski-lul}
\text{C.-Nom Austria-to vacation-Acc went but ski-Acc}
\text{thacianhassta. skied not}

(i) \text{A: Cheli-ka hakkyo-eyse wutungsayng-i-ta.}
\text{C.-Top school-at honor.student-Cop-Dec}
\text{‘Cheli is a honor student at the school.’}
\text{B: Minswu-ka kong-ul chakoissta.}
\text{M.-Nom ball-Acc was.kicking}
\text{‘Minswu was kicking a ball.’}

We suggest that the addition of location via free enrichment does not arise in (iB). Given that the event of (iA) has nothing to do with the event of (iB), the location of the event of kicking a ball is not contextually assumed to be the same as the location mentioned in A’s utterance. Hence, the addition of location of ‘at the school’ does not occur in Minswu’s kicking event.

A reviewer raises the possibility that ellipsis analysis which assumes parallelism requirement like (ii) accounts for the impossibility of missing adjunct interpretation as shown in (iB).

(ii) \text{Parallelism (Collins 2015: 8)}
\text{Adjunct deletion is only possible in the following structure:}
\begin{align*}
\text{[XP1…\text{A}\ldots Adjunct \ldots ] and/\text{than [XP2\ldots B\ldots Adjunct> \ldots ]}}
\end{align*}
\text{where B is focused and XP1 is a member of F(XP2), the focus value of XP2.}

However, the ellipsis analysis cannot account for the contrast between (iiiia) and (iiiib).

(iii) \text{a. Cheli-ka ppalli twiesssta kuliko Yenghi-to twiesssta.}
\text{C.-Nom fast ran and Y.-also ran}
\text{b. Cheli-ka hakyo-eyse twiesssta kuliko Yenghi-to twiesssta.}
\text{C.-Nom school-at ran and Y.-also ran.}

The second conjunct in (iiiib) can mean ‘Yenghi also ran at school’. However, the second conjunct in (iiiia) does not mean ‘Yenghi also ran fast’. It only means ‘Yenghi also ran’. Since the parallelism requirement is satisfied in (iii), the adjunct ellipsis should be possible. As a result, adjunct reading is predicted to be obtained in the second conjunct of (iiiia), too, contrary to fact. Careful investigations related to the parallelism requirement are solicited for future research.

\(^{13}\) One might raise the following question: why is the interpretation of missing locative PP possible in (26) although the second sentence contains negation? In (26) both the conjuncts have the same subject, so the event is shared. As a result, they occupy the same space and time. Thus, locative interpretations are possible in the second conjuncts in (26).
‘Chelswu went on vacation in Austria and didn’t ski.’

(26a) can mean that Chelswu didn’t jump from the cliff and (26b) can mean that Chelswu didn’t ski in Austria. The presence of adjunct reading in (26) sharply contrasts with the absence of adjunct reading in (15), repeated here as (27).14

(27) a. Chelswu-nun caki-uy pang-eyse Hamlet-ul ilkess-ko
C.-Top self-Gen room-at Hamlet-Acc read-and
Tongswu-nun _______ Hamlet-ul ilkciahanassta.
T.-Top H.-Acc read.not
‘Chelswu read Hamlet in his room and Tongswu didn’t read Hamlet.’
(*’Tongswu didn’t read Hamlet in his room.’) (cf. Oku 2016)

b. Chelswu-nun caki-uy pang-eyse Hamlet-ul ilkess-ko
C.-Top self-Gen room-at Hamlet-Acc read-and
Tongswu-nun _______ King Lear-lul ilkciahanassta.
T.-Top King Lear-Acc read.not
‘Chelswu read Hamlet in his room and Tongswu didn’t read King Lear.’ (*’Tongswu didn’t read King Lear in his room.’)

The difference seems to lie in subjects. The subjects in (26) are shared in both the conjuncts while in (27), the subjects in the first conjuncts are different from those of the second conjuncts. Hence, we can think that the predicates in both the

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14 A reviewer points out the possibility that when the second sentence contains negation, in some cases, the adjunct recovery seems to be allowed, as shown in (iB).

(i) A: Cheli-nun caki hakkyo tosekwan-eyse kongpwuhacianhassta.
C.-Top self school library-at study.not
‘Cheli didn’t study at his school library.’
B: (myengpaykhi) Yengi-to kongpwuhacianhassta.
Obviously Y.-also study.not
‘Obviously Yenghi didn’t study, either.’

The reviewer claims that (iB) seems to be understood like ‘Yenghi didn’t study at her school library’. If the missing location in (iB) were added, it ought to allow (though not force) the inclusion of the adjunct caki hakkyo tosekwan-eyse ‘at her school library’ (at his school library present in the antecedent clause). This should give rise to the reading ‘Yenghi didn’t study at her library’, which in turn allows the interpretation ‘Yenghi studied but not at her school library’. In the case of denying the studying event, ‘Yenghi didn’t study at her school library’ could be true because Yenghi didn’t study at all. In this case, apparent missing adjunct interpretation seems to some speakers to be possible.
conjuncts in (26) refer to one event. Therefore, the location in the first conjuncts naturally applies to the second conjuncts. By contrast, since the subjects differ in both the conjuncts of (27), we can think that the event in the first conjunct is different from that of the second conjunct. Hence, to obtain locative reading in the second conjunct, free pragmatic enrichment should occur. However, it seems that in the scope of negation, a location slot is not inserted through free pragmatic enrichment. As a result, locative reading is not possible in (27).

However, without negation, location slot can be provided through free pragmatic enrichment and the value is contextually provided, as shown in (17), repeated here as (28).15

(28) a. Chelswu-nun caki-uy pang-eyse Hamlet-ul ilk-ko
   C.-Top self-Gen room-at Hamlet-Acc read-and
   Tongswu-to _______ Hamlet-ul ilkessta.
   T.-also H.-Acc read
   ‘Chelswu_i read Hamlet in his_i room and Tongswu_j also read
   Hamlet [e].’ ([e] can be in his_j room.)

b. Chelswu-nun caki-uy pang-eyse Hamlet-ul ilk-ko
   C.-Top self-Gen room-at Hamlet-Acc read-and
   Tongswu-nun _______ King Lear-lul ilkessta.
   T.-Top King Lear-Acc read
   ‘Chelswu_i read Hamlet in his_i room and Tongswu_j read King Lear [e].’
   ([e] can be in his_j room)

15 As pointed out by a reviewer, (28) reminds us of the following example discussed by Collins (2015:1), as shown in (i).

(i) John wants to dance at the prom and Bill wants to sing (Collins 2015: 1).

(i) has two interpretations (iia) and (iib).

(ii) a. John wants to dance at the prom and Bill wants to sing. (not specifically at the prom)
    b. John wants to dance at the prom and Bill wants to sing at the prom.

Collins (2015: 1) suggests that the two interpretations of (ii) can be distinguished by context. Collins (2015) mentions two possibilities to resolve the ambiguity of (i). One is to suggest that the adjunct is actually present in the syntax and the other is to suggest that the adjunct is absent from the syntax and deduced by some kind of semantic or pragmatic inference. Collins (2015) simply presents a syntactic deletion account, and leaves it to future work to attempt a comparison to semantic and pragmatic account.
In other words, (28ab) can give rise to the sloppy-like interpretations that Tongswu read Hamlet/King Lear in his own room. We suggest that the locative (sloppy-like) reading in the second conjuncts of (28) results from free pragmatic enrichment.

To sum up, when a locative PP is absent, the relevant reading is possible in three ways. If the locative PP is a complement of a verb, the missing locative reading is possible due to a silent proform. If the locative PP is required by lexical semantics of a verb like *arrive*, an empty location slot of the event is given and the value is obligatorily assigned with the help of its context. As a result, the missing locative reading is conveyed. If the locative PP is not required by lexical semantics of a verb like *dance*, a location slot of the event is optionally inserted and the value is assigned with the help of its context. In the third case, insertion of a location slot is restricted: for instance, in the scope of negation, insertion of location slot does not occur; accordingly, locative reading is absent.

Missing temporal adverbials pattern with missing locative adverbials concerning the availability of the relevant reading.

(29) a. Chelswu-ka caknyen-ey Austria-lo hyuka-lul kassta kuliko C.-Nom last.year-in Austria-to vacation-Acc went and ski-lul thassta.
ski-Acc skied

‘Chelswu went on vacation in Austria last year and skied.’

b. Chelswu-ka caknyen-ey Austria-lo hyuka-lul kassta kulena C.-Nom last.year-in Austria-to vacation-Acc went but ski-lul thacianhassta.
ski-Acc skied.not

‘Chelswu went on vacation in Austria last year and didn’t ski.’

(29a, b) yield the interpretations that Chelswu skied/didn’t ski last year. The presence of temporal reading seems to be due to the fact that the subjects in (29) are shared in both the conjuncts, and the predicates in both the conjuncts refer to the same event and the time in the first conjuncts naturally applies to second conjuncts.

Note further that temporal reading of missing adjunct is possible in the positive sentences like (30), but it is impossible in the negative sentences like (31).
(30) a. Chelswu-nun caknyen-ey Hamlet-ul ilkess-ko
   C.-Top last.year-in Hamlet-Acc read-and
   Tongswu-to _______ Hamlet-ul ilkessta.
   T.-Also H.-Acc read
   ‘Chelswu read Hamlet last year and Tongswu also read Hamlet.’
   (‘Tongswu read Hamlet last year.’)

b. Chelswu-nun caknyen-ey Hamlet-ul ilkess-ko
   C.-Top last.year-in Hamlet-Acc read-and
   Tongswu-to _______ King Lear-lul ilkessta.
   T.-Also King Lear-Acc read
   ‘Chelswu read Hamlet last year and Tongswu read King Lear.’
   (‘Tongswu read Hamlet last year.’)

(31) a. Chelswu-nun caknyen-ey Hamlet-ul ilkess-ko
   C.-Top last.year-in Hamlet-Acc read-and
   Tongswu-nun _______ Hamlet-ul ilkciahnassta.
   T.-Top H.-Acc read
   ‘Chelswu read Hamlet last year and Tongswu didn’t read Hamlet.’
   (*’Tongswu didn’t read Hamlet last year.’)

b. Chelswu-nun caknyen-ey Hamlet-ul ilkess-ko
   C.-Top last.year-in Hamlet-Acc read-and
   Tongswu-nun _______ King Lear-lul ilkciahnassta.
   T.-Top King Lear-Acc read
   ‘Chelswu read Hamlet last year and Tongswu didn’t read King Lear.’
   (*’Tongswu didn’t read Hamlet last year.’)

We can account for the contrast in (30) and (31) in a way similar to missing locative PPs; I.e., free pragmatic enrichment is not possible within the scope of negation, so missing temporal reading cannot be obtained in (31) unlike (30).

Note also that missing adjunct reading is always impossible in the case of manner and reason adverbials, as shown in (32) and (33).16)

16) A reviewer points out the examples in (i-ii).

(i) A: Cheli-ka kal-lo ccilliessta.
   C.-Nom knife-from got.a.cut
   ‘Cheli got a cut from a knife.’

B: Minswu-ka kwail-ul kkakassta.
   M.-Nom fruit-ul peeled.
(32)  a. Chelswu-ka caki koyangi-chelem twiessta kuliko Yenghi-to
c.-Nom his cat-like ran and Y.-also
twiessta.
ran
‘Chelswu ran like his cat and Yenghi ran.’
(≠ Yenghi also ran like her cat.)
b. Chelswu-ka caki koyangi-chelem twiessta kulena Yenghi-nun
c.-Nom his cat-like ran but Y.-Top
twicianhassta.
ran.not
‘Chelswu ran like his cat and Yenghi didn’t run.’
(≠ Yenghi didn’t run like her cat.)

(33)  a. Chelswu-ka caki chinkwu-ttaymwuney wulessta kuliko
c.-Nom his friend-for cried and
Yenghi-to wulessta.
Y.-also cried
‘Chelswu cried because of his friend and Yenghi cried.’
(≠ Yenghi cried because of her friend.)
b. Chelswu-ka caki chinkwu-ttaymwuney wulessta kulena
C.-Nom his friend-for cried but
Yenghi-nun wulcianhassta.
Y.-Top cried.not
‘Chelswu cried because of his friend and Yenghi didn’t cry.’
(≠ Yenghi didn’t cry because of her friend.)

‘Minswu peeled fruit.’

(ii) A: Cheli-ka Seoul-lo kankes-un catongca-lo-i-ta.
c.-Nom S.-to go-Top car-by-Cop-Dec
‘It was by car that Cheli went to Seoul.’
B: Minswu-ka wassta.
M.-Nom came
‘Minswu came.’

(iB) does not mean that Minswu peeled fruit ‘with a knife’, and (iiB) does not mean that Minswu came ‘by car’. The missing adjunct reading is not possible because addition of instrument through free pragmatic enrichment does not arise in (iB) and (iiB) due to non-parallel or incoherent contexts given in the antecedent sentences.
In (32), the second conjuncts do not yield manner reading; and in (33), the second conjuncts do not involve reason reading. The absence of manner and reason reading appears to be tied to properties of event arguments.

Given that free pragmatic enrichment is a process of addition of an extra conjunct about events, only location and temporal slot are added. In other words, reason slot and manner slot are not inserted through free pragmatic enrichment. Hence, in order for the manner and reason reading to be conveyed, the relevant linguistic expressions must be overtly present in the utterances.

Further, a negative event may not denote an event since a negative sentence is interpreted as stating the non-existence of any event of some kind. In this respect, negative events may contrast with positive sentences which assert the existence of some events. Thus, it might be naturally assumed that the free pragmatic enrichment (or explicatures) cannot be survived by negative events, as seen above. Thus, the correlations of absence of the free pragmatic enrichment with negative events lend another support to our claim that missing adjunct interpretation does not hinge upon syntactic ellipsis but remains as a pragmatic residue.

3. More on the Interpretation of Missing CPs

We note that missing CP examples are classified into two types. In the first type, the predicate selects missing arguments. We have claimed that a missing argument is a silent version of an overt proform. In the second type, the predicate does not

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17) According to Bernard (2018), under the standard analysis of negation in event semantics, a negative sentence is interpreted as stating the non-existence of any event of some kind in contrast with positive sentences which assert the existence of some events. According to Asher (1993, 2000), a negative NP such as the nonarrival of the train does not denote an event, as it is not compatible with perfect nominal containers (Vendler 1967) as shown in (i).

(i) *The nonarrival of the train occurred at 10 A.M. (lasted many hours; took place at the station in Victoria)  
(Bernard 2018: 13)

The ill-formedness of (i) is explained by first distinguishing between actual and non-actual events and then introducing a Neg function sending any event-predicate P to the not-P event and obeying a single axiom. In this line of reasoning, we suggest that in the negative sentence, addition of time and location slot do not occur by free pragmatic enrichment.

18) As an alternative of free pragmatic enrichment, we might consider the possibility that the manner PP in (32a) and the reason PP in (33a) involve pro. As pointed out by a reviewer, this possibility doesn’t become real. If we consider Huang’s (1982) analysis of ‘when’ and ‘where’ in English, which can be taken as a quasi-argument, only ‘then’ and ‘there’ can have silent forms.
select any complements, and we have suggested that missing CP readings result from free pragmatic enrichment processes.

3.1 Complements

Yim (2020) notes that mwutta ‘ask’ and malhata ‘say’ differ in the subcategorial features that they select for. The former takes only CP\([+Q]\) and the latter takes only CP\([-Q]\).

(34) a. CeA-ka caki appa-ka cip-ey osyess-nunci
    C.-Nom self dad-Nom house-at came-whether
    mwulessta. Celin-to ___ mwulessta.
    asked C.-also asked
    Lit. ‘Ce-A asked if self’s dad came home. Celin asked __, too.’

   b. CeA-ka caki appa-ka cip-ey osyessta-ko
    C.-Nom self dad-Nom house-at came-that
    malhayssta. Celin-to ___ malhayssta
    said C.-also said
    Lit. ‘CeA said that self’s dad came home. Celin asked __, too.’
    (Yim 2020: 439)

Yim (2020) raises the following problem: For the pro analysis to account for this fact, two kinds of pro distinct with respect to the subcategorial feature [Q] should be posited: \(\text{pro}_{\text{CP}[+Q]}\) and \(\text{pro}_{\text{CP}[-Q]}\). Yim (2020) claims that this can be a weak point of pro analyses.

However, unlike Yim’s (2020) claim, under the pronoun analysis, the second sentences in (34) both have a silent form of kukes-ul. (34a-b) can be analyzed in parallel with (35a, 35b).

(35) a. CeA-ka caki appa-ka cip-ey osyess-nunci
    C.-Nom self dad-Nom house-at came-whether
    mwulessta. Celin-to kukes-ul mwulessta.
    asked Celin-also it-Acc asked
    Lit. ‘Ce-A asked if self’s dad came home. Celin asked __, too.’

   b. CeA-ka caki appa-ka cip-ey osyessta-ko
    C.-Nom self dad-Nom house-at came-that
Hence, pronoun analysis doesn’t need to postulate two kinds of pros here. In the same line of reasoning, we can account for the complementizer mismatch in (36) (cf. Lee 2014: 13-14).

(36) A: Na-nun [Cheli-ka Swumi-lul salanghanta-ko] sayngkakhay.
   I-Top C.-Nom S.-Acc love-C\_Q think
   ‘I think that Cheli loves Swumi.’
B: Nay-ka Yenghi-eykey ______ mwulepoasse.
   I-Nom Y.-Dat asked
   ‘I asked Yenghi if Cheli loves Swumi.’
   (e = if Cheli loves Swumi)
C: Nay-ka Yenghi-eykey kukes-ul mwulepoasse.
   I-Nom Y.-Dat it-Acc asked
   ‘I asked Yenghi if Cheli loves Swumi.’
D: #Nay-ka Yenghi-eykey [Cheli-ka Swumi-lul salanghanta-ko]
   I-Nom Y.-Dat [C.-Nom S.-Acc love-C\_Q ]
   mwulepoasse.
   asked                (Ahn & Cho 2019: 97)

The bracketed antecedent clause in (36A) is declarative but the implicit complement in (36B) is interrogative. As shown in (36D) the implicit complement in (36B) cannot be derived through the deletion of [Cheli-ka Swumi-lul salanghanta-ko]. Hence, under AE, an additional assumption or more complex mechanism is needed to account for the mismatch between the antecedent (37A) and its elided argument (37B).

(37) A: Na-nun Yenghi-eykey [Cheli-ka Swumi-lul salanghanta-ko]
   sayngkakhay.
B: Nay-ka Yenghi-eykey [Cheli-ka Swumi-lul salangha-nunci]
   mwulepoasse.

By contrast, the mismatch is not problematic under pronoun analysis since the missing argument in (36B) can be a silent form of kukes-ul (NB: (36B) and (36C) are interpreted in a parallel way).
3.2 Adjuncts

Yim (2020: 438) indicates that the verb *taykkwuhata* ‘reply, talk back’ takes a CP complement but not a (theme) NP as shown in (37).

(37) a. Chelswu-nun (wuli-eykey) [CP caki-ka ta alase ha-kessta-ko] 
    C.-Top we-Dat self-Nom all know do-will-C 
    taykkwuhayssta. 
    replied 
    ‘Chelswu replied (to us) that he would do it all on his own.’

b. *Chelswu-nun (wuli-eykey) [NP cinsil-ul] taykkwuhayssta. 
    C.-Top we-to truth-Acc replied 
    Lit. ‘Chelswu replied (to us) for the truth.’

Based on the ill-formedness of (37b), Yim (2020) stressed that the missing argument in (38a) cannot be an NP but a CP.

(38) a. Chelswu-ka [CP caki-nun molunta-ko] taykkwuhayssta. 
    C.-Nom self-Top not.know-C replied 
    Myengswu-to taykkwuhayssta. 
    M.-also replied 
    Lit. ‘Chelswu replied that self did not know. Myengswu replied too.’

b. Myengswu-to [CP caki-nun molunta-ko] taykkwuhayssta. 
    M.-Nom self-Top not.know-C replied 
    Myengswu-to *kukes-ul taykkwuhayssta. 
    M.-also it-Acc replied 
    Lit. ‘Chelswu replied that self did not know. *Myengswu replied it, too.’ 
    (Yim 2020: 436)

Yim (2020: 437) further points out that Ahn & Cho’s (2009) pro analysis should assume ProCP. Otherwise, the pro analysis can’t account for the well-formedness of (38a).

We, however, suggest that (38a) does not contain missing arguments. According to Standard Korean Dictionary made by the National Institute of the Korean Language, *taykkwuhata* can be used as an intransitive verb, as shown in (39).19)
(39) a. Ku-nun naynglaynghi taykkwuhassta.
   He-Top coldly replied.
   ‘He replied coldly.’

b. Ku cemwen-un kwichanhuntusi taykkwuhassta.
   the clerk-Top with.an.annoyed.look replied
   ‘The clerk replied with an annoyed look.’

c. elun malssum-ey ilili taykkuhaysen mosssunta.
   adult talk-at in.everything talk.back don’t
   ‘Don’t talk back in everything when an adult is talking to you.’

On this view, *taykkwuhata* in (38a) is an intransitive predicate. Then, the CP in (38a) is not a complement of the verb. We note that the CP in (38a) is served as an adjunct. Nevertheless, the follow-up sentence in (38a) can be interpreted as involving missing CP through free pragmatic enrichment process. Thus, (38a) cannot be understood as a substantial case of argument (CP) ellipsis.

As pointed by Carston (1988), Walczak (2016) and many others, cancellability is a property of any and all aspects of utterance meaning which are derived pragmatically. Since free pragmatic enrichment process (also known as “explicature”) is linguistic/pragmatic hybrid, some content of this pragmatic process is cancellable. This is found with (40).

(40) Chelswu-ka [CP caki-nun molunta-ko] taykkwuhayssta.
   C.-Nom self-Top not.know-C replied
   Myengswu-to taykkwuhayssta, caki-nun alkoissesstako.
   M.-also replied self-Top knew
   Lit. ‘Chelswu replied that self did not know. Myengswu, replied too. (He said that) he; knew (it).’

19) A reviewer suggests that *taykkwuhata* ‘reply’ takes a manner adverb phrase as its complement and to his ears, (38a) sounds ill-formed. However, according to Standard Korean Dictionary made by the National Institute of the Korean Language, *taykkwuhata* can occur without an ADVP, as shown in (i).

(i) pwuin-un taykkwuhaci anhko ccalpun phyencok kelumulo
   wife-Nom reply not.and short one.leg stride
   cokumssik twittwungtwittwung keleka pelyessta.
   little.by.little staggeringly walked away
   ‘His wife staggeringly walked away with one leg with a short stride.’
If (38a) is derived through CP deletion of *caki-nun moluntako*, the contrast between (40) and the following (41) cannot be explained under ellipsis analyses like AE and VVPE.

\[(41)\] Chelswu-ka [\text{CP} caki-nun molunta-ko] taykkwuhayssta.
C.-Nom self-Top not.know-C replied
*Myengswu-to caki-nun molunta-ko taykkwuhayssta,
M.-also self-Top not.know-C replied
caki-nun alkoissesstako.
s elf-Top knew
Lit. ‘Chelswu replied that self did not know. Myengswu replied that he didn’t know it too. (He said that) he knew (it).’

In other words, the apparent missing CP interpretation in (38a) does not directly support a syntactic ellipsis analysis, but may display another instance of free pragmatic enrichment process and the like.

Like interpretations of missing adjunct PPs, when the clause contains negation, adjunct CP interpretation is absent as shown in (42).

\[(42)\] Chelswu-ka [\text{CP} caki-nun molunta-ko] taykkwuhayssta.
C.-Nom self-Top not.know-C replied
kulena Myengswu-nun taykkwuhacianhassta.
but M.-Top replied.not
Lit. ‘Chelswu replied that self did not know. But Myengswu didn’t reply.’

In (42), the second sentence just means that Myengswu didn’t reply.

On a par with the sentence involving *taykkwuhata*, we can also account for the missing CP reading in the second sentence of (43).

\[(43)\] Chelswu-ka [\text{CP} caki-nun molunta-ko] palppaymhayssta.
C.-Nom self-Top not.know-C made.an.excuse
Myengswu-to palppaymhayssta.
M.-too made.an.excuse
‘Chelswu made an excuse that he didn’t know. Myengswu made an excuse, too.’
According to Standard Korean Dictionary made by the National Institute of the Korean Language, the verb *palppaymhata* belongs to an intransitive verb class which patterns alike *taykkwuahata*. A typical intransitive usage is illustrated in (44).

(44) Kutul-un selo nam eykey chaykim-ul milwumyense
    They-Top each other-to responsibility-Acc shift
    palppaymhanunteyeyman kupkuphayssta.
    made.an.excuse be.busy
    ‘They were busy trying to make an excuse shifting responsibilities to others.’

On this view, *palppaymhata* in (43) is an intransitive predicate, and through free pragmatic enrichment process, (43) can have the interpretation that Myengswu made an excuse that he did not know it.

Again, missing CP interpretation disappears within the scope of negation as shown in (45), which indirectly supports the pragmatic nature of this interpretation.

(45) Chelswu-ka [CP caki-nun molunta-ko] palppaymhapssta.
    C.-Nom self-Top not.know-C made.an.excuse
    kulena Myengswu-nun palppaymahi anhassta.
    but M.-Top made.an.excuse didn’t
    ‘Chelswu made an excuse that he did not know. But Myengswu didn’t make an excuse.’

We also suggest that the second sentence in (46-47) does not have missing CPs, and the apparent missing CP reading, if possible, in the second sentence may be a combination of linguistic meaning and free pragmatic enrichment.

(46) Chelswu-ka [CP caki-nun molunta-ko] hwa-lul nayssta.
    C.-Nom self-Top not.know-C anger-Acc got
    Myengswu-to hwa-lul nayssta.
    M.-too anger-Acc got
    ‘Chelswu got angry (saying) that he did not know. Myengswu got angry, too.’
(47) Chelswu-ka [CP caki-nun molunta-ko] nwunmwul-ul hullyessta.
C.-Nom self-Top not.know-C tear-Acc shed
Myengswu-to nwunmwul-ul hullyessta.
M.-too tear-Acc shed
‘Chelswu shed tears (saying) that he did not know. Myengswu shed tears, too.’

The second sentence in (46) may mean that Myengswu got angry saying that he didn’t know it. Since the free pragmatic enrichment is an optional process, the missing interpretation of CP is also optional. Without the operation, the second conjunct in (46) can mean that Myengswu got angry without saying anything about the issue. A similar explanation is possible for the second conjunct in (47). The second sentence in (47) conveys a complete proposition without CP as ‘Myengswu also shed tears’. As a result of optional application of free pragmatic enrichment, the second sentences in (47) may yield the reading that Myengswu also shed tears saying that he didn’t know it.

4. Conclusion

We have shown that interpretations of missing arguments can be freely recovered regardless of their environments while those of missing adjuncts can be recovered in very restricted environments. With respect to the difference, we have attempted to defend the premise that missing arguments are syntactically present as silent proforms. Hence, their interpretations are relatively less influenced by pragmatic processes. We have further indicated that missing adjuncts are classified into two types. Adjunct reading of one type is obtained through mandatory pragmatic enrichment processes like saturation and that of the other type is obtained through optional free pragmatic enrichment. Accordingly, interpretations of missing adjuncts are more influenced by contexts. We have also shown that the analysis advanced here can give a solid explanation to the data pointed out by Yim (2020).

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