Locative PP Extraction out of VP-ellipsis*

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Kim, Sun-Woong and Jinhee, Kim. 2018. Locative PP extraction out of VP-ellipsis. *Korean Journal of English Language and Linguistics* 18-2, 157-172. This paper is an attempt to explain the extraction possibility of locative PP out of VP-ellipsis site. In general, extraction out of VP-ellipsis is known to be possible. Both A-extraction and A'-extraction are of no problem out of VP-ellipsis site. However, extraction of a locative PP out of VP-ellipsis site is reportedly bad. Where comes the difference? To answer the question, this paper assumes the following theoretical apparatuses: Dynamic definition of phases and Elidability Condition. Contrary to the original definition of phases (Chomsky 2005), den Dikken (2007) Bošković (2014) argue in common that phases must be defined contextually. On top of this, ellipsis is assumed to be done on the phase and its complement. Under these assumptions, the difference of LIC and PTC is discussed to boil down to the matter of elidability in terms of phase. Further related issues regarding affix bleeding and tense doubling are also discussed.

Keywords: locative inversion, presentational *there*, phase, VP ellipsis, extraction

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1. Introduction

This paper is an attempt to explain extraction possibility of locative PP out of VP-ellipsis site. In general, extraction out of VP-ellipsis is known to be possible. Consider the following examples (Bruëning 2010):

(1) a. I know who Briggs is watching, but I don't know who Murphy is.
    b. Apples, I like, but oranges, I don't.
    c. A: Someone should fix the car.
       B: It will be.

Wh-extraction out of VP-ellipsis is widely possible as in (1a); topicalization out of VP-ellipsis is possible as in (1b); and passivization out of VP-ellipsis is also possible as in (1c). These show that both A-extraction and A'-extraction is of no problem out of VP-ellipsis site.[1]

In contrast, extraction of a locative PP out of VP-ellipsis site is bad. Look at (2b) in contrast to (2a). VP-ellipsis is definitely possible with respect to a locative PP. However, extraction of a locative PP is not possible out of the VP-ellipsis site as in (2b'). The relevant part of the derivation of (2b) is given in (2b') (Bruëning 2010).

(2) a. Into the room stepped a purple dragon. Then I did.
    b. Into the room stepped a purple dragon. *Out of it did, too.
    b'. *[$_{PP}$ Out of it] did <$_{VP}$ step a purple dragon t$_{PP}$>, too.
(3) Into the room stepped a purple dragon. Out of it there did, too.

The extraction of [$_{PP}$ out of it] out of the VP-ellipsis site results in ungrammaticality as represented in (2b'). What makes the fact more complicated is that if *there* is present in (2b), grammaricality turns out to be

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[1] Some cases of A-extraction out of VP ellipsis are reported impossible. See section 2.2. for more about A-extraction out of VP ellipsis.

good as in (3). Where does the difference between (2b) and (3) come from? This question is a primary concern of this paper.

2. Locative Inversion

2.1. Locative Inversion Construction and Presentational *There* Construction

There has been much debate on whether Locative Inversion Construction (LIC) and Presentational *There* Construction (PTC) are the same or separate constructions (Postal 2003). This paper assumes that they are the same, following Postal (2004), Kim (2003) and Bruëning (2010). Bruëning (2010), for example, discusses the following and concludes that LIC actually involves an unpronouned *there*.[2]

(4) a. To Gloria will fall a number of unpleasant tasks, won't there?
    b. At that time were built a number of warships, weren't there?

The presence of *there* in tags implies that the matrix clause has a null *there.* Evidence for this is abundant. The following parallels, though not exhaustive, further demonstrate that LIC and PTC are intrinsically the same and both of them have *there*, the null *there* or the overt *there*, respectively.
   First, both LIC and PTC involve unaccusative verbs and the postverbal NPs receive focus interpretation.

(5) a. Into the room walked a man.(LIC)
    b. There walked into the room [a man (from India)].(PTC)
(6) a. *In New Zealand are lawyers many women.(LIC)
    b. *In New Zealand there are lawyers many women.(PTC)

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[2] Locative inversion is a rich resource of research from various perspectives. Among the articles of this journal, Kim (2016) and Kwon (2002) deal with locative inversion from the viewpoint of information coherence and argument structure, respectively.

In (5), both of (a) and (b) involve unaccusative verb *walk* (from unergative) (Hoekstra and Mulder 1990). The postverbal logical subject *a man* has [+focus] feature (Park and Cho 2004). In (6), neither LIC nor PTC can be formed with intransitive verbs that are not unaccusative. In particular, the examples demonstrate that both constructions cannot be formed with copula *be*.

Second, as was discussed above, verbs agree with postverbal logical subject in both LIC and PTC.

(7) a. On the rock *was/were sitting two giant frogs.
    b. On the rock there *was/were sitting two giant frogs.

It does not matter for number agreement whether or not there is an overt *there*.[3]

Third, neither can be formed with intransitive predicate nominals.

(8) a. Many women are lawyers in New Zealand.
    b. *In New Zealand are lawyers many women.
    c. *In New Zealand there are lawyers many women.

In (8), *lawyers* cannot be used as ordinary predicates neither in LIC nor in PTC.

Fourth, the logical subject cannot be a complement clause (e.g., *that*-clause) (Bresnan 1994).

(9) a. (The warning) that enemies were coming was written on the roof.
    b. *On the roof was written that enemies are coming.
    c. *On the roof there was written that enemies are coming.

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[3] Further parallels include the following (Postal 2003).
(i) a. At that time were built a number of warships, weren't *then/there?
    b. At that time there were built a number of warships, weren't *then/there?
(ii) a. To that question might correspond an interesting answer, mightn't *it/?there?
    b. To that question might there correspond an interesting answer, mightn't *it/?there?

In (9) *that enemies are coming* cannot be used as a complement clauses in LIC and PTC.

  Fifth, multiple raising is barred in both constructions.

(10) a. Into that cave there continue to crawl strange-looking frogs.
    b. *Into that cave are believed to continue to crawl strange-looking frogs.
    c. *Into that cave there are believed to continue to crawl strange-looking frogs.

Simple raising is allowed as in (10a). However, if the PP raises across an embedded clause boundary, both LIC and PTC are not allowed as in (10b) and (10c).

  Finally, certain verbs that belong to the same meaning group (e.g., *fall*, *occur*, etc.) show different behavior with respect to two constructions.

(11) a. To Jenny fell the task of contacting the parents.
    b. To Jenny there fell the task of contacting the parents.
    c. *To Jenny occurred the idea of contacting the parents.
    d. *To Jenny there occurred the idea of contacting the parents.

Fall allows the fronted human PP in both LIC and PTC as in (11a) and (11b); *occur*, however, does not allow the same fronting.

  In sum, there is a fair amount of evidence that LIC has many reasons to belong to the same group with PTC. This paper therefore assumes that LIC and PTC are actually the same construction. If they are the same, then it is reasonable to assume a covert or null expletive is postulated in LIC along with its overt counterpart in PTC.

(12) a. In the room $\emptyset_{there}$ stepped a purple dragon. (LIC)
    b. In the room there stepped a purple dragon. (PTC)

2.2. Extraction out of VP-ellipsis

Let us consider extraction possibilities out of VP-ellipsis. Differently from VP-ellipsis, other VP anaphors like *do so* and *do it* show interesting syntactic properties. To begin with, consider A'-extraction. A'-extraction is not allowed to *do so*.[4]

(13) A'-extraction (*Wh*-movement, Topicalization, Relativization) out of *do so*
    a. *I don't know which puppy you should adopt, but I don't know which one you shouldn't do so. (Park 2015, reproduced from Thompson 2012)
    b. *Hazelnuts, I'll eat, but peanuts, I won't do so.
    c. *I sold the furniture that I knew my cat might scratch, and I kept the pieces that he already had done so.

As shown above, *wh*-movement, topicalization, and relativization result in ungrammatical sentences in *do so* contexts. A'-extraction is never allowed. A simple conclusion is that the *do so* construction is a deep anaphor in the same way as *do it* anaphor is. Note that VP ellipsis allows A'-extraction but *do it* does not.

(14) A'-extraction out of VP-ellipsis[5]
    a. I don't know which puppy you should adopt, but I don't know which one you shouldn't.
    b. Hazelnuts, I'll eat, but peanuts, I won't.

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[4] Note that this construction is called no extracting anaphor.
[5] Not all examples of A'-extraction are grammatical (Schuyler 2001). (14a), for example, is in contrast with the regular A'-extraction examples in (i) below:
  (i) *I think you should adopt one of these puppies, but I don't know which one you should.
  MaxElide (Merchant 2013) would probably be responsible for the ungrammaticality of (i). The clue to the solution has to do with the observation that the examples in (14) have contrastively-focused element in the c-command domain of the extractee. See Schuyler (2001) for an extensive discussion. Readers are referred to Park (2016) for the interaction between A'-extraction out of VP-ellipsis and subject-auxiliary inversion.

  c. I sold the furniture that I knew my cat might scratch, and I kept the pieces that he already had.

(15) A'-extraction out of *do it*

  a. *I don't know which puppy you should adopt, but I don't know which one you shouldn't do it.

  b. *Hazelnuts, I'll eat, but peanuts, I won't do it.

  c. *I sold the furniture that I knew my cat might scratch, and I kept the pieces that he already had done it.

The same result can be witnessed with respect to covert A'-movement. Look at the following examples about inverse scope, ACD relatives, and comparatives.

(16) Covert A'-extraction (Comparatives, ACD relatives, Inverse scope) out of *do it*

  a. *He ate more than he should have done so.

  b. *He has read every book that he must do so.

  c. ?At least one representative will support each new measure, and I expect at least one senator to do so, too. (*one > each*; *each > one*)

Neither comparatives nor ACD relatives, and nor inverse scoping is possible in *do so* context. In contrast, these covert A'-movements are all correct out of VP ellipsis.

(17) Covert A'-extraction out of VP ellipsis

  a. He ate more than he should have.

  b. He has read every book that he must.

  c. At least one representative will support each new measure, and I expect at least one senator to, too. (*one > each*; *each > one*)

Needless to say, these movements are all incorrect when they are out of *do it*, a robust anaphor.

(18) Covert A'-extraction (Comparatives, ACD relatives, Inverse scope) out of
    do it
    a. *He ate more than he should have done it.
    b. *He has read every book that he must do it.
    c. *At least one representative will support each new measure, and I
       expect at least one senator to do it, too. (*one > each*; *each > one*)

   Turning to A-extraction, it is known that it is generally possible if it is out
of allowed in VP-ellipsis but not out of *do so*. For example, passive and
raising out of *do so* turn out to be bad. Passive can be done out of VP ellipsis
but cannot out of *do it* anaphor.

(19) a. *This cat was adopted, but that one was not done so.
     b. This cat was adopted, but that one was not.
     c. *This cat was adopted, but that one seemed not to be done it.

With respect to unaccusative verbs, *do so* anaphor diverge from *do it* anaphor
in their acceptability. *Do so* is acceptable with unaccusatives.[6]

(20) a. ⋯ AIDS deaths are increasing, and will probably continue to do so.
     b. ⋯ AIDS deaths are increasing, and will probably continue to.
     c. *⋯ AIDS deaths are increasing, and will probably continue to do it.

All in all, out of VP ellipsis, both A and A' extraction are possible while other
VP anaphors show different properties.

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[6] Thompson (2014, Chapter) reports that stative unaccusatives like *exist* do not
allow *do so*.
   (i) a. *Robert seems to dislike Tom, even though there's no reason for him to do so.
       b. *The administrators aren't sure why the task force exists, and they don't
          want it to do so.

2.3. PP extraction out of VP—ellipsis

Turning to the main concern of this paper, consider more examples of locative PP extraction out of VP—ellipsis.

(21) a. *From the back of the hall will appear a large purple dragon, and from backstage   will too.
   b. From the back of the hall there will appear a large purple dragon, and [PP from backstage] there will <VP appear a large purple dragon tPP>, too.

(21a) is bad while (21b), which has a presentational *there* overtly, is good. PP—extraction is not possible out of VP—ellipsis if the clause does not have *there*. If LIC and PTC are the same except for covert/overt manifestation of *there*, this constrast runs afoul of the simple prediction that PTC version of (21b) would be the same with respect to grammaticality. This is shown below.

(22) a. *From the back of the hall $\emptyset_{there}$ will appear a large purple dragon, and [PP from backstage] $\emptyset_{there}$ will <VP appear a large purple dragon tPP>, too.
   b. From the back of the hall there will appear a large purple dragon, and [PP from backstage] there will <VP appear a large purple dragon tPP>, too.

More of such examples are abundant, as is reported in Bruëning (2010).

(23) a. Out of that room seems to have stepped a large purple dragon.
   b. *Out of this one seems to (have), too.
   c. Out of this one there seems to have, too.
(24) a. For this perverted cause are likely to be slaughtered thousands of innocents.
   b. *For that one are likely to be, too.
   c. For that one there are likely to be, too.

PP—extraction out of non—finite VP is also bad if not with an overt *there*. If the overt *there* is added, all became grammatical again as shown in (23c) and

(24c). How can we explain the difference between LIC and PTC about the PP extraction out of VP-ellipsis if they are the same?

3. Proposal

To answer the question, this paper assumes two theoretical apparatuses: Dynamic definition of phases and   Elidability Condition. Chomsky (2008) restricts phases to CP and vP only based on propositionality. He assumes that only CP and vP are propositional. This original notion of phase is criticized too rigid to cover empirical data. The most noticeable critics would be den Dikken (2007) and Bošković (2014). Although they are different in theoretical details, they argue in common that phases can vary according to syntactic environments. Adopting the discussion given in Kim (2017), let us assume the following.

(25) Disjunctive application of phase transfer
    a. Phases are a complete maximal projection (no segment), and (b) OR (c) holds.
    b. If head moves, phase is extended.
    c. The highest projection of the extended domain of a lexical category is a
       phase.

(25b) is the basic requirement of phase extension of den Dikken (2007). (25c) is a more extended version of dynamic definition, freeing phase extension from head movement (Bošković 2014). By ordering two proposals disjunctively, this paper assumes that a phase can be transferred to a higher XP either by head movement or by being the highest phrase. In addition to (25), this paper assumes that the following condition on ellipsis holds with respect to phasehood:

(26) Elidability Condition (EC) (cf. Bošković 2014, Wurmbrand 2017)[7]
    a. A phase and the complement of its head are elidable.
    b. The complement of the complement of a phase head is not eligible to
   ellipsis.

(26) is a condition on ellipsis guggested in Bošković (2014) and adopted in
Wurmbrand (2017). A general guideline is that ellipsis is done by the phase.
A phase and the complement of its phase head are elidable; but crucially, the
complement of the complement of a phase head is not. For extensive
applications of the condition across languages, readers are referred to Bošković
(2014) and Wurmbrand (2017).

3.1. Proposal

Now, let us check how those theoretical apparatuses interact to explain the
data. First, recall that locative PP extraction out of VP-ellipsis is bad. This is
because what is actually elided is not the complement of a phase. Compare
(27a) and (27b). For (27a), locative PP first moves out of VP to Spec-Foc.
The strong T-feature of Foc attracts T *will* to Foc. This makes FocP a
phase. And then VP is elided under identity with the antecedent VP. But VP is
not elidable since it is not the complement of FocP (phase) but the
complement of its complement. This ellipsis is banned due to violation of EC,
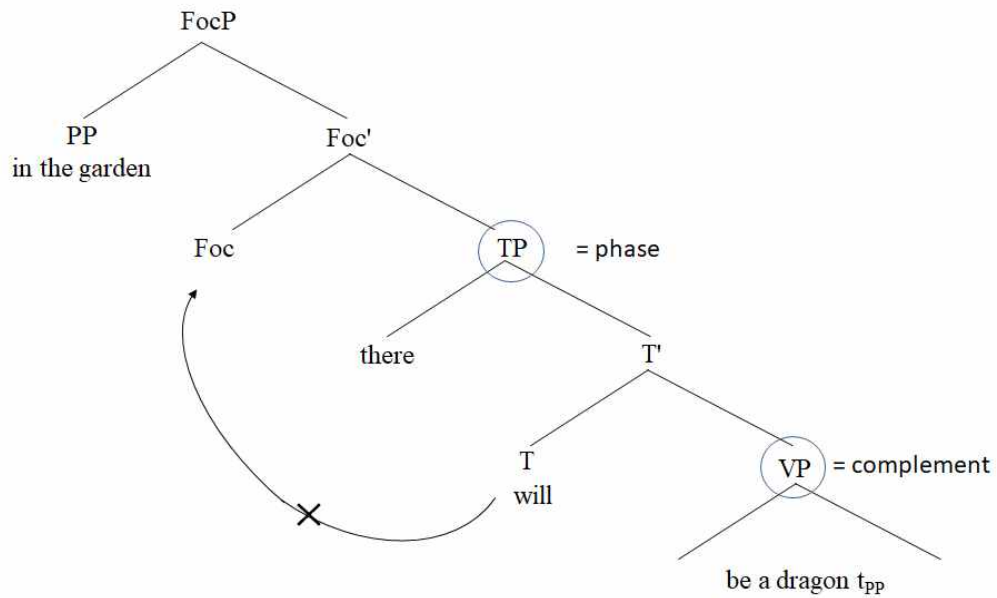given in (26) above.

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[7] Wurmbrand (2017) argues that Spell-out domain in elidable. However, it is a topic
of further empirical research.

(27) a. *[PP In the garden] will <VP be a dragon tPP>. (→ VP cannot be elided.)
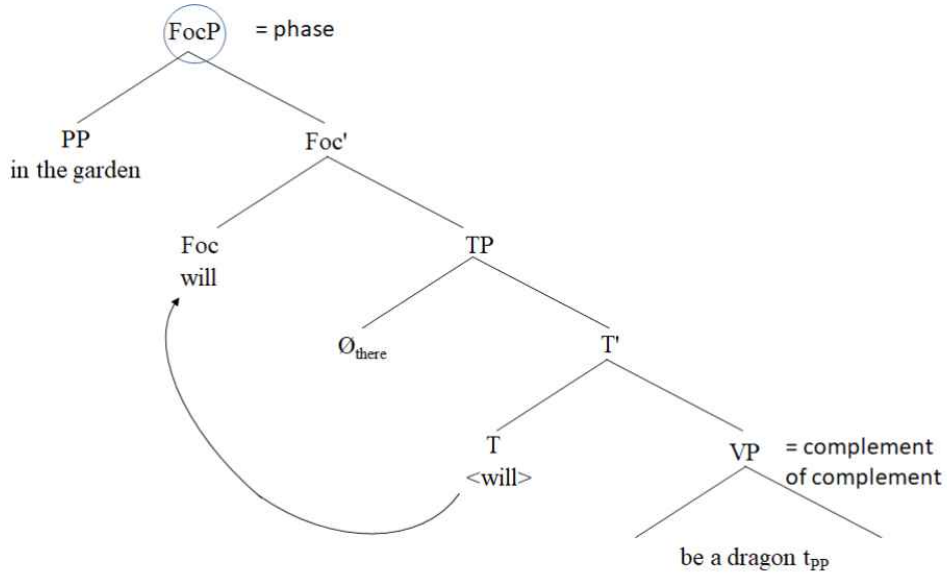
Next, consider (27b):

(27) b. [PP In the garden] there will <VP be a dragon tPP>. (→ VP can be elided.)

For (27b), as in the derivation of (27a) locative PP first moves out of VP to Spec-Foc. Here since *will* does not move to Foc, differently from (27a), TP keeps its phasehood so that *v*P is its complement. Being the complement of a phase head (T) it can be elided, resulting in the licit (27b). A question arises about raising of *will*. What if *will* moves up to Foc as in (27a)? If it is the case, the prediction is that FocP becomes a phase, then VP cannot be elided. But this does not actually happen due to prosody reasons. A sentence cannot end with *there* with no stress since it is an expletive which cannot bear stress. (27a) is possible since the sentence final *will* can bear stress.

3.2. Extensions/Consequences

This subsection discusses two possible extensions of the proposal of this paper. The first has to do with VP-preposing. Differently from VP-ellipsis examples, VP-preposing is not allowed when the locative PP is extracted. This does not care much about the presence of the overt *there*. Look at the following (Bruëning 2010):

(28) *I said there would be a man in the garden, and be a man in the garden there/ϕ_{there} certainly will.

(29) To this argument (there) can be added numerous others, * ... and added numerous others, to this argument there/ϕ_{there} certainly can be.

This lack of contrast in VP-preposing is explained under the present analysis as a PIC violation in both derivations. If VP is fronted, its landing site would be the Spec of an XP (Call this Foc2P.), which is higher than FocP. This is because the Spec of FocP would have already been occupied by the fronted PP. This makes phasehood transferred further up to the Spec-Foc2P. If this is the case, FocP is the complement of a phase head. Consequently, TP is predicted not to be elidable. This is a good result. One more prediction is that FocP would be elidable because it is the complement of a phase. This prediction is also borne out.

(30) A: To this argument (there) can be added numerous others, and what else?

  B: [Added numerous more], <to this argument there/ϕ_{there} certainly seems to be __>.

Since (30) is not bad, the prediction that FocP can be elided since it is the complement of a phase head comes true.

  The second prediction is about embedded fragmenting. The following fragment answer is reportedly grammatical (Weir 2014).

(31) A: Where do you think the man is now?

  B: I think in the garden.

This is predicted under the proposed structure of this paper.

(32) I think [$_{FocP}$ [$_{PP}$ in the garden]$_i$ Foc [$_{TP}$ (there) ... t$_i$]]

In (32), if PP moves to the front at the Spec-FocP, then TP counts as its complement. Being a complement, TP can be eldied so that the embedded fragmenting of a locative PP is allowed.[8]

4. Conclusion

  So far this paper has attempted to explain the extraction possibility of locative PP out of the VP-ellipsis site. Although the extraction of a locative PP out of VP-ellipsis in PTC is possible, the extraction of a locative PP out of VP-ellipsis site in LIC is reportedly bad. The question is why. Assuming two theoretical apparatuses, Dynamic definition of phases and Elidability Condition, the difference between LIC and PTC turned out to be a matter of elidability in terms of phase. Further related issues regarding affix bleeding

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  [8] In contrast to the general consensus that fragment answers are banned in the embedded clause, Weir (2014) argues that fragment embedding is actually possible with bridge verbs. See Weir (2014) and Kim (2017) for more discussion.

and tense doubling are also discussed to draw the conclusion that the proposed assumptions and analysis of this paper is on the right track.

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