Linguistic Research 41(1): 91-108
DOI: 10.17250/khisli.41.1.202403.004

The timing of XP ellipsis is not fixed: Evidence from English*

Dongwoo Park
(Korea National Open University)

Park, Dongwoo. 2024. The timing of XP ellipsis is not fixed: Evidence from English. *Linguistic Research* 41(1): 91-108. Some native speakers of English exhibit an asymmetry between matrix copular verb phrase ellipsis and embedded copular verb phrase ellipsis with respect to the extractability from the ellipsis site. In order to account for the asymmetry that cannot be captured under the existing derivational ellipsis approaches, this paper proposes a constraint on the timing of XP ellipsis they have – XP is elided when an E-feature on the head merging with XP becomes activated during the derivation and the activation occurs when all syntactic operations triggered by the ellipsis licensing head are completed. The proposal can explain how the presence or the absence of head movement of the ellipsis licensing head affects the availability of overt extraction out of the ellipsis site in English copular verb phrase ellipsis. This yields two theoretical implications: Firstly, the present discussion provides an additional argument for the claim that head movement takes place in narrow syntax. Furthermore, it suggests that head movement is goal-driven rather than probe-driven. **(Korea National Open University)**

Keywords timing of ellipsis, English copular verb phrase ellipsis, extraction, head movement

1. Introduction

Ellipsis has been extensively studied within the field of generative grammar, since it relates to a variety of interesting topics (see Ross 1969; Sag 1976; Hardt 1993, 1999; Chung et al. 1995; Lobeck 1995; Merchant 2001; Culicover and Jackendoff 2005; van Craenenbroeck and Lipták 2008, among others). Recently, some researchers suggest that

* I would like to express my sincere gratitude to Nayoun Kim for her help in conducting a judgment test. Additionally, I am grateful to the two anonymous reviewers of this journal for their insightful comments and constructive feedback. All the remaining errors are solely mine. Part of this paper is developed from Park (2017). This work was supported by Global Research Network program through the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea (NRF-2019S1A2A2031915).

the timing of ellipsis is determined by certain operations that occur during the derivation, such as merge or Agree, in order to account for the restrictions on overt extraction out of ellipsis sites in various ellipsis constructions. For instance, Baltin (2007, 2012) proposes that XP ellipsis occurs as soon as the licensing head merges with the XP. On the other hand, Aelbrecht (2010) proposes that XP is elided when the licensing head establishes an Agree relation with the head that bears the E-feature (i.e., a morphosyntactic feature a functional head bears in order to represent conditions on the elision of its complement; See Merchant 2001) and selects the XP simultaneously. While differing in details, they share one common aspect: in both analyses, only elements that can be located above the ellipsis site at the derivational point of ellipsis can be pronounced, while those unable to escape the ellipsis site are elided. A corollary of this is that the extractability of an element generated inside the XP ellipsis site remains unchanged, irrespective of whether the elision of XP occurs in the matrix clause or in the embedded clause. This is because the location of the elided XP does not affect the derivational point where the licensing head of XP ellipsis is merged, thereby leaving the timing of XP ellipsis unaffected.

However, English copular verb phrase ellipsis (CVPE), which involves the elision of the phrase headed by the copular verb, displays an asymmetry between the matrix clause and the embedded clause regarding object *wh*-extraction from the ellipsis site among certain native speakers of English. I will call this the matrix-embedded extraction asymmetry throughout this paper. As shown in (1), object *wh*-extraction from the ellipsis site is permitted for all native speakers of English when the matrix copular verb phrase is elided. On the other hand, the extraction of the object *wh*-phrase is only allowed for some speakers when the embedded copular verb phrase is elided, as illustrated in (2).

(1) a. What will Dan be good at and what won't he ~~be good at~~?
    b. Who might Eric be jealous of and who might Henry ~~be jealous of~~?
    c. Who might Howard be afraid of and who might he not ~~be afraid of~~?
    d. Who will Sam be angry with and who won't he ~~be angry with~~?

(2) a. %I can imagine what Dan will be good at and Mary can imagine what he won't ~~be good at~~.
    b. %I wonder who Eric might be jealous of and Tom wonders who Henry might ~~be jealous of~~.

c. %Kim revealed who Howard might be afraid of but Chris revealed who he might not ~~be afraid of~~.
d. %I don't know who Sam will be angry with but I know who he won't ~~be angry with~~.

These data are from a judgment test conducted with 29 native speakers of English. They were tasked to rate the acceptability of the sentences in (1) and (2) on a 7-point scale. Among them, seven informants consistently rated the sentences in (2) below 4, while thirteen consistently rated them at 4 or above. The remaining informants showed mixed results. Importantly, certain native speakers of English reject the sentence in (2), while accepting sentences in (1). There has been no research exploring the asymmetry between matrix CVPE and embedded CVPE concerning the availability of extraction from the ellipsis site. In this paper, I suggest that the observed asymmetry is attributed to the difference in the timing of ellipsis caused by the presence/absence of head movement of the licensing head.

The rest of this paper is organized as follows: Section 2 discusses the structure of English copular constructions and a licensing condition in CVPE. In section 3, I propose a constraint concerning the timing of ellipsis certain native speakers of English have who report a significant difference in the acceptability between (1) and (2). Section 4 provides some implications of the proposal advanced in this paper. The paper concludes in section 5.

2. English copular verb phrase ellipsis

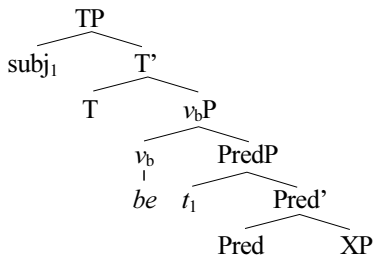
English copular verb phrase ellipsis (CVPE) is exemplifies in (3).

(3) a. Gary will [be fond of this book]$_1$, and Ivan will e_1, too.
b. Mina might [be proud of her sister]$_2$, but Jenny might not e_2.

The ellipsis sites in (3) contain the copular verb *be* and the predicate, namely the adjective phrase (AdjP). In generative grammar, researchers have made several suggestions for the inner structure of copular constructions. In this paper, I assume the structure suggested in Mikkelsen (2005). In this structure, the subject of the copular construction is base-generated in the specifier position of the predication phrase (PredP),

following Bowers (1993) and Baker (2003). The PredP is selected by the functional head *v*, where the copular verb is base-generated. Mikkelsen calls this little *v* head v_b, and assumes that v_b is a subtype of unaccusative *v*: the difference between normal *v* and v_b is that the former takes a VP complement, while the latter a PredP complement. The structure of copular constructions is illustrated in (4).

(4)



XP = {AdjP, DP, PP}

When T merges with v_bP, the subject obligatorily moves to [Spec,TP] to satisfy the EPP on T. On the other hand, the copular verb undergoes head movement to T only when there is no auxiliary verb located in T. When T is occupied by another auxiliary verb, the copular verb does not move to T. This is shown in (5).

(5) a. Ivan is not fond of his teacher.
b. Ivan might not be fond of his teacher.

Given that the negation expression *not* is located either in the leftmost position of the highest verbal domain or in NegP (or ΣP) immediately dominating the highest verbal domain (Pollock 1989; Laka 1990; Baltin 1993, among many others), the sentences in (5) indicate that the copular verb remains inside the verbal domain when the inflected auxiliary verb is located in T.[1] Based on the discussion above, we can conclude that the ellipsis site in English CVPE is v_bP.

Regarding the licensing head of CVPE, one of the arguments supporting the idea that T is the licensing head of CVPE comes from VP ellipsis (VPE) facts in subjunctives.

1 A substantial body of work (Bjorkman 2011; Iatridou and Zeijlstra 2013; Harwood 2015, inter alia) suggests that scope bearing modals are generated lower than T, and then move to T. This difference does not affect the proposal advanced in this paper.

(6) a. *We think that Mary should present her case to the committee and we will ask that Bill, too. (Potsdam 1996: 76)
b. We think that Mary should present her case to the committee but we will ask that Bill not. (Potsdam 1996: 79)

Baltin (1993) argues that the contrast in (6) can be attributed to whether T is morphologically filled or not. In (6a), T is not morphologically filled, and thus, VPE is not licensed. On the other hand, when negation undergoes movement to T, as in (6b), and thus, T is filled by negation, then, VPE is allowed (cf. Potsdam 1996). If we accept this argument, the contrast in (7) demonstrates that CVPE, akin to VPE, is licensed by T.

(7) a. *John requires that Bill be proud of his success, and he requires that Tom, as well.
b. ?John requires that Bill be proud of his success, but he requires that Tom not.

Given that CVPE is allowed when T is morphologically filled, we can say that morphologically filled T is the licensing head of CVPE.

So far, I have argued that the ellipsis site of CVPE is v_bP and that CVPE is licensed by the morphologically filled T. In the next section, I will briefly review the problems that existing derivational approaches to ellipsis have in accounting for the matrix-embedded extraction asymmetry, and propose a constraint concerning the timing of ellipsis certain of native speakers have who report a significant difference in the acceptability between (1) and (2).

3. When does ellipsis occur?

The extractability of *wh*-elements from the ellipsis site has been extensively discussed in Baltin (2007, 2012) and Aelbrecht (2010). Baltin argues that the elision of XP occurs when a functional head merges with XP. Meanwhile, Aelbrecht proposes that XP ellipsis takes place when the licensing head, which may or may not be identical to the head taking the XP as its complement, is introduced into the derivation and enters an Agree

relation with the head merging with the XP, which bears an E-feature. When the XP ellipsis licensing head is identical to the head merging with the XP, XP is elided upon the merger of the ellipsis licensing head. In both analyses, an element can only be pronounced outside the ellipsis site if the element can be positioned above the ellipsis at the point of ellipsis. If it fails to escape the ellipsis site at the time of ellipsis, it is elided along with XP. They, however, have an undergeneration problem, since they cannot account for the grammaticality of (1). Their systems predict that overt extraction of the object *wh*-elements in (1) should be prohibited. This is because CVPE must occur when the modals are merged with v_bP (i.e., before the object *wh*-elements escape the ellipsis site), given that A-bar movement proceeds only via phase edges and Spec,TP is not an appropriate landing site for the object *wh*-element. This means that the matrix-embedded extraction asymmetry remains unexplained in their analyses (See also Sailor 2018).

In order to resolve the matrix-embedded extraction asymmetry found in a portion of English speakers, I propose the constraint in (8).

(8) The timing of ellipsis
XP ellipsis occurs when an E-feature on the head merging with the XP is activated during the derivation.

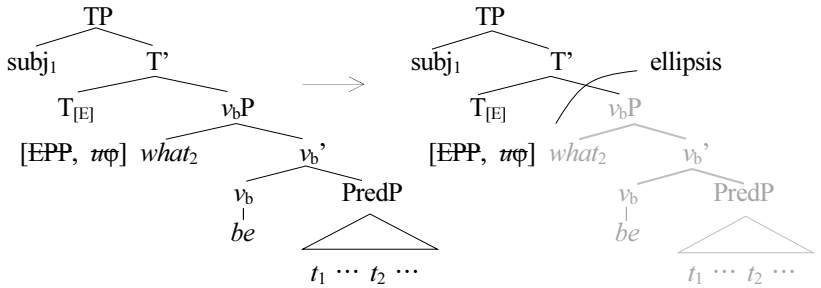
(9) Activation of an E-feature
An E-feature becomes activated when all syntactic operations triggered by the ellipsis licensing head are completed.

The constraint in (8) entails that the timing of XP ellipsis is not fixed, but determined by the derivational point where all syntactic operations triggered by the ellipsis licensing head are completed.

Certain English speakers who have the constraint in (8) consider the sentences in (2) unacceptable for the following reason: Given that morphologically filled T is the licensing head of CVPE and bears an E-feature as the head merging with the the copular verb phrase at the same time, the embedded modals in (2) participate in two syntactic operations – φ-feature agreement and subject movement to Spec,TP by the EPP. According to what (9) states, the activation of an E-feature for the elision of v_bP occurs as soon as φ-feature agreement and subject movement to Spec,TP are completed. These operations are completed as soon as the modals are merged. Then, this must be when

the E-feature on the licensing head becomes activated and v_bP ellipsis occurs. This is illustrated in (10).

(10)

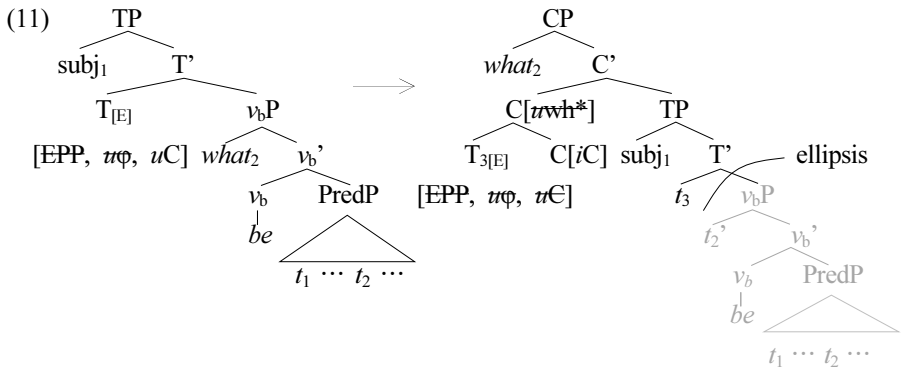


When ellipsis occurs, the subject has already been placed outside the ellipsis site. Meanwhile, since the object *wh*-phrase stays inside the ellipsis site when ellipsis occurs, it is elided within v_bP. Thus, the sentences in (2) are ungrammatical for some speakers who have the constraint in (8) in their grammar, since the elided object *wh*-phrases are prounouced. Note that I adopt the assumption that *v*P that is headed by the copular verb is a phase, following Deal (2009). On this assumption, the object *wh*-phrases in (2) are located in Spec,v_bP at the point of ellipsis. Since the ellipsis site of CVPE is v_bP rather than a non-maximal projection of v_b excluding the displaced *wh*-phrases located in Spec,v_bP, the object *wh*-phrases must be elided along with v_bP. Consequently, it is still the case that object *wh*-phrases cannot be pronounced outside the ellipsis site.

On the other hand, elision of v_bP occurring in matrix clauses allows object *wh*-phrase extraction from the ellipsis site, as shown in (1). One difference between the modals in the matrix clauses in (1) and the modals in the embedded clauses in (2) is that the former undergo T-to-C movement, while the latter do not. Based on Lasnik's (1999) head movement system, Messick and Thoms (2016) assume that a moving head contains an uninterpretable feature, and it moves to a higher head bearing its matching interpretable feature (see also Harwood 2015).[2] As a result of head movement, the uninterpretable feature on the moving head can be deleted. Following them, I assume in this paper that a modal undergoing T-to-C movement contains the [*u*C]-feature. It moves to C containing

2 Chomsky (2015) proposes that head movement results from the affixal status of moving heads. This means that a moving head has an offending morphological property that triggers head movement, which partially overlaps with the assumption that I entertain in this paper that the T contains an offending featural that needs to be elided through adjunction to its c-commanding head, namely C.

the [*i*C]-feature, and then the feature is deleted. If a modal stays in T and does not move to C, it can only be because it did not bear the [*u*C]-feature. Given this, we can assume that the matrix modals in (1) participate in three syntactic operations – φ-feature agreement, subject movement to Spec,TP by the EPP and T-to-C movement. The first two are completed when the modals are merged. Even after these two syntactic operations, however, CVPE cannot occur. This is because T-to-C movement triggered by the [*u*C]-feature on T has not been completed and thus, the activation of an E-feature on T has not yet taken place. When C is introduced to the derivation, the modal moves to C. Deletion of the [*u*C]-feature and internal merge of the *wh*-element to [Spec,CP] occur simultaneously, since these two operations are triggered by the features on the same head, namely C. Lastly, the E-feature on T becomes activated and the elision of v_bP occurs. Eliding any sooner (i.e., before tending to all of the featural requirements of C) would violate the constraint in (8). Since the *wh*-elements in the sentences in (1) are located outside the ellipsis site when CVPE occurs, the *wh*-elements can be pronounced outside the ellipsis site. A noteworthy aspect of this derivation is that the moved modals can license v_bP ellipsis. That is, a modal can license the elision of the phrase that is not its complement in the surface representation, but a complement of a lower copy/position that the modal previously occupied. This is represented in (11).



If the analysis of the matrix-embedded extraction asymmetry is on the right track, we can make the following prediction: In both matrix and embedded CVPE, extraction of the subject *wh*-phrase should be possible. This is because subject *wh*-phrase undergoes movement to Spec,TP en route to its surface position. Since CVPE must occur after the

subject moves to Spec,TP, the subject *wh*-phrase is placed in a position higher than the ellipsis site both in embedded clauses or matrix clauses when ellipsis takes place. This prediction is borne out, as illustrated in (12) and (13).

(12) a. I know who might be fond of this shirt, no matter who may not ~~be fond of this shirt~~.
b. I know who will be proud of her success, but I have no idea about who won't ~~be proud of her success~~.

(13) a. Who might be fond of this shirt, and who might not ~~be fond of this shirt~~?
b. Who will be proud of her success, and who won't ~~be proud of her success~~?

I have argued that the matrix-embedded extraction asymmetry observed in certain English native speakers results from whether or not the modals contain the [*u*C]-feature. Since this feature in the modals in (1) is not deleted until C is merged, the timing of CVPE in the sentences in (1) differs from that in the sentences in (2) – in accordance with the constraint in (8) – and thus, extraction of object *wh*-phrases is possible only in (1).

Here is another argument supporting the present analysis. Consider the sentences in (14). The non-elliptical first conjunct in (14a) is identical to the one in (15b). However, the ellipsis site in (14b) is smaller than that in (14a), differing as to whether or not the copular verb is included in the ellipsis site. Ellipsis of the type shown in (14b) will be referred to as predicate ellipsis.

(14) a. John might be proud of his father, and Bill might, too.
b. John might be proud of his father, and Bill might be, too.

In principle, the ellipsis site in predicate ellipsis can be either AdjP, which is the complement of Pred, or PredP selected by v_b (See (4)). At this stage, we cannot be sure whether the ellipsis site is AdjP or PredP. Suppose first that the ellipsis site is AdjP. The ellipsis licensing head must be a functional head c-commanding the AdjP (Lobeck 1995). The asymmetry between (14b) and (15) indicates that the licensing head of the predicate ellipsis cannot be Pred. The reason is as follows: The inner structures of (14b) and (15)

are represented in (16a) and (16b), respectively. Both the copular verb in (16a) and *considered* in (16b) c-command PredP, and Pred takes the elided AdjP as a complement (Bowers 2001; see also Basilico 2003).

(15) *I considered John crazy, but Mary considered Tom ~~crazy~~.

(16) a. John might be [$_{PredP}$ Pred [$_{AdjP}$ proud of his father]], and Bill might be [$_{PredP}$ Pred ~~[$_{AdjP}$ proud of his father]~~], too.

b. *I considered [$_{PredP}$ John Pred [$_{AdjP}$ crazy]], but Mary considered [$_{PredP}$ Tom Pred ~~[$_{AdjP}$ crazy]~~].

If the licensing head were Pred selecting the ellipsis site AdjP, then there should be no reason (14b) and (15) exhibit the observed asymmetry. Thus, the licensing head must be a functional head higher than PredP. The same is true if the ellipsis site is Pred. Then, the licensing head of predicate ellipsis must be a head c-commanding PredP.

The discussion above shows that, whether the ellipsis site in (14b) is PredP or AdjP, the licensing head of predicate ellipsis must be a functional head c-commanding PredP. Then, we can conclude that the lowest possible licensing head is the copular verb. (Recall the assumption that the copular verb selects PredP.) Bearing this in mind, let us consider the phasehood of v_bP. As I mentioned before, *v*P headed by the copular verb is a phase (see also Legate 2003 and Sauerland 2003). Consequently, v_b can have an EPP-feature, which triggers internal merge of a moving element (Chomsky 2000, 2001). Given these, it is predicted that a *wh*-element generated inside an XP selected by Pred could be located in a position higher than the ellipsis site in predicate ellipsis, regardless of whether predicate ellipsis occurs in matrix clauses or embedded clauses. The reason is as follows: Given that the lowest possible licensing head of predicate ellipsis is the copular verb, predicate ellipsis will occur no sooner than the point at which internal merger of a moving element triggered by the copular verb is completed. Due to the EPP-feature on the copular verb, a *wh*-element generated inside the predicate can be placed outside the ellipsis site when predicate ellipsis occurs, whether or not the copular verb undergoes head movement. This expectation is fulfilled, as illustrated in (17).[3]

3 I assume here that the highest projection of the extended domain of lexical verbs is a phase, following Bošković (2014). The highest phrase in the verbal domain of a transitive verb is VoiceP, while the verbal domain of a copula is v_bP. Thus, *v*P in the transitive verbal domain is not a phase, while v_bP in the copular verbal domain is. I will discuss in detail right below.

(17) a. What won't Eric be proud of, and what will he be ~~proud of~~?
b. I don't know what Eric won't be proud of, but I do know what he will be ~~proud of~~.
c. What isn't Sue afraid of, and what is she ~~afraid of~~?
d. ?I don't know what Sue isn't proud of, but I do know what she is ~~proud of~~.

So far, we have argued that English native speakers who show the matrix-embedded extraction asymmetry have the constraint in (8) in their grammar. However, I have noted that not all native speakers of English judge that extraction of the object *wh*-phrase in embedded CVPE is disallowed. Even though I have no definite account of their grammar, I can speculate on the following possibilities: First, under the assumption that ellipsis occurs during the derivation, they have a grammar where all syntactic derivations occur by phases, based on Chomsky (2008). According to this, XP ellipsis occurs when the phase containing the licensing head of XP is completed. The licensing head of CVPE, namely T, inherits all the features from C, when C is merged. Then, not until CP is completed does the elision occur. Due to this, an A-bar moving phrase can be placed in a position higher than the ellipsis site when ellipsis takes place. Next possibility is that in their grammar, ellipsis occurs after the derivation of the whole sentence is completed and it is sent to PF. That is, ellipsis does not occur during the derivation. In this approach, the *wh*-elements in (2) are moved to its surface position in overt syntax, and subsequently, v_bP is elided at PF.

An intriguing point is that the extraction asymmetry is not found in regular VPE. That is, extraction out of the ellipsis site is freely allowed in both the matrix clause and the embedded clause in regular VPE, as shown in (18).

(18) a. Who will Bill kiss and who will John? (Messick and Thoms 2016: 310)
b. We don't know who Anne will like, but we have no idea about who she won't.

Now, let us discuss why extraction asymmetry between matrix clauses and embedded clauses does not arise in VPE among the native speakers who have the constraint in (8) in their grammar. Regular VPE allows extraction both in the matrix and embedded clause. In order to explain why object *wh*-phrase extraction from the ellipsis site in regular VPE

is permitted both in matrix and embedded clauses, unlike in CVPE, I assume first that the ellipsis site in regular VPE is *v*P selected by Voice, following Merchant (2008, 2013). A second assumption I am entertaining in this paper is that an agent subject is introduced by Voice (Harley 2013; Legate 2014; Alexiadou et al. 2015). Thus, I assume that Voice has (at least) two functions, one of which is that it bears a voice feature that determines the voice form of verbs in the morphology, and the other of which is that it introduces an agentive subject. I also assume the following: when a verbal domain contains Voice, VoiceP, the highest projection in the verbal domain, is a phase, while *v*P is not (Baltin 2007, 2012, Aelbrecht 2010; Legate 2014). This is compatible with Bošković's (2014) contextual phasehood requiring that among multiple projections, only the highest projection of the extended domain of a lexical verb is a phase. Now, we are in a position to account for why object *wh*-phrase extraction is possible in regular VPE, regardless of whether ellipsis occurs in embedded or matrix clauses. Given that the licensing head of the elision of *v*P in (18) is T, an E-feature on Voice is activated when all syntactic operations triggered by T are completed. Note that I am assuming that ellipsis licensing head does not necessarily have to coincide with the head containing an E-feature (i.e., the head merging with the phrase that deletes), adopting Aelbrecht (2010). Accordingly, the object *wh*-phrases generated inside *v*P can internally merge in Spec,VoiceP before the elision of *v*P occurs. This is because these object *wh*-phrases would move to Spec,VoiceP even before the licensing head T is merged. Thus, regardless of whether T-to-C movement occurs or not, extraction of object *wh*-phrases in regular VPE is permitted (see also Aelbrecht 2010).

To summarize, in this section I have proposed that for some English speakers, XP ellipsis occurs when an E-feature on the head merging with the XP is activated and that the E-feature becomes activated when all syntactic operations triggered by the ellipsis licensing head are completed.[4]

---

4 When *be* is a non-finite auxiliary verb, the object *wh*-phrases can be pronounced outside the ellipsis site, as illustrated in (i).

(i) a. I know what John will be reading, and I know what Mary will.
b. I know what John might be given, but I have no idea about what Mary might not.

This implies that the matrix-embedded extraction asymmetry is attributed to the copular verb *be*. This means that verbal domains containing the copular verb *be* and those containing a non-finite auxiliary be are different in their structure. Examining the exact structure of the latter is beyond the scope of this paper. However, the current analysis has to assume that the putative structure must enable the objects in (i) to be positioned

4. Implications: The nature of head movement

Regarding the locus of head movement, some researchers advocate the view that head movement is a PF operation (Chomsky 2001; Harley 2004), while others support the view that head movement is a syntactic operation (Lechner 2006, 2007; Roberts 2010). The current approach to the matrix-embedded extraction asymmetry identified within a subset of native speakers of English implies that the latter approach is superior to the former approach. If head movement were a PF phenomenon, it would be expected that head movement could not determine the timing of ellipsis and capture the matrix-embedded extraction asymmetry. This is because movement of the object *wh*-elements, which occurs in narrow syntax, always precedes head movement at PF.

Concerning what motivates head movement in narrow syntax, views can be bifurcated into two main camps: One school of thought assumes that the probe (i.e. a higher head c-commanding the moving head) contains a property that motivates head movement, based on Chomsky's (2000) probe-goal system (Pesetsky and Torrego 2001). For instance, based on Travis' (1984) head movement constraint, Pesetsky and Torrego (2001) propose the head movement generalization, given in (19).

(19) head movement generalization
Suppose that a head H attracts a feature of XP as part of a movement operation.
(i) If XP is the complement of H, copy the head of XP into the local domain H.
(ii) Otherwise, copy XP into the local domain of H.

Given this, they argue that interrogative C in the matrix clause bears an uninterpretable T feature (i.e. [*u*T]-feature) with the EPP property. When the matrix interrogative C merges with TP, the [*u*T]-feature on C Agrees with the [*i*T]-feature on T. Since TP is the complement of the interrogative C, the EPP property on [*u*T]-feature attracts the head of TP into C. On the other hand, the uninterpretable T feature located on embedded interrogative C does not have the EPP property, and thus, T-to-C movement does not occur. I will call this the probe-driven head movement approach.

The other school of thought assumes that head movement is driven by a requirement

---

outside the ellipsis site by the time the constituent containing the auxiliary be is elided.

of the moving head. For instance, Lasnik (1999) argues that a moving head bears a strong feature. The head moves to a higher head that bears a matching feature in order to check the strong feature. Adopting and modifying Lasnik's approach, Aelbrecht and Harwood (2015) and Harwood (2015) suggest that all auxiliary verbs contain an uninterpretable inflectional feature which motivates head movement. Every auxiliary verb bearing an uninterpretable inflectional feature as a probe tries to find a goal containing a matching interpretable feature in its c-command domain. However, when it cannot find an appropriate goal, the derivation is in danger of crashing. In this case, following Bošković (2007), they assume that in order to salvage the derivation, each auxiliary verb undergoes head movement to find an appropriate goal, located higher than its base position. After movement, an appropriate probe-goal configuration is created. As a result of Agree, the uninterpretable inflectional feature on each auxiliary can be deleted. I will call this the goal-driven head movement approach.

Out of the two approaches to head movement, the goal-driven head movement can easily capture why and how the timing of ellipsis of English CVPE can vary depending on the presence/absence of T-to-C movement, as I have suggested. On the other hand, the probe-driven head movement approach cannot easily explain the matrix-embedded extraction asymmetry in CVPE. The reason is as follows: Recall the proposed constraint on the timing of ellipsis – XP ellipsis occurs when an E-feature on the head merging the XP elision is activated during the derivation and the E-feature becomes activated when all syntactic operations triggered by the ellipsis licensing head are completed. Suppose that what triggers T-to-C movement is some feature on C. Then, matrix CVPE in (1) do not differ from embedded CVPE in (2) with regard to the timing at which the operations triggered by the ellipsis licensing head are completed, since both the matrix T and the embedded T triggers the same operations – φ-feature agreement and subject movement to Spec,TP, and they are completed upon the merger of T.

Consequently, in order to account for the grammar of certain English speakers who observe the significant asymmetry between (1) and (2), it is necessary to assume that head movement is an overt syntactic operation. Furthermore, the goal-driven head movement approach is superior to the probe-driven approach in capturing this phenomenon.

5. Conclusion

In this paper, I showed that certain native speakers of English exhibit the asymmetry between matrix CVPE and embedded CVPE with respect to the extractability from the ellipsis site. In order to account for this unexpected puzzle, which cannot be captured by the existing derivational ellipsis approaches, I proposed a constraint on the timing of XP ellipsis – XP is elided when an E-feature on the head merging with the XP becomes activated during the derivation and the activation occurs when all syntactic operations triggered by the ellipsis licensing head are completed. This can explain how head movement of the ellipsis licensing head can affect the timing of XP ellipsis and the availability of the extraction from the ellipsis site. The present discussion provides an argument for the claim that head movement takes place in narrow syntax. Additionally, this lends further support to the view that head movement is goal-driven.

References

Aelbrecht, Lobke. 2010. *The syntactic licensing of ellipsis*. Amsterdam: John Benjamins Publishing Company.

Baker, Mark. 2003. *Lexical categories: Verbs, nouns, and adjectives.* Cambridge: Cambridge University Press.

Baltin, Mark. 1993. *Negation and clause structure*. Manuscript. New York, NY: New York University.

Baltin, Mark. 2007. *Deletion versus Pro-forms: A false dichotomy?* Manuscript. New York, NY: New York University.

Baltin, Mark. 2012. Deletion versus pro-forms: An overly simple dichotomy? *Natural Language and Linguistic Theory* 30(2): 381-423.

Basilico, David. 2003. The topic of small clauses. *Linguistic Inquiry* 34(1): 1-35.

Bjorkman, Bronwyn. 2011. *BE-ing default: The morphosyntax of auxiliaries*. PhD Dissertation. Massachusetts Institute of Technology.

Bošković, Željko. 2014. Now I am a phase, now I'm not a phase: On the variability of phases with extraction and ellipsis. *Linguistic Inquiry* 45(1): 27-89.

Bowers, John. 1993. The syntax of predication. *Linguistic Inquiry* 24(4): 591-656.

Bowers, John. 2001. Predication. In Mark Baltin and Chris Collins (eds.), *The handbook of contemporary syntactic theory*, 299-333. Malden, MA: Blackwell Publishing.

Chomsky, Noam. 2000. Minimalist inquiries: The framework. In Roger Martin, David Michaels,

and Juan Uriagereka (eds.), *Step by step: Essays on minimalism in honor of Howard Lasnik*, 89-155. Cambridge, MA: The MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In Michael Kenstowicz (ed.), *Ken Hale: A life in language*. 1-52. Cambridge, MA: The MIT Press.

Chomsky, Noam. 2008. On phases. In Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta (eds.), *Foundational issues in linguistic theory: Essays in honor of Jean-Roger Vergnaud*, 133-166. Cambridge, MA: The MIT Press.

Chomsky, Noam. 2015. Problems of projection: Extensions. In Elisa Di Domenico, Comelia Hamann, and Simona Matteini (eds.), *Structures, strategies and beyond: Studies in honor of Adriana Belletti*, 3-16. Amsterdam; Philadelphia: John Benjamins Publishing Company.

Chung, Sandra, William Ladusaw, and James McCloskey. 1995. Sluicing and logical form. *Natural Language Semantics* 3(3): 239-283.

Culicover, Peter and Jay Jackendoff. 2005. *Simpler syntax*. New York, NY: Oxford University Press.

Deal, Amy Rose. 2009. The origin and content of expletives: Evidence from "selection". *Syntax* 12(4): 285-323.

Hardt, Daniel. 1993. *Verb phrase ellipsis: Form, meaning and processing*. PhD Dissertation. Philadelphia, PA: University of Pennsylvania.

Hardt, Daniel. 1999. Dynamic interpretation of verb phrase ellipsis. *Linguistics and Philosophy* 22(2): 185-219.

Harley, Heidi. 2004. Merge, conflation and head movement: The first sister principle revisited. In Keir Moulton and Matthew Wolf (eds.), *Proceedings of 33th North East Linguistic Society*, 239-254. University of Massachusetts, Amherst: Graduate Linguistics Student Association (GLSA).

Harley, Heidi. 2013. External arguments and the mirror principle: On the distinctness of Voice and v. *Lingua* 125(1): 34-57.

Harwood, William. 2015. Being progressive is just a phase: Celebrating the uniqueness of progressive aspect under a phase-based analysis. *Natural Language and Linguistic Theory* 33(2): 523-573.

Iatridou, Sabine and Hedde Zeijlstra. 2013. Negation, polarity, and deontic modals. *Linguistic Inquiry* 44(4): 529-568.

Laka, Itziar. 1990. *Negation syntax: On the nature of functional categories and projections*. PhD Dissertation. Cambridge, MA: Massachusetts Institute of Technology.

Lasnik, Howard. 1999. Pseudogapping puzzles. In Shalom Lappin and Ealbbas Benmamoun (eds.), *Fragments: Studies in ellipsis and gapping*, 141-174. Oxford: Oxford University Press.

Legate, Julie. 2003. Some interface properties of the phase. *Linguistic Inquiry* 34(3): 506-516.

Legate, Julie. 2014. *Voice and v: Lessons from Acehnese*. Cambridge, MA: The MIT Press.

Lobeck, Anne. 1995. *Ellipsis: Functional heads, licensing and identification*. Oxford: Oxford University Press.

Merchant, Jason. 2001. *The syntax of silence: Sluicing, islands, and the theory of ellipsis*. Oxford:

Oxford University Press.
Merchant, Jason. 2008. An asymmetry in voice mismatch in VP-ellipsis and pseudogapping. *Linguistic Inquiry* 39(1): 169-179.
Merchant, Jason. 2013. Voice and ellipsis. *Linguistic Inquiry* 44(1): 77-108.
Mikkelsen, Line. 2005. *Copular clauses: Specification, predication and equation*. Amsterdam: John Benjamin Publishing Company.
Park, Dongwoo. 2017. *When does ellipsis occur, and what is elided?* PhD Dissertation. College Park, MD: University of Maryland.
Pesetsky, David and Esther Torrego. 2001. T-to-C movement: Causes and consequences. In Michael Kenstowicz (ed.), *Ken Hale: A life in language*, 355-426. Cambridge, MA: The MIT Press.
Potsdam, Eric. 1996. *Syntactic issues in the English imperative*. PhD Dissertation. Santa Cruz, CA: University of California.
Pollock, Jean-Yves. 1989. Verb movement, Universal Grammar, and the structure of IP. *Linguistic Inquiry* 20(3): 365-424.
Ross, John Robert. 1969. Guess who?. In Robert Binnick, Alice Davison, Georgia Green, and Jerry Morgan (eds.), *Papers from the 5th regional meeting of the Chicago Linguistic Society*, 252-286. Chicago, IL: Chicago Linguistic Society.
Sag, Ivan. 1976. *Deletion and logical form*. PhD Dissertation. Cambridge, MA: Massachusetts Institute of Technology.
Sailor, Craig. 2018. The typology of head movement and ellipsis: A reply to Lipták & Saab. *Natural Language and Linguistic Theory* 36(3): 851-875.
Sauerland, Uli. 2003. Intermediate adjunction with A-movement. *Linguistic Inquiry* 34(2): 308-314.
Travis, Lisa. 1984. *Parameters and effects of word order variation*. PhD Dissertation. Cambridge, MA: Massachusetts Institute of Technology.
van Craenenbroeck, Jeroen and Anikó Lipták. 2008. On the interaction between verb movement and ellipsis: New evidence from hungarian. In Charles B. Chang and Hannah J. Haynie (eds), *Proceedings of the 26th West Coast Conference on Formal Linguistics,* 138-146. Somerville, MA: Cascadilla Press.
Winfried, Lechner. 2006. An interpretive effect of head movement. In Mara Frascarelli (ed.), *Phases of interpretation*, 45-71. Berlin: Mouton de Gruyter.
Winfried, Lechner. 2007. *Interpretive effects of head movement*. Manuscript. University of Stuttgart.

Dongwoo Park
Associate Professor
Department of English Language and Literature
Korea National Open University
86 Daehak-ro, Jongno-gu,
Seoul, 03087 Korea

108 Dongwoo Park

E-mail: dongwoop@knou.ac.kr

Received: 2024. 02. 13.
Revised: 2024. 03. 05.
Accepted: 2024. 03. 08.