A Minimalist Analysis of VP-ellipsis in the History of English

Shuto Yamamura

1. Introduction

It is a well-known fact of Present-day English (PE) that VP-ellipsis (VPE) is allowed in the complement position of modals, but not lexical verbs, as shown in (1):

(1) a. Because she shouldn't, Mary doesn't smoke.

                     (cf. Lobeck (1995: 47))

      b. *Because Mary continued, John also started speaking French.

                     (cf. Lobeck (1995: 48))

In addition to this fact, Doron (1999) and Goldberg (2005) report that a lexical verb can be the remnant of VPE in languages like Hebrew, Irish and Swahili where V-to-T movement is attested, which they call V-stranding VPE, as illustrated in (2) from Hebrew:

(2) a. Q: at   saragt et   ha- sveder ha-ze

          Q: you knit   ACC the sweater this

            'Did you knit this sweater?'

      b. A: lo, ima   Seli sarga

          A: no, mother my knit

            'No, my mother did.'   (Doron (1999: 128))

According to them, a lexical verb survives VPE in these languages because it raises to the T position which is structurally higher than the target of deletion.

If these observations are correct, it will make the following prediction: if a language has VPE and V-to-T movement, it can produce sentences with "Lexical-V-stranding VPE" as in (2); if another language has VPE but not V-to-T movement, it can only produce sentences with "Modal-stranding VPE" as in (1). This article focuses on the empirical fact that Old English (OE) and Middle English (ME) have both VPE and V-to-T movement, but only Modal-stranding VPE is allowed just like PE, contrary to the prediction just mentioned.

The aim of this paper is to provide a theoretical account for this apparently contradictory fact under the LF-copy analysis of VPE within the recent Minimalist framework (Chomsky (2000, 2001)). Section 2 overviews the feature-driven deletion approach to VPE and points out its problems. Section 3 reviews the arguments that modals were categorized as lexical verbs and V-to-T movement was attested in OE and ME, pointing out that the absence of Lexical-V-stranding VPE in these periods poses an empirical problem for the feature-driven deletion approach to VPE. Section 4 proposes that the LF-copy analysis built on the Agree system overcomes the theoretical and empirical problems with the feature-driven deletion approach, and neatly accounts for the development of VPE in the history of English.

2. The Feature-driven Deletion Approach to VPE and Its Problems

Merchant (2001) proposes a PF-deletion approach in which VPE is driven by the [E(llipsis)] feature in a functional category, on the condition that the target of deletion is e-GIVEN, in other words, the semantics of the antecedent VP and that of the deleted VP entail each other. For example, the [E] feature lies in T and its complement VP is deleted at PF in (3):

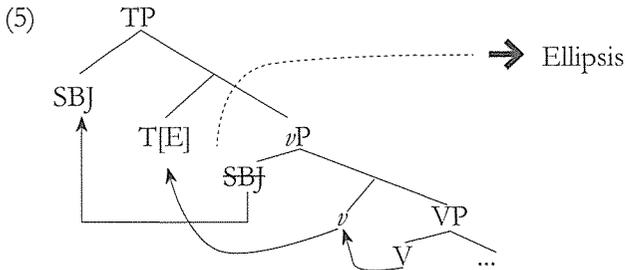(3) a. Abby called Chuck an idiot after Ben did.

(cf. Merchant (2001: 27))

  b. ... after [$_{TP}$ Ben [$_{T'}$ did[E] [$_{VP}$ ~~call Chuck an idiot~~]]]

Adopting this approach, Goldberg (2005) tries to explain Lexical-V-stranding VPE which is observed in languages which have V-to-T movement. Here follows an example from Hebrew:

(4) dani amar Se- ha- seret tov,   aval moSe lo   amar
     Dani said that the movie good, but Moshe not said
   'Dani said that the movie is good, but Moshe didn't.'

<div align="right">(cf. Doron (1999: 128))</div>

Unlike Modal-stranding VPE in PE, the lexical verb *amar* lies outside the complement of T with the [E] feature after V-to-T movement, so it can be left as the remnant of VPE, as illustrated in (5):

(5)   TP
       /   \ .... ⇒ Ellipsis
     SBJ   \
            /   \
         T[E] vP
            \   SBJ
             \   / \
              \ v VP
               \ / \ ...
                 V   ...

At first sight, this feature-driven deletion approach seems to be successful in accounting for both Modal-stranding VPE and Lexical-V-stranding VPE: the former is attested in languages without V-to-T movement like PE, whereas the latter is attested in languages with V-to-T movement like Hebrew. However, this approach is problematic in some respects.

First, the syntactic position of the [E] feature is arbitrarily determined based on surface word order. Thus, unlike Merchant (2001), Gengel (2005) and Merchant (2008) assume the following structure for VPE, in which the [E] feature lies in v and its complement VP is deleted at PF, yielding the same surface word order as the analysis in (3).

(6)
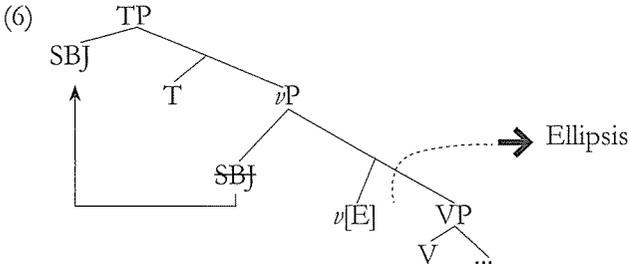
On the other hand, the two authors argue that pseudogapping is accounted for under the feature-driven deletion approach by positing the [E] feature on the head of focus phrase (FocP):

(7)　Some bought Roses, and others did lilies.　(Merchant (2008: 174))

(8)　[TP SBJ [T′ T [FocP OBJ [Foc′ Foc[E] ⎿ [vP S̶B̶J̶ [v′ v [VP V O̶B̶J̶]]]]]]]
　　　　　　　　　　　　　　　　　　　⎿⟶ Ellipsis

In (8), the object moves to Spec, FocP, and the [E] feature of Foc serves to delete its complement, namely vP.　However, the following example provided by Tanaka (2011) does not support the feature-driven deletion approach summarized above, showing that there is no such difference in the size of deletion between VPE and pseudogapping:

(9)　a.　Many of them have turned in their assignment already, but they haven't all yet.

　　b.　? Many of them have turned in their take-home already, but they haven't all yet their paper.　　　　(Tanaka (2011: 474))

If the floating quantifier associated with a subject lies in its base position, namely Spec, vP (Sportiche (1988)), it could not survive pseudogapping, contrary to fact.

　　Furthermore, as pointed out by Sag and Nykiel (2011), the ungrammaticality of the following example poses a challenge for Merchant's (2001, 2008) analysis based on e-GIVENness:

(10)　*John will beat someone at chess, and then Mary will l̶o̶s̶e̶ ̶t̶o̶ s̶o̶m̶e̶o̶n̶e̶ ̶a̶t̶ ̶c̶h̶e̶s̶s̶.　　　　　　(Sag and Nykiel (2011: 193))

In (10), the verb *beat* in the antecedent VP and the verb *lose* in the deleted

VP are relational opposites, that is, they are antonyms but entail each other.

In addition to these problems, the feature-driven deletion approach is also empirically problematic in that it cannot account for the fact that only Modalstranding VPE has been allowed throughout the history of English, despite the availability of VPE and V-to-T movement before the sixteenth century, as we will see in the next section.

3. The Historical Background of Modals, V-to-T Movement and VPE

Let us review the arguments made in the literature on the status of modals and the availability of V-to-T movement in the history of English. Although it is the standard analysis that modals are categories of T in PE, there is reason to assume that they belong to the same category as lexical verbs in OE, as evidenced by the following examples, taken from *The York-Toronto-Helsinki Parsed Corpus of Old English Prose* (YCOE).[1]

(11) a. Ælc cristen   man sceal cunnan his paternoster   and his credan
         each Christian man shall can   his Lord's prayer and his belief
         'each Christian man will know his prayer and his belief.'

                                   (coaelive, ÆLS[Ash_Wed]: 261.2850: o3)

     b. he soðlice ne   cuðe þære soðfæstnysse weg
         he really   not could that faithfulness   way
         'he really did not know a way of the faithfulness'

                                   (coaelhom, ÆHom_4: 252.658: o3)

The examples in (11) indicate that OE modals can appear in their infinitive forms and take other kinds of complements than infinitives. These properties are also observed in the ME period, as illustrated in (12):

(12) a. but it sufficeth to hem to kunne her Pater Noster, ...
         but it suffices to them to know their Pater Noster, ...

                   (?c1425 (?c1400) Loll. Serm. 2.325)/(Denison (1993: 310))

    b.   Who   this booke shall wylle lerne ...

          He-who this book   shall wish learn ...

  (c1483 (a1840) Caxton, Dialogue 3.37)/(Roberts and Roussou (2003: 38))

    c.   euerych bakere of þe town ... shal to þe clerke of þe

          every   baker of the town ... owes to the clerk of the

          town a penny

          town a penny

    (a1400: Usages of Winchester (Engeroff), p. 64)/(Visser (1963: 498))
Modals pattern with lexical verbs in these respects in OE and ME, which
has led many authors to assume that modals are categories of V in these
periods (Lightfoot (1979) and Roberts (1993, 2007) among others).
Moreover, the following examples will provide a clue to determine the
type of lexical verbs they belong to:

  (13) a.   ða   cwæð ic: Hwy ne sceolde me swa ðyncan?

           then said   I: Why neg should me so   seem

           'Then I said: Why should it not seem so to me?'

                                (coboeth, Bo: 38.119.9.2369: o2)

    b.   Me mæig ... gif hit mot gewiderian,   mederan settan ...

          One can ... if it   must be-fair-weather, madder   plant ...

          'One can, in case of fair weather, plant madder'

                                (colawger, LawGer: 9.23: o3)

    c.   ... agens   whom it schal be argued and concluded ...

          ... against whom it shall be argued and concluded ...

                (c1443: Pecock, Reule 96)/(Visser (1969: 1588))

    d.   Hu   ... may it be þat vr langage spek þai þus?

          How ... may it be that our language speak they thus

                (c1300: Havelok 18966)/(Visser (1969: 1780))

In (13a, b), the expletives appear as the subjects of the modals in OE: the
null expletive and the expletive *it*, respectively. The examples in (13c, d)
illustrate the possibility of modals occurring with expletive subjects in ME

as well. This indicates that modals do not take an external argument like unaccusative verbs, so it is reasonable to assume that they are raising verbs taking infinitival complements in OE and ME (Roberts (1993)).

Turning now to the availability of V-to-T movement, it has been observed that lexical verbs move to T and further to C in some cases in OE and ME. In (14a, b), the lexical verb *takþ* precedes the negative marker, and the lexical verb *disseruedist* is inverted with the subject in the *wh*-question, respectively. These examples are taken from *The Penn-Helsinki Parsed Corpus of Middle English, Second Edition* (PPCME2):[2]

(14) a.   ... he takþ not vengaunce   of his turmentours as a man
             ... he take not avenging act of his torturer   as a man
                                              (CMAELR3,47.666: m3)

     b.   ..., hou disseruedist thou to come to this grace?
             ..., how deserve   you to come to this grace
                                              (CMAELR4,20.587: m4)

Of course, the same holds of modals, as illustrated in (15):

(15) a.   A blynde man kan nat juggen wel in hewis
             A blind   man cannot judge   well in colours
                      (c1387: Chaucer, Troilus 2, 21)/(Roberts (1993: 311))

     b.   Wilt thou   ony thinge with hym?
             Wilt thou [do] any thing   with him?

         (1470–85, Malory, Morte d'Arthure III, iii, 120)/(Visser (1963: 503))

It is beyond the scope of this paper to give a detailed analysis of the reanalysis of modals as T-elements, as well as the mechanism of the loss of V-to-T movement, but it will suffice for the present purposes to assume with Roberts (1993, 2007) that modals were reanalyzed as T-elements and lexical verbs ceased to move to T in the sixteenth century. Then, the structural change of a modal would be as follows, where its infinitival complement is assumed to be transitive for the sake of illustration.

(16) a.   Before the Reanalysis
             $[_{CP}$ C $[_{TP}$ SBJ T $[_{vP\text{-}MOD}$ v $[_{VP}$ V-MOD $[_{v^*P\text{-}INF}$ ~~SBJ~~ v^* $[_{VP}$ V ...]]]]]] (OE, ME)

b.   After the Reanalysis

$[_{CP}$ C $[_{TP}$ SBJ T-MOD $[_{v^*P\text{-}INF}$ ~~SBJ~~ v^* $[_{VP}$ V ...]]]] (16c-)

In (16), the modal, which is a raising verb taking an infinitival v^*P complement, undergoes V-to-T movement in OE and ME; once the reanalysis took place, the modal came to be base-generated in T after the sixteenth century.

With this in mind, consider the possibility of VPE in the history of English and its implications for the feature-driven deletion approach to VPE reviewed in the previous section. Warner (1993) observes that VPE is allowed in the complement position of modals in OE and ME. This is supported by the investigation based on YCOE and PPCME2. The result is summarized in Table 1, followed by examples from each corpus:

Table 1   The Occurrence of Modal-stranding VPE in YCOE and PPCME2

YCOE	PPCME2
639	528

(17) a.   &   he wolde þone weðer forlætan,   ac   he ne   mihte,
           and he would that   wether relinquish, but he not might
           'and he would relinquish that sheep, but he might not,'
                          (cogregdC, GDPref_and_3_[C]: 22.224.25.3075: o4)

     b.   A,   good ser, I pray ʒow dryuyth hym away fro   me, for
          Ah, good sir, I pray you drives   him away from me, for
          God knowyth I would ryth fawyn don wel & plesyn hym yf
          God knows   I would right gladly do   well & please him if
          I cowde.
          I could
          'Ah, good sir, I pray that you drive him away from me, for
          God know I would do well willingly and please him if I
          could.'   (CMKEMPE, 85.1921: m4)

Consider the following derivation of Modal-stranding VPE in OE and

ME under the feature-driven deletion approach to VPE:

(18) a. $[_{CP}$ C $[_{TP}$ T[E] $[_{vP\text{-}MOD}$ v $[_{VP}$ V-MOD $[_{v^*P\text{-}INF}$ SBJ v^* $[_{VP}$ V-LEX ...]]]]]]

      b. $[_{CP}$ C $[_{TP}$ SBJ $[_{T'}$ T[E]/V-MOD $<[_{vP\text{-}MOD}$ v $[_{VP}$ ~~V-MOD~~ $[_{v^*P\text{-}INF}$ ~~SBJ~~ v^* $[_{VP}$ V-LEX...]]]]
      $>$]]]

In (18), the modal base-generated in V raises to T, and the [E] feature serves to delete vP-MOD, the complement of T, which is marked with the angled brackets. This accounts for the grammaticality of Modal-stranding VPE, as desired. However, given that OE and ME have V-to-T movement, it would be wrongly predicted that Lexical-V-stranding VPE is allowed in these periods like Hebrew, because the v^*P complement of T (marked with the angled brackets) could be deleted to strand a lexical verb that has raised to T, as shown in (19):

(19) a. $[_{CP}$ C $[_{TP}$ T[E] $[_{v^*P\text{-}LEX}$ SBJ v^* $[_{VP}$ V-LEX $[_{DP}$ ...]]]]]]

      b. $[_{CP}$ C $[_{TP}$ SBJ $[_{T'}$ T[E]/V-LEX $<[_{v^*P\text{-}LEX}$ ~~SBJ~~ v^* $[_{VP}$ ~~V-LEX~~ $[_{DP}$ ...]]] $>$]]]

        Therefore, apart from the problems pointed out in the previous section, the feature-driven deletion approach to VPE faces an empirical problem in accounting for the fact that Lexical-V-stranding VPE is impossible in OE and ME. The next section proposes an LF-copy analysis of VPE, which is originally proposed by Lobeck (1995) and revised within the recent Minimalist framework, and attempts to account for the development of VPE in the history of English.

4. The Development of VPE in the History of English

4.1 Formal Licensing and Identification of E-*pro*

Lobeck (1995) proposes that ellipsis constructions are not derived by a deletion operation, but involve in the ellipsis site an empty, non-arbitrary pronominal *pro*, which I refer to as E(llipsis)-*pro*. E-*pro* is licensed and identified under the following condition:

(20) Licensing and Identification of *pro*

An empty, non-arbitrary pronominal must be properly head-governed, and governed by an X-0 specified for strong agreement.

(Lobeck (1995: 20))

In the case of VPE under consideration, E-*pro* is allowed to occur only when it is head-governed by INFL (i.e. T) specified for the [+Tense] feature, which is strong in the sense that it is morphologically realized. Therefore, VPE is well-formed in (21a) with T realized as *should*, while the lack of a T-element causes the ungrammaticality of (21b). Under this analysis, the semantic content of E-*pro* is recovered by copying that of its antecedent at LF.

(21) a. Because she [$_{Agr'}$ Agr [$_{TP}$ [+Tense]/shouldn't [$_{VP}$ e]]], Mary doesn't smoke.

b. *Because she [$_{Agr'}$ Agr [$_{TP}$ [+Tense]/ϕ [$_{VP}$ e]]], Mary doesn't smoke.   (cf. Lobeck (1995: 47, 144ff.))

Although VPE is analyzed successfully under Lobeck's (1995) analysis, it is problematic in that the functional category Agr in the proposed structure of VPE and the notion of government in the licensing and identification condition of E-*pro* in (20) have been abandoned in the Minimalist framework. Updating her analysis within the Minimalist framework, the remainder of this section proposes a new LF-copy analysis of VPE, based on the syntactic operation Agree in the sense of Chomsky (2000, 2001).

In order to develop such an analysis, this paper adopts the mechanism of licensing and identification of E-*pro* proposed by Yamamura (2010) in his analysis of adjectives used as nouns in OE like (22), where the head noun is elided after the adjective within DP.

(22) a. ða   cwican

those quick. PL   (cobede, Bede_1: 11.50.3.448: o2)

b.

$$DP$$

D   NP

ða

u-φ   AP   NP

cwican

i-φ[PL]   E-*pro*   (Yamamura (2010: 354))
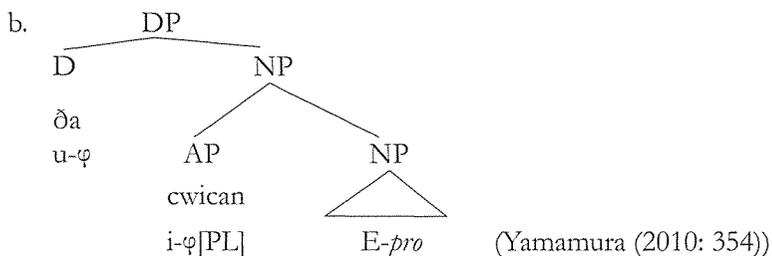
Here, D has the set of uninterpretable φ-features (u-φ) which functions as a probe in the same way as other functional categories like T and v^*. Furthermore, since adjectives in OE have the rich inflectional system just like nouns, they have the set of interpretable φ-features (i-φ) which serves as a goal. E-*pro* itself does not have any formal features such as φ-features or Case features, so it is allowed to occur within DP as long as the derivation of DP in which it is contained converges. In (22), D enters into the Agree relation with AP and u-φ on D is valued by i-φ on AP, leading to the convergent derivation. Moreover, the formal features (number and gender) of E-*pro* can be recovered by the morphology of D, which is a probe in the relevant Agree relation, so that it is successfully identified, and made visible for the copying of the semantic content of its antecedent. This mechanism of licensing and identification of E-*pro* is summarized in (23).

(23) Licensing and Identification of E-*pro*

a.   E-*pro* is licensed if the derivation of its host phrase converges.

b.   E-*pro* is identified and made visible for LF-copying by the Agree relation whose result is morphologically realized on its probe.

Let us consider how the grammaticality of Modal-stranding VPE in PE is accounted for under the analysis based on (23). E-*pro* is treated as VP in VPE which is generated as the complement of v^*, as shown in (24):

(24) Because [$_{TP}$ she [$_{T'}$ shouldn't [$_{v*P}$ ~~she~~ [$_{v*'}$ v^* [$_{VP}$ E-*pro*]]]]], Mary doesn't
     smoke.

In (24), T enters into the Agree relation with the subject, valuing u-φ on T
and the uninterpretable Case feature (u-Case) on the subject. This Agree
relation deletes all the uninterpretable features within the relevant v^*P, so
its derivation converges and hence, E-*pro* is licensed under the condition
in (23a). Moreover, the Agree relation between T and the subject is
morphologically realized on T, so E-*pro* is successfully identified under
the condition in (23b). Finally, the content of E-*pro* other than its formal
features is recovered by copying that of the antecedent VP at LF.

     The following sections try to explain the empirical fact that OE and
ME allows Modal-stranding VPE, but not Lexical-V-stranding VPE, under
the LF-copy analysis based on the formal licensing and identification of
E-*pro* introduced in this section.

4.2 Modal-stranding VPE in OE and ME

This section considers the possibility of Modal-stranding VPE in OE
and ME, beginning with the derivation of modals without VPE. The
first conjunct of the example in (17a), repeated here as (25), will have the
structure in (26), where the modal is analyzed as a raising verb taking an
infinitival v^*P complements (see section 3):

     (25) &   he wolde þone weðer forlætan, ac he ne mihte
          and he would that   wether relinguish, but he not might
          'and he would relinguish that sheep, but he might not.'
                         (cogregdC, GDPref_and_3_[C]: 22.224.25.3075: o4)
     (26) [$_{CP}$ C [$_{TP}$ he$_i$ [$_{T'}$ wolde$_j$ [$_{vP\text{-}MOD}$ v [$_{VP}$ ~~wolde~~$_j$ [$_{v*P\text{-}INF}$ ~~he~~$_i$ [$_{v*'}$ v^* [$_{VP}$ forlætan
          þone weðer]]]]]]]]

In (26), the modal undergoes V-to-T movement, and the subject generated
in Spec, v^*P-$_{INF}$ raises to Spec, TP under the Agree relation with T. This
Agree relation values both u-φ on T and u-Case on the subject, leading to
the convergent derivation.

With this in mind, consider now the derivation of Modal-stranding VPE in OE and ME. The second conjunct of the example in (17a) will have the structure in (27), where the relevant infinitival v^*P contains E-*pro*, which is a category of VP selected by v^*:[3]

(27) [$_{CP}$ C [$_{TP}$ he$_i$ [$_{T'}$ mihte$_j$ [$_{vP\text{-}MOD}$ v [$_{VP}$ ~~mihte~~$_j$ [$_{v^*P\text{-}INF}$ ~~he~~$_i$ [$_{v^{*'}}$ v^* [$_{VP}$ E-*pro*⫼⫼]]]]]]]]

Again, T enters into the Agree relation with the subject, which induces valuation of u-φ on T and u-Case on the subject. As a result, the derivation converges, so E-*pro* is licensed under the condition in (23a). Furthermore, E-*pro* is successfully identified under the condition in (23b), because the Agree relation between T and the subject is morphologically manifested on T.

Thus, the present analysis can account for the fact that Modal-stranding VPE has been available throughout the history of English. Although the structure of modals with VPE changed from (27) to (24) under the reanalysis of modals and the loss of V-to-T movement in the sixteenth century, this did not affect the possibility of VPE (namely, licensing and identification of E-*pro*), since the Agree relation relevant for modals is morphologically realized on T.

4.3 The Impossibility of Lexical-V-stranding VPE in OE and ME

Recall from section 2 that the feature-driven deletion approach cannot account for the fact that Lexical-V-stranding VPE is not attested in OE and ME, because these periods have V-to-T movement, which would in turn makes it possible for a lexical verb to be left as the remnant of VPE. This section addresses the question why Lexical-V-stranding VPE is impossible in OE and ME.

4.3.1 Ellipsis of Infinitival Complements of Lexical Verbs

Bare infinitives in OE and ME could appear not only as raising complements of modals but also as control complements of lexical verbs, as illustrated in (28):

(28) , þa   mynton   we us   gerestan,
       , then intended we ourselves gerestan
       'then we intended to repose ourselves'

(coalex, Alex: 19.2.215: o3)

The structure of lexical verbs taking control complements will be analyzed as follows:

(29) $[_{v^*\text{P-LEX}}$ SBJ $[_{v^*\cdot}\ v^*\ [_{\text{VP}}$ V-LEX $[_{v^*\text{P-INF}}\ [_{v^*\cdot}\ v^*\ \text{VP}]]]]]$

This paper follows Tanaka (2009) in assuming that a control complement in OE and ME has its external argument realized as the infinitival morpheme *-an* occupying v^*, which is assigned accusative Case by the matrix verb (see also Kageyama (1992) for extensive discussion on the absence of PRO in OE infinitives). In (29), the matrix v^* enters into the Agree relation with the infinitival morpheme. This Agree relation values u-φ on the matrix v^* and u-Case on the infinitival morpheme, leading to the convergent derivation.

Now, consider what happens if VP is replaced by E-*pro* in (29), that is to say, control complements are elided.

(30) $^*[_{v^*\text{P-LEX}}$ SBJ $[_{v^*\cdot}\ v^*\ [_{\text{VP}}$ V $[_{v^*\text{P-INF}}\ [_{v^*\cdot}\ v^*\ [_{\text{VP}}$ E-*pro*$]]]]]]$

In (30), E-*pro* is licensed because the derivation of the matrix v^*P converges in the same manner as in (29). However, the Agree relation between the matrix v^* and the infinitival morpheme is not morphologically realized on the former, since OE and ME do not have agreement associated with accusative Case assignment, namely object-verb agreement. This results in the failure of the identification of E-*pro*, and therefore Lexical-V-stranding VPE is impossible in control complements of lexical verbs in OE and ME.

4.3.2 Ellipsis of Nominal Complements of Lexical Verbs

Next, consider the case in which nominal complements of lexical verbs are elided. The absence of Lexical-V-stranding VPE in this case follows immediately from the present analysis, if we assume that D carries u-φ just

like other functional categories such as T and v^* (see section 4.1). The relevant structure of VPE will be like (31):

(31) $^*[_{v^*P\text{-}LEX}$ SBJ v^* $[_{VP}$ V $[_{DP}$ D $[_{NP}$ E-*pro*]]]]]]

Given that E-*pro* does not have any formal features (see section 4.1), u-φ on D does not have an appropriate goal in this configuration, so the derivation does not converge and hence E-*pro* is not licensed. Thus, together with the conclusion in the previous section, the present analysis can provide an account for the general impossibility of Lexical-V-stranding VPE in OE and ME.[4]

5. Concluding Remarks

This paper has discussed the unchanged property of VPE in the history of English: English has only allowed for Modal-stranding VPE throughout its history. This property has been successfully accounted for in terms of the v^*P structure with E-*pro*, which is licensed and identified under the Agree system proposed within the recent Minimalist framework. The present analysis has also succeeded in ruling out the possibility of Lexical-V-stranding VPE in OE and ME.

NOTES

[1]   YCOE consists of about 1.5 million words. The texts in YCOE are distributed in the following periods: O1 (-850), O2 (850–950), O3 (950–1050), and O4 (1050–1150).

[2]   PPCME2 consists of about 1.2 million words. The texts in PPCME2 are distributed in the following periods: M1 (1150–1250), M2 (1250–1350), M3 (1350–1420), and M1 (1420–1500).

[3]   This paper assumes that the first merge (External Merge) is not conditioned on the satisfaction of argument structure, but elements can freely be merged in the syntax and the evaluation of created configurations is taken place at the CI interface. Hence, the subject can be merged in Spec, v^*P in (27) even though the semantic content of VP is empty in the

syntax. In addition, note that v^* selecting E-*pro* does not have u-φ which is responsible for accusative assignment, like v^* in unergative sentences.

[4] The present analysis apparently cannot account for the possibility of Lexical-V-stranding VPE in languages like Hebrew, Irish and Swahili. It might be possible that it is not an instance of VPE, but of null object construction, which is subject to conditions different from those in (23).

REFERENCES

Chomsky, Noam. 2000. Minimalist inquiries: The framework. In *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, ed. by Roger Martin, David Michaels and Juan Uriagereka, 89–155. Cambridge, MA: MIT Press.

Chomsky, Noam. 2001. Derivation by phase, In *Ken Hale: A life in language*. ed. by Michael Kenstowicx, 1–52. Cambridge, MA: MIT Press.

Denison, David. 1993. *English historical syntax: Verbal constructions*. London: Longman.

Doron, Edit. 1999. *V*-movement and *VP* ellipsis. In *Fragments: Studies in ellipsis and gapping*, ed. by Shalom Lappin and Elabbas Benmamoun, 124–140. Oxford: Oxford University Press.

Gengel, Kirsten. 2005. Phases and Ellipsis. *Linguistic Analysis* 35, 21–42.

Goldberg, Lotus. Madelyn. 2005. *Verb-stranding VP-ellipsis: A cross-linguistic study*. Doctoral dissertation, McGill University.

Kageyama, Taro. 1992. AGR in Old English *to*-infinitives. *Lingua* 88, 2, 91–128.

Lightfoot, David. 1979. *Principles of diachronic syntax*. Cambridge: Cambridge University 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 mismatches in VP-ellipsis and pseudogapping. *Linguistic inquiry* 39, 169–179.

Roberts, Ian. 1993. *Verbs and diachronic syntax: A comparative history of English and French*. Dordrecht: Kluwer Academic Publishers.

Roberts, Ian. 2007. *Diachronic syntax*. Oxford: Oxford University Press.

Roberts, Ian and Anna Roussou. 2003. *Syntactic change: A minimalist approach to grammaticalization*. Cambridge: Cambridge University Press.

Sag, Ivan A. and Joanna Nykiel. 2011. Remarks on sluicing. In *Proceedings of the HPSG11 Conference*, 189–208.

Sportiche, Dominique. 1988. A theory of floating quantifiers and its corollaries for constituent structure. *Linguistic Inquiry* 19: 425–451.

Tanaka, Hidekazu. 2011. Voice mismatch and syntactic identity. *Linguistic Inquiry* 42, 470–490.

Tanaka, Tomoyuki. 2009. Scrambling from infinitival clauses: A case study of restructuring in the history of English. In *Ivy never sere: The fiftieth anniversary publication of the society of English literature and linguistics*, 475–492.

Visser, Frederikus Theodorus. 1963–1973. *An historical syntax of the English language*, 4 vols., E. J. Brill, Leiden. . Vol. I, 1963; Vol. II, 1966; Vol. III, first half, 1969; Vol. III second half, 1973.

Warner, Anthony. 1993. *English auxiliaries: structure and history*. Cambridge: Cambridge University Press.

Yamamura, Shuto. 2010. The development of adjectives used as nouns in the history of English. *English Linguistics* 27, 344–363.

CORPORA

Kroch, Anthony and Ann Taylor. 2000. *The Penn-Helsinki Parsed Corpus of Middle English, Second edition* (PPCME2), Philadelphia: University of Pennsylvania.

Taylor, Ann, Ansthony Warner, Susan Pintzuk and Frank Beths. 2003. *The York-Tronto-Helsinki Parsed Corpus of Old English Prose* (YCOE), Heslington: University of York.

Synopsis

A Minimalist Analysis of VP-ellipsis in the History of English
Shuto Yamamura

This paper investigates the mechanism of VP-ellipsis (VPE) in English, focusing on the fact that only Modal-stranding VPE has been allowed throughout its history. This empirical fact apparently contradicts a theoretical prediction based on a recent PF-deletion approach to VPE (Merchant (2001, 2008), Goldberg (2005)): if a language has VPE and V-to-T movement, it can produce sentences with "Lexical-V-stranding VPE."

This paper aims to provide a theoretical account for the contradictory fact under the LF-copy analysis of VPE within the recent Minimalist framework (Chomsky (2000, 2001)). Although the feature-driven deletion analysis appears plausible in providing a unified account for VPE and pseudogapping, their syntactic and semantic properties clearly show some problems. In addition, the absence of Lexical-V-stranding VPE in OE and ME raises an empirical problem to the feature-driven deletion analysis of VPE, given modals were categorized as lexical verbs and V-to-T movement was attested in OE and ME. This paper proposes the LF-copy analysis built on Agree system, in which an ellipsis site within VPE is filled by a phonologically null pronominal (E-*pro*). This empty category is licensed if the derivation of its host phrase converges, and identified and made visible for LF-copying by the Agree relation the result of which is morphologically realized on its probe. Finally, it is shown that the proposed analysis overcomes the theoretical and empirical problems with the feature-driven deletion approach, and neatly accounts for the development of VPE in the history of English.