VP Ellipsis Revisited:
Optional deletion of non-finite auxiliaries

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TIN-dag 2013,
Utrecht,
9 January 2013
Overview

1. Introduction: the pattern
2. Preliminaries: the verbal structure
3. Analysis, Part I: the ellipsis site
4. Analysis, Part II: auxiliary ellipsis
5. Extending the analysis: VP fronting
6. Digging deeper: predicate ellipsis
7. Conclusion and further issues
Introduction: the pattern (1)

VP ellipsis (VPE) = non-pronunciation of the verb phrase

(1) Betsy was hassled by the police, and Peter was, too.
    = ... and Peter was [hassled by the police], too.

Finite auxiliary remains overt.
(English) main verb is always deleted, even when finite.

(2) Betsy ate an apple, and Peter did, too.
    = ... and Peter [ate an apple], too.
Introduction: the pattern (2)

- Standardly:
  Under a deletion approach to ellipsis, VPE is analysed as PF deletion of VP, or more recently vP, licensed by the auxiliary or the T head (Johnson 2001, 2004; Merchant 2001; Gengel 2007 and many others)

![Diagram showing the structure of a sentence with PF deletion]

\[Peter \text{ was hassled by the police}\]
Introduction: the pattern (3)

Main research question in this talk:
What happens in sentences with more than one auxiliary?

(3) Betsy must have been being hassled.

= finite modal – perfect HAVE – progressive BE – passive BE – V
Introduction: the pattern (4)

Answer: More than just VP/vP is targeted by VPE (Akmajian & Wasow 1975, Sag 1976).

(4) Betsy must have been being hassled by the police, and...
   a. * Peter must have been being hassled by the police, too.
   b. Peter must have been being hassled by the police, too.
   c. Peter must have been being hassled by the police, too.
   d. * Peter must have been being hassled by the police, too.
Introduction: the pattern (5)

Akmajian & Wasow (1975), Sag (1976):

- Lexical verb obligatorily elided under VPE
- *Being* obligatorily elided under VPE
- *Have*, modals and finite auxiliaries never elided under VPE
- *Be/been* optionally elided under VPE

<table>
<thead>
<tr>
<th>Modal/finite aux</th>
<th>Have</th>
<th>Be</th>
<th>Been</th>
<th>Being</th>
<th>Lexical V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elided</td>
<td>*</td>
<td>*</td>
<td>(✓)</td>
<td>(✓)</td>
<td>✓</td>
</tr>
</tbody>
</table>

- Aim: explore and explain this observation

!!! Discussion on deletion of *have*: see later
Introduction: the pattern (6)

Main claims of this talk:

- VP Ellipsis targets the progressive aspectual layer (when it is present in the derivation).
- Optional auxiliary ellipsis = optional raising of auxiliaries out of the ellipsis site + rescue by PF deletion of the non-raised auxiliaries
- VPE = predicate ellipsis
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Preliminaries: The verbal structure (1)


- Aspectual layer + vP shell with auxiliary
- WYSIWYG approach
- Split layers = necessary for auxiliary raising
Preliminaries: The verbal structure (1)


- Aspectual layer + vP shell with auxiliary
- WYSIWYG approach
- Split layers = necessary for auxiliary raising
Preliminaries: The verbal structure (2)

Base positions

TP

T

ModP

Mod

InfP

Inf

vP_PERF

vP_PERF

PerfP

Perf

vP_PROG

vP_PROG

ProgP

Prog

vP

v

VoiceP

Voice

VP
Preliminaries: The verbal structure (2)

Base positions

TP
T
ModP
Mod
InfP
Inf
vP_{PERF}
vP_{PERF}
PerfP
Perf
vP_{PROG}
vP_{PROG}
ProgP
Prog
BE
VoiceP
Voice
VP

Passive/copula *be*
Preliminaries: The verbal structure (2)

Base positions

TP

T

ModP

Mod

InfP

Inf

vP_{PERF}

vP

vP_{PROG}

Perf

PerfP

vP_{PERF}

Progressive be

Passive/copula be

BE

ProgP

Prog

VoiceP

Voice

VP
Preliminaries: The verbal structure (2)

Base positions

TP

T

ModP

Mod

InfP

Inf

VP_{PERF}

HAVE

PerfP

Perf

VP_{PROG}

ProgP

Prog

VP

BE

VoiceP

BE

Voice

VP
Preliminaries: The verbal structure (2)

Base positions

TP

T

ModP

MODAL

InfP

Inf

VP

Perfect have

HAVE

PerfP

Perf

vP

Progressive be

BE

ProgP

Prog

vP

Passive/copula be

BE

VoiceP

Voice

VP
Preliminaries: The verbal structure (3)

Lasnik (1995): Auxiliary raising for feature checking

- Each aspectual head bears an interpretable inflectional feature (Bjorkman 2012, Lasnik 1995)
- Auxiliaries are merged inflected, but their morphological form has to be licensed by checking of a PF feature against the relevant aspectual head (Chomsky 1993, Lasnik 1995)
Preliminaries: The verbal structure (3)

*Being* can only be copular or passive BE.
- moves to Prog to check its inflectional feature and license its morphological form
Preliminaries: The verbal structure (3)

- **Being** can only be copular or passive BE.
  - moves to Prog to check its inflectional feature and license its morphological form
Preliminaries: The verbal structure (3)

- Being can only be copular or passive BE.
  - moves to Prog to check its inflectional feature and license its morphological form
Preliminaries: The verbal structure (3)

*Been* can be progressive, passive or copular BE.

- moves to Perf to check its inflectional feature
Preliminaries: The verbal structure (3)

*Been* can be progressive, passive or copular BE.
- moves to Perf to check its inflectional feature
Preliminaries: The verbal structure (3)

*Been* can be progressive, passive or copular BE.
- moves to Perf to check its inflectional feature
Preliminaries: The verbal structure (3)

The infinitival forms *have* and *be* move to Inf to check their features.
The infinitival forms *have* and *be* move to Inf to check their features.
Preliminaries: The verbal structure (3)

The infinitival forms *have* and *be* move to Inf to check their features.
Preliminaries: The verbal structure (3)

```
TP
\[i_{T}\]
ModP
\[MOD_{[\mu_T]}\]
InfP
\[[i_{Inf}]\]
VP_{PERF}
\[\text{Fin HAVE}_{[\mu_T]}\]
PerfP
\[[i_{Perf}]\]
VP_{PROG}
\[\text{Fin BE}_{[\mu_T]}\]
ProgP
\[[i_{Prog}]\]
VP
\[\text{Fin BE}_{[\mu_T]}\]
VoiceP
\[\text{Voice}_{[\mu_T]}\]
VP
```

The finite auxiliaries move to T.
Preliminaries: The verbal structure (3)

The finite auxiliaries move to T.

Diagram: 

TP
  └───[iT]
      ├───MOD
      │     └───Fin HAVE
      │         └───Fin BE
      └───[iInf]
          └───PerfP
              └───[iPerf]
                  └───vP
                      └───VoiceP
                          └───Voice

                      └───[iProg]
                          └───vP
                              └───Voice

                      └───vP

                      └───InfP

                      └───ModP

                      └───[uT]

                      └───[uT]
Preliminaries: The verbal structure (3)

The finite auxiliaries move to T.
Preliminaries: The verbal structure (4)

Surface positions:

TP
  MOD
  Fin
  AUX
  ModP
  InfP
  be/have
  VP
  PerfP
  been
  VP
  ProgP
  being
  VP
  VoiceP
  Voice
  VP
Preliminaries: The verbal structure (5)

IMPORTANT: The overt movement of auxiliaries is a concern for PF.

Auxiliaries could potentially move covertly to check inflectional features at LF, BUT...

No overt movement/checking = crash at PF

(See Chomsky 1993, 1995; Lasnik 1995; Roberts 1998)
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Analysis, part I: The ellipsis site (1)

Our claim: VPE elides as much as the progressive layer ($vP_{prog}$), if present.
Analysis, part I: The ellipsis site (2)

**Argumentation behind this claim:**
Only auxiliaries generated inside the ellipsis site can ever be elided.

- Two basic accounts for optional auxiliary ellipsis:
  1. Optional extension of ellipsis site (Akmajian, Steele & Wasow 1979, Bošković 2012)
  2. Optional raising of auxiliaries (Sailor 2012, Thoms 2012)
Analysis, part I: The ellipsis site (3)

Consensus: auxiliaries can only be elided if they are at some point contained within the ellipsis site.

In other words: if an auxiliary can be elided, its base position needs to be included in the ellipsis site.

(The opposite does not necessarily hold: if an auxiliary is not elided, it can still be base-generated in the ellipsis site.)
Analysis, part I: The ellipsis site (4)

Base positions of the auxiliaries:

```
         VP Ellipsis Site
           /     \
          vP     vP
          /\     /\
         vP_PROG vP_PERF
        /     \  /     \  
       been-be been-be-being
      /     \        /     \  
     ProgP   VoiceP    vP     VP
    /       \         /     /\  
   been-be- being   Voice  Prog   vP
      /\                  /\     /\  
     been-be-being     been-be
        /\              /\    /\  
       have           have
      /\              /\    /\  
     Perf            Perf
    /\              /\    /\  
    Inf            Inf
   /\              /\    /\  
   modal          modal
  /\              /\    /\  
  T            T
```

Analysis, part I: The ellipsis site (5)

We show that all auxiliaries generated within or below the progressive aspectual layer can be elided.

- VPE targets $vP_{prog}$

- Copula *BE* can be elided:
  (5) a. John has been in the garden, and Mary has (*been*) in the garden, too.
  b. John will be in the garden, and Mary will (*be*) in the garden, too.

- Passive *BE* can be elided:
  (6) a. John has been arrested, and Mary has (*been*) arrested, too.
  b. John might be arrested, and Mary might (*be*) arrested, too.
Analysis, part I: The ellipsis site (6)

Progressive *BE* can be elided:

(7)  
   a. John may be questioning our motives, but Peter won’t *(be)* questioning our motives.
   b. John may have been questioning our motives, but Peter hasn’t *(been)* questioning our motives.

!! There is a mismatch interpretation available without progressive *BE*:

(8)  
   a. ...Peter won’t *question* our motives.
   b. ...Peter hasn’t *questioned* our motives.

- How can we be sure the progressive auxiliary is ever actually elided?
Analysis, part I: The ellipsis site (7)

Can we find contexts that show whether progressive *be* can genuinely be elided?

- Our answer: YES, and they show it can be elided.

- Ellipsis and existential constructions
- Ellipsis and idiomatic expressions
Analysis, part I: The ellipsis site (8)

Ellipsis and existential constructions

Unergative and transitive existentials depend on progressive aspect (Milsark 1974; Aissen 1975; Burzio 1986; Ward & Birner 1996; Deal 2009; Harwood 2011):

(9)  a. There was a clown dancing at my birthday party.
    b. * There has a clown danced at my birthday party.
    c. * There might a clown dance at my birthday party.
    d. * There danced a clown at my birthday party.
Analysis, part I: The ellipsis site (9)

If we apply ellipsis to these existentials, no mismatch interpretation without the progressive will be available.

Results: All our informants accepted deletion of progressive *be* in these existentials.

(10) John said there had been a clown dancing at his birthday party, even though we all knew there hadn’t *(been)* a clown dancing at his birthday party.

(11) John said there would be a clown dancing at his birthday party, even though we all knew there wouldn’t *(be)* a clown dancing at his birthday party.

- Progressive *be* is optionally elided.
Analysis, part I: The ellipsis site (12)

Recapitulating:

- Passive *be/been* can be elided.
- Copula *be/been* can be elided.
- Progressive *be/been* can be elided.
- Perfect *have* is never elided.
- Modals and other finite auxiliaries are never elided.

However, there is some discussion as to whether or not perfect *have* can be elided:

- Perfect *have* can be elided - Akmajian, Steele & Wasow (1979), Thoms (2010)
Analysis, part I: The ellipsis site (13)

Akmajian, Steele & Wasow (1979), Thoms (2011): *have* can be elided!

(15) John couldn’t have studied Spanish, but Bill could.
   (Akmajian, Steele & Wasow 1979:15, example 48)

! Wurmbrand (2012): the acceptability of (5) is due to the available mismatch reading in which perfect aspect is altogether absent from the elided constituent:

(16) John couldn’t have studied Spanish, but Bill could [*study Spanish*].
Analysis, part I: The ellipsis site (14)

Can we find contexts that show whether *have* can genuinely be elided or not?

- Ellipsis and fixed expressions
- Ellipsis and identity requirements
Analysis, part I: The ellipsis site (15)

Ellipsis and fixed expressions
Certain expressions are dependent on perfect aspect:

(17)  a. We have been to Rome.
      b. * We are being to Rome.
      c. * We will be to Rome.
      d. * We are to Rome.

(18)  a. Sarah has been around the block a few times.
      b. * Sarah is being around the block a few times.
      c. * Sarah will be around the block a few times.
      d. * Sarah was around the block a few times.
Analysis, part I: The ellipsis site (16)

If VPE is applied to these expressions, no mismatch interpretation without the perfect aspect will be available.

- This context shows whether perfect *have* can be elided.

Result: 80% of our (British English) informants rejected ellipsis of *have* in these cases.

(19)  * This time next year Jon will have been to Rome, and I will have been to Rome, as well.

(20)  * I thought Sarah might have been around the block a few times, and indeed she might have been around the block a few times.
Analysis, part I: The ellipsis site (19)

Recapitulating:
- Passive \textit{be/been} can be elided.
- Copula \textit{be/been} can be elided.
- Progressive \textit{be/been} can be elided.

- Perfect \textit{have} is never elided.
- Modals and other finite auxiliaries are never elided.

- The ellipsis site must include at least the base position of progressive \textit{BE}.

\rightarrow Claim: VPE elides $\text{vP}_{\text{prog}}$. 
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4. **Analysis, Part II: auxiliary ellipsis**
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Analysis, part II: Auxiliary ellipsis (1)

Reminder

<table>
<thead>
<tr>
<th></th>
<th>Modal/ finite aux</th>
<th>Have</th>
<th>Be</th>
<th>Been</th>
<th>Being</th>
<th>Lexical V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elided</td>
<td>*</td>
<td>*</td>
<td>(✓)</td>
<td>(✓)</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

- Ellipsis site = $\text{vP}_{\text{prog}}$
- Auxiliaries raise to the relevant tense/aspectual head to license their morphological form (by checking a PF feature).
Analysis, part II: Auxiliary ellipsis (2)

A. Modals/have and being/lexical V
B. Be and been
Analysis, part II: Auxiliary ellipsis (3)

A. Modals/have and lexical V/being

```
TP
  \[iT\]
  ModP
    InfP
      [iInf]
        VP_{PERF}
          PerfP
            [iPerf]
              VP_{PROG}
                ProgP
                  [iProg]
                    VP
                      VoiceP
                        Voice
                          VP
```
Analysis, part II: Auxiliary ellipsis (3)

A. Modals/\textit{have} and lexical V/\textit{being}

\[
\text{TP} \quad \text{[iT]} \quad \text{ModP} \quad \text{InfP} \quad \text{[iInf]} \quad \text{VP}_{\text{PERF}} \quad \text{PerfP} \quad \text{[iPerf]} \quad \text{VP}_{\text{PROG}} \quad \text{ProgP} \quad \text{[iProg]} \quad \text{VP} \quad \text{VoiceP} \quad \text{Voice} \quad \text{VP} \quad \text{LEX V}
\]
Analysis, part II: Auxiliary ellipsis (3)

A. Modals/have and lexical V/being

```
TP
  [iT]
    ModP
      InfP
        [iInf]
          VP_{PERF}
            PerfP
              [iPerf]
                VP_{PROG}
                  ProgP
                    [iProg]
                      VP
                        BEING
                          [uProg]
                            Voice
                              VoiceP
                                VP
                                  LEX V
```
Analysis, part II: Auxiliary ellipsis (3)

A. Modals/have and lexical V/being

```
TP
  \[iT\]
     ModP
        InfP
           [iInf]
              VP_{PERF}
                 PerfP
                    [iPerf]
                       VP_{PROG}
                          ProgP
                             [iProg]
                                BEING
                                   [uProg]
                                       VoiceP
                                          Voice
                                              VP
                                                 LEX V
```
Analysis, part II: Auxiliary ellipsis (3)

A. Modals/have and lexical V/being

```
TP
  [iT]
    ModP
      InfP
        [iInf]
          VP_{PERF}
            PerfP
              [iPerf]
                VP_{PROG}
                  ProgP
                    [iProg]
                      BEING
                        VoiceP
                          Voice
                            VP
                              LEX V
```
Analysis, part II: Auxiliary ellipsis (3)

A. Modals/have and lexical V/being

```
TP
[\textit{iT}] ModP
  InfP
    [\textit{iInf}] VP_{PERF}
      HAVE
        [\textit{uInf}] [\textit{iPerf}] PerfP
          vP_{PROG}
            ProgP
              [\textit{iProg}] BEING
                [\textit{uProg}] VoiceP
                  Voice
                    VP
                      LEX V
```
A. Modals/have and lexical V/being
Analysis, part II: Auxiliary ellipsis (3)

A. Modals/have and lexical V/being

```
TP
  | iT]
  | ModP
  |   InfP
  |     [iInf]
  |       HAVE
  |         [iInf]
  |           VP
  |             PERF
  |               [iPerf]
  |                 VP
  |                   PROG
  |                       [iProg]
  |                         BEING
  |                           [iProg]
  |                             VP
  |                               Voice
  |                                 [Voice]
  |                                   LEX V
```
Analysis, part II: Auxiliary ellipsis (3)

A. Modals/have and lexical V/being

```
TP
  [iT]
    ModP
      MOD
        [uT]
          [iInf]
            InfP
              HAVE
                [uInf]
                  [iPerf]
                    PerfP
                      vP
                        [iProg]
                          ProgP
                            [uProg]
                              [iProv]
                                BEING
                                  [uProv]
                                    VoiceP
                                      Voice
                                        VP
                                          LEX V
```

B: 0BC

D: F3E

R!S

(( A: 5D

---
Analysis, part II: Auxiliary ellipsis (3)

A. Modals/have and lexical V/being

```
TP
  ModP
    InfP
      [iInf] HAVE
      [iPerf] VP
          PerfP
              vP
                  [iProg] BEING
                  VoiceP
                      Voice
                          VP
                              LEX V
```
Analysis, part II: Auxiliary ellipsis (3)

A. Modals/\textit{have} and lexical V/\textit{being}

\[
\begin{array}{c}
\text{TP} \\
\text{[iT]} \\
\text{MOD} \\
\text{[e^T]} \\
\text{ModP} \\
\text{InfP} \\
\text{[iInf]} \\
\text{HAVE} \\
\text{[u^Inf]} \\
\text{PerfP} \\
\text{[iPerf]} \\
\text{VP} \text{\textsubscript{PERF}} \\
\text{ProgP} \\
\text{[iProg]} \\
\text{BEING} \\
\text{[u^Prog]} \\
\text{VoiceP} \\
\text{Voice} \\
\text{VP} \\
\text{LEX V}
\end{array}
\]
Analysis, part II: Auxiliary ellipsis (3)

A. Modals/have and lexical V/being

A diagram showing the syntactic structure with nodes labeled [iT], MOD, TP, ModP, InfP, HAVE, VP_{PERF}, PerfP, [iInf], and [iPerf].
Analysis, part II: Auxiliary ellipsis (4)

Elided
- Lexical verb: merged inside the ellipsis site and never raises out
- *Being*: merged inside the ellipsis site and only raises to Prog\(^*\), INSIDE the ellipsis site

Not elided
- *Have*: merged outside the ellipsis site
- Modals: merged outside the ellipsis site

MODAL  
HAVE  
BEING  
Lex V  
VPE
Analysis, part II: Auxiliary ellipsis (5)

B. *Be and been*

*Be/been* are merged inside the ellipsis site. They raise out of the ellipsis site for checking.

 fichierTwo options available:

1. Raise and check = survive ellipsis.
2. Remain within the ellipsis site and be deleted via ellipsis, thereby removing the problematic PF features from the derivation.
Analysis, part II: Auxiliary ellipsis (6)

Non-ellipsis of *be/been*
Non-ellipsis of *be/been*
Analysis, part II: Auxiliary ellipsis (6)

Non-ellipsis of *be/been*
Analysis, part II: Auxiliary ellipsis (6)

Non-ellipsis of *be/been*
Analysis, part II: Auxiliary ellipsis (6)

Non-ellipsis of be/been
Analysis, part II: Auxiliary ellipsis (6)

Non-ellipsis of *be/been*
Analysis, part II: Auxiliary ellipsis (6)

Non-ellipsis of *be/been*
Analysis, part II: Auxiliary ellipsis (6)

Non-ellipsis of *be/been*
Analysis, part II: Auxiliary ellipsis (7)

Ellipsis of *be/been*
Analysis, part II: Auxiliary ellipsis (7)

Ellipsis of *be/been*

Diagram:

```
TP
  ModP
    InfP
      [iInf]
      vP_{PERF}
        PerfP
          [iPerf]
          vP_{PROG}
            BEEN
              \[uPerf\]
                ProgP
                  \[uPerf\]
                    BEEN
                      VoiceP
                        Voice
                          VP
```
Analysis, part II: Auxiliary ellipsis (7)

Ellipsis of *be/been*

```
TP
  ModP
    InfP
      [iInf]
      vP_PERF
        PerfP
          [iPerf]
          vP_PROG
            BEEN
              [uPerf]
              BE
                [ulInf]
                ProgP
                  vP
                    BEEN
                      [uPerf]
                      Voice
                        VoiceP
                          VP
```

LII6 (A): "*0ED

LII6 (A): F3ED

=&&'9+'+-BA-
Analysis, part II: Auxiliary ellipsis (7)

Ellipsis of \textit{be/been}
Analysis, part II: Auxiliary ellipsis (8)

If *be/been* raise out of the ellipsis site to check their features, they survive ellipsis.

If *be/been* do not raise and remain in the ellipsis site, their uninterpretable features are elided along with them, so the derivation does not crash at PF.

▶ Optional raising only made possible by rescue via ellipsis

▶ Prediction: auxiliary raising obligatory in all other contexts.

Relevant data: VP fronting.
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Extending the analysis: VP fronting (1)

VPF targets the same chunk of structure as VPE (Zagona 1982; Johnson 2001; Kim 2003; Aelbrecht & Haegeman 2012; Funakoshi 2012; Aelbrecht 2012)

- The lexical verb is fronted
- *Being* is fronted
- *Have* is never fronted
- Modals are never fronted
Extending the analysis: VP fronting (2)

Lexical verb and *being*: always fronted

(23) * If John says he has eaten fish, then [fish] he has *eaten*.
(24) If John says he has eaten fish, then [**eaten** fish] he has.
(25) * If John says he was being seduced, then [seduced] he was *being*.
(26) If John says he was being seduced, then [**being** seduced] he was.
Extending the analysis: VP fronting (3)

Modals and *have*: never fronted

(27) If John says he may have eaten fish, then [eaten fish] he may *have*.
(28) * If John says he may have eaten fish, then *[have eaten fish] he may.*
(29) If John says he will eat fish, then [eat fish] he *will*.
(30) * If John says he will eat fish, then *[will eat fish] he.*

▶ Explanation: VPF targets same constituent as VPE: vP_{PROG}!
Extending the analysis: VP fronting (4)
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Extending the analysis: VP fronting (4)
Extending the analysis: VP fronting (4)
Extending the analysis: VP fronting (5)

Akmajian, Steele & Wasow (1979) and Roberts (1998): be/been can never be fronted, not even optionally:

(31) a. If John says he’ll be working late, then [working late] he will be.
    b. * If John says he’ll be working late, then [be working late] he will.
    c. If John says he has been working late, then [working late] he has been.
    d. * If John says he has been working late, then [been working late] he has.

= remarkable contrast with VP ellipsis.

▶ This can easily be explained by our analysis.
Extending the analysis: VP fronting (6)

Fronted constituent same as ellipsis site: vPROG

*Be/been* are generated inside fronted constituent

- Two options for *be/been*:
  - *Be/been* raise out of VPF site to Perf°/Inf° to check features.
    - Not fronted, derivation fine.
  - If *be/been* do not raise and remain in the VPF site, no ellipsis occurs to rescue the derivation.
    - The unchecked features remain and the derivation crashes.
Extending the analysis: VP fronting (7)

Raising of *be/ been*
Extending the analysis: VP fronting (7)

Raising of *be/been*
Extending the analysis: VP fronting (7)

Raising of be/been
Extending the analysis: VP fronting (7)

Raising of *be/been*
Extending the analysis: VP fronting (7)

Raising of *be/been*
Extending the analysis: VP fronting (7)

Raising of *be/been*
Extending the analysis: VP fronting (7)

Raising of *be/been*
Extending the analysis: VP fronting (8)

Non-raising of *be/been*
Extending the analysis: VP fronting (8)

Non-raising of *be/been*
Extending the analysis: VP fronting (8)

Non-raising of *be/been*
Extending the analysis: VP fronting (8)

Non-raising of *be/been*

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Non-raising of *be/been*  CP
  vP_PROG
  BEEN [uPerf]  ProgP
  BE [vinf]  vP
  BEEN [uPerf]  VoiceP
  BE [vinf]  Voice
  VP

TP
  ModP
  InfP
  [iInf]  vP_PERF
  [iPerf]  PerfP
```
Extending the analysis: VP fronting (8)

Non-raising of be/been

\(vP_{PROG}\)

BEEN \([uPerf]\)

BE \([\ulnf]\)

\(\text{ProP}\)

\(vP\)

VoiceP

\(\text{Voice}\)

\(\text{VP}\)

\(\text{TP}\)

\(\text{ModP}\)

\([i\text{Inf}]\)

\(\text{vP}_{\text{PERF}}\)

\([i\text{Perf}]\)

\(\text{PerfP}\)
Extending the analysis: VP fronting (9)

Extending the data set even more:
We expect other phenomena that make use of either VPE or movement of the verb phrase to exhibit the same pattern.

- Phenomena involving VPE: optional deletion of *be/been*.
- Phenomena involving movement: obligatory stranding of *be/been*.

This prediction is potentially borne out in:
- Tag questions in American English (involving VPE)
- Specificational pseudo-clefts (involving VPF)
- Predicate inversion (involving VPF)
Overview

1. Introduction: the pattern
2. Preliminaries: the verbal structure
3. Analysis, Part I: the ellipsis site
4. Analysis, Part II: auxiliary ellipsis
5. Extending the analysis: VP fronting
6. **Digging deeper: predicate ellipsis**
7. Conclusion and further issues
Digging deeper: Predicate ellipsis (1)

Our claim: VPE elides as much as vP_{prog}.

! If progressive aspect is absent from the structure VPE elides vP.
= ‘variable ellipsis site’

(Note: ‘variable’ depending on what is present in the structure, not in the sense of Akmajian, Steele & Wasow 1979 and Bošković 2012, for whom VPE can optionally elide more or less, and who explain the optional deletion of be and been in this way.)
Digging deeper: Predicate ellipsis (2)

Problem: If the constituent being targetted by VPE varies, it is harder to formalise how ellipsis is licensed.

For instance, if the ellipsis site is recognised as ‘the constituent bearing the E-feature’ (Merchant 2001), does the E-feature sometimes occur on $v_{prog}$ and sometimes on $v$?

How to formalise the licensing of ellipsis, and more specifically, how to determine the size of the ellipsis site formally?

Our (speculative) solution: VPE is predicate ellipsis.
Digging deeper: Predicate ellipsis (3)

Our suggestion:
VPE targets the highest projection in the predicate layer of the clause.

What is included in this predicate?
- Lexical VP/DP/PP/AP
- The internal and external arguments of this lexical predicate
- Little v projection: determines some lexical properties, such as agentivity, causality etc.
- Voice
- (According to us) the progressive projection
Digging deeper: Predicate ellipsis (4)
Digging deeper: Predicate ellipsis (11)

Our tentative proposal:

- Divide between progressive and perfect aspect in English
- Predicative layer: up to \( vP_{\text{prog}} \)
- Functional verbal layer: from PerfP up to TP/FinP

(Will’s work: \( vP_{\text{prog}} \) constitutes the clause-internal phase.)

VPE targets the predicative layer, but nothing higher:
- \( vP_{\text{prog}} \) when it is present
- \( vP \) otherwise
Digging deeper: Predicate ellipsis (12)

How to formalise this?
Suppose: E-feature starts out on V, and percolates up to every next head of the predicative layer (See Grimshaw’s 2005 extended projections)
Digging deeper: Predicate ellipsis (13)

It cannot be transferred to a projection higher than the predicative layer in Standard English: E for predicate ellipsis is only compatible with heads that are part of the predicative layer (see Grimshaw’s 2005 Extended Domains). VPE elides as much as vP_{prog} but not more.
Digging deeper: Predicate ellipsis (14)

Note: E-feature marks the ellipsis site; it is not on the licensing head of the ellipsis (contra Merchant)

This approach is compatible with Aelbrecht’s (2010) account of ellipsis licensing.

E-feature with uninterpretable Tense
Digging deeper: Predicate ellipsis (15)

Aelbrecht (2010): Ellipsis is licensed via an Agree relationship between the licensing head and the E-feature marking the ellipsis site lower down.

VPE is licensed by T head

T checks E and triggers ellipsis of \( vP_{\text{Prog}} \).
Overview

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Conclusion and further issues (1)

- VPE and VPF target vP\textsubscript{prog}.
- Lexical verb never raises out of this site: never escapes ellipsis or fronting
- \textit{Being} raises to Prog\textsuperscript{°}, within the VPE/VPF site: never escapes ellipsis or fronting
- \textit{Have} and modals are merged outside of the VPE/VPF site: never elided or fronted
- \textit{Be/been} are merged inside of the VPE/VPF site but raise out to check inflectional features:
  - If they raise in ellipsis contexts, they escape ellipsis.
  - Alternatively, \textit{be/been} may remain in the ellipsis site and be elided, having their unchecked features deleted at PF
- \textit{Be/been} must raise in fronting contexts because there is no ellipsis operation to alternatively delete their features.
Conclusion and further issues (2)

- VPE targets the predicative layer, which includes the progressive projections, but not the perfect.
- VPE targets as much of this predicate as possible.
- This can be formalized using the E-feature (Merchant 2001; Aelbrecht 2010) and Extended Projections (Grimshaw 2005).
Thank You!