It could have been elided, but it wasn’t: Optional auxiliary deletion under VP ellipsis

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Overview

1. Introduction: the pattern
2. Complications for the pattern
3. Preliminaries: The verbal structure
4. Analysis, Part I: The ellipsis site
5. Analysis, Part II: Auxiliary ellipsis
6. Extending the analysis: VP fronting
7. Digging deeper: Predicate ellipsis?
8. 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)

Peter 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.
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

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→ Aim: explore and explain this observation
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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Complications for the pattern (1)

Two generalisations about this pattern have been challenged:

A. *Have* is never elided?
B. *Being* is always elided?

→ Let us look at these objections to the original pattern.
Complications for the pattern: *have* (2)

A. *Have* is never elided?

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

(5) 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:

(6) John couldn’t have studied Spanish, but Bill could [study Spanish].
Complications for the pattern: *have* (3)

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

- Ellipsis and fixed expressions
- Ellipsis and identity requirements
Complications for the pattern: *have* (4)

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

(7)  
  a. We have been to Rome.  
  b. * We are being to Rome.  
  c. * We will be to Rome.  
  d. * We are to Rome.  

(8)  
  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.
Complications for the pattern: *have* (5)

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.

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

(10) * I thought Sarah might have been around the block a few times, and indeed she might *have* been around the block a few times.
Complications for the pattern: *have* (6)

**Ellipsis and identity requirements**
Auxiliaries can only be elided if they have an identical antecedent

= Syntactic Identity condition; see Lasnik (1995), Warner (1986)

(11)a. Sue has *been* eaten by cannibals, and Rob might *(be)*, too.
  b. First Sue will *be* eaten by cannibals, and then Rob will *(be)*.
  c. Sue *was* eaten by cannibals after Rob had *(been)*.
  d. Sue has *been* eaten by cannibals, and Rob has *(been)*, too.
Complications for the pattern: have (7)

In a sentence with been in the antecedent clause, VPE can only elide been if the ellipsis clause contains perfect aspect, otherwise been would not be identical in form to its antecedent.

→ This context shows whether have can be elided or not.

Result: Our informants unanimously rejected deletion of have. (Contra Thoms 2011)

(12) a. John might have been fired, and Ted might have (been) fired, too.
   b.* John might have been fired, and Ted might, too.
   = Ted might have been fired, too.
   = Ted might be fired, too.

→ Although there still is some discussion, and there might be some dialectal variation involved, we take ellipsis of have to be impossible.
Complications for the pattern: *being* (8)

B. *Being* is always elided?

Quirk et al (1985:875) and Thoms (2012): ellipsis of *being* is not categorial.

(13) a. Remember, always be respectful and courteous, even if the officer isn't *being*.

    b. Otherwise you may have some integrity problems because the key that apparently should be enforced actually isn’t *being*.

→ Is *being* only optionally elided, on a par with *be* and *been*?
Complications for the pattern: *being* (9)

**No:**
Whilst *be* and *been* are optionally elided...

(14)a. Ted should be home, and Barney should _be_ home, too.

  b. Ted should be home, and Barney should _be home_, too.

(15)a. Robin has been fired, and Barney has _been_ fired, too.

  b. Robin has been fired, and Barney has _been fired_, too.
Complications for the pattern: *being* (10)

*Being* is always elided, *unless being* is absent from the antecedent:

(16) Bill was punished this morning, and now Ted is *being* punished.

(17) Bill was *being* punished this morning, and now Ted is (*being*) punished.

→ *Being* only survives when it is not recoverable from the antecedent. If *being* is recoverable, it is obligatorily elided, unlike *be*(en).

(We come back to this later!)
Complications for the pattern (11)

Generally, Sag’s original (1976) pattern still holds:

- Lexical verb = obligatorily elided under VPE
- *Being* = obligatorily elided under VPE (contrast cases: see later!)
- *Have*, modals and finite auxiliaries = never elided under VPE
  - *have* might be subject to dialectal variation, but generally not for the informants we have consulted.
- *Be/been* = optionally elided under VPE

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→ This is the pattern we will try to capture in our analysis.
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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 (2)
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 (4)

**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 (5)

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

→ moves to Perf to check its inflectional feature
The infinitival forms *have* and *be* move to Inf to check their features.
The finite auxiliaries move to T.
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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Our claim: VPE elides as much as the progressive layer ($vP_{prog}$), if present.
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)
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:

TP
  └── ModP
    │    └── InfP
    │         └── vP
    │                  └── PerfP
    │                                      └── VP
    │                                              └── VP ellipsis site
    └── modal
          └── have
                └── VP
          └── been - be
                └── VP
          └── being – been – be
                └── VP
We show that all auxiliaries generated within or below the progressive aspectual layer can be elided

$\Rightarrow$ VPE targets $vP_{prog}$

• Copula $BE$ can be elided:

(18) 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:

(19) a. John has been arrested, and Mary has (been) arrested, too.
    b. John might be arrested, and Mary might (be) arrested, too.
Progressive *BE* can be elided

(20) 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*:

(21) 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?
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
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):

(22) 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.
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.

(23) 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.

(24) 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 (10)

Ellipsis and idiomatic expressions

Certain idioms are dependent upon progressive aspect:

(25)a. John is dying to meet you. = He is keen to meet you.
   b. #John has died to meet you.
   c. #John will die to meet you.
   d. #John died to meet you.
If we apply ellipsis, a mismatch interpretation without the progressive would not result in an idiomatic interpretation.

Results: All our informants retained the idiomatic reading when *be/been* was not pronounced.

(26) John has been dying to meet you, even though he says he hasn’t *(been)* dying to meet you.

(27) Q: Are you sure Bob will be dying to meet George Lucas?
A: He most certainly will *(be)* dying to meet George Lucas.

→ Progressive *be* is optionally elided.
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.

→ The ellipsis site must include at least the base position of progressive *BE*.

→ Claim: VPE elides \(vP_{\text{prog}}\).
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Analysis, part II: Auxiliary ellipsis (1)

Reminder

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→ Ellipsis site = \(vP_{\text{prog}}\)

→ 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
Analysis, part II: Auxiliary ellipsis (4)
Analysis, part II: Auxiliary ellipsis (5)

**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
Analysis, part II: Auxiliary ellipsis (6)

B. *Be* and *been*

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

Two 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 (7)

Non-ellipsis of *be/been*

```
TP
  ModP
    InfP
      [iInf]
        VP_{perf}
          PerfP
            [iPerf]
              VP_{prog}
                been
                  [uPerf]
                    ProgP
                      VP
                        Voice
                          VP
```

Analysis, part II: Auxiliary ellipsis (7)
Analysis, part II: Auxiliary ellipsis (8)
Analysis, part II: Auxiliary ellipsis (9)
Analysis, part II: Auxiliary ellipsis (10)

Ellipsis of be/been
Analysis, part II: Auxiliary ellipsis (11)
Analysis, part II: Auxiliary ellipsis (12)

- 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

(28) a.* If John says he has eaten fish, then [fish] he has eaten.
   b. If John says he has eaten fish, then [eaten fish] he has.
   c.* If John says he was being seduced, then [seduced] he was being.
   d. If John says he was being seduced, then [being seduced] he was.
Extending the analysis: VP fronting (3)

• Modals and *have* are never fronted

(29) a. If John says he may have eaten fish, then [eaten fish] he may have.
   b.* If John says he may have eaten fish, then [have eaten fish] he may.
   c. If John says he will eat fish, then [eat fish] he will.
   d.* If John says he will eat fish, then [will eat fish] he.

벽  Explanation: VPF targets same constituent as VPE: vP_{prog}!
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:

(30) 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: $\text{vP}_{\text{prog}}$

→ *Be/been* are generated inside the fronted constituent.

- Two options for *be/been*:
  - *Be/been* raise out of VPF site to Perf°/Inf° to check features.
    - Not fronted, derivation fine.
  - *Be/been* do not raise and remain in the VPF site, but no ellipsis occurs to rescue the derivation.
    - The unchecked features remain and the derivation crashes.
Extending the analysis: VP fronting (7)
Extending the analysis: VP fronting (8)

Non-raising of \textit{be}/\textit{been}
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)
Extending the analysis: VP fronting (10)

- Tag questions in American English

Akmajian & Wasow (1975), Bošković (2004): AmE tags parallel VPE
Lexical verb and being $\rightarrow$ always absent from tag questions
Non-finite have $\rightarrow$ always present (if the sentence being tagged contains perfect aspect, naturally)

(31)  

a. Ted was being eaten by a gorilla, wasn’t he (*being) (*eaten) by a gorilla.

b. Ted should have become a hot air balloon pilot, shouldn’t he *(have)?
Sailor (2009): Tags can be analysed involving VPE.

! *Be* and *been* are optionally elided in these tags, like in VPE (Sailor 2009)

(32)  

a. Ted has been eating dolphin sandwiches, hasn’t he *(been)*?

b. Ted will be eating dolphin sandwiches, won’t he *(be)*?

(American English)

If tags indeed involve VPE, this is expected under our analysis.

British English tags are different: only the finite auxiliary remains. Even non-finite *have* is deleted (Sailor 2009). Perhaps they don’t involve VPE?
Extending the analysis: VP fronting (12)

- Specificational pseudoclefts


  Sailor (2012): *being* is always included in the pseudocleft.

(33)  Ted should be *being* praised. – No, *<being>* criticised is what he should be </*being*>.
Extending the analysis: VP fronting (13)

Sailor (2012): *been* and *be* are never included in the pseudocleft, not even optionally (and neither is *have*).

(34)  a. Ted should be praised. – No, *<be>* criticised is what he should *<be>*.

    b. Ted should have been praised. – No, *<been>* criticised is what he should have *<been>*.

→ Conforming with our prediction: Auxiliaries only have the option of not raising in ellipsis contexts, in which their unchecked PF features can be deleted via ellipsis.
Extending the analysis: VP fronting (14)

- Predicate Inversion

Hooper & Thompson (1973), Emonds (1976), Heycock & Kroch (1999) and Haegeman (2008) have analysed predicate inversion contexts as involving fronting of the predicate.

→ *being* is always included in the inverted predicate:

(35)  [Also *being* loud and obnoxious today] is my old friend Bugs Bunny.

(36)  * [Also loud and obnoxious today] is *being* my old friend Bugs Bunny.
Extending the analysis: VP fronting (15)

→ *Be and been are never included in the inverted predicate:

(37)a. [Also with us in the studio today] will be my old friend Bugs Bunny.
    b. *[Also be with us in the studio today] will my old friend Bugs Bunny.

(38) a. [Also with us in the studio today] has been my old friend Bugs Bunny.
    b.* [Also been with us in the studio today] has my old friend Bugs Bunny.

→ This is captured by our analysis: obligatory raising in non-ellipsis.
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Digging deeper: Predicate ellipsis (1)

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

! If progressive aspect is absent from the structure $\rightarrow$ 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)

VPE does not necessarily delete a VP.

→ It can elide any kind of main clausal predicate:

(39) a. The door was green, but the window wasn’t [green].

   b. Marshall could have been a pilot and Lily could have been [a pilot] too.

   c. The chickens were in the garden, and the crocodile was [in the garden] too.

→ VPE elides the main predicate of a clause, not necessarily a vP.
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.
- (According to us) the progressive projection
Digging deeper: Predicate ellipsis (5)

VP ellipsis site = predicative layer
Digging deeper: Predicate ellipsis (6)

Why would the progressive be part of the predicate layer, and not perfect aspect? Why would it be more lexical?

- Progressive is sensitive to lexical restrictions, unlike perfect aspect:

  (40)a. *I am knowing French.  → progressive not with stative Vs
        b. I have known him for years. → perfect fine with all kinds of Vs

- Morphological form of progressive = nominalisation in several languages

  (41) a. Ted(s) growing (of) a beard was the worst idea ever.
          b. De krokodil was aan het dansen.  (Dutch)
             the crocodile was on    the dance.INF (The crocodile was dancing.)
Digging deeper: Predicate ellipsis (7)

- Progressive and passive auxiliary is *BE* in English, just like the copular auxiliary in predicate constructions, and unlike perfect aspect *HAVE*:

(42)a. He was swimming/drunken/in the garden/arrested/a doctor.
    b. He has eaten the dolphin sandwich.

!! Whether this is a correlation, is easy to test:
- Serbo-Croatian uses *BE* for perfect aspect as well.
- There are several English dialects (Hiberno-English, Shetland English, Newfoundland English) which use *BE* as the perfect aspect auxiliary

→ We should test whether this perfect *BE* can be elided or not.
Digging deeper: Predicate ellipsis (8)

- Progressive aspect can be included in lexical idioms

Idioms typically include the predicate and one or all of its arguments

(43)a. The boy was thrown/*tossed to the wolves/*hyenas.
   b. The shit/*dirt will hit the fan/*radiator.

→ Some idioms include progressive aspect as well:

(44) John <is pushing>/<#has pushed>/<#will push> up daisies.

→ If idioms target predicate projections (Svenonius 2005), then progressive aspect is part of the predicate layer.
Digging deeper: Predicate ellipsis (9)

Perfect aspect is not included in idioms, so not in the predicate layer.

! Some potential counterexamples

(45)a. The cat has got your tongue.
    b. He has been to Rome before.

BUT: (45)a is not dependent on perfect:

(46) a. The cat got your tongue.
    b. The cat has your tongue.
Digging deeper: Predicate ellipsis (10)

BUT: (45)b behaves differently from idioms.
   If perfect aspect is absent, the sentence is ungrammatical; it does not simply lose the idiom reading (unlike actual idioms):

(47) a. * I am to Rome tomorrow.
    b. * He will be to Rome soon.
    c. # John pushed up daisies.
    d. # John will push up daisies
Digging deeper: Predicate ellipsis (11)

Moreover, other languages have this construction too, with or without the perfect restriction, and it is not considered an idiom:

(48) a. Ik ben naar Rome.  
   I am to Rome  
   ‘I am going to Rome.’ (Dutch)

   I have been to Rome  
   I am to Rome  
   ‘I have been to R./*I am to R.’ (French)

→ Our hunch is that these perfect constructions, which do not involve a lexical verb (always with main BE), are not idioms in the sense we are considering idioms for the predicate layer.

→ Perfect aspect is not part of the predicate layer in Standard English.
Digging deeper: Predicate ellipsis (12)

Our tentative proposal: Divide between progressive and perfect aspect in English

→ Predicative layer: up to $vP_{prog}$
  Functional verbal layer: from PerfP up to TP/FinP

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

→ VPE targets the predicative layer, but nothing higher:
  $vP_{prog}$ when it is present
  $vP$ otherwise
Digging deeper: Predicate ellipsis (13)

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)

\[ \begin{align*}
\text{VP} & \rightarrow \text{vP} \\
\text{vP} & \rightarrow \text{v} \text{VoiceP} \\
\text{VoiceP} & \rightarrow \text{Voice} \text{VP} \\
\text{VP} & \rightarrow [E] \\
\text{Voice} & \rightarrow \text{ProgP} \\
\text{ProgP} & \rightarrow \text{prog} \text{vP} \\
\text{vP} & \rightarrow \text{v} \text{Prog} \\
\text{Prog} & \rightarrow \text{prog} \text{v} \\
\end{align*} \]
Digging deeper: Predicate ellipsis (14)

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 (15)

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

→ This approach is compatible with my own account of ellipsis licensing (Aelbrecht 2010):

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_{prog}.
Digging deeper: Predicate ellipsis (16)

This might give us a solution to the *being* problem.

Recall that *being* is normally obligatorily elided, but has to survive ellipsis if it is not recoverable from the antecedent:

(49) Bill was punished this morning, and now Ted is **being** punished.

(50) Bill was **being** punished this morning, and now Ted is (*been) punished.

→ *Being* only survives when it’s not recoverable from the antecedent (unlike *be(en)*).
Digging deeper: Predicate ellipsis (17)

Suppose:

E obligatorily percolates up to the next head up until it gets to the highest predicative projection (see Grimshaw’s extended domains).

= ‘Elide as much of the predicate as possible’

! When being is not recoverable, ProgP cannot be elided because of the recoverability condition on ellipsis.

+ ‘Elide as much of the predicate as possible’

→ The E on v is checked instead of that on vP_{prog} and VPE targets vP (nothing more).

→ VPE targets the predicative layer, but only the part that is recoverable.
Digging deeper: Predicate ellipsis (18)

Potential evidence for this claim: interaction with associates of existential constructions.

Derived associate must precede *being*, but follows *been*:

(51) a. John says there are <many people> *being* <*many people> arrested.
    b. John says that there have <*many people> *been* <many people> arrested.

→ The derived associate must have risen out of the complement of V to some position in the progressive aspectual layer which precedes *being*.

\[ been \rightarrow \text{associate} \rightarrow \text{being} \rightarrow V \]
Digging deeper: Predicate ellipsis (19)

When VPE ellipsis is applied to the *being* sentences, the associate and *being* are typically obligatorily elided:

(52) John says there are many people *being* arrested, and indeed there are many people *being* arrested.

However, when *being* is not recoverable, it can survive ellipsis:

(53) John says there will be more people arrested tomorrow than there are *being [people arrested]*, now.

→ **Proposal**: VPE targets vP here, not the progressive layer due to recoverability.

→ **Prediction**: The associate, which usually raises to a position within the progressive layer, should also be able to survive ellipsis when it occupies this position, despite being recoverable itself.
Digging deeper: Predicate ellipsis (20)

→ To the extent that *being* can be stranded, this prediction is borne out:

(54) John says there will be more people arrested tomorrow than there are \([vP_{\text{prog}} \text{ people being } vP \text{ arrested}]\) now.

→ Like *be(en)*, the associate raises to check its features.

When VPE targets vP instead of vP_{\text{prog}} (when *being* is not recoverable), the associate has two options:

- raise to the progressive layer, check its feature and survive ellipsis, despite being recoverable
- remain in VP, not check its feature and get rescued by ellipsis.

→ This data shows that when *being* escapes ellipsis, it is because the progressive layer isn’t targeted by VP ellipsis, but vP is.
Digging deeper: Predicate ellipsis (21)

- Remaining problem:

(52) If Ted wasn’t being difficult, then who WAS (being)?

We do not know how to deal with this example yet, but it is a rare exception. Maybe it should be considered a fixed expression?

- Extra application: British English *do*?

*Do* sits in little v head and is not recoverable → Ellipsis of VP only
Overview

1. Introduction: the pattern
2. Complications for the pattern
3. Preliminaries: The verbal structure
4. Analysis, Part I: The ellipsis site
5. Analysis, Part II: Auxiliary ellipsis
6. Extending the analysis: VP fronting
7. Digging deeper: Predicate ellipsis?
8. Conclusion and further issues
Conclusion and further issues (1)

- VPE and VPF target $\text{vP}_{\text{prog}}$.
- Lexical verb never raises out of this site: never escapes ellipsis or fronting.
- *Being* raises to Prog°, within the VPE/VPF site: never escapes ellipsis or fronting.
- *Have* and modals are merged outside of the VPE/VPF site: never elided or fronted.
- *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, *be/been* may remain in the ellipsis site and be elided, having their unchecked features deleted at PF.
  - *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).
Conclusion and further issues (3)

Further issues

- Finite *BE*
  
  In our analysis as it stands, finite *BE* has the option to not raise as well, contrary to fact.

→ Possible solution: T has a feature to be checked as well, it needs to be filled.
  
  Auxiliaries have the option to raise, so in this case, they **have** to.
  
  Lexical verbs never raise, and in that case, dummy *do* is inserted (as a last resort PF operation, more costly than auxiliary raising).
Conclusion and further issues (4)

Further issues

○ Voice mismatches

Merchant (2007, 2008): Voice mismatches between antecedent and ellipsis clause are possible under VPE.

(53)a. The janitor must remove the trash whenever it is apparent that it should be [removed]. \hspace{1cm} (Act-Pass)

b. The system can be used by anyone who wants to [use it]. \hspace{1cm} (Pass-Act)

⇒ Merchant: Voice is not included in the ellipsis site, and therefore not subject to the recoverability condition.
Conclusion and further issues (5)

! Under our approach, Voice *is* included in the ellipsis site, whether VPE deletes either vP or vP$_{prog}$.

→ We predict Voice mismatches to be illicit (if we adhere to the syntactic identity requirement), contrary to fact.

→ Possible solution:

Perhaps speakers who allow for these mismatches, allow for the ellipsis site to be smaller in these cases, on a par with our solution for the survival of *being* when it was not recoverable.
Conclusion and further issues (6)

**Potential supporting evidence:**

When the sentence contains progressive aspect (i.e., when the ellipsis site is \(vP_{\text{prog}}\)), Voice mismatches are not allowed:

(54)  * The system can be used by just anyone, even though Mary has been [using the system] all year.

Such mismatches are allowed with perfect aspect:

(55)  The system can’t be used by just anyone, even though Mary has [used the system] twice already.
Thank You!
Appendix: Previous accounts (1)

Previous accounts:

A. *Being* obligatorily elided
B. *Being* sometimes survives
C. *Be/been* optionally elided
Appendix: Previous accounts (2)

A. Being

APPROACH 1: NO RAISING OF BEING (Bošković 2004, 2012; Thoms 2011)

*Being* remains in its base position and has its inflection lowered onto it (see also Akmajian & Wasow 1975; Akmajian, Steele & Wasow 1979)

All other auxiliaries raise to receive inflections.

→ Passive/copular *be* is base-generated in vP without its progressive affix –*ing* attached to it.

The –*ing* affix sits somewhere above *be* in ProgP and is lowered onto the auxiliary.

→ If VPE always targets vP, *being* can never survive ellipsis.
Appendix: Previous accounts (3)

**Advantage:**
Ellipsis site is always vP → No extension of ellipsis site to vP_{prog} when progressive aspect is present.

**Problem:**
It is a pure stipulation that *being* does not raise for inflection when all other auxiliaries do.

**Bošković:** *being* does not raise because it is adjacent to the –*ing* suffix and *be* can receive its progressive inflection in its base position.

!! What if *BE* surfaces as *been*?

→ ProgP would be absent from the derivation and *BE* would be immediately adjacent to the perfect inflection in PerfP.

→ Prediction: both *been* and *being* are obligatorily elided under VPE since they occupy the same position, contrary to fact.
Appendix: Previous accounts (4)

Thoms (2011): *being* not raising to receive inflection is crucial because it is head movement (and A’-movement) itself that licenses ellipsis of everything below the landing site of the moving head.

→ *Being* can never survive ellipsis because it does not move and therefore cannot license ellipsis of its complement.

Counterargument: In questions the finite verb moves to C°, but the subject is still in TP below it → VPE should be able to elide the subject as well.

(56) I heard Ted is playing the ukelele tonight. – Oh, is *(he) [playing the ukelele tonight]*?
Appendix: Previous accounts (5)

APPROACH 2: NO AUXILIARY RAISING FOR INFLECTION AT ALL (Sailor 2012; Thoms 2012)

Sailor (2012): uniform lowering of affixes onto auxiliaries through a reverse Agree model (Bjorkman 2011).

→ Distinction between *be/been* and *being*: optional raising of *be* and *been* out of the ellipsis site.

**Problems:**

This additional raising is unmotivated and, again, a pure stipulation.

This optional raising of *be* and *been* cannot capture the obligatory raising of these auxiliaries under VPF contexts. = **biggest problem**
Appendix: Previous accounts (6)

Thoms (2012):

Optional raising of *have, be* and *been* through optional cliticisation to the preceding auxiliary.

*Being* cannot be cliticised and therefore does not raise.

Problems:

No evidence that *be* and *been* undergo cliticisation to higher elements in the same way that *have* does.

This optional raising of *be* and *been* cannot capture the obligatory raising of these auxiliaries under VPF contexts. = biggest problem
Appendix: Previous accounts (7)

B. Being sometimes survives

Thoms (2012):  
*Being can cliticise to T and survive ellipsis when the finite aux has extra stress.*

**Problem:** Several contexts show that *being* cannot be cliticised to T

Floating quantifiers intervene:

(57) John said they would all be arrested, and they are <all> being <*all>.

Associate of existential construction intervenes:

(58) John says there will be more men arrested tomorrow than there are <WOMEN> being <*WOMEN> now
Appendix: Previous accounts (8)

C. *Be/been* optionally elided

Our analysis: optional raising of the auxiliaries for inflection

Other approaches: optional extension of the ellipsis site (Bošković 2012; Akmajian, Steele & Wasow 1979).

**Bošković:**

*Been* always raises to occupy Perf°.

VPE either elides the complement of Perf° (\(\rightarrow\) *been* survives), or elide PerfP itself (\(\rightarrow\) *been* is elided).
Appendix: Previous accounts (9)

Problems:

• Optional ellipsis of *be* (!not discussed by Bošković!): Ellipsis targets either the complement of InfP, or InfP (and *be* in Inf°) itself?
  
  !! What if non-finite *have* sits in Inf° rather than *be*?
    
    → Prediction: optional deletion of *have*, contrary to fact.

  !! If in the presence of InfP the complement of Inf° must always be elided under VPE, everything below the infinitival auxiliary is obligatorily elided
    
    → Prediction: obligatory deletion of *been*, contrary to fact.

• Cannot capture the VPF data.