It wasn't elided, but it could have been:

Optional deletion of auxiliaries in VP ellipsis

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Leiden,

15 May 2013

Overview

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)
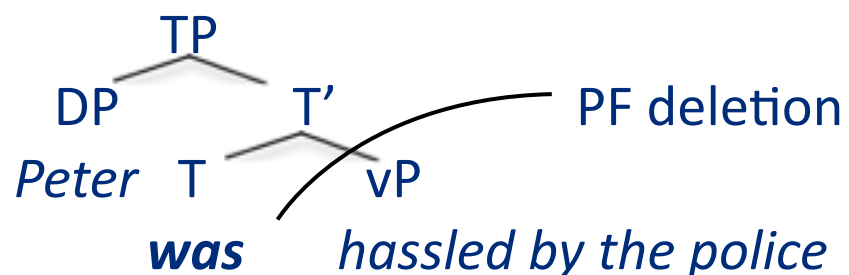
Introduction: the pattern (3)

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 <u>have</u> ~~been being~~ hassled by the police, too.

    c.   Peter must <u>have</u> <u>been</u> ~~being~~ hassled by the police, too.

    d.* Peter must <u>have</u> <u>been</u> <u>being</u> ~~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

	Modal/ finite aux	Have	Be	Been	Being	Lexical V
Elided	*	*	(✓)	(✓)	✓	✓

▸ 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

Overview

Preliminaries: The verbal structure (1)

Bošković (2012), Cinque (1999), Harwood (2011):
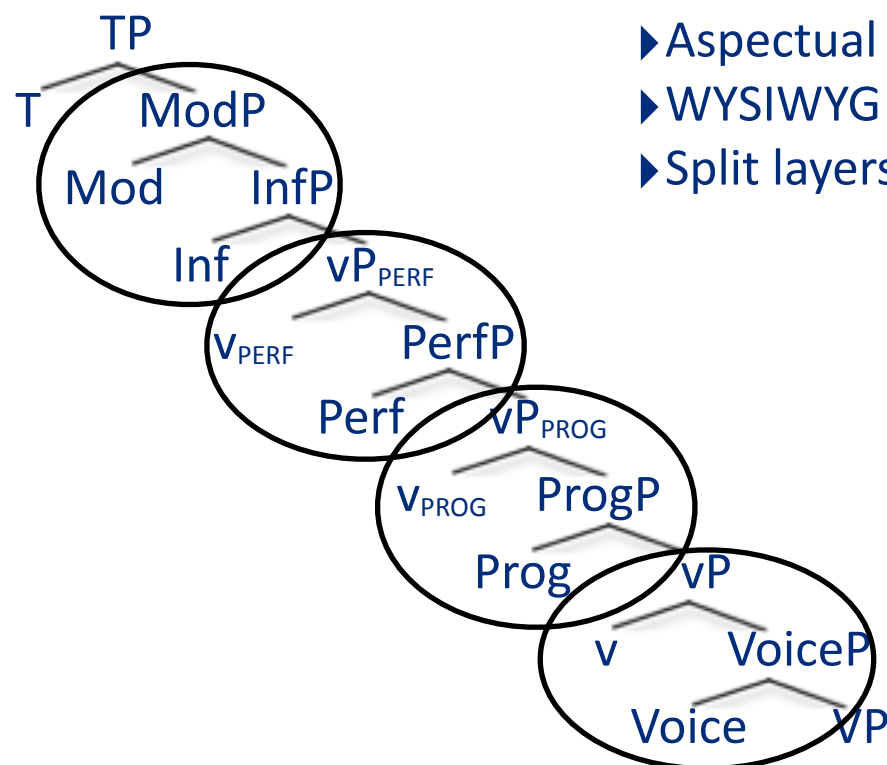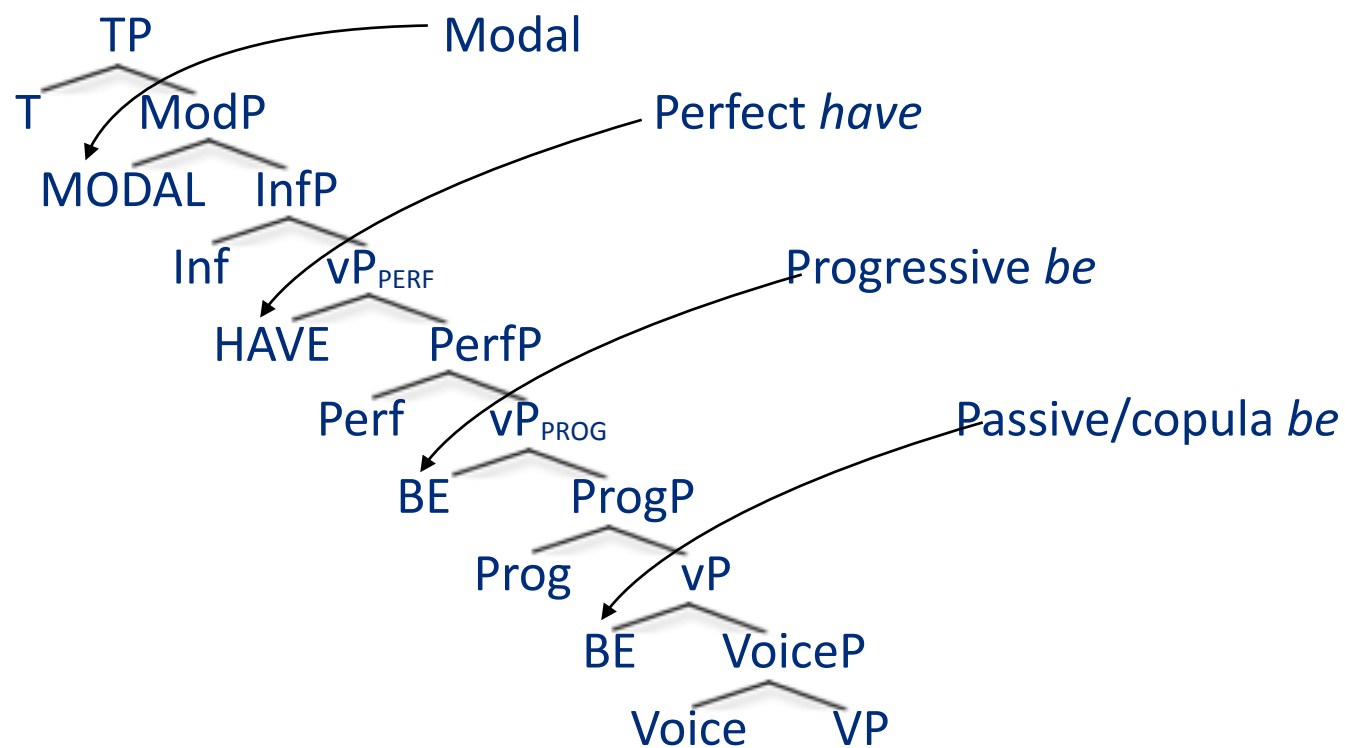

- ▸ Aspectual layer + vP shell with auxiliary
- ▸ WYSIWYG approach
- ▸ Split layers = necessary for auxiliary raising

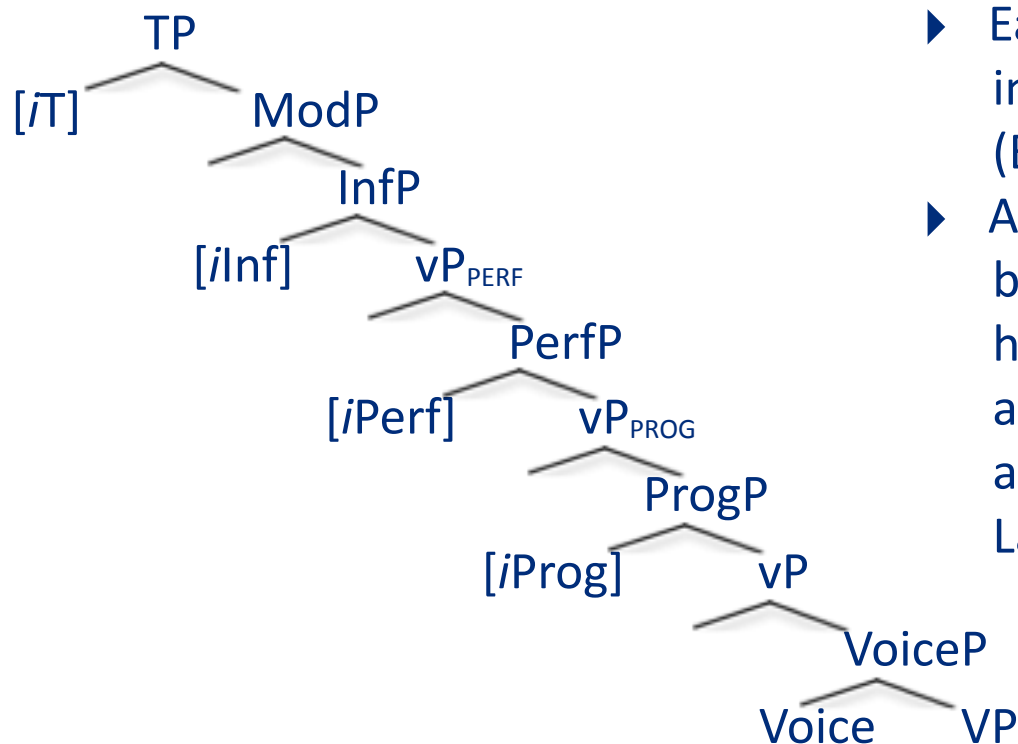# Preliminaries: The verbal structure (2)

Base positions

TP ← Modal

T   ModP

MODAL   InfP ← Perfect *have*

Inf   vP$_{PERF}$

HAVE   PerfP ← Progressive *be*

Perf   vP$_{PROG}$

BE   ProgP ← Passive/copula *be*

Prog   vP

BE   VoiceP

Voice   VP

Preliminaries: The verbal structure (3)

Lasnik (1995): Auxiliary raising for feature checking

TP
[iT]   ModP
            InfP
[iInf]   vP$_{PERF}$
               PerfP
[iPerf]   vP$_{PROG}$
                ProgP
[iProg]   vP
                VoiceP
            Voice   VP

▸ 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)
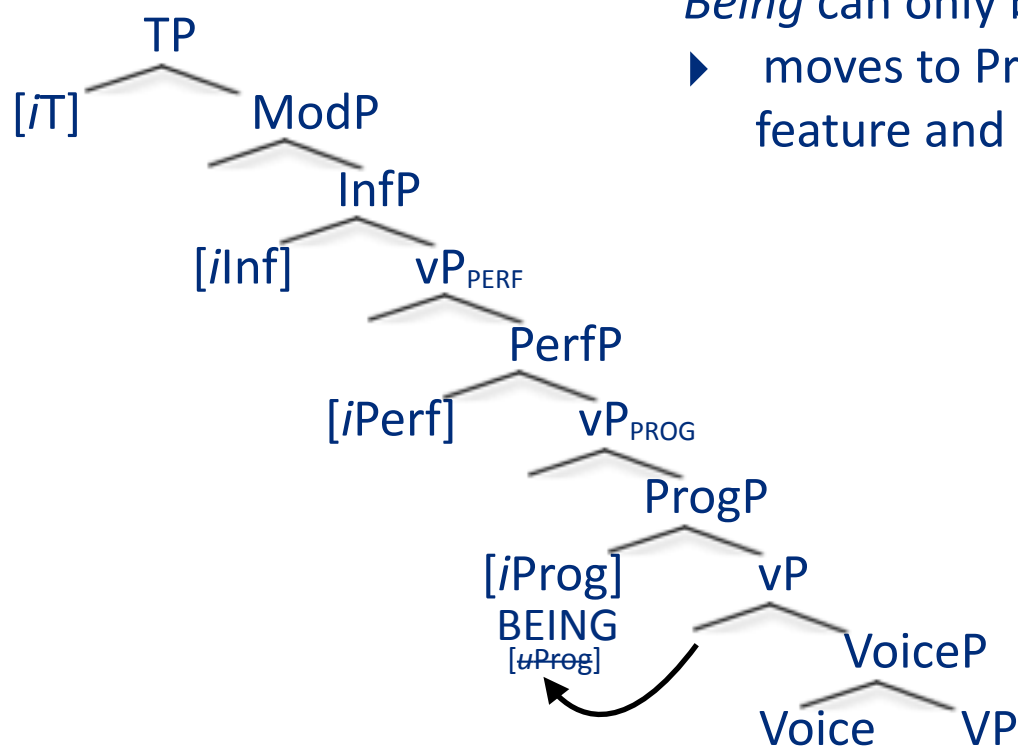
Being can only be copular or passive BE.
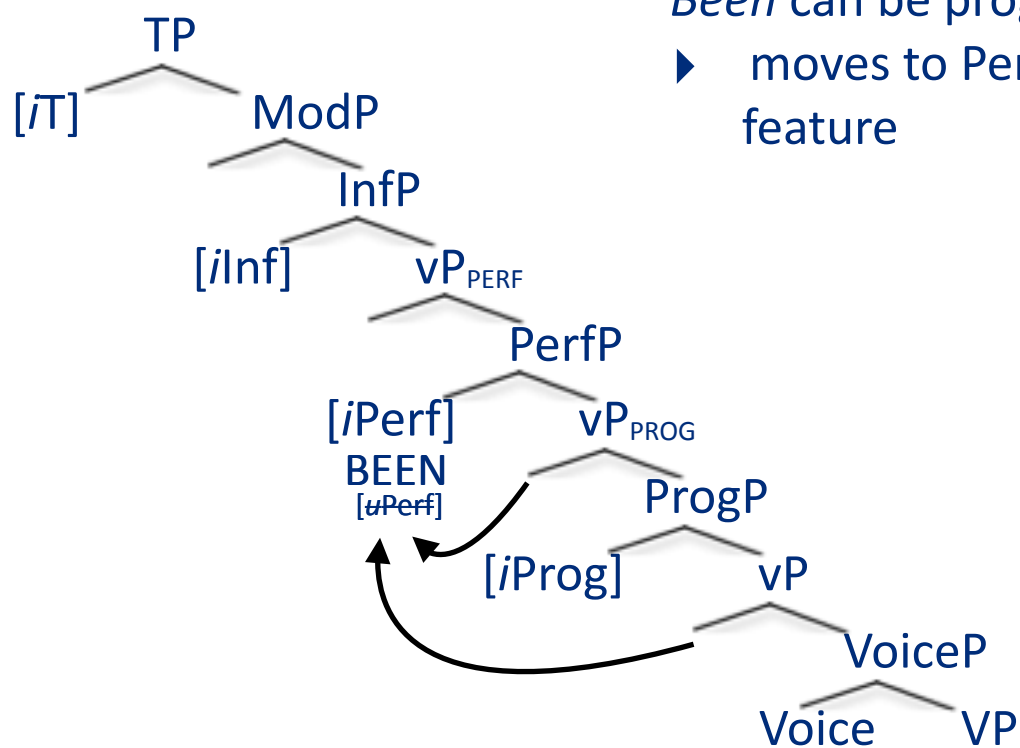- ▶ moves to Prog to check its inflectional feature and license its morphological form

TP
[*i*T] ModP
InfP
[*i*Inf] vP$_{PERF}$
PerfP
[*i*Perf] vP$_{PROG}$
ProgP
[*i*Prog] vP
BEING
[~~*u*Prog~~] VoiceP
Voice VP

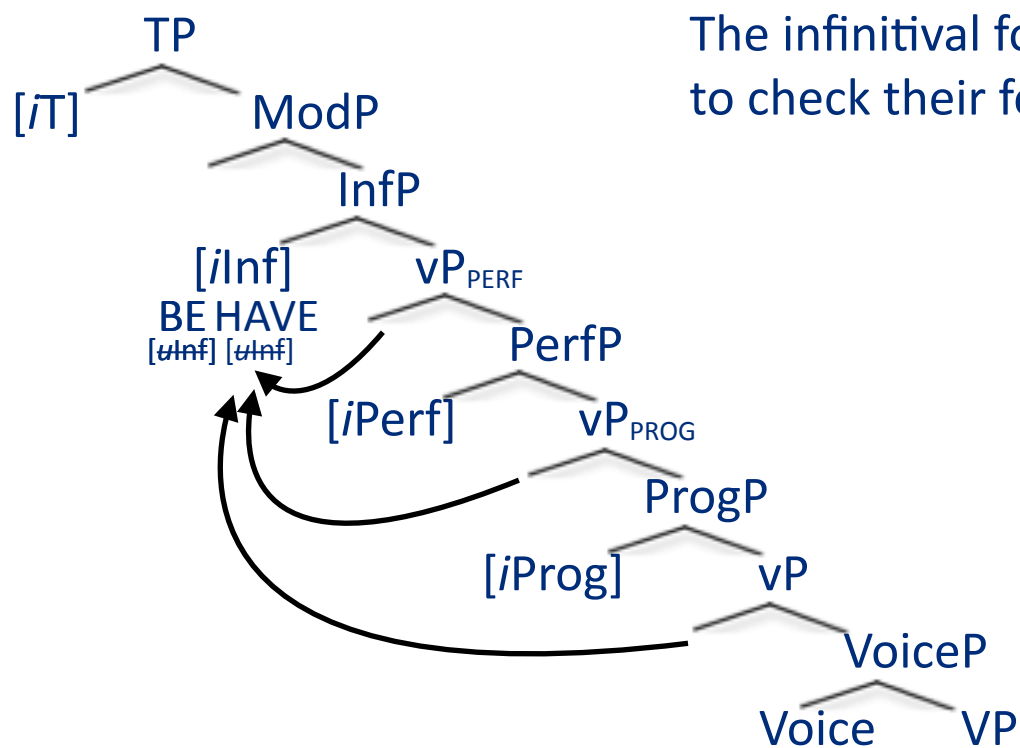# Preliminaries: The verbal structure (3)

Been can be progressive, passive or copular BE.
▸ moves to Perf to check its inflectional feature

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

Preliminaries: The verbal structure (3)

TP
[*i*T]   ModP
         InfP
         [*i*Inf]   vP_PERF
         BE HAVE
         [~~u~~Inf] [~~u~~Inf]   PerfP
                    [*i*Perf]   vP_PROG
                                ProgP
                                [*i*Prog]   vP
                                            VoiceP
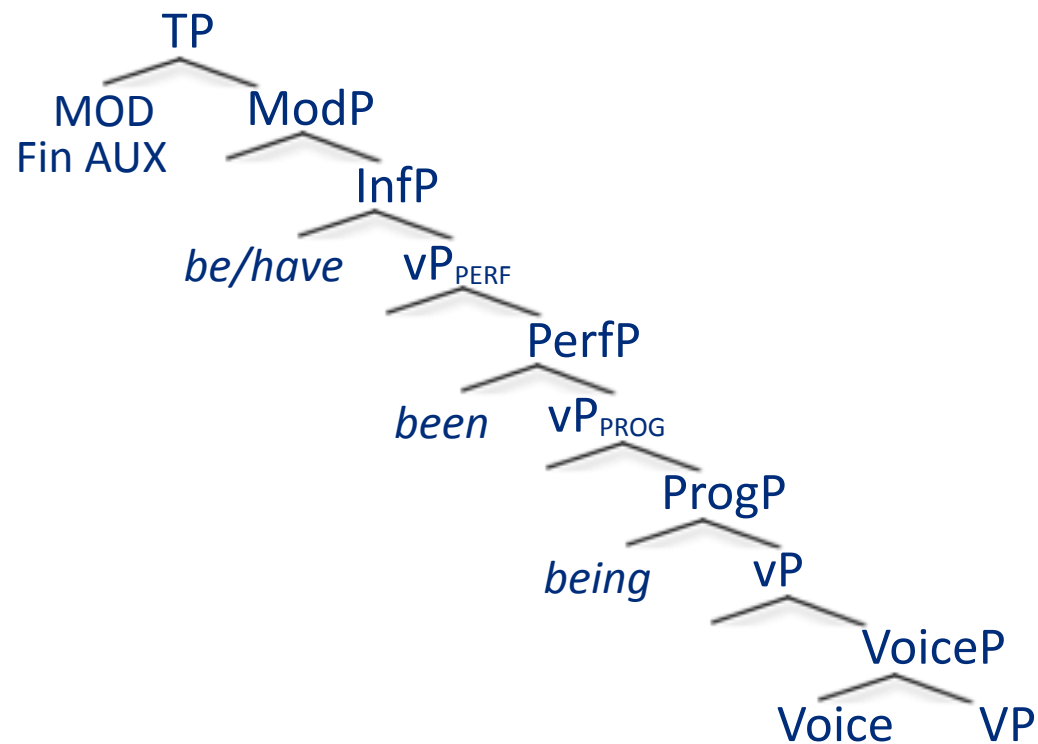   Voice   VP

The infinitival forms *have* and *be* move to Inf to check their features.

Preliminaries: The verbal structure (3)

The finite auxiliaries move to T.

TP

[*i*T]
MOD
[*u*T]
Fin HAVE
[*u*T]
Fin BE
[*u*T]

ModP

InfP

[*i*Inf]   vP$_{PERF}$

PerfP

[*i*Perf]   vP$_{PROG}$

ProgP

[*i*Prog]   vP

VoiceP

Voice   VP
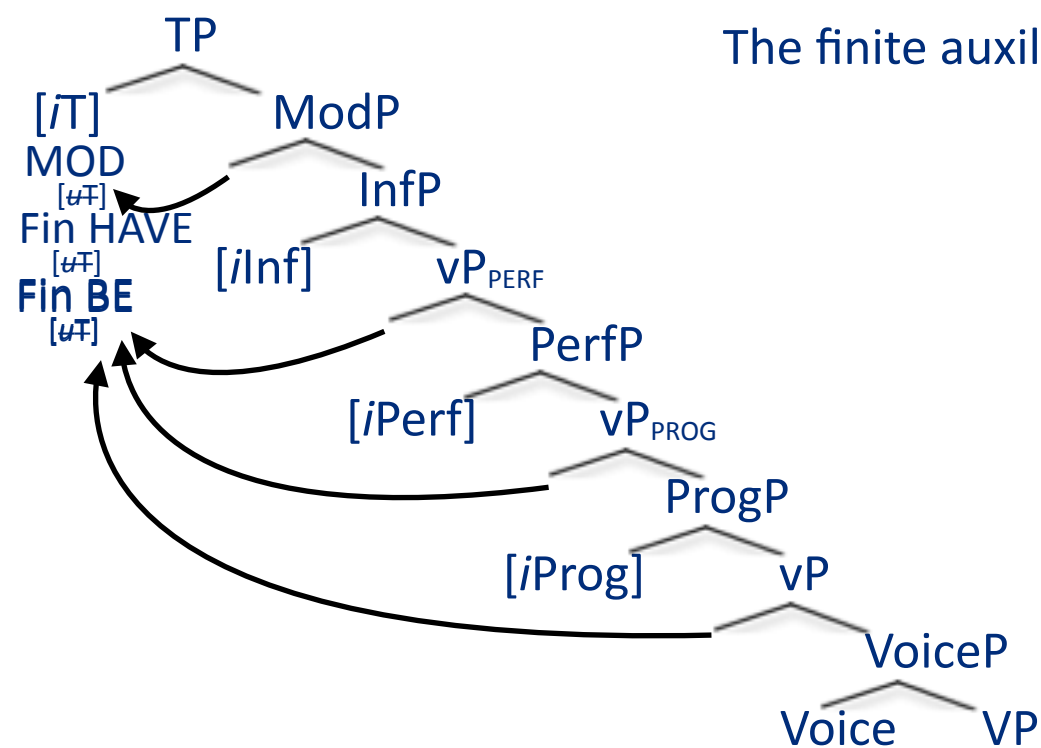
Preliminaries: The verbal structure (4)

Surface positions:

```
              TP
        ⟋        ⟍
     MOD          ModP
   Fin AUX      ⟋      ⟍
             be/have    InfP
                      ⟋      ⟍
                  be/have    vP_PERF
                           ⟋      ⟍
                        been       PerfP
                                 ⟋      ⟍
                              been       vP_PROG
                                       ⟋      ⟍
                                    being       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...

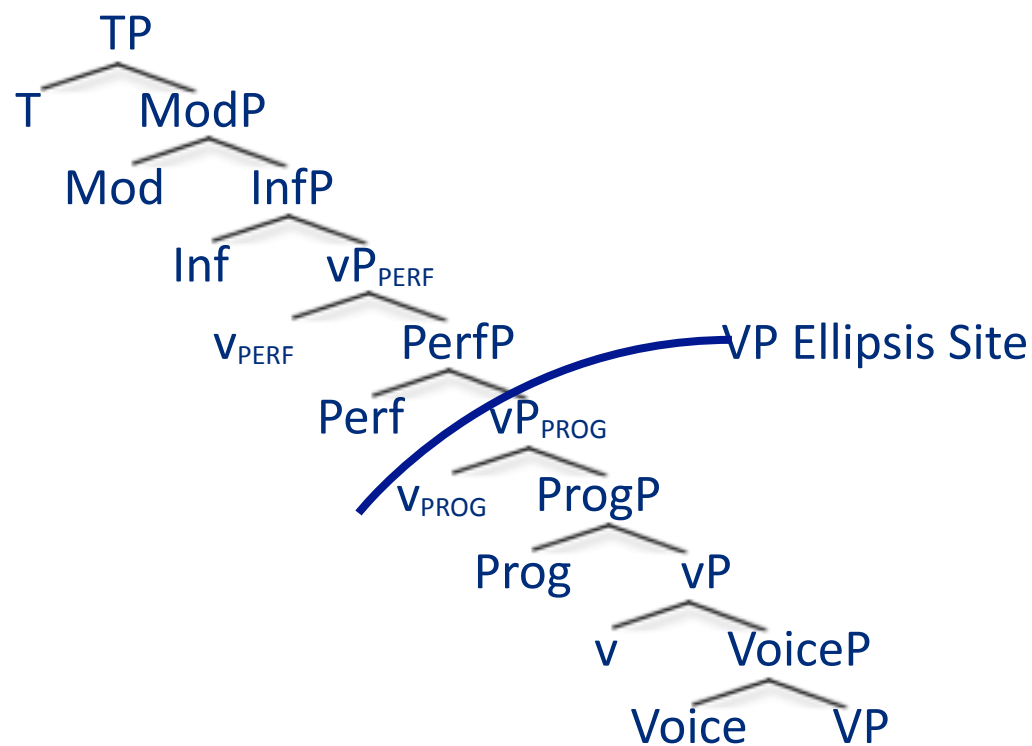No overt movement/checking = crash at PF

(See Chomsky 1993, 1995; Lasnik 1995; Roberts 1998)

Overview

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)
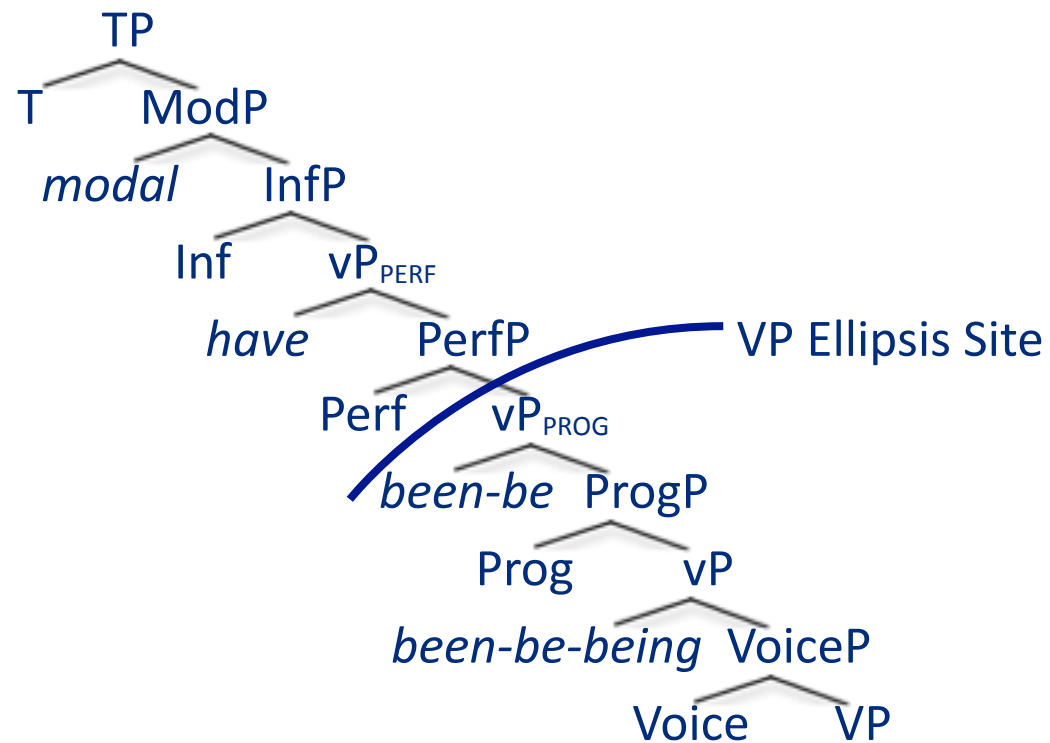2. Optional raising of auxiliaries (Sailor 2012, Thoms 2012)

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.

Analysis, part I: The ellipsis site (4)

Base positions of the auxiliaries:

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

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 (10)

Ellipsis and idiomatic expressions

Certain idioms are dependent upon progressive aspect:

(12) 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.

Analysis, part I: The ellipsis site (11)

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.

(13) John has been dying to meet you, even though he says he hasn't (**been**) ~~dying to meet you~~.

(14) 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.

Analysis, part I: The ellipsis site (12)

Recapitulating:

- Passive *BE* can be elided.
- Copula *BE* can be elided.
- Progressive *BE* 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* cannot be elided - Sag (1976), Lobeck (1987), Johnson (2001), Bošković (2012), Sailor (2009, 2012), Wurmbrand (2012)

▸ 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 might have called, and Bill might, too.   (Wurmbrand 2012:10)

! Wurmbrand (2012): the acceptability of (15) is due to the available mismatch reading in which perfect aspect is altogether absent from the elided constituent:

(16) John might have called, and Bill might [~~call~~], too.

Wurmbrand (2012) uses conflicting time specifications to rule out the mismatch interpretation: ellipsis of *have* is then rejected:

(17) * John might have called yesterday, and Bill might, two days ago.

(Wurmbrand 2012: 10, example (36b'))

Analysis, part I: The ellipsis site (14)

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

- Ellipsis and fixed expressions
- Ellipsis and identity requirements
- *Before*-clauses (Sailor 2012)

Analysis, part I: The ellipsis site (15)

Ellipsis and fixed expressions

Certain expressions are dependent on perfect aspect:

(18)   a.   We have been to Rome.

          b. *   We are being to Rome.

          c.   *   We will be to Rome.

          d. *   We are to Rome.

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 John will have been to Rome, and I will ~~have been to Rome~~, as well.

Analysis, part I: The ellipsis site (17)

Ellipsis and identity requirements

Auxiliaries can only be elided if they have an identical antecedent
= Syntactic Identity condition; see Lasnik (1995), Warner (1986)

(20)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.

Analysis, part I: The ellipsis site (18)

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 (see (21a)).

▸ This context shows whether *have* can be elided or not.

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

(21) 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.

Analysis, part I: The ellipsis site (19)

Before-clauses (Sailor 2012)

Before-clauses are sensitive to perfect aspect.

Sailor (2012): These sentences are ungrammatical if _have_ is deleted, and without _have_ they don't have a sensible reading.

(22) Mary could have studied harder for the exam. Before finally taking it yesterday...

    a.   she really should have.

    b. * she really should.   (Sailor 2012, his (36))

Although there still is some discussion, and there might be some dialectal variation involved, we take ellipsis of _have_ to be impossible.

Analysis, part I: The ellipsis site (20)

Recapitulating:

- Passive *BE* can be elided.
- Copula *BE* can be elided.
- Progressive *BE* can be elided.

- Perfect *HAVE* is never elided.
- Modals and other finite auxiliaries are never elided.

▸ The ellipsis site must include the base position of progressive *BE*.

➡ Claim: VPE elides vP_{prog}.

Overview

Analysis, part II: Auxiliary ellipsis (1)

Reminder

	Modal/ finite aux	Have	Be	Been	Being	Lexical V
Elided	*	*	(✓)	(✓)	✓	✓

- Ellipsis site = vP$_{prog}$
- 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 (3)

A. Modals/*have* and lexical V/*being*

Tree diagram:

TP
- [iT] MOD [uT]
- ModP
  - InfP
    - [iInf] HAVE [$uInf$]
    - vP$_{PERF}$
      - PerfP
        - [iPerf]
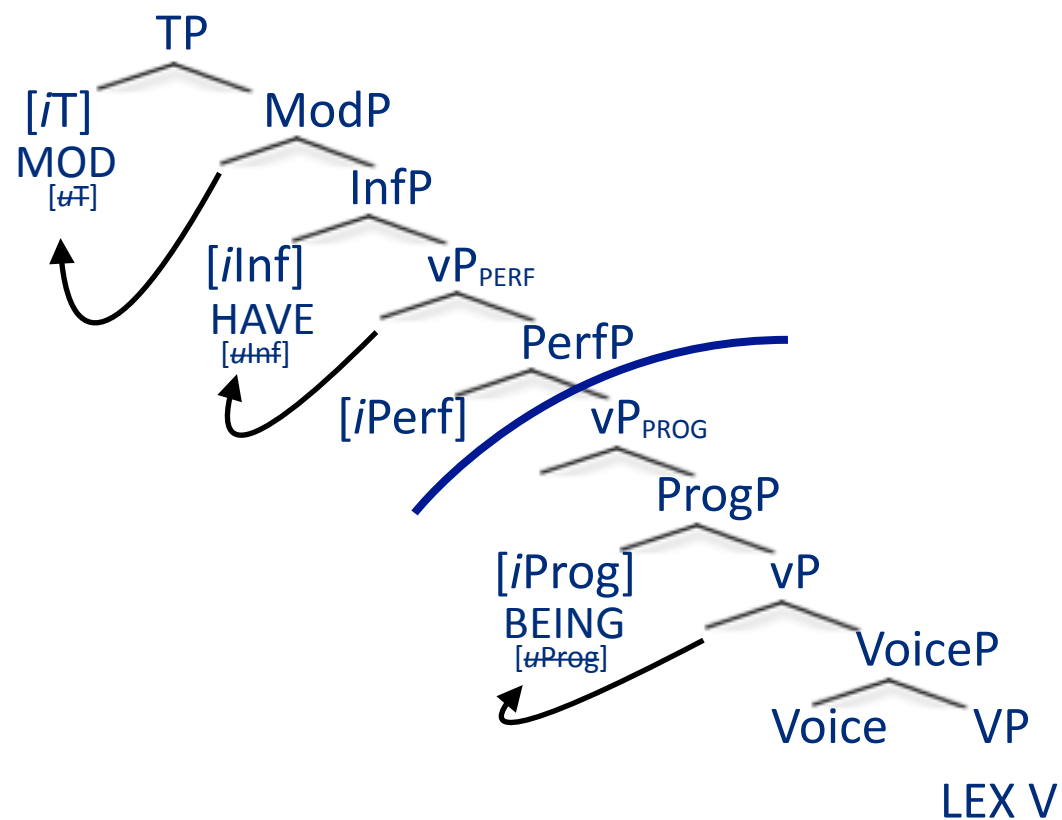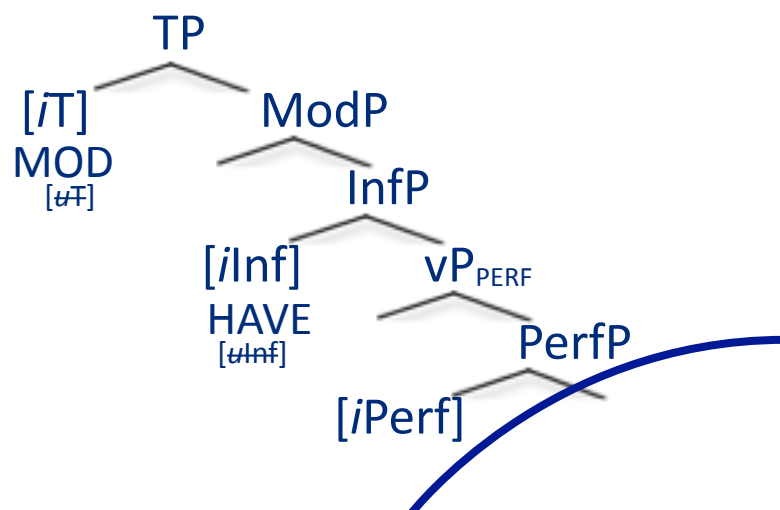
Elided

- 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 (4)

B. *Be* and *been*

Be/been are merged inside the ellipsis site.

They raise out of the ellipsis site for 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.
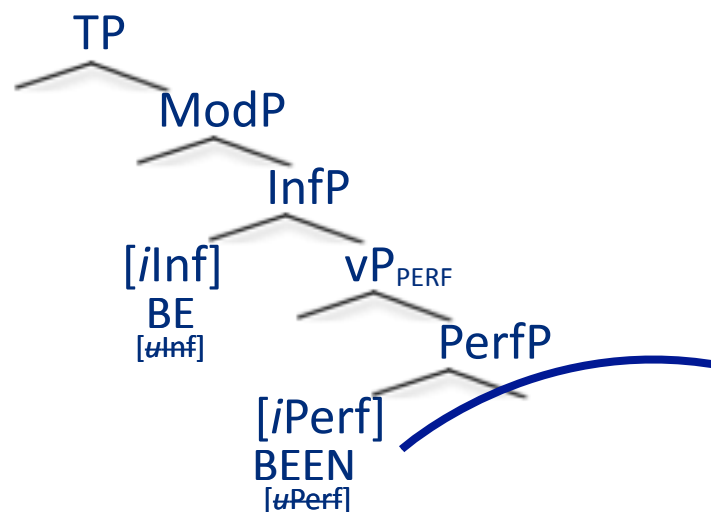
Analysis, part II: Auxiliary ellipsis (5)

Non-ellipsis of *be/been*

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

TP
ModP
InfP
[*i*Inf]
BE
[~~*u*Inf~~]
vP_PERF
PerfP
[*i*Perf]
BEEN
[~~*u*Perf~~]
vP_PROG
ProgP
vP
VoiceP
Voice VP

Analysis, part II: Auxiliary ellipsis (5)

Non-ellipsis of *be/been*

TP
 └ ModP
    └ InfP
       ├ [*i*Inf]
       │ BE
       │ [*u*Inf]
       └ vP_{PERF}
          └ PerfP
             └ [*i*Perf]
                BEEN
                [*u*Perf]
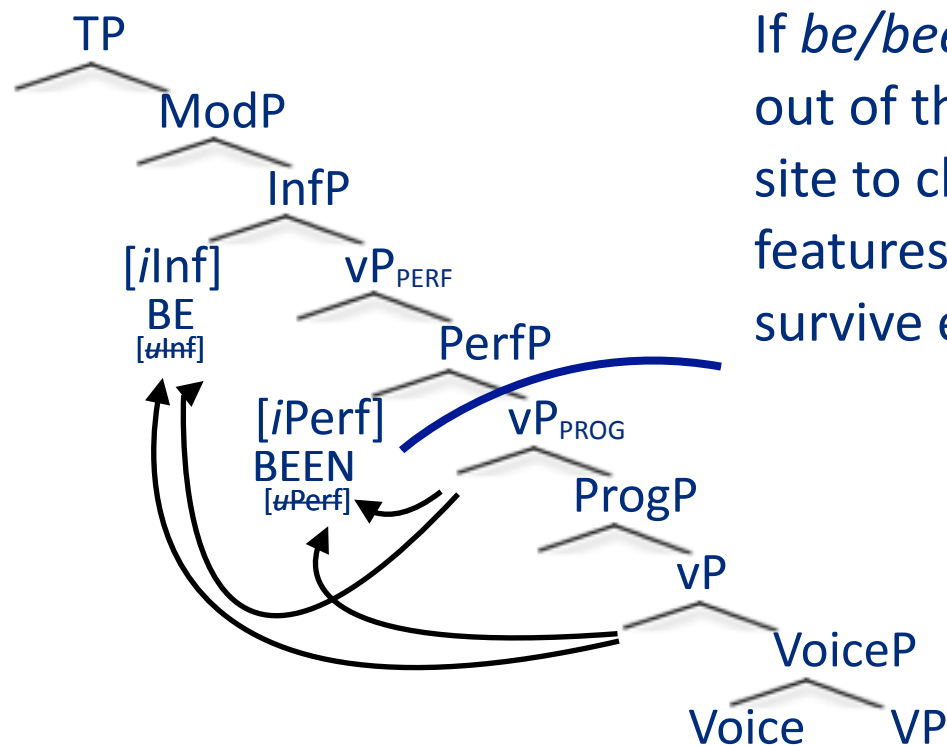
If *be/been* raise out of the ellipsis site to check their features, they survive ellipsis.

Analysis, part II: Auxiliary ellipsis (6)

Ellipsis of *be/been*

TP
ModP
InfP
[*i*Inf]   vP$_{PERF}$
PerfP
[*i*Perf]   vP$_{PROG}$
BEEN
[*u*Perf]   ProgP
BE
[*u*Inf]   vP
BEEN   VoiceP
[*u*Perf]
BE   Voice   VP
[*u*Inf]

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.

Analysis, part II: Auxiliary ellipsis (6)

Ellipsis of *be/been*

TP
  ModP
    InfP
[*i*Inf]   vP~PERF~
         PerfP
[*i*Perf]
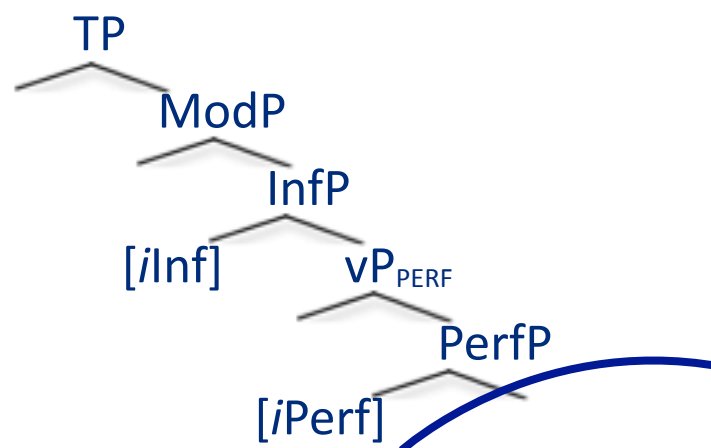
If *be/been* do not raise and remain in the ellipsis site, their uninterpretable features are elided along with them, so the derivation does not crash at PF.

Analysis, part II: Auxiliary ellipsis (7)

▷ Optional raising only made possible by rescue via ellipsis

▷ Prediction: auxiliary raising obligatory in all other contexts.

Relevant data: VP fronting.

Overview

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.

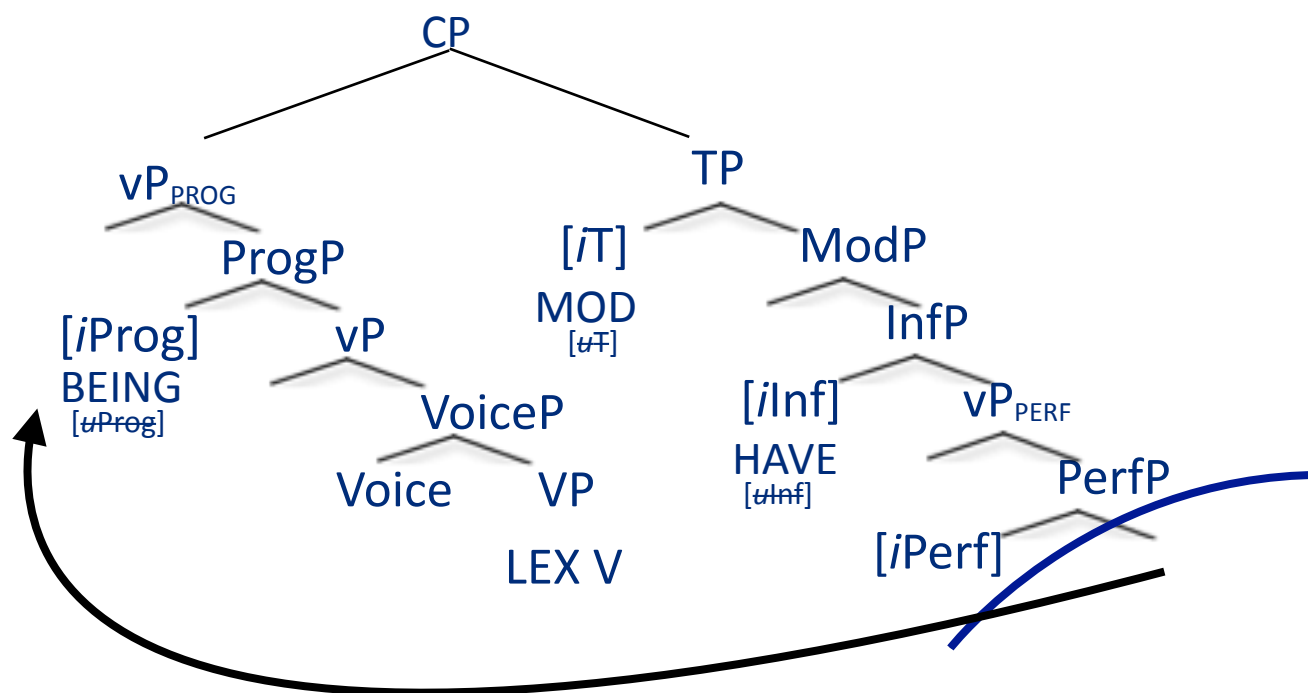# Extending the analysis: VP fronting (3)

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)
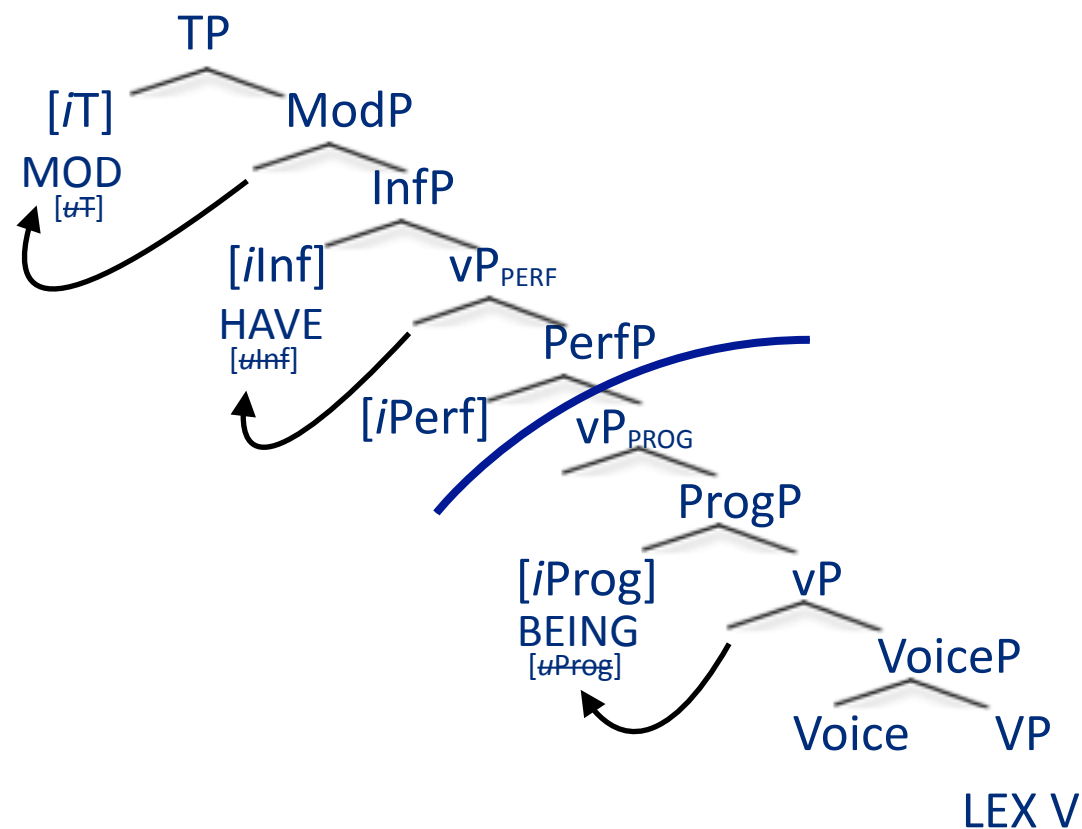
Extending the analysis: VP fronting (4)

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: vP$_{PROG}$

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.

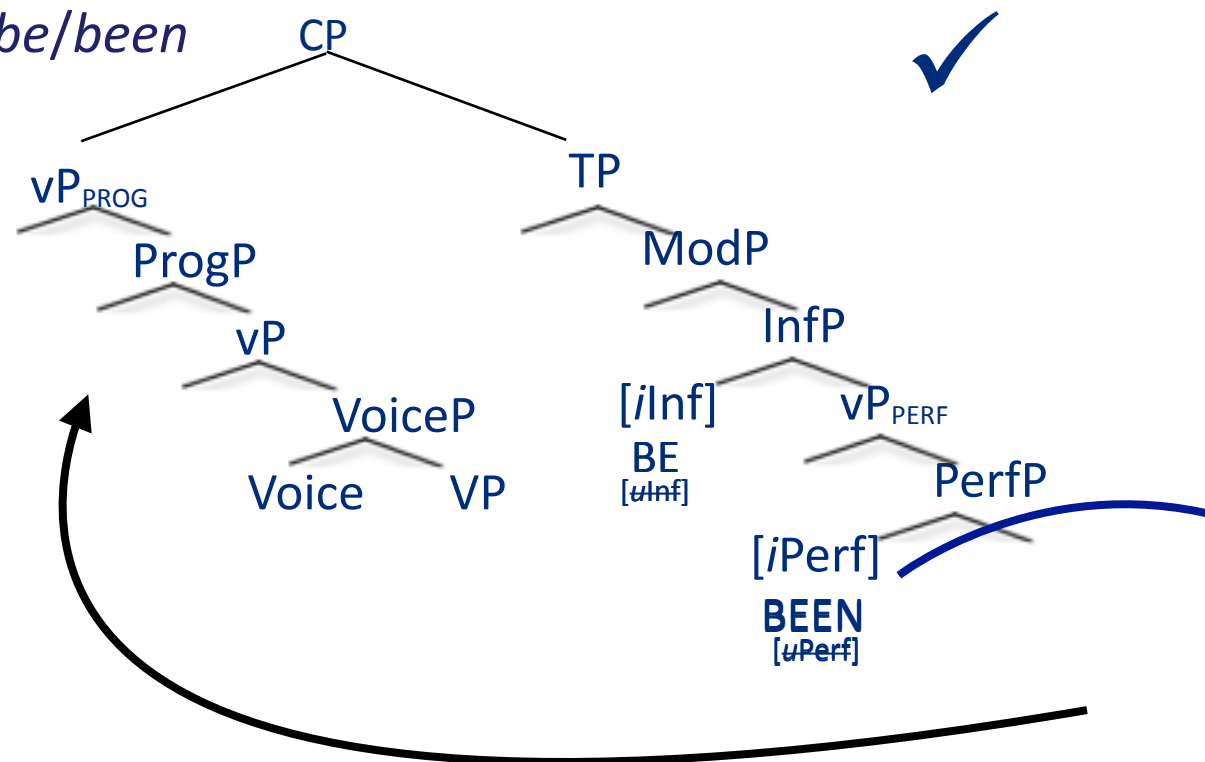 ▷ The unchecked features remain and the derivation crashes.

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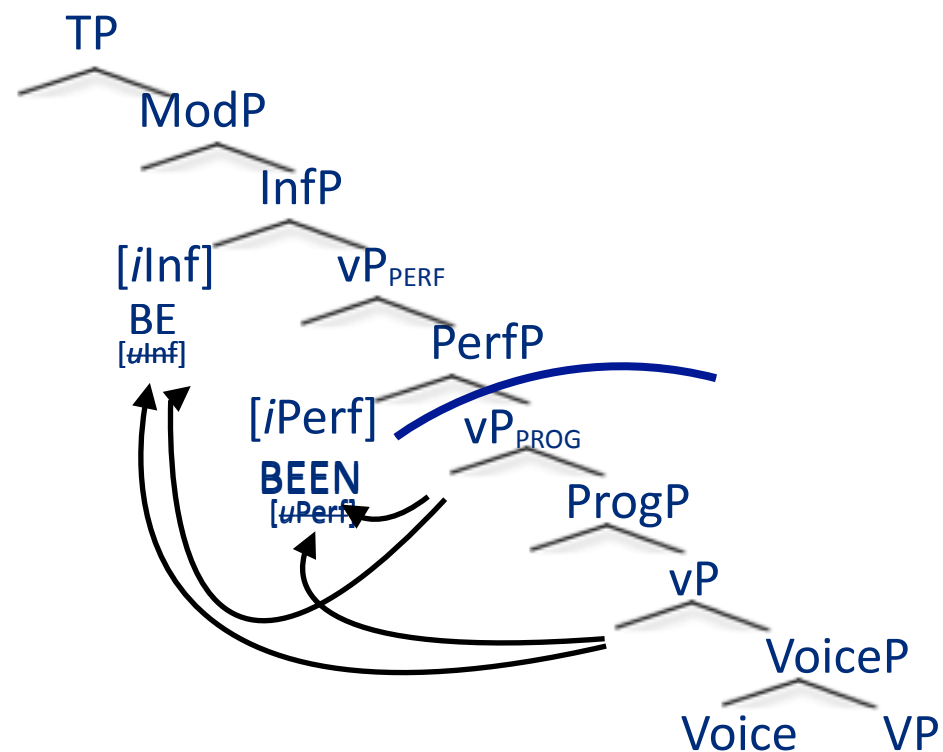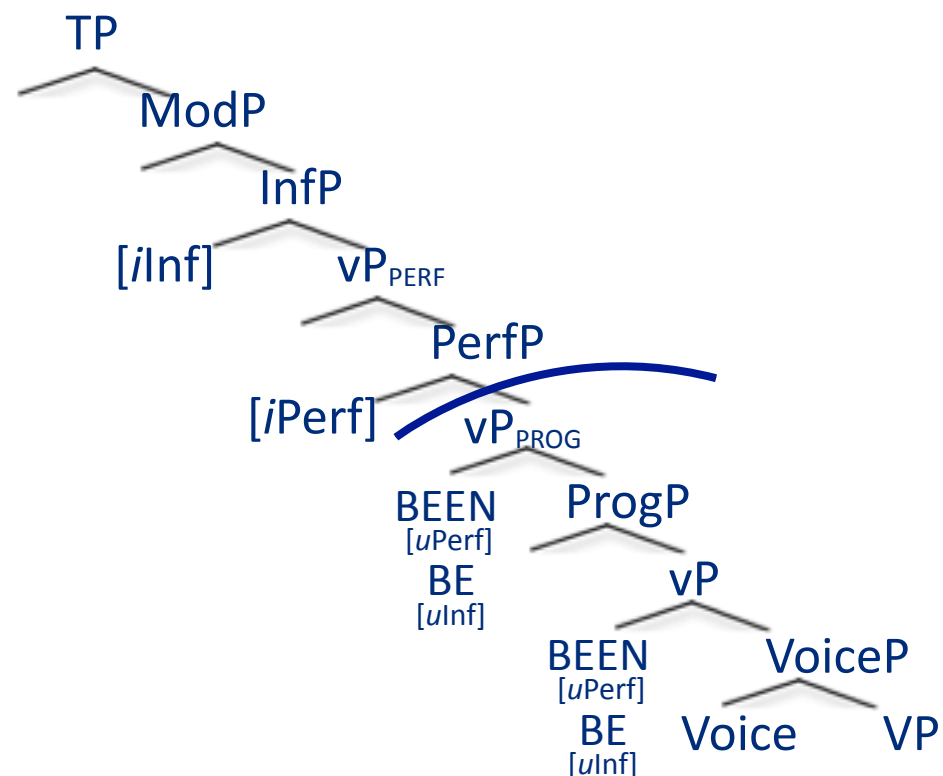
Raising of *be/been*

Extending the analysis: VP fronting (7)

Raising of *be/been* ✓

CP
- vP$_{PROG}$
  - ProgP
    - vP
      - VoiceP
        - Voice
        - VP
- TP
  - ModP
    - InfP
      - [*i*Inf]
        - BE
        - [~~*u*Inf~~]
      - vP$_{PERF}$
        - PerfP
          - [*i*Perf]
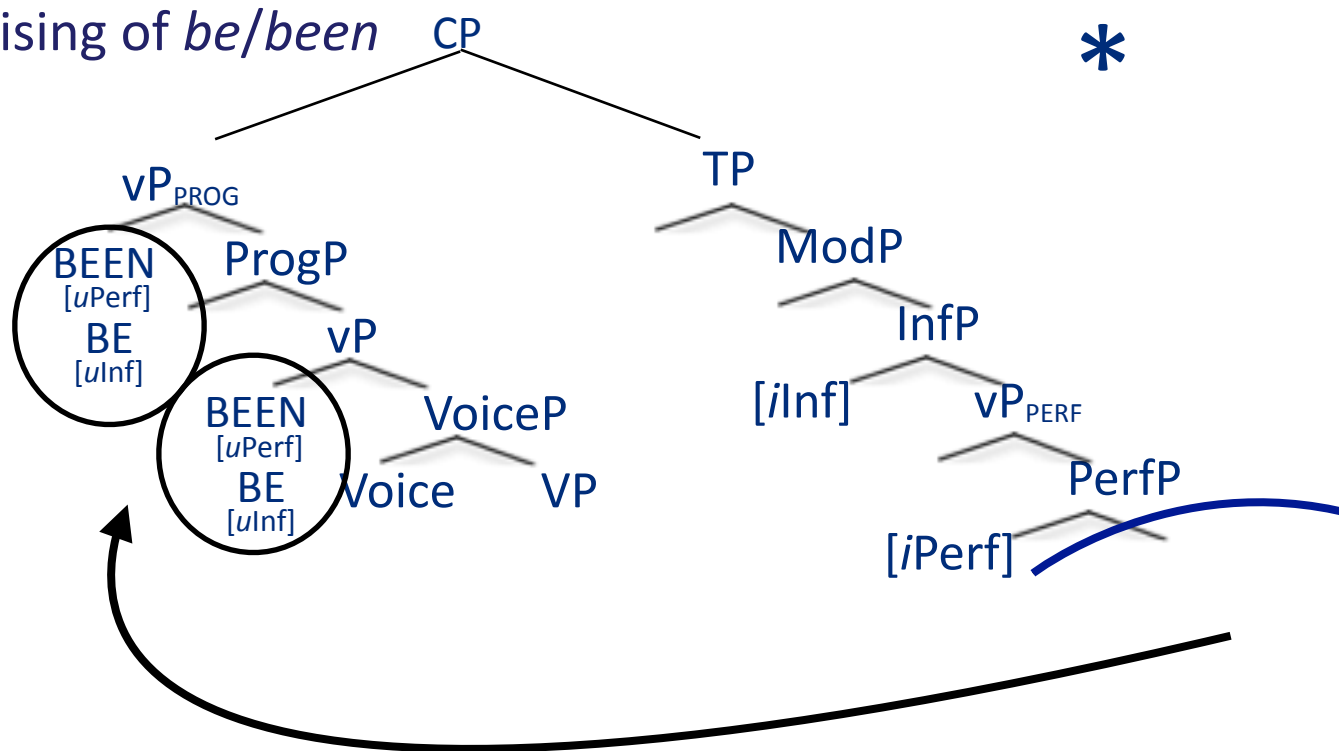   - BEEN
            - [~~*u*Perf~~]

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 (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 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*: always absent from tag questions
- Non-finite *have*: always present (if the sentence being tagged contains perfect aspect, naturally)

(32)   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**)?

Extending the analysis: VP fronting (11)

Sailor (2009): Tags can be analysed as involving VPE.
! *Be* and *been* are optionally elided in these tags, like in VPE (Sailor 2009)

(33) 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

Such pseudoclefts involve fronting of the verb phrase (Blom & Daalder 1977, Declerck 1988, Den Dikken 1995, Heggie 1988, Heycock 1994, Higgins 1979, Moro 1997 &Verheugd 1990).

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

(34) 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*).

(35)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 inversed predicate:

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

(37) * [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 inversed predicate:

(38) 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.

(39) 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.

Overview

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 targeted by VPE varies, it is harder to formalise how ellipsis is licensed.

For instance, if the ellipsis site is recognised as 'the constituent that is the complement of the head bearing an E-feature' (Merchant 2001), does the E-feature sometimes occur on v_{perf} and sometimes on v_{prog} or v?

How to formalise the licensing of ellipsis, and more specifically, how to determine the size of the ellipsis site formally?
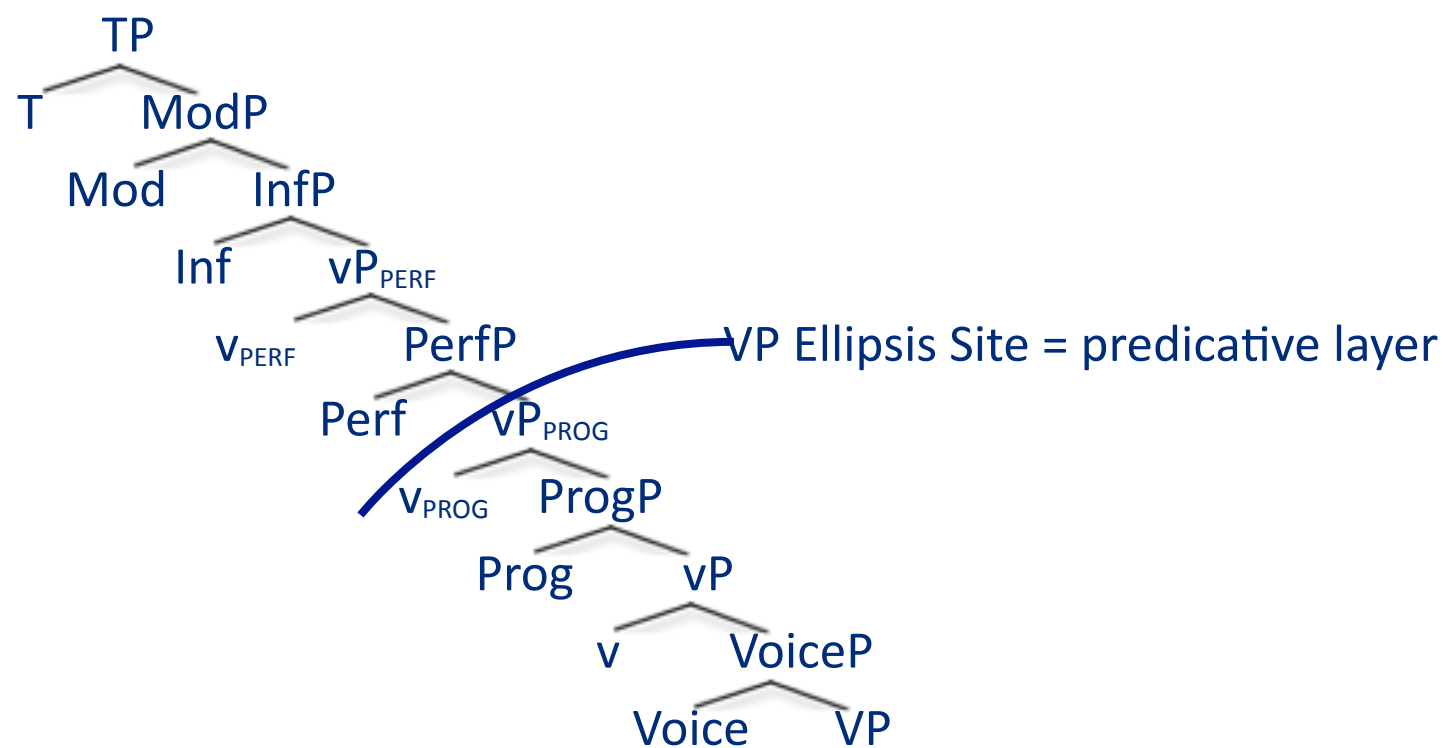
Digging deeper: Predicate ellipsis (3)

VPE is predicate ellipsis

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
▸ The progressive projection (following Bowers 2002)

Digging deeper: Predicate ellipsis (4)

TP

T — ModP

Mod — InfP

Inf — vP$_{PERF}$

v$_{PERF}$ — PerfP

Perf — vP$_{PROG}$

v$_{PROG}$ — ProgP

Prog — vP

v — VoiceP

Voice — VP

VP Ellipsis Site = predicative layer

Digging deeper: Predicate ellipsis (5)

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

Several indications that suggest that this is the case:

1) Progressive is sensitive to lexical restrictions on the verb, unlike perfect aspect, suggesting it is more closely tied to the verb:

(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

Digging deeper: Predicate ellipsis (6)

2) 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.'

c. Kòjó tò   àmì ló zân.   (Gungbe)
    Kojo *imperf* oil *det nominaliser*
    'Kojo is using the oil.'   (Aboh 2005: 140)

Digging deeper: Predicate ellipsis (7)

3) 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/drunk/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.

Digging deeper: Predicate ellipsis (8)

4) Progressive aspect can be included in idiomatic constructions:

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.

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

Digging deeper: Predicate ellipsis (9)

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
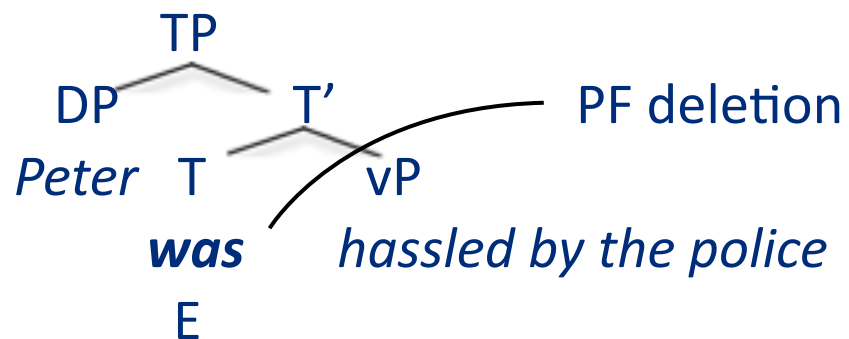
Digging deeper: Predicate ellipsis (10)

Formalising the proposal

- Merchant's (2001, 2004) E-feature + Aelbrecht's (2010) adaptation
- Grimshaw's (2000, 2005) Extended projections

Digging deeper: Predicate ellipsis (11)

Merchant's E-feature applied to VPE:
Licensing head T bears an E-feature, which marks its vP complement
for non-pronunciation at PF.

Digging deeper: Predicate ellipsis (12)

!! Sometimes material intervenes between the licensor and the ellipsis site (Aelbrecht 2010)

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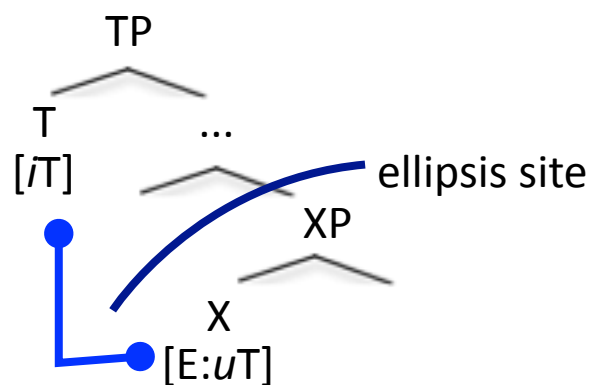
VPE is licensed by T head

T checks E on head X and triggers ellipsis of X's complement.

```
          TP
         /  \
       T      ...
      [iT]   /  \
           X      ellipsis site
         [E:uT]    /  \
```
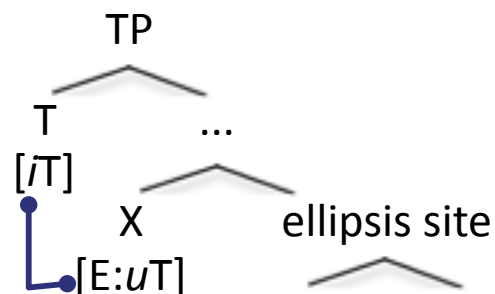
Digging deeper: Predicate ellipsis (13)

Our proposal: E marks the ellipsis site itself:

TP
T
[*i*T]
...
ellipsis site
XP
X
[E:*u*T]

Digging deeper: Predicate ellipsis (14)

Grimshaw's extended projections (2000, 2005)

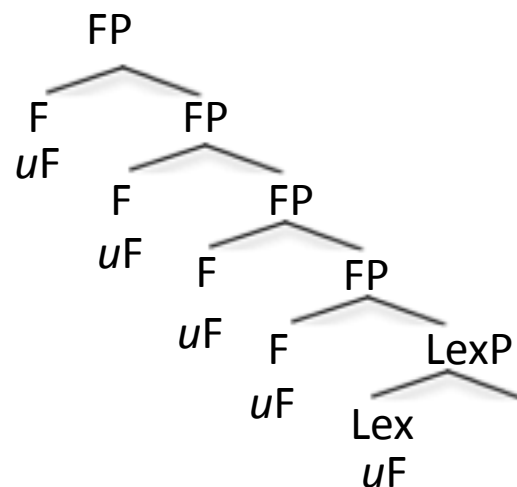Clausal spine divided into domains: extended projections

Each lexical item, i.e. noun, adjective, adverb, verb and preposition, constitutes a separate domain.

FPs merged on top of the lexical item are extensions of this domain, i.e. extended projection of the lexical item.

Digging deeper: Predicate ellipsis (15)

**Grimshaw's extended projections (2000, 2005)**

Certain properties and features of the lexical item can percolate up into the functional projections of the extended domain

```
                    FP
                   /  \
                  F    FP
                 uF   /  \
                     F    FP
                    uF   /  \
                        F    FP
                       uF   /  \
                           F    LexP
                          uF   /   \
                              Lex
                              uF
```

Digging deeper: Predicate ellipsis (16)

Our proposal

Suppose: E-feature starts out on V, and percolates up to every next head of the predicative layer (See Grimshaw's 2005 extended projections)
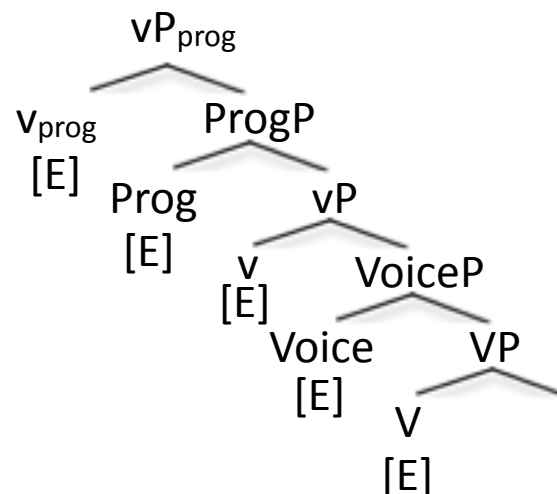
Digging deeper: Predicate ellipsis (17)

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.
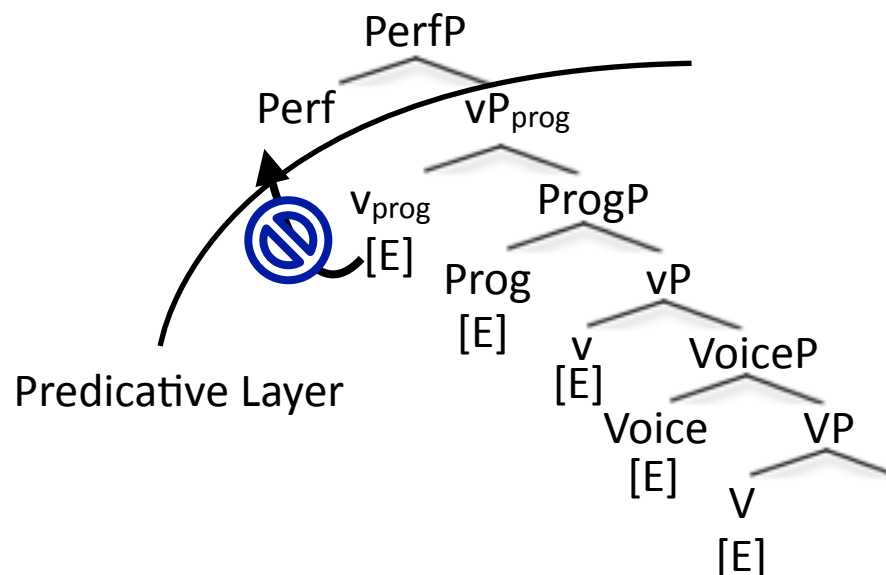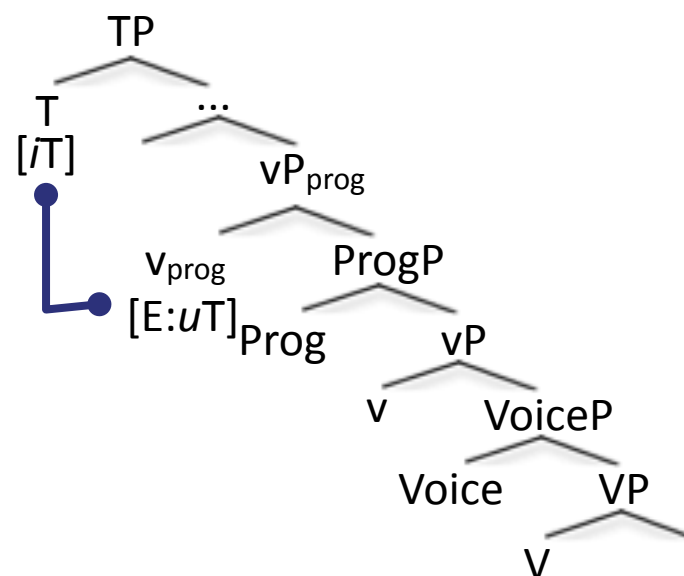
Digging deeper: Predicate ellipsis (18)

T checks the E-feature which occurs on the highest head of the predicate layer.

If vP_{Prog} is present: vP_{Prog} is elided.
If vP_{Prog} is absent: vP is elided.

➡ VPE is predicate ellipsis:

It elides the highest projection in the
extended domain of the lexical predicate

Overview

Conclusion and further issues (1)

▸ VPE and VPF target vP_{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

1) 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)

2) Voice mismatches

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

(46) a.   The janitor must remove the trash whenever it is apparent that it
          should be [~~removed~~].   (Act-Pass)
     b.   The system can be used by anyone who wants to [~~use it~~]. (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.

= conflict between 'elide as much of the predicate as possible' and 'elide only recoverable material'

Conclusion and further issues (6)

A point of interest:

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

(47) * The system can't be used by just anyone, even though Mary has been [~~using the system~~] all year.

Such mismatches are allowed with perfect aspect:

(48) The system can't be used by just anyone, even though Mary has [~~used the system~~] twice already.

Conclusion and further issues (7)

3) *Being* is always elided?

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

(49) 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*?

Conclusion and further issues (8)

No:

Whilst *be* and *been* are optionally elided...

(50)   a.   Ted should be home, and Barney should <u>be</u> ~~home~~ too.

b. Ted should be home, and Barney should ~~be home~~ too.

c. Robin has been fired, and Barney has <u>been</u> ~~fired~~, too.

d. Robin has been fired, and Barney has ~~been fired~~, too.

Conclusion and further issues (9)

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

(51) a. Bill was punished this morning, and now Ted is **<u>being</u>** ~~punished~~.

 b. Bill was **being** punished this morning, and now Ted is (*__being__)
 ~~punished~~.

Being only survives when it is not recoverable from the antecedent.

If it is recoverable, then it is obligatorily deleted, unlike *be(en).*

Conclusion and further issues (10)

Suggestion:

VPE elides only vP in this case, because of recoverability.

= VPE targets as much of the predicative layer as possible, but only if it is recoverable from the antecedent.

Again:

= conflict between 'elide as much of the predicate as possible' and 'elide only recoverable material'

Thank You!