Syntax

Pavel Caha

25 Nov 2024

► Next lecture: Dec 2

- ▶ Next lecture: Dec 2
- ▶ Dec 9: Recap (???)

- Next lecture: Dec 2
- Dec 9: Recap (???)
- Dec 16: test – multiple choice, a-b-c

- Next lecture: Dec 2
- Dec 9: Recap (???)
- Dec 16: test – multiple choice, a-b-c
- There will be more options later on

Where we are at...

wh-questions
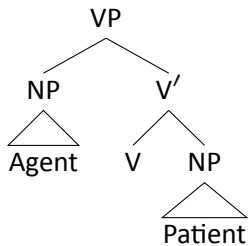
Split phrases

Embedded Interrogatives

Move closest

Long-distance wh-movement

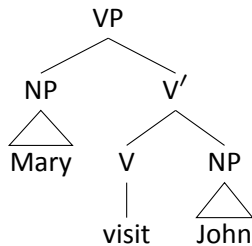Floating quantifiers in intermediate position

Scope-marking construction

Islands

VP-internal 'subject'
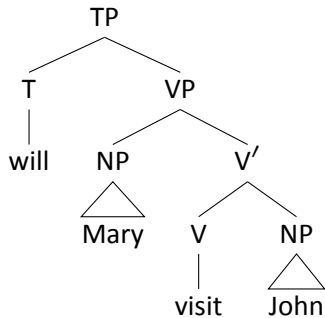
VP
NP V′
Agent V NP
Patient

VP-internal 'subject'

```
            VP
         /      \
       NP        V'
       /\       /  \
      /  \     V    NP
    Mary  visit    /\
                  John
```

VP-internal 'subject'

TP
- T — will
- VP
  - NP — Mary
  - V′
    - V — visit
    - NP — John
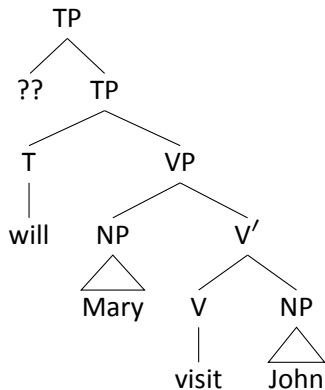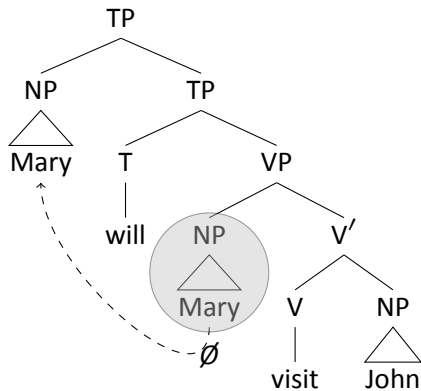
VP-internal 'subject'

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VP-internal 'subject'

(1) a. Three students are now ~~three students~~ working on this project.

VP-internal 'subject'

(1)   a.   Three students are now ~~three students~~ working on this project.

         b.   There are now three students working on this project.

VP-internal 'subject'

VP-internal 'subject'

TP
- EXPL
  - there
- TP
  - T
    - are
  - VP
    - AdvP
      - now
    - VP
      - NP
        - three students
      - V′
        - V
          - working
        - PP
          - on the project
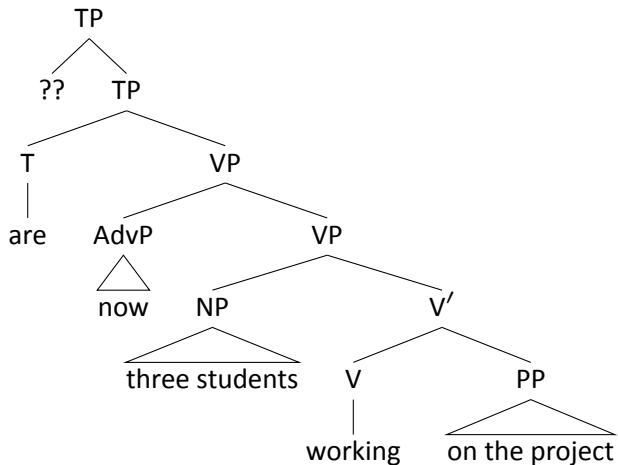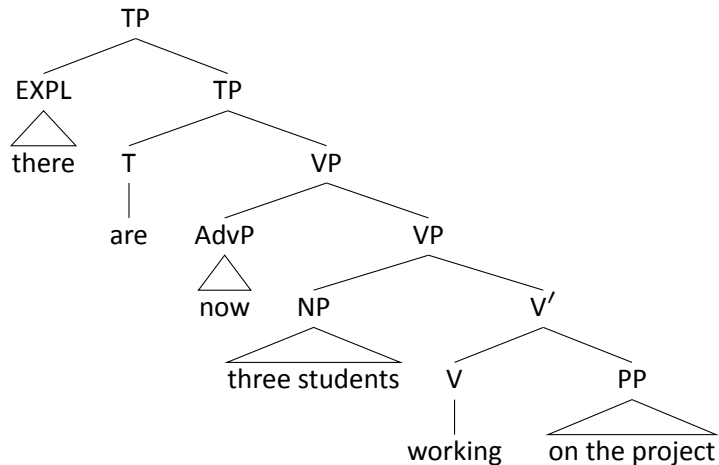
VP-internal 'subject'
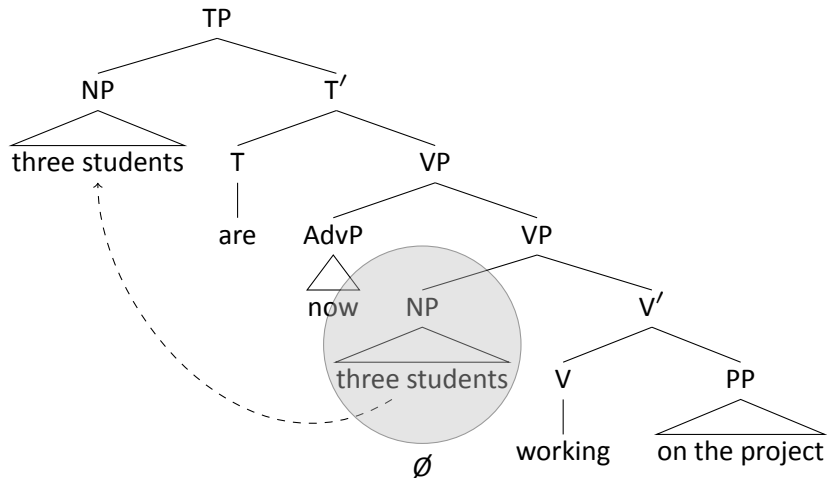
Floating quantifiers

(2)   All astronauts don't ~~all astronauts~~ speak the same language

Floating quantifiers

(2)   All astronauts don't ~~all astronauts~~ speak the same language

(3)   Astronauts don't all speak the same language

Floating quantifiers

(2)   All astronauts don't ~~all astronauts~~ speak the same language

(3)   Astronauts don't all speak the same language
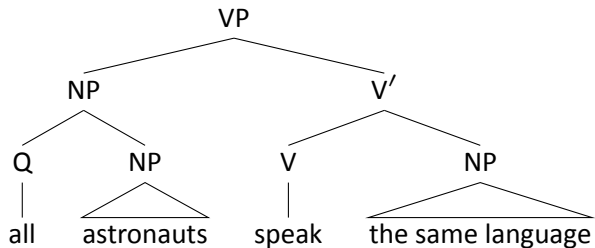
(4)   Astronauts don't all speak the same language

(5)   Astronauts don't all speak the same language
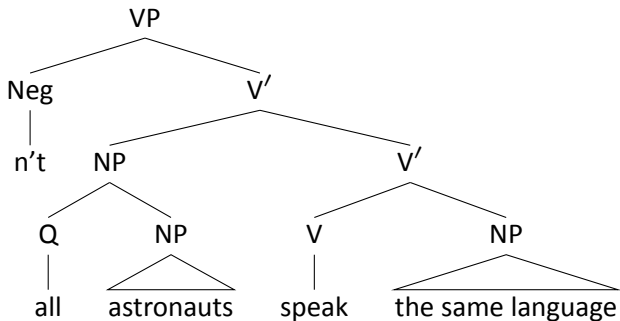
```
                          TP
               ┌──────────┴──────────┐
               T                     VP
               │              ┌───────┴───────┐
               do            Neg              VP
                              │         ┌──────┴──────┐
                             n't        NP            V′
                                    ┌────┴────┐    ┌───┴────┐
                                    Q         NP   V        NP
                                    │        ╱╲    │       ╱──╲
                                   all  astronauts speak  the same language
```

(6) Astronauts don't all speak the same language
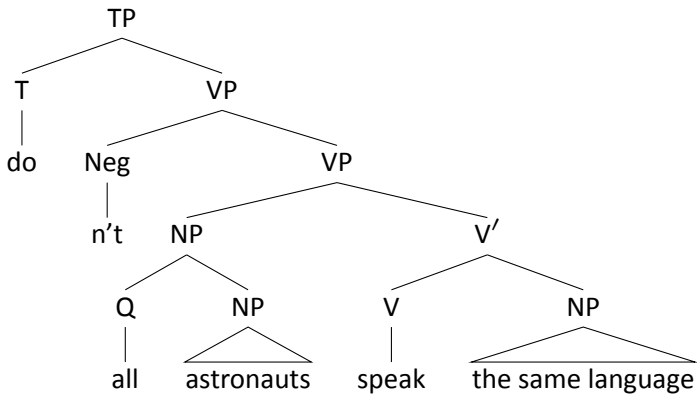
```
                        TP
                   ╱         ╲
                 ??            T′
                          ╱         ╲
                        T              VP
                        │         ╱         ╲
                       do       Neg            VP
                                 │        ╱         ╲
                                n't      NP             V′
                                    ╱      ╲        ╱      ╲
                                   Q         NP    V         NP
                                   │         ╱╲    │         ╱╲
                                  all   astronauts speak  the same language
```
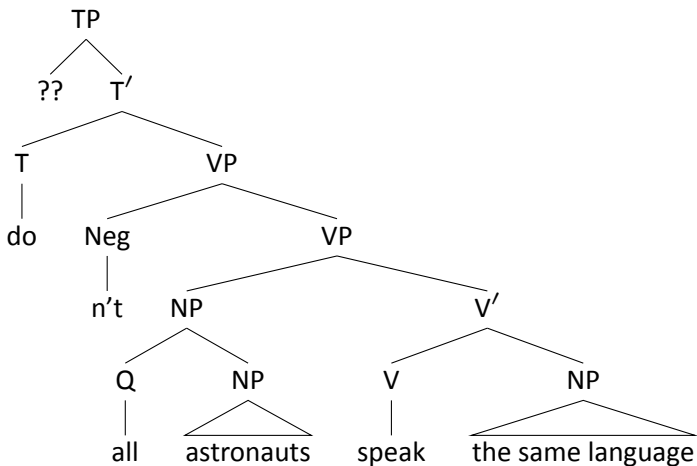
(7)   Astronauts don't all speak the same language
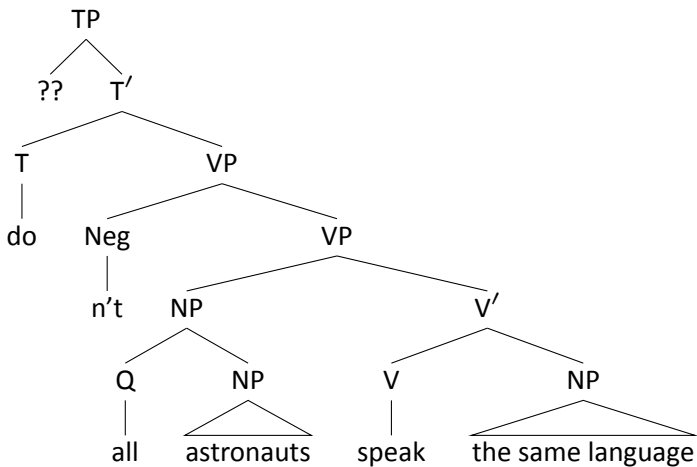
Economy of movement

(8) Astronauts don't all speak the same language
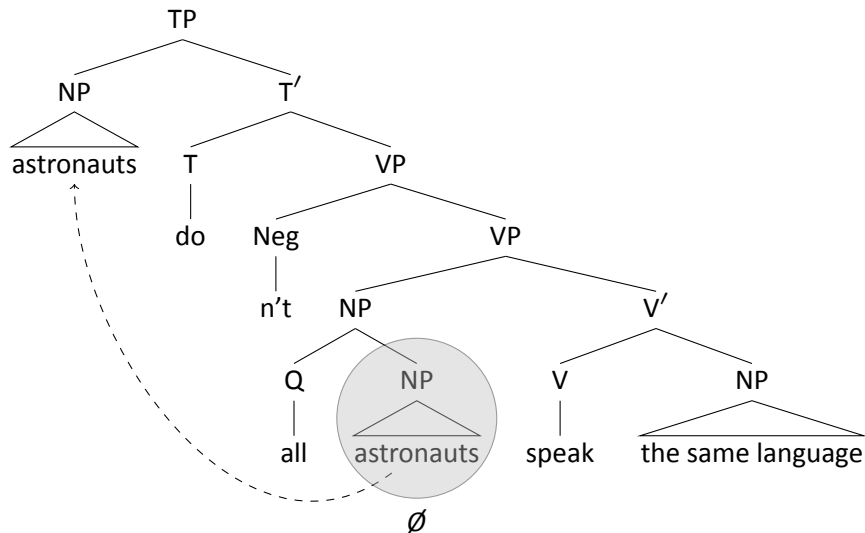
Economy of movement

(9)   All astronauts don't speak the same language
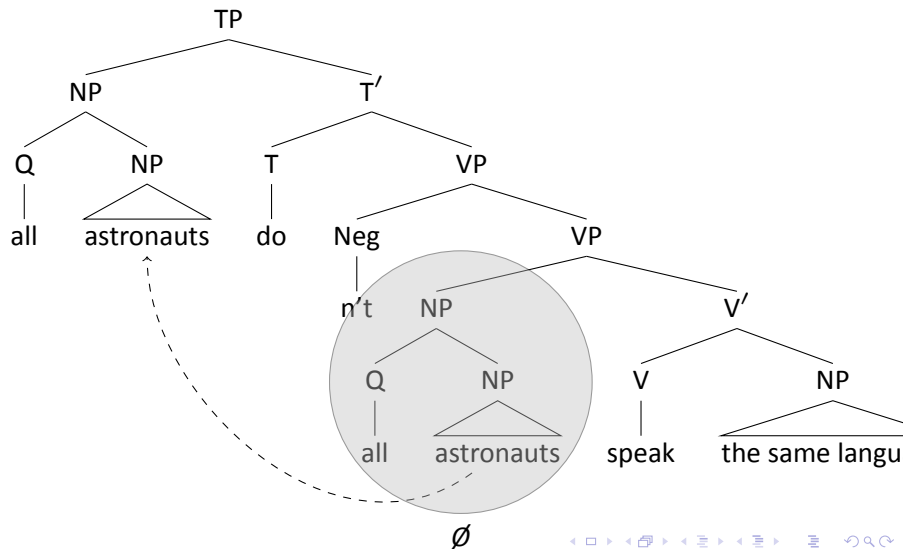
- VP-internal subject hypothesis

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  - all arguments are part of the core event

- ▶ VP-internal subject hypothesis
  - ▶ all arguments are part of the core event
  - ▶ there exists a subject function, independent of argument-status (expletives)

- ▶ VP-internal subject hypothesis
  - ▶ all arguments are part of the core event
  - ▶ there exists a subject function, independent of argument-status (expletives)
  - ▶ the subject moves there

Recap

- 'Universal' part
  - Describe the event

Recap

- ‘Universal’ part
  - Describe the event
  - Anchor it in time

Recap

- 'Universal' part
  - Describe the event
  - Anchor it in time
  - Specify intention: question, fact, condition, ...

Recap

- 'Universal' part
  - Describe the event
  - Anchor it in time
  - Specify intention: question, fact, condition, ...
- Variable part

Recap

- ▶ 'Universal' part
  - ▶ Describe the event
  - ▶ Anchor it in time
  - ▶ Specify intention: question, fact, condition, ...
- ▶ Variable part
  - ▶ Is each meaning/function expressed by an independent marker?

Recap

- ▶ 'Universal' part
  - ▶ Describe the event
  - ▶ Anchor it in time
  - ▶ Specify intention: question, fact, condition, ...
- ▶ Variable part
  - ▶ Is each meaning/function expressed by an independent marker?
  - ▶ 'Movement': One item – multiple functions

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  - ▶ Describe the event
  - ▶ Anchor it in time
  - ▶ Specify intention: question, fact, condition, ...
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  - ▶ Is each meaning/function expressed by an independent marker?
  - ▶ 'Movement': One item – multiple functions
    - ▶ Express event – host an affix

Recap

- ► 'Universal' part
  - ► Describe the event
  - ► Anchor it in time
  - ► Specify intention: question, fact, condition, ...
- ► Variable part
  - ► Is each meaning/function expressed by an independent marker?
  - ► 'Movement': One item – multiple functions
    - ► Express event – host an affix
    - ► Be an agent in the event – be the subject

Recap

- ▶ 'Universal' part
  - ▶ Describe the event
  - ▶ Anchor it in time
  - ▶ Specify intention: question, fact, condition, ...
- ▶ Variable part
  - ▶ Is each meaning/function expressed by an independent marker?
  - ▶ 'Movement': One item – multiple functions
    - ▶ Express event – host an affix
    - ▶ Be an agent in the event – be the subject
  - ▶ Movement has a principled part – move shortest

Recap

- ▶ 'Universal' part
  - ▶ Describe the event
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  - ▶ Specify intention: question, fact, condition, ...
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Recap

- 'Universal' part
    - Describe the event
    - Anchor it in time
    - Specify intention: question, fact, condition, ...
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        - Agent becomes the subject – not the patient
        - We move the highest auxiliary

Recap

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  - Describe the event
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    - Agent becomes the subject – not the patient
    - We move the highest auxiliary
  - And a variable part – Move as light as possible vs. Move as short as possible

Recap

- 'Universal' part
  - Describe the event
  - Anchor it in time
  - Specify intention: question, fact, condition, ...
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  - Is each meaning/function expressed by an independent marker?
  - 'Movement': One item – multiple functions
    - Express event – host an affix
    - Be an agent in the event – be the subject
  - Movement has a principled part – move shortest
    - Agent becomes the subject – not the patient
    - We move the highest auxiliary
  - And a variable part – Move as light as possible vs. Move as short as possible
  - Split phrases – floating quantifiers

Where we are at...

wh-questions

Split phrases

Embedded Interrogatives

Move closest

Long-distance wh-movement

Floating quantifiers in intermediate position

Scope-marking construction

Islands

(10)   a.   What are you reading?

(10) a. What are you reading?
      b. Where are you staying?

(10) a. What are you reading?
      b. Where are you staying?

► *wh*-word: *what, where, why, who, which, when, ... how*

(10)   a.   What are you reading?

         b.   Where are you staying?

▶ *wh*-word: *what, where, why, who, which, when, ... how*

(11)   a.   wh -ere
               what -place

(10) a. What are you reading?
      b. Where are you staying?

▶ *wh*-word: *what, where, why, who, which, when, ... how*

(11) a. wh   -ere
          what -place
      b. wh   -o
          what person

(10)   a.   What are you reading?

         b.   Where are you staying?

► *wh*-word: *what, where, why, who, which, when, ... how*

(11)   a.   wh   -ere
              what -place

         b.   wh   -o
              what person

         c.   wh   -y
              what reason

(10)   a.   What are you reading?
       b.   Where are you staying?

▶ *wh*-word: *what, where, why, who, which, when, ... how*

(11)   a.   wh   -ere
            what -place
       b.   wh   -o
            what person
       c.   wh   -y
            what reason
       d.   wh   -en
            what time

(10)   a.   What are you reading?
       b.   Where are you staying?

▶ *wh*-word: *what, where, why, who, which, when, ... how*

(11)   a.   wh   -ere
             what -place
       b.   wh   -o
             what person
       c.   wh   -y
             what reason
       d.   wh   -en
             what time

▶ What is the thing such that ... you are reading that thing

(10)   a.   What are you reading?
       b.   Where are you staying?

► *wh*-word: *what, where, why, who, which, when, ... how*

(11)   a.   wh   -ere
             what -place
       b.   wh   -o
             what person
       c.   wh   -y
             what reason
       d.   wh   -en
             what time

► What is the thing such that ... you are reading that thing
► What is the place such that ... you are staying at that place

(10) a. What are you reading?
      b. Where are you staying?

► *wh*-word: *what, where, why, who, which, when, ... how*

(11) a. wh   -ere
          what -place
      b. wh   -o
          what person
      c. wh   -y
          what reason
      d. wh   -en
          what time

► What is the thing such that ... you are reading that thing
► What is the place such that ... you are staying at that place
► The idea: questions are derived from declaratives (by adding what is the X such that ... X ...)

(10)   a.   What are you reading?
       b.   Where are you staying?

▶ *wh*-word: *what, where, why, who, which, when, ... how*

(11)   a.   wh   -ere
              what -place
       b.   wh   -o
              what person
       c.   wh   -y
              what reason
       d.   wh   -en
              what time

▶ What is the thing such that ... you are reading that thing
▶ What is the place such that ... you are staying at that place
▶ The idea: questions are derived from declaratives (by adding what is the X such that ... X ...)

(12)   What will you eat?

(12)   What will you eat?

```
              VP
         ┌────┴─────┐
        NP          VP
        △        ┌──┴──┐
      agent      V     NP
                 │     △
                eat  patient
```

(17)   What will you eat?

```
            VP
          /    \
        NP      VP
        /\     /  \
       /__\   V    NP
       you   |    /\
            eat  /__\
                what
```

(17)   What will you eat?

```
                TP
         _____/_____
        T              VP
        |         _____/\_____
      will       NP           VP
                 /\       ____/\____
               you       V          NP
                         |          /\
                        eat       what
```

(17)   What will you eat?

```
            TP
           /  \
         ??    TP
              /  \
             T    VP
             |   /  \
           will NP   VP
               /\   /  \
              /__\ V    NP
              you |    /\
                 eat  /__\
                      what
```
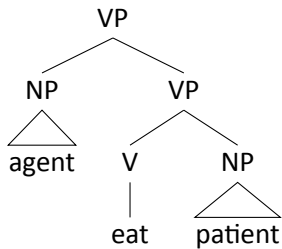
(17)   What will you eat?

(17)   What will you eat?

```
                    TP
               ┌────┴────┐
              NP         TP
              △      ┌────┴────┐
             you     T         VP
              │      │      ┌───┴───┐
            will           V       NP
                           │       △
                          eat     what
```

(17)   What will you eat?

```
              CP
          ／      ＼
        C            TP
        |         ／    ＼
        Ø       NP        TP
               △        ／    ＼
              you      T        VP
                       |      ／    ＼
                     will   V        NP
                            |        △
                           eat     what
```

(17)   What will you eat?

```
                        CP
              ┌─────────┴─────────┐
              C                   TP
          ┌───┴───┐          ┌────┴────┐
          T       C         NP         TP
          │       │         △      ┌───┴───┐
        will      Ø        you     T       VP
                                   │    ┌───┴───┐
                                  will  V       NP
                                        │       △
                                       eat     what
```

(17)   What will you eat?

CP

NP   CP

what   C   TP

T   C   NP   TP

will   Ø   you   T   VP

will   V   NP

eat   what

Ø

(13)   West Ulster English
        a.   Who all did you meet   when you were in Derry?

(13)   West Ulster English
   a.   Who all did you meet   when you were in Derry?
   b.   Who all did you meet ~~who all~~ when you were in Derry?

(13)   West Ulster English
   a.   Who all did you meet   when you were in Derry?
   b.   Who all did you meet ~~who all~~ when you were in Derry?
   c.   Who   did you meet ~~who~~ all when you were in Derry?

(13)   West Ulster English
   a.   Who all did you meet   when you were in Derry?
   b.   Who all did you meet ~~who all~~ when you were in Derry?
   c.   Who   did you meet ~~who~~ all when you were in Derry?
   d.   Who   did you meet   all when you were in Derry?

(14) West Ulster English

    a.   Who all did you meet   when you were in Derry?

    b.   Who   did you meet   all when you were in Derry?

(14)   West Ulster English
  a.   Who all did you meet   when you were in Derry?
  b.   Who   did you meet   all when you were in Derry?

```
              TP
          ┌────┴────┐
         NP         TP
         △      ┌────┴────┐
        you     T         VP
                │     ┌────┴────┐
               did    V        NP
                      │     ┌───┴───┐
                    meet    NP      Q
                            △       │
                           who     all
```

(15)   West Ulster English

   a.   Who all did you meet   when you were in Derry?
   b.   Who   did you meet   all when you were in Derry?

(15) West Ulster English
    a. Who all did you meet   when you were in Derry?
    b. Who   did you meet   all when you were in Derry?

```
                          CP
                   ┌──────┴──────┐
                   C             TP
               ┌───┴───┐     ┌────┴────┐
               T       C    NP         TP
               │       │    △      ┌───┴───┐
              did      Ø   you     T       VP
               ⌐ ─ ─ ─ ─ ─ ─ │   ┌───┴───┐
                            did   V       NP
                             │    │   ┌───┴───┐
                           meet  NP       Q
                                 △        │
                                who       all
```

(19)   West Ulster English
   a.   Who all did you meet   when you were in Derry?
   b.   Who   did you meet   all when you were in Derry?
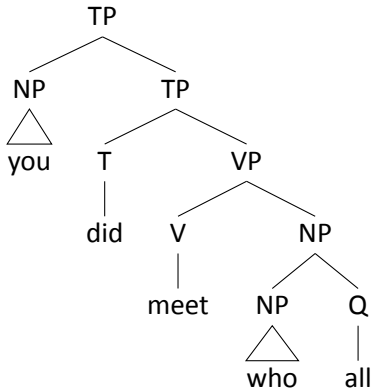
```
                        CP
               ┌─────────┴─────────┐
              ??                   CP
                          ┌─────────┴─────────┐
                          C                   TP
                     ┌────┴────┐        ┌──────┴──────┐
                     T         C        NP            TP
                     │         │        △        ┌────┴────┐
                    did        Ø        you       T        VP
                                                  │     ┌───┴───┐
                                                 did    V       NP
                                                        │    ┌──┴──┐
                                                      meet   NP    Q
                                                             △     │
                                                            who   all
```
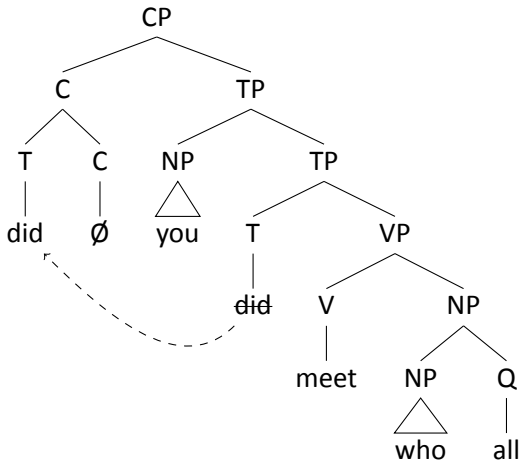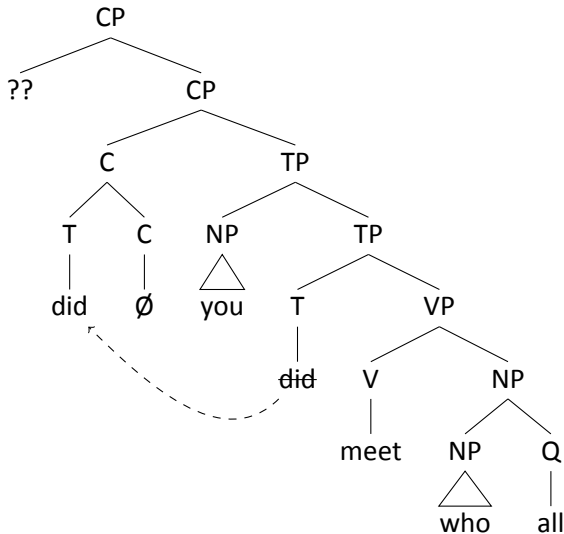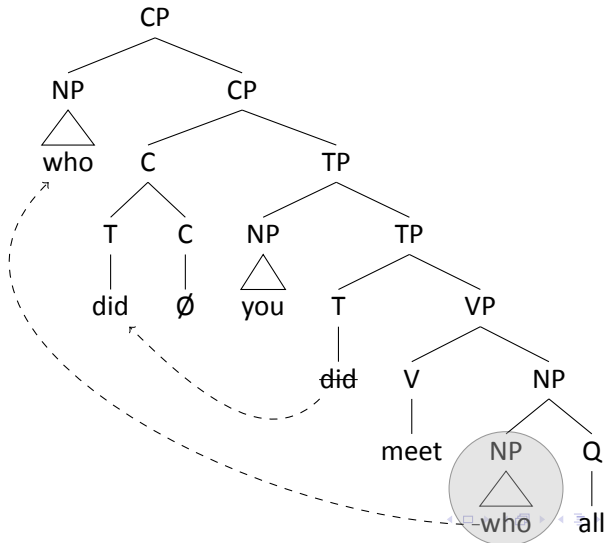
(19) West Ulster English

    a.   Who all did you meet   when you were in Derry?

    b.   Who   did you meet   all when you were in Derry?

```
                              CP
                  ┌────────────┴────────────┐
                 NP                          CP
                 △               ┌────────────┴────────────┐
                who              C                          TP
                          ┌──────┴──────┐        ┌──────────┴──────────┐
                          T             C        NP                    TP
                          │             │        △            ┌────────┴────────┐
                         did            Ø       you           T                VP
                                                             did        ┌───────┴───────┐
                                                                        V               NP
                                                                        │        ┌──────┴──────┐
                                                                      meet      NP             Q
                                                                                △              │
                                                                               who            all
```

(19) West Ulster English

    a.   Who all did you meet   when you were in Derry?

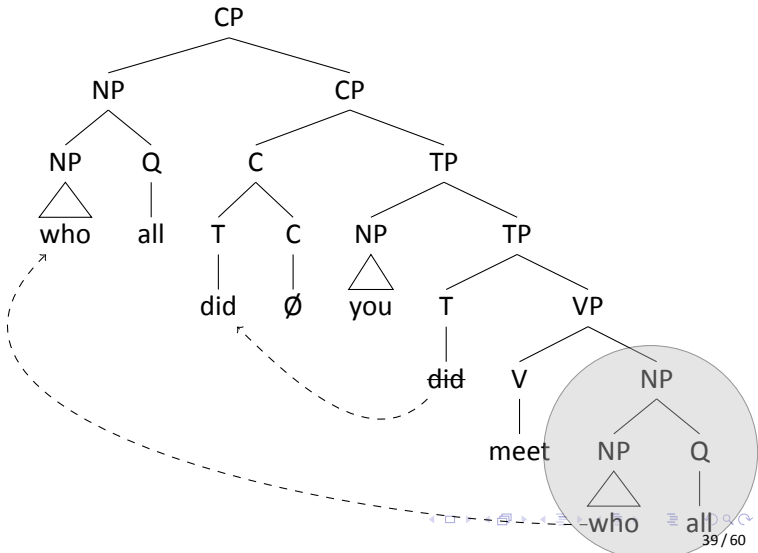   b.   Who   did you meet   all when you were in Derry?

```
                              CP
                    ┌─────────┴─────────┐
                   NP                   CP
                 ┌──┴──┐          ┌──────┴──────┐
                NP     Q          C             TP
                △      │        ┌─┴─┐      ┌─────┴─────┐
               who    all       T   C     NP          TP
                                │   │     △        ┌───┴───┐
                               did  Ø    you       T       VP
                                                   │     ┌──┴──┐
                                                  did    V    NP
                                                         │   ┌─┴─┐
                                                       meet  NP  Q
                                                             △   │
                                                            who all
```

39 / 60

(16)   The students wondered whether they should adopt this analysis.

(16)   The students wondered whether they should adopt this
        analysis.

(17)   The students wondered which analysis they should adopt.

(16) The students wondered whether they should adopt this analysis.

(17) The students wondered which analysis they should adopt.
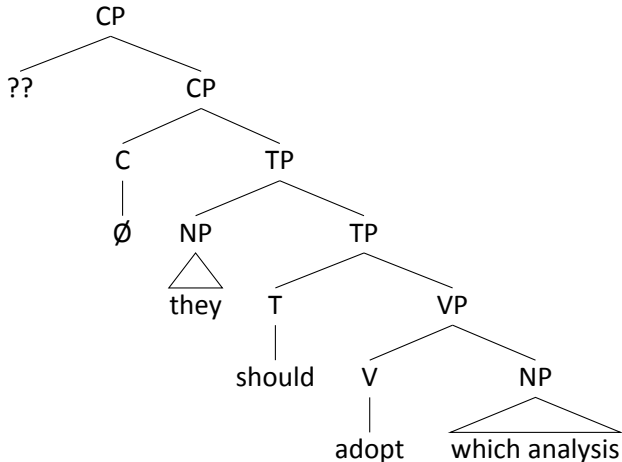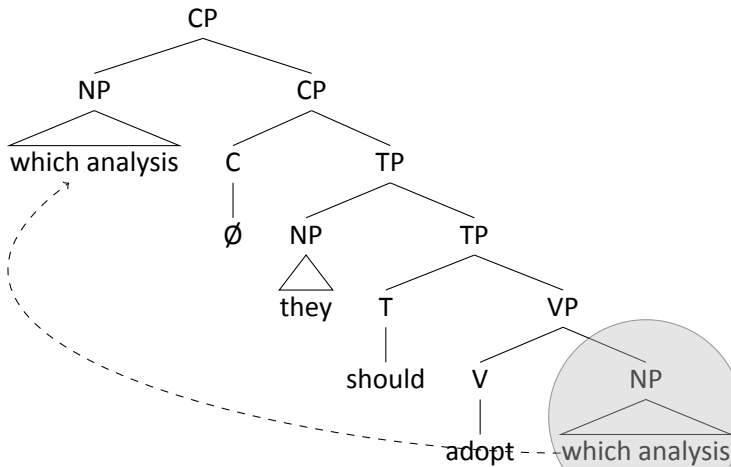
The students wondered ...

```
                        CP
              ┌─────────┴─────────┐
              C                   TP
              │           ┌───────┴───────┐
           whether       NP               TP
                         /\        ┌──────┴──────┐
                        they       T             VP
                                   │        ┌────┴────┐
                                should       V        NP
                                             │        /\
                                           adopt   this analysis
```
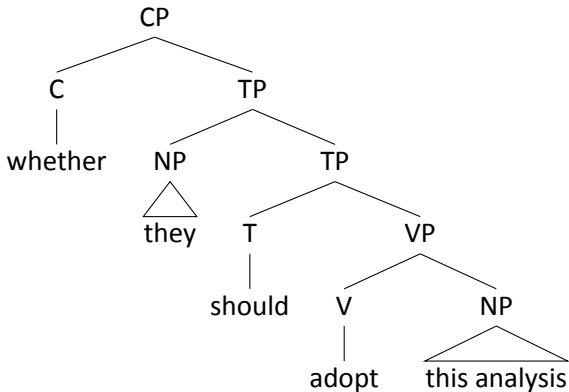
(18)   The students wondered whether they should adopt this
        analysis.

(19)   The students wondered which analysis they should adopt.

The students wondered ...

(20)   The students wondered whether they should adopt this
        analysis.

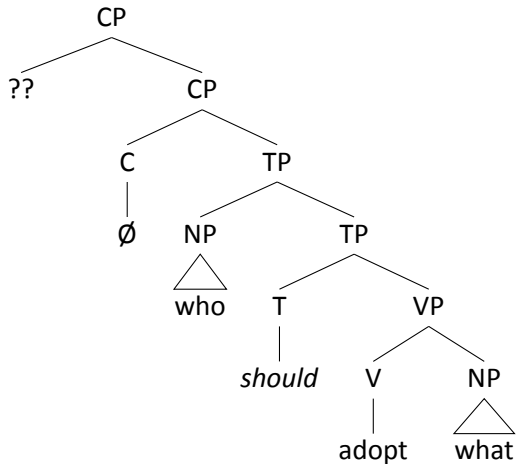(21)   The students wondered which analysis they should adopt.

The students wondered ...

Superiority

(22)   The students wondered **who** should adopt **what**.

Superiority

(22) The students wondered **who** should adopt **what**.
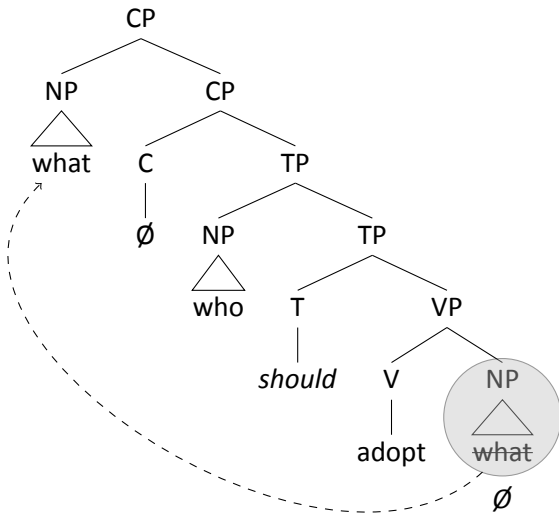
The students wondered ...

```
              CP
           /      \
        ??          CP
                 /      \
               C          TP
               |        /    \
               Ø       NP       TP
                       △      /    \
                      who    T       VP
                             |      /   \
                          should   V     NP
                                   |      △
                                 adopt   what
```
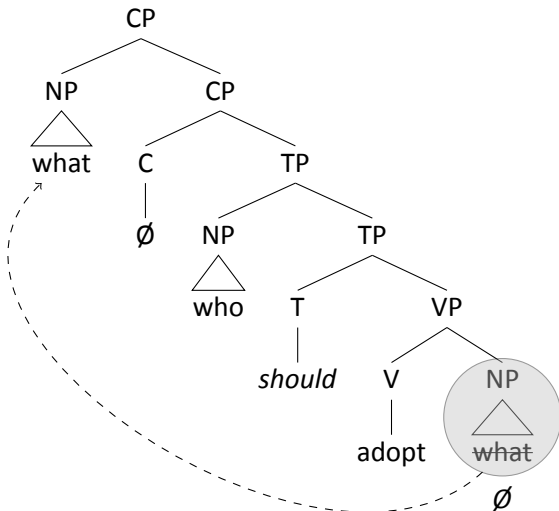
(23)   The students wondered **who** should adopt **what**.

The students wondered ...
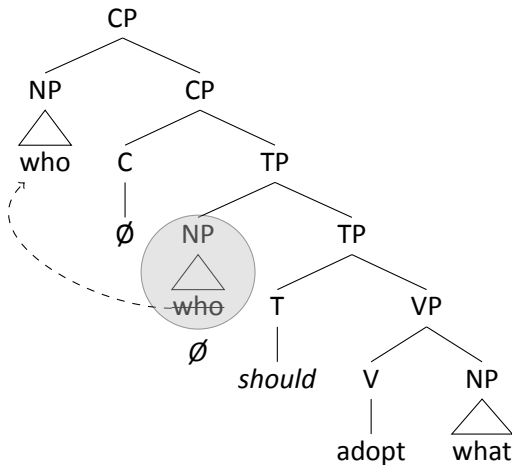
The students wondered ...

The students wondered ...
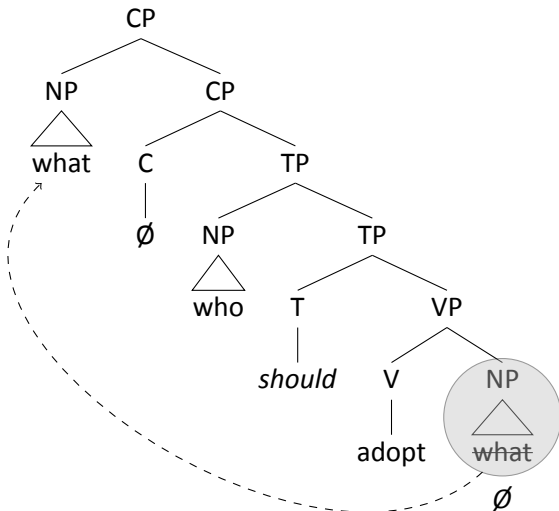
(24)   *The students wondered what who should adopt ~~what~~

The students wondered ...

CP
- NP
  - what
- CP
  - C
    - Ø
  - TP
    - NP
      - who
    - TP
      - T
        - *should*
      - VP
        - V
          - adopt
        - NP
          - ~~what~~
          - Ø

(24)   *The students wondered what who should adopt ~~what~~

(25)The students thought that they should adopt **the wrong analysis**.

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(26)What is the analysis such that ...
the students thought that they should adopt that analysis

(25) The students thought that they should adopt **the wrong analysis**.

(26) What is the analysis such that ...
   the students thought that they should adopt that analysis

(27) What analysis did the students think that they should adopt –

(25) The students thought that they should adopt **the wrong analysis**.

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    the students thought that they should adopt that analysis

(27) What analysis did the students think that they should adopt –

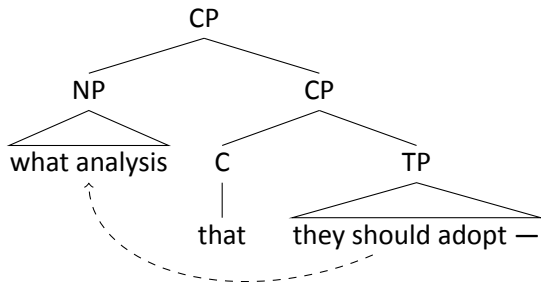(28) What analysis did the students think – that they should adopt –

(25) The students thought that they should adopt **the wrong analysis**.

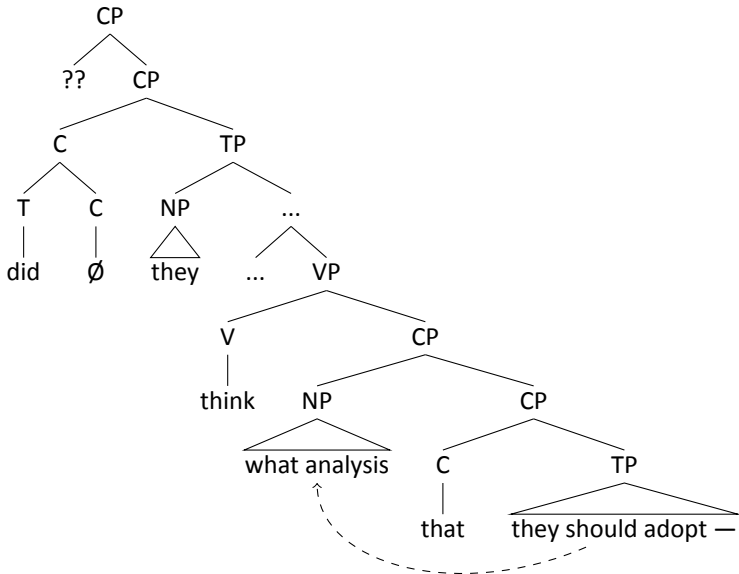(26) What is the analysis such that ...

the students thought that they should adopt that analysis

(27) What analysis did the students think that they should adopt –

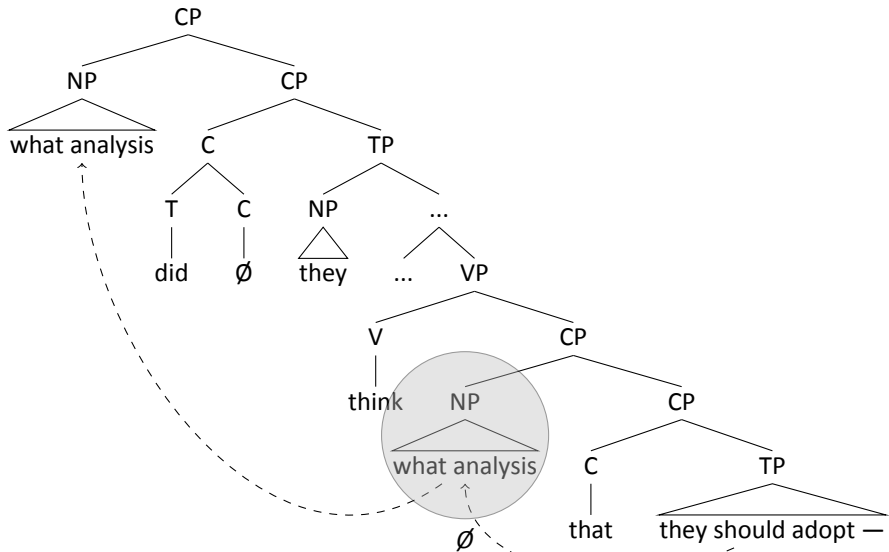(28) What analysis did the students think – that they should adopt –

(29) What analysis did the students think that they should adopt?

(30)   What analysis did the students think that they should adopt?

(31)   Who did you meet all when you were in Derry?

(31)   Who did you meet all when you were in Derry?

(32)   What all did he say that he wanted?

(31)   Who did you meet all when you were in Derry?

(32)   What all did he say that he wanted?

(33)   What all did he say that he wanted —?

(31) Who did you meet all when you were in Derry?

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(34) What all did he say — that he wanted —?

(31)   Who did you meet all when you were in Derry?

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(35)   What did he say — that he wanted — all?

(31)   Who did you meet all when you were in Derry?

(32)   What all did he say that he wanted?

(33)   What all did he say that he wanted —?

(34)   What all did he say — that he wanted —?

(35)   What did he say — that he wanted — all?

(36)   What did he say — all that he wanted —?

(37)   a.   Myslím,   že Slováci   zvolí   X?
                     I.think   that the.Slovaks will.vote.for —

(37) a.   Myslím,   že   Slováci   zvolí   X?
                  I.think   that the.Slovaks will.vote.for —
      b. Koho myslíš,   že   Slováci   zvolí   —?
          Who do.you.think that the.Slovaks will.vote.for —

(37) a.   Myslím,   že   Slováci   zvolí   X?
                    I.think   that the.Slovaks will.vote.for —

     b.   Koho myslíš,   že   Slováci   zvolí   —?
        Who   do.you.think that the.Slovaks will.vote.for —

     c.   Koho myslíš,   — že   Slováci   zvolí   —?
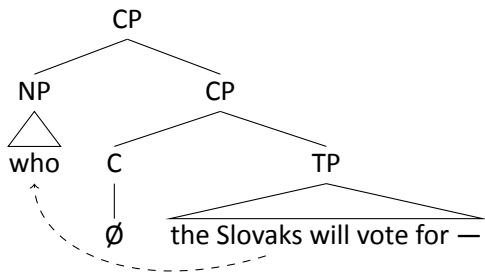   Who   do.you.think — that the.Slovaks will.vote.for —

(37)   a.   Myslím,   že   Slováci   zvolí   X?
                   I.think   that the.Slovaks will.vote.for —

       b.   Koho myslíš,   že   Slováci   zvolí   —?
            Who do.you.think that the.Slovaks will.vote.for —

       c.   Koho myslíš,   — že   Slováci   zvolí   —?
            Who do.you.think — that the.Slovaks will.vote.for —

       d.   Co   myslíš,   koho Slováci   zvolí   —?
            What do.you.think who the.Slovaks will.vote.for

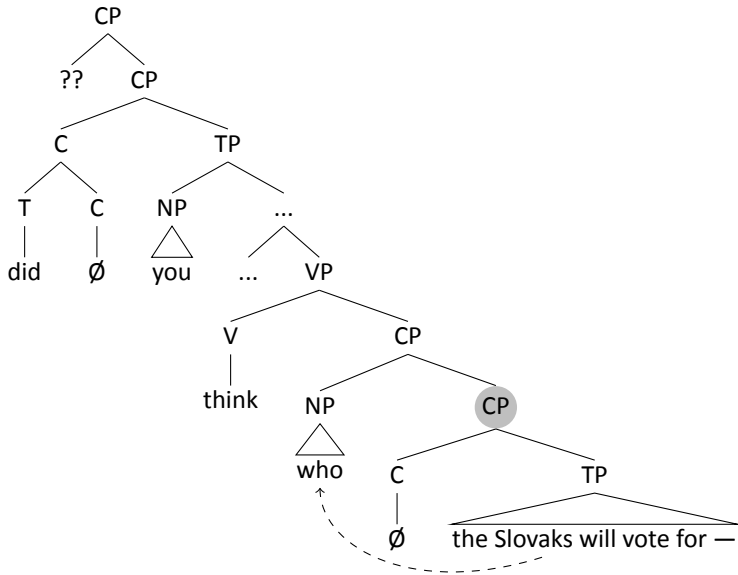(37) a.   Myslím,   že Slováci   zvolí   X?
              I.think   that the.Slovaks will.vote.for —

      b. Koho myslíš,   že Slováci   zvolí   —?
          Who do.you.think that the.Slovaks will.vote.for —

      c. Koho myslíš,   — že Slováci   zvolí   —?
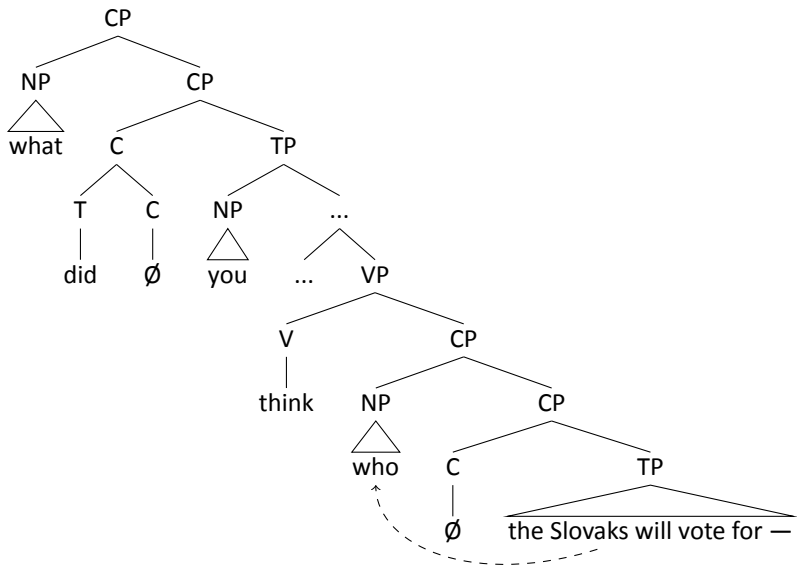   Who do.you.think — that the.Slovaks will.vote.for —

      d. Co   myslíš,   koho Slováci   zvolí   —?
          What do.you.think who the.Slovaks will.vote.for

      e. *To   myslím,   koho Slováci   zvolí   —
          That I.think   who the.Slovaks will.vote.for

```
                    CP
           ┌─────────┴─────────┐
          NP                   CP
           △            ┌───────┴───────┐
          who           C               TP
                        │          ┌─────┴──────┐
                        Ø       the Slovaks will vote for —
```

CP
                          ╱   ╲
                        ??   CP
                               ╱   ╲
                             C   TP
                          ╱   ╲   ╱   ╲
                        T   C   NP   ...
                        │   │   ╱△╲   ╱   ╲
                       did   Ø   you   ...   VP
                                              ╱   ╲
                                            V   CP
                                            │   ╱   ╲
                                          think   NP   CP
                                                    ╱△╲   ╱   ╲
                                                   who   C   TP
                                                        ↑   │   ╱   ╲
                                                        ┆   Ø   the Slovaks will vote for —
                                                        └╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌╌┘

(38) Islands
   a. There is a path between filler and gap (trace)
   b. Certain interveners are not allowed

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(39) a. The guy who ate a death cap died yesterday

(38)   Islands
        a.   There is a path between filler and gap (trace)
        b.   Certain interveners are not allowed

(39)   a.   The guy who ate a death cap died yesterday
        b.   What is the thing such that the guy who ate that thing
              died yesterday

(38)   Islands

      a.   There is a path between filler and gap (trace)

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(39)   a.   The guy who ate a death cap died yesterday

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      c.   *What did the guy who ate — die yesterday?

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  c. *What did the guy who ate — die yesterday?
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(40) You can't move a wh-word across another wh-word

(41) a. I wonder what they gave to whom.

(38) Islands
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   b. Certain interveners are not allowed

(39) a. The guy who ate a death cap died yesterday
   b. What is the thing such that the guy who ate that thing
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(38) Islands

    a. There is a path between filler and gap (trace)

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(39) a. The guy who ate a death cap died yesterday

    b. What is the thing such that the guy who ate that thing died yesterday

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(40) You can't move a wh-word across another wh-word

(41) a. I wonder what they gave to whom.

    b. Who is the person such that ... you wonder what they gave to that person.

(42) a. *Who do you wonder what they gave to —

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        b.   Certain interveners are not allowed

(39)   a.   The guy who ate a death cap died yesterday
        b.   What is the thing such that the guy who ate that thing
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