# Syntax

Pavel Caha

29 Nov 2020

► Last lecture: Dec 6

- Last lecture: Dec 6
- Test: Dec 13 multiple choice, a-b-c

- ▶ Last lecture: Dec 6
- ▶ Test: Dec 13 multiple choice, a-b-c
- ▶ There will be more options later on

## Where we are at...

wh-questions

Split phrases
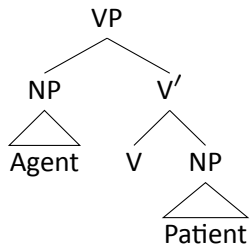
Embedded Interrogatives

Move closest

Long-distance wh-movement
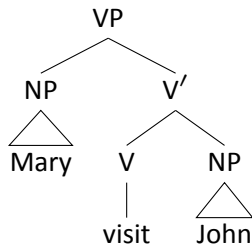
Floating quantifiers in intermediate position

Scope-marking construction

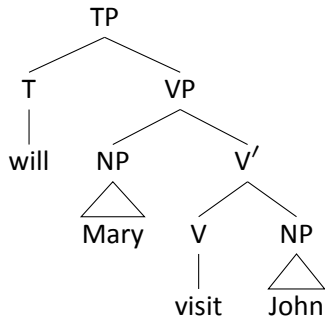Islands

# VP-internal 'subject'

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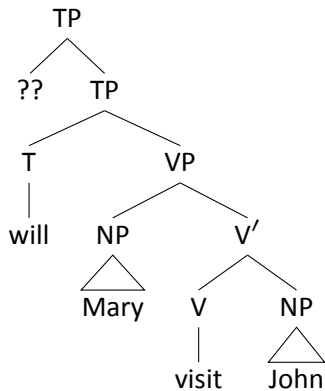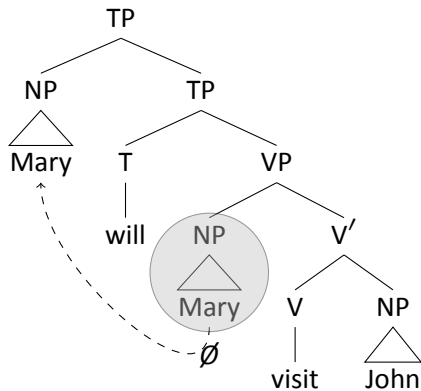
# VP-internal 'subject'

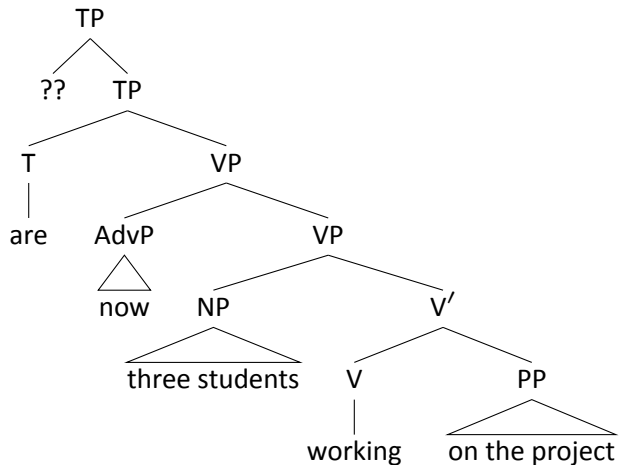# VP-internal 'subject'

# VP-internal 'subject'

# 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          TP
                  △        ┌───┴────┐
                there      T         VP
                      │         ┌────┴─────┐
                     are      AdvP          VP
                              △        ┌────┴─────┐
                            now       NP          V′
                                      △       ┌───┴────┐
                               three students  V        PP
                                          │          △
                                       working   on the project
```
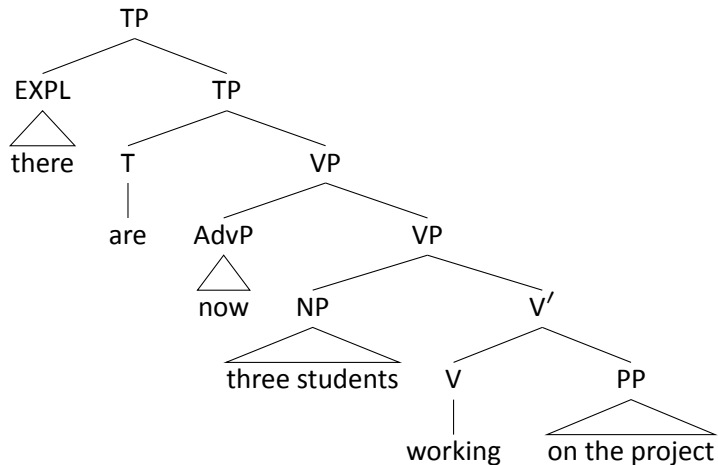
# VP-internal 'subject'
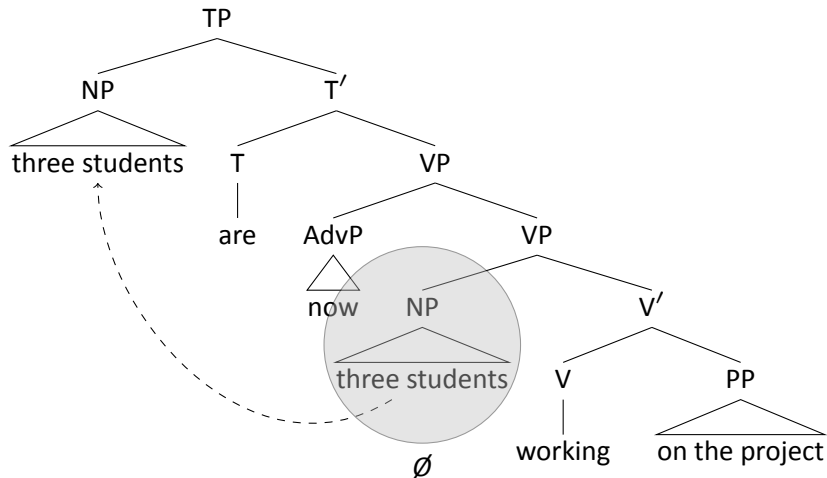
# Floating quantifiers

(2)    <span style="color:red">All astronauts</span> don't ~~all astronauts~~ speak the same language

# Floating quantifiers

(2)    <span style="color:red">All astronauts</span> don't ~~all astronauts~~ speak the same language

(3)    <span style="color:red">Astronauts</span> don't <span style="color:red">all</span> 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
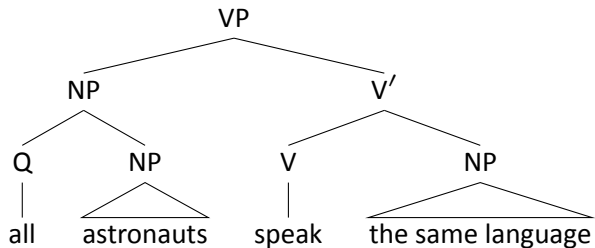
VP
├── Neg
│   └── n't
└── V′
    ├── NP
    │   ├── Q
    │   │   └── all
    │   └── NP
    │       └── astronauts
    └── V′
        ├── V
        │   └── speak
        └── NP
            └── the same language
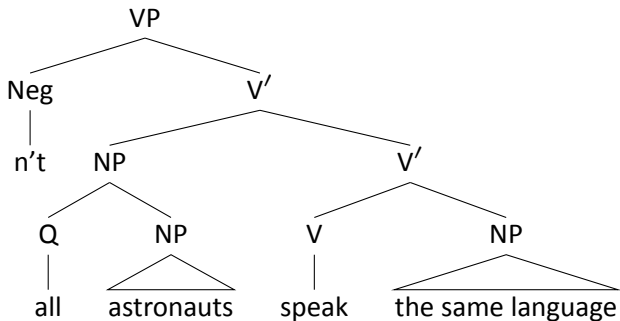
(5)   Astronauts don't all speak the same language
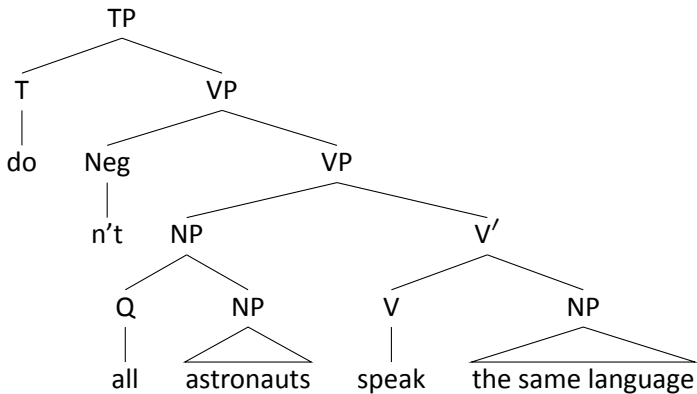
(6)    Astronauts don't all speak the same language

(7)    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
```

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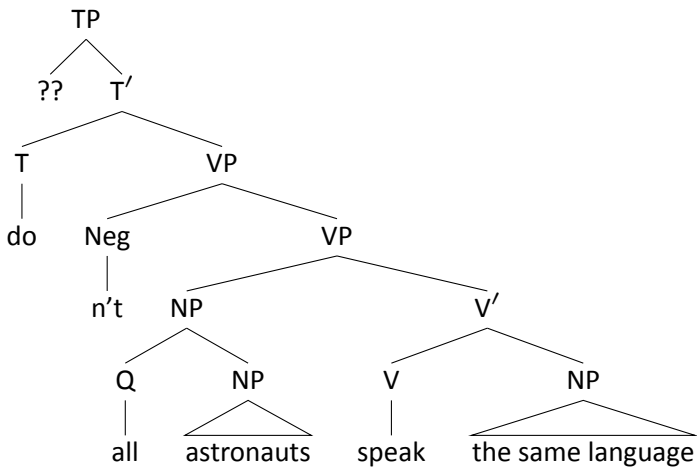
(8)    Astronauts don't all speak the same language
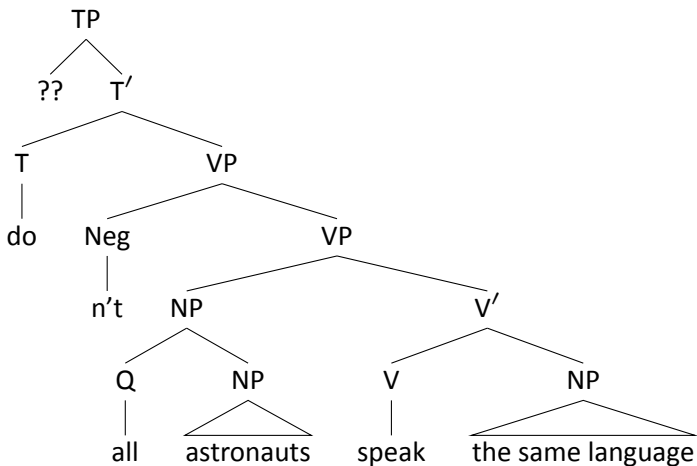
# Economy of movement

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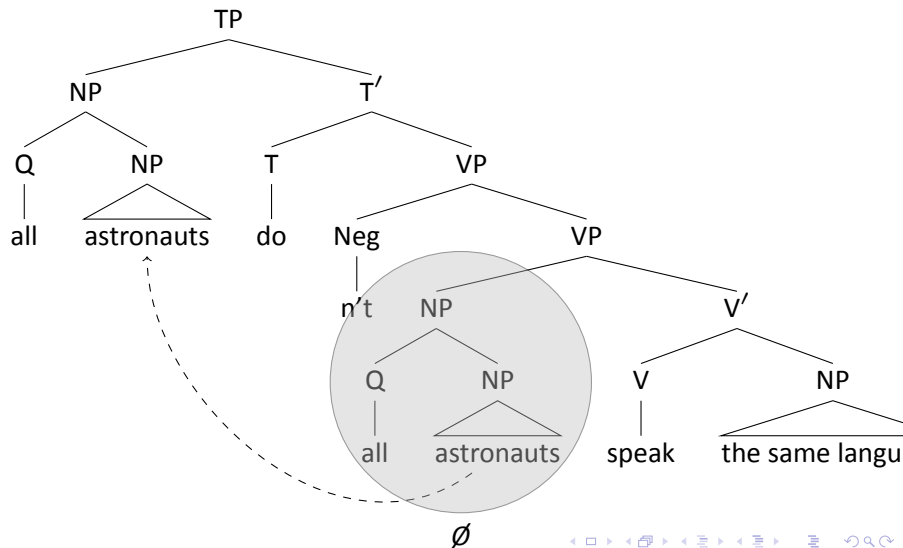
► VP-internal subject hypothesis

- VP-internal subject hypothesis
  - all arguments are part of the core event

- ▶ VP-internal subject hypothesis
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  - ▶ 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

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  - ▶ Specify intention: question, fact, condition, ...
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  - ▶ Is each meaning/function expressed by an independent marker?

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  - ▶ 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

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  - ▶ 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

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  - ▶ 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

# 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

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    - ▶ We move the highest auxiliary

# Recap

- ► 'Universal' part
    - ► Describe the event
    - ► Anchor it in time
    - ► Specify intention: question, fact, condition, ...
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    - ► 'Movement': One item – multiple functions
        - ► Express event – host an affix
        - ► Be an agent in the event – be the subject
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        - ► 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, ...
- 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
    - 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

(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?

&#9656; *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?
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▶ *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?
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▶ *wh*-word: *what, where, why, who, which, when, ... how*

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

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          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       /\
                     /  \
                  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
```
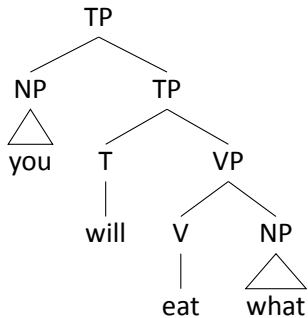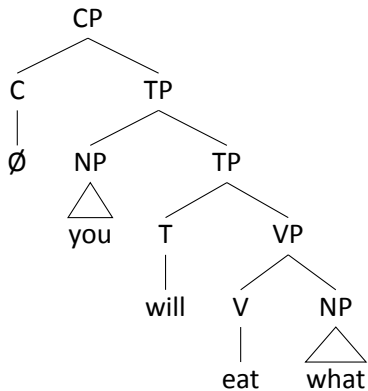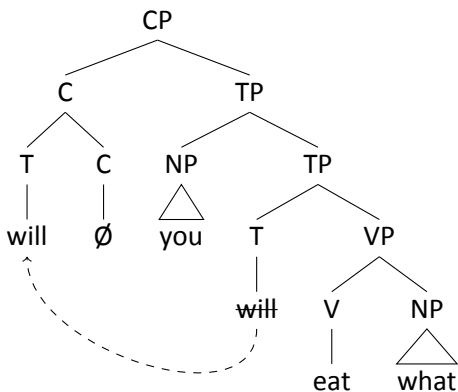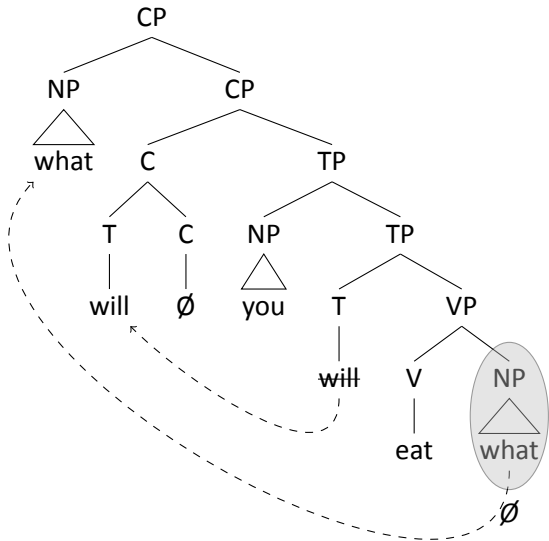
(17)    What will you eat?

(17)     What will you eat?

(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?

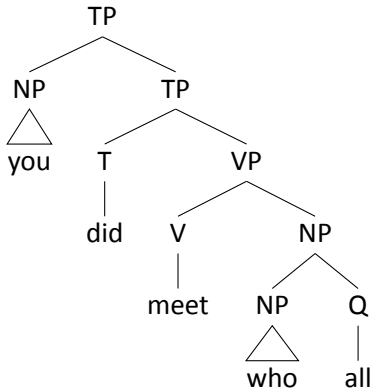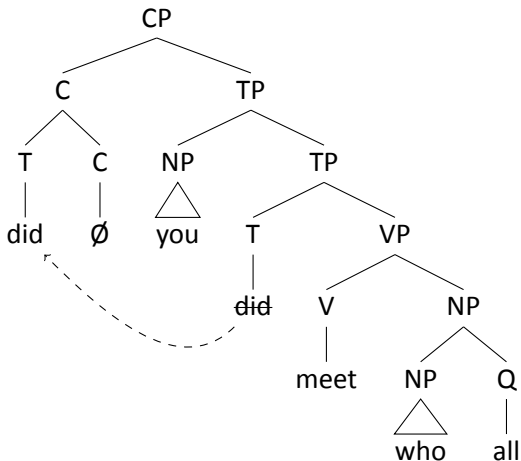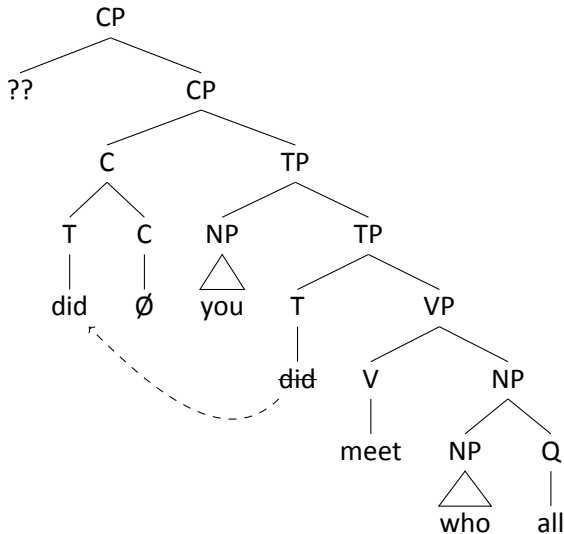b.    Who    did you meet          all when you were in Derry?

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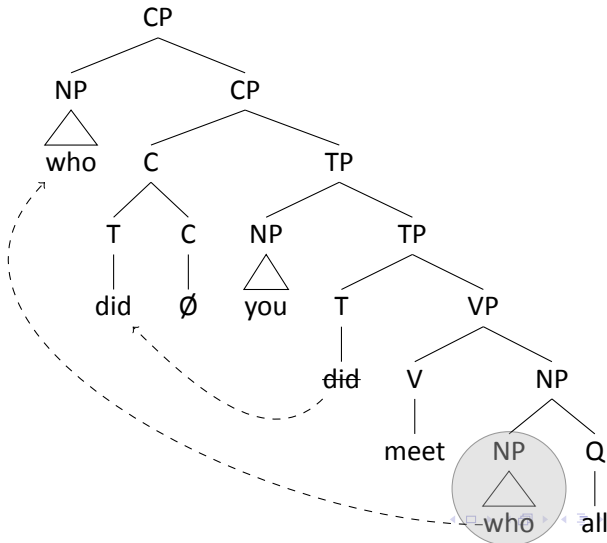
(19)     West Ulster English
   a.   Who all did you meet          when you were in Derry?
   b.   Who    did you meet         all when you were in Derry?

```
                    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?

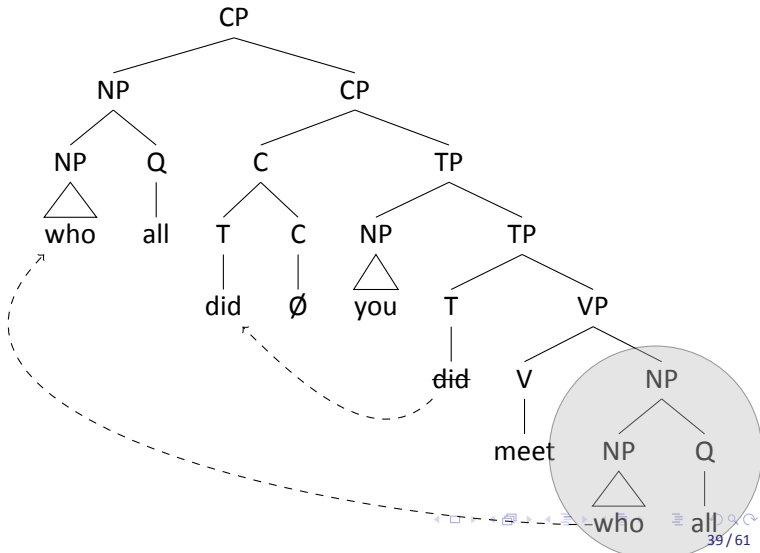    b.   Who    did you meet      all when you were in Derry?

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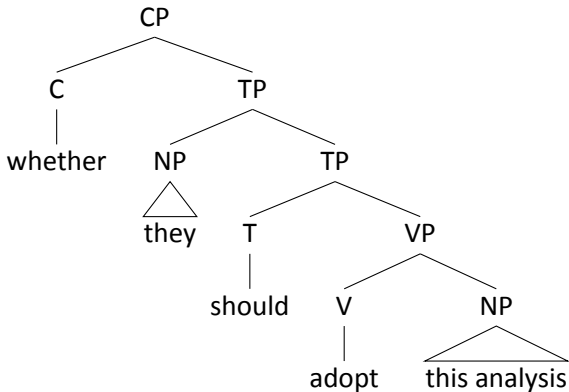
(16)   The students wondered whether they should adopt this
       analysis.

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

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

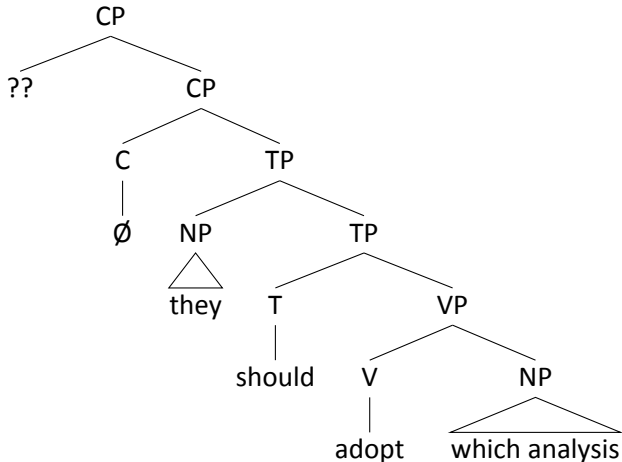(16) The students wondered whether they should adopt this analysis.

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

The students wondered ...
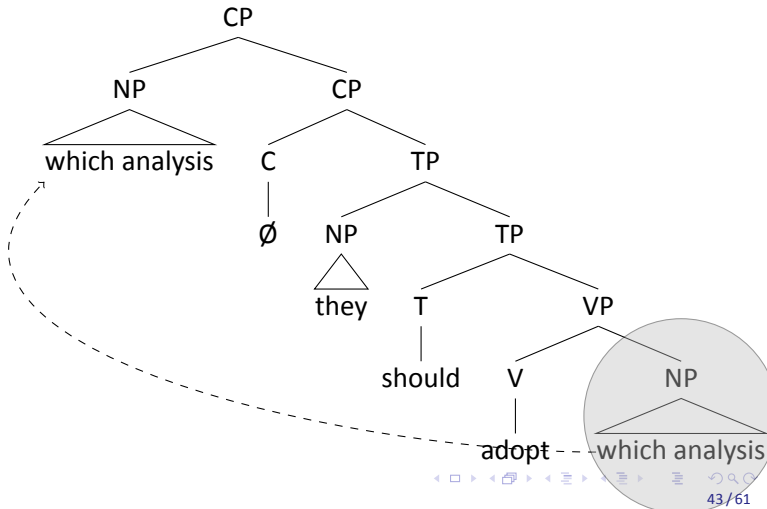
```
                    CP
             _____|_____
            C             TP
            |         _____|_____
         whether     NP          TP
                     /\      _____|_____
                    they    T           VP
                            |        ___|___
                         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 ...

```
              CP
           /      \
         ??        CP
                 /    \
                C      TP
                |    /    \
                Ø  NP      TP
                   △     /    \
                  they  T      VP
                        |    /    \
                     should  V      NP
                             |      △
                           adopt  which analysis
```

(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**.
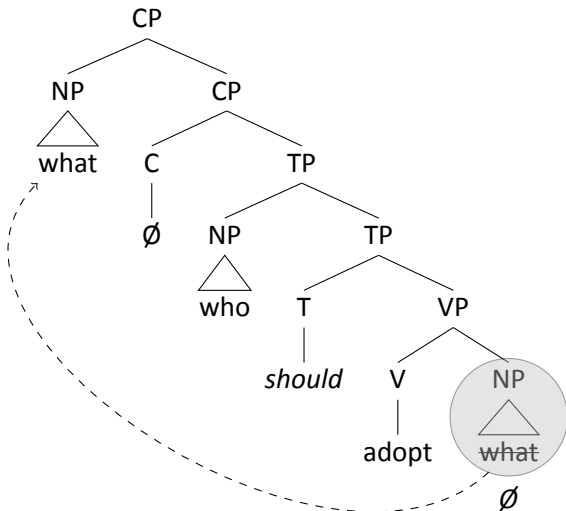
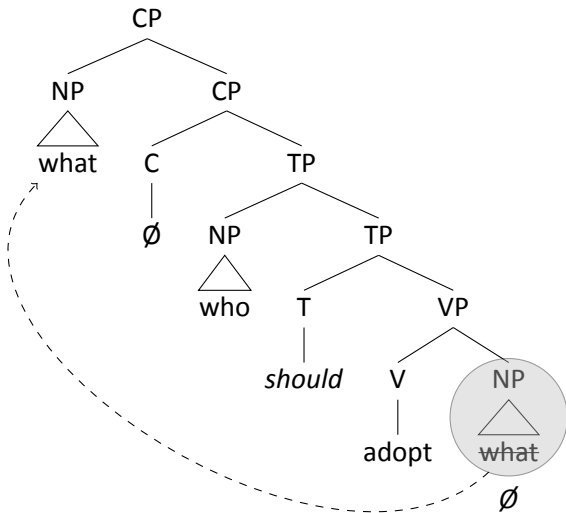The students wondered ...

```
              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 ...



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

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

(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

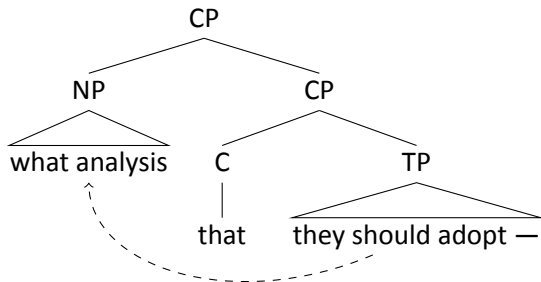(27) What analysis did the students think that they should adopt –

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

(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 –

(25) The students thought that they should adopt **the wrong analysis**.
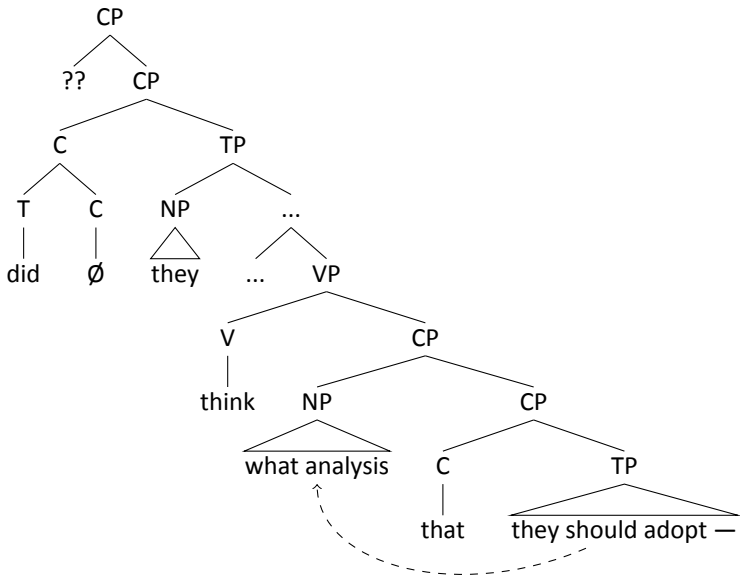
(26) What is the analysis such that ...

the students thought that they should adopt that analysis

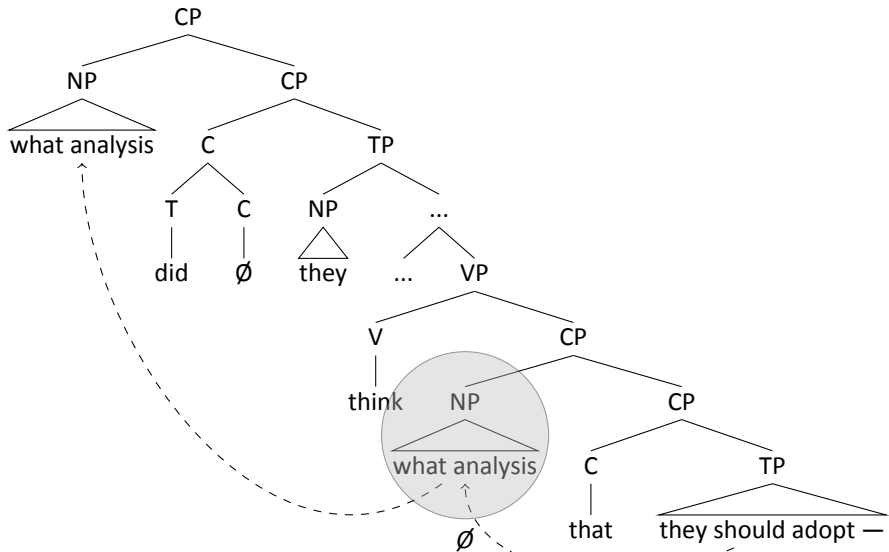(27) <span style="color:red">What analysis</span> did the students think that they should adopt <span style="color:red">–</span>

(28) <span style="color:red">What analysis</span> did the students think <span style="color:red">–</span> that they should adopt <span style="color:red">–</span>

(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?

(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 —?

(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?

(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 —?

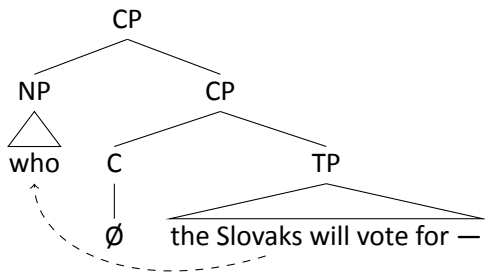(37)  a.      Myslím,      že Slováci      zvolí      X?
              I.think      that the.Slovaks will.vote.for —

(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 —

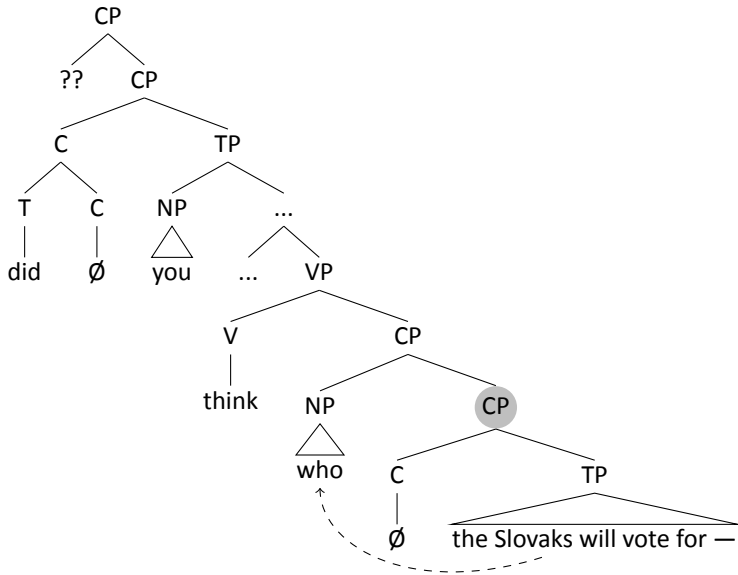(37)    a.          Myslím,      že  Slováci    zvolí       X?
                      I.think      that the.Slovaks will.vote.for —

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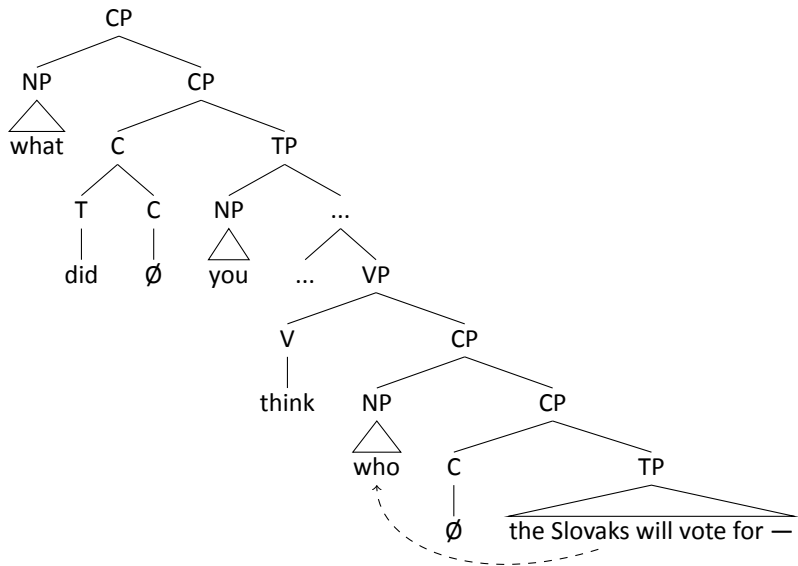       Who  do.you.think that the.Slovaks will.vote.for —

    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

△        C        TP
what

T        C        NP        ...

did        Ø        △        ...        VP
you

V        CP

think        NP        CP

△        C        TP
who

Ø        the Slovaks will vote for —

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

(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

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

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

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

(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

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

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

(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.

(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

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

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

(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 —

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

(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 —
     b.   *Who do you wonder what they gave to —