V2 and *wh*-movement

1   CP and V2

Last week:

- (Embedded) clauses have CP above TP

- The *complementizers that*, *whether*, etc. are in C

- Questions trigger movement of T; we said this was T-to-C movement

How do we know all of these processes target the same position, C?

Consider the word order of German.[1] What determines the position of the verb 'saw' *sah* below?

(1)   a.   Marie glaubt,   dass Hans den Mann <u>sah</u>.
           Marie believes that Hans the man   saw

           'Marie believes that Hans saw the man.'

      b.   Hans <u>sah</u> den Mann.
           Hans saw the man

           'Hans saw the man.'

(2)   a.   Hans sagte, er <u>sei</u> glücklich.
           Hans said   he is happy

           'Hans said he is happy.'

      b.   Hans sagte, dass er glücklich <u>ist</u>.
           Hans said   that he happy   is

           'Hans said that he is happy.'

(3)   a.   Hans fragt sich,   ob   er glücklich <u>ist</u>.
           Hans asks himself whether he happy   is

           'Hans wonders whether he is happy.'

      b.   Hans singt, weil   er glücklich <u>ist</u>.
           Hans sings because he happy   is

           'Hans sings because he is happy.'

Observation: The complementizer *dass* and the verb earlier in the sentence are in *complementary distribution*.

Idea: This too is movement to C: the verb is moved to C if and only if C is not pronounced as a separate word like *dass*.

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[1] I follow class notes of Norvin Richards's here.

(4) **Evidence from the particle verb 'turn on':**

    a. Wir machten das Licht an.
       we made   the light on

       'We turned on the light.'

    b. Marie glaubt, dass wir das Licht anmachten.
       Marie believes that we the light on-made

       'Marie believes that we turned on the light.'

There also has to be some movement to a position above C in sentences like (1a) and (2b). There is an EPP requirement on C when the verb moves there, which can be filled by

(5)   a. Hans sah den Mann gestern.
       Hans saw the man   yesterday

       'Hans saw the man yesterday'

    b. Den Mann sah Hans gestern.
       the man   saw Hans yesterday

    c. Gestern   sah Hans den Mann.
       yesterday saw Hans the man

This pattern is called *verb-second (V2)*: it looks like the verb always has to be in second position in sentences without overt C. In reality, this isn't specifically about the main verb:

(6)   a. Marie glaubt, dass wir den Mann sehen werden.
       Marie believes that we the man see   will

       'Marie believes that we will see the man.'

    b. Wir werden den Mann sehen.
       we will   the man see

       'We will see the man.'

    c. * Wir sehen den Mann werden.
         we see   the man will

(7)   a. Marie glaubt, dass wir den Mann gesehen haben.
       Marie believes that we the man seen   have

       'Marie believes that we have seen the man.'

    b. Wir haben den Mann gesehen.
       we have the man seen

       'We have seen the man.'

    c. * Wir gesehen den Mann haben.
         we seen   the man have

So V2 is T-to-C movement, not movement of V to C. V2 languages like German motivate the idea that when T moves up to a higher position, it is moving to C.

2   Questions, German, and English

If you ask a yes/no question in German, the sentence is T-initial instead of V2: (examples from **?**)

(8) <u>Hat</u> mein Freund dem   Mann gestern   das   Buch <u>gegeben</u>?
     has my   friend the.dat man   yesterday the.acc book given
     'Did my friend give the man the book yesterday?'

If you ask a question with a *wh-word*, you get V2 with the *wh*-word in initial position:

(9) a. *Was*   hat mein Freund dem   Mann gestern   gegeben?
         what.ACC has my   friend the.DAT man   yesterday given
         'What did my friend give the man yesterday?'

     b. *Wann* hat mein Freund dem   Mann das   Buch gegeben?
         when has my   friend the.DAT man   the.ACC book given
         'When did my friend give the man the book?'

What does this remind you of?

Idea: English is the same as German, but there is no T-to-C movement (or overt C) and no EPP requirement on C in declarative clauses.

(10) **Questions trigger T-to-C movement:**

      a. John <u>will</u> <u>see</u> Mary someplace.

      b. *Where* <u>will</u> John <u>see</u> Mary ___?

(11) **Questions trigger *do*-support:**

      a. John <u>saw</u> Mary someplace.

      b. *Where* <u>did</u> John <u>see</u> Mary ___?

3   *Wh*-movement and six islands

Today we'll focus on this movement of *wh*-words to Spec,CP, which we call *wh-movement*. We use *t* (*traces*) or ___ (gaps) to show where moved constituents used to be.

(12) ***Wh*-movement is unbounded:**

      a.   *What* did he say that he read ___?

      b.   *What* does she believe that he said that he read ___?

      c.   *What* are they claiming that she believes that he said that he read ___?

      d.   *What* do you think that they are claiming that she believes that he said that he read ___?

Although *wh*-movement is unbounded, it is not completely unrestricted. As observed in Háj Ross's dissertation (Ross, 1967), *wh*-movement is constrained by *islands*:

(13) **The Sentential Subject Constraint**

No NP can be extracted from within a CP subject.

* *Who* did [[that John spoke to ___] surprise you]?

(14) **The Coordinate Structure Constraint**

In a coordinate structure (conjunction or disjunction), no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct.

a. * *What* did John eat [beans and ___]?

b. * *What* did John go to class and Mary read ___?

(15) **The Left Branch Condition**

No NP which is the leftmost constituent of a larger NP can be extracte.

a. * *Whose* does John like [___ sister]?
(cf *Whose sister* does John like ___)

b. * *How expensive* did he buy [___ (of) a car]?
(cf *How expensive (of) a car* did he buy ___?)

(16) **Adjunct Islands**

No extraction out of an adjunct clause.

* *What* did you go home [because you needed to do ___]?

(17) **The Complex NP Constraint**

No extraction out of a clause embedded under a noun.

(Affects both relative clause modifiers of NPs, and CP complements of N.)

a. * *How many cities* does John have brothers [who live in ___]?
(Relative Clause: an island)

b. *How many cities* does John have brothers [living in ___]?
(Participial Clause; not an island)

c. * *What* does John believe [the report [that Mary bought ___]]?
(CP Complement of N; an island)

d. *What* does John believe [(that) Mary bought ___]?
(Finite Complement; not an island)

(18) ***Wh*-Islands**

No extraction out of an embedded question.

* *What* does John wonder [*where* Mary went to buy ___]?

4 Types of A′-movement

There are other movements besides *wh*-movements which can also be long-distance, and are also sensitive to Ross's islands. Chomsky (1977) identifies a number of such phenomena and calls them all "*wh*-movement." We now generally refer to this category of movement as *A′-movement*.

(19) Some types of A′-movement:

- Relative clauses
- *It*-clefts
- Topicalization
- Comparatives

For example, the idea for relative clauses is that *book* in (20) started in the gap position below:

(20) I bought [the book [*which* the teacher told us to read ___]].

Exercise: Check that relative clauses are sensitive to Ross's islands.

4.1 *It*-clefts

(21) a. It is this book that I really like ___.

b. It is this book that I asked Bill to get his students to read ___.

c. * It is this book that I accept the argument that John should read ___.

d. * It is this book that I wonder *who* read ___.

4.2 Topicalization vs left-dislocation

Here are two different constructions:

(22) **Topicalization:**

This book, I think you should read ___.

(23) **Left-dislocation:**

a. This book, I think you should read it.

b. As for this book, I think you should read it.

Are these the same construction? No! Left-dislocation does not look like movement, but topicalization does:

(24) **Topicalization is island-sensitive:**

a. This book, I really like ___.

b. This book, I asked Bill to get his students to read ___ .

c. * This book, I accept the argument that John should read ___ .

d. * This book, I wonder who should read ___ .

(25) **...unlike left dislocation:**

c. As for this book, I accept the argument that John should read it.

d. This book, I wonder who should read it.

4.3 Comparatives

The standards of comparatives (the descriptions after *than/as*) involve a gap, which looks maybe like some kind of ellipsis. *Wh*-words can potentially appear, though.

(26) a. John is taller than (?*what*) Mary is.

b. John is taller than (?*what*) Mary told us that Bill is.

(27) **Comparative standards are island-sensitive:**

a. Mary isn't the same as [she was ___ five years ago]

b. Mary isn't the same as [John believes [that Bill claimed [that she was ___ five years ago]]

c. * Mary isn't the same as [John believes [Bill's claim [that she was ___ five years ago]]]

d. * Mary isn't the same as [I wonder [whether she was ___ five years ago]]

(28) **The idea, following Chomsky (1977):**

a. Mary is taller than [[~~the height~~] [that Mary is *t*-~~tall~~]]

b. Mary is taller than [[~~the height~~] [that Bill told us [that Mary is *t*-~~tall~~]]]

References

Chomsky, Noam. 1977. On *wh*-movement. In *Formal syntax*, ed. Peter Culicover, Thomas Wasow, and Adrian Akmajian, 71–132. New York: Academic Press.

Ross, John Robert. 1967. Constraints on variables in syntax. Doctoral Dissertation, Massachusetts Institute of Technology.