V2 and *wh*-movement

Relevant review:

- (Embedded) clauses have CP above TP

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

- Questions in English trigger movement of T. We call this T-to-C movement.

▶ How do we know all of these processes involve the same head, C?

1 CP and V2

Consider German word order.[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.   b. Hans sagte, dass er glücklich <u>ist</u>.
         Hans said   he is   happy   Hans said   that he happy   is

         'Hans said he is happy.'   '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 <u>*complementary*</u> <u>*distribution*</u> .

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*.

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

     a. Marie glaubt, dass wir das Licht <u>anmachten</u>.
         Marie believes that we the light on-made

         'Marie believes that we turned on the light.'

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

b. Wir <u>machten</u> das Licht <u>an</u>.
   we   made   the light on
   '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-like requirement on C when the verb moves there, which can be filled by an NP, adverb, or PP (not shown).

(5)   a. Hans <u>sah</u> den Mann gestern.
           Hans saw the man   yesterday
           'Hans saw the man yesterday'

     b. Den Mann <u>sah</u> Hans gestern.
           the   man   saw Hans yesterday

     c. Gestern   <u>sah</u> 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 <u>sehen</u> <u>werden</u>.
           Marie believes that we the man   see   will
           'Marie believes that we will see the man.'

     b. Wir <u>werden</u> den Mann <u>sehen</u>.
           we   will   the man   see
           'We will see the man.'

     c. * Wir <u>sehen</u> den Mann <u>werden</u>.
             we see   the man   will

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

     b. Wir <u>haben</u> den Mann <u>gesehen</u>.
           we   have   the man   seen
           'We have seen the man.'

     c. * Wir <u>gesehen</u> den Mann <u>haben</u>.
             we seen   the man   have

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

- head-final in *v*/VP and TP;
- head-initial in CP;
- with V-to-T movement unless T is a free morpheme; T-to-C movement unless C is a free morpheme;
- with an EPP requirement on C.

2 Questions in German and English

If you ask a yes/no question in German, the sentence is T-initial instead of V2:[2]

(8) Hat mein Freund dem Mann gestern das Buch gegeben?
     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 in questions , but there is no T-to-C movement (or overt C) and no EPP requirement on C in declarative clauses in English .

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

      a. John will see Mary someplace.

      b. *Where* will John ___ see Mary ___ ?

(11) **T-to-C movement may necessitate *do*-support in English :**

      a. John saw Mary someplace.

      b. *Where* did John ___ see Mary ___ ?

3 *Wh*-movement and six islands

Today we'll focus on this movement of *wh*-words or phrases 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 ___ ?

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[2]Examples from Santorini and Kroch 2007

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 [[_{CP} 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 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/that live in ___]?
       (Relative clause: an island)

 b.   *How many cities* does John have brothers [living in ___]?
       (Participial adjunct; 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 ___]?
       (CP complement of V; not an island)

(16)   **The Left Branch Condition** :

The leftmost constituent of a larger NP cannot be extracted.

 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 ___?)

(17)   **Adjunct Islands** :

No extraction out of an adjunct clause.

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

(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* ("A-bar").

(19) Some types of A′-movement:
- Relative clauses
- *It*-clefts
- Topicalization
- Movement in comparative standards

A′-movement contrasts with *A-movement*, which is the term for the movement of NPs to Spec,TP and similar.

4.1 Relative clauses

For example, the idea for relative clauses is that *which* 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.

4.2 *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 ___ . Complex NP

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

4.3 Topicalization vs left-dislocation

(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 ___.   Complex NP island

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

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

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

    d.   This book, I wonder who should read it.   *Wh*-island

4.4 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 Mary is.

      b. John is taller than Mary told us that Bill is.

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

    a.   Mary is taller than [she was ___ five years ago]

    b.   Mary is taller than [John believes [that Bill claimed [that she was ___ five years ago]]

    c.   * Mary is taller than [John believes [Bill's claim [that she was ___ five years ago]]]

    d.   * Mary is taller than [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

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