

# 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.

## 1 CP and V2

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

Consider the word order of German.<sup>1</sup> What determines the position of the verb 'saw' *sah* below?

- (1) a. Marie glaubt, dass Hans den Mann sah.  
Marie believes that Hans the man saw  
'Marie believes that Hans saw the man.'
- b. Hans sah den Mann.  
Hans saw the man  
'Hans saw the man.'
- (2) a. Hans sagte, er sei glücklich.  
Hans said he is happy  
'Hans said he is happy.'
- b. Hans sagte, dass er glücklich ist.  
Hans said that he happy is  
'Hans said that he is happy.'
- (3) a. Hans fragt sich, ob er glücklich ist.  
Hans asks himself whether he happy is  
'Hans wonders whether he is happy.'
- b. Hans singt, weil er glücklich ist.  
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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<sup>1</sup>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 anmachen.  
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-like requirement on C when the verb moves there, which can be filled by an NP, adverb, or PP (not shown).

- (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 (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.

## 2 Questions, German, and English

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

- (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?'

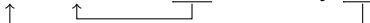
What does this remind you of?

**Idea:** English is the same as German, 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 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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<sup>2</sup>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 [[<sub>CP</sub> 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** :

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 \_\_\_?)

(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

### 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

- Chomsky, Noam. 1977. On *wh*-movement. In *Formal syntax*, ed. Peter Culicover, Thomas Wasow, and Adrian Akmajian, 71–132. New York: Academic Press.
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- Santorini, Beatrice, and Anthony Kroch. 2007. *The syntax of natural language: An online introduction using the Trees program*.