# Copies and Spell-Out

## 1   Overt vs covert movement

<u>Previously:</u> Some *wh*-in-situ (Japanese *wh-the-hell*) is sensitive to Ross's islands, even though nothing visibly moves. This motivates the idea of *covert movement*.

Two ways of thinking about overt vs covert movement:

- ***LF movement*** (May, 1977, 1985, a.o.):

  Some movements occur for interpretation but without affecting word order/pronunciation. Consider the *Y-model* of syntax: (this is a flow chart, not a tree)

  $$
  \begin{array}{c}
  \textit{start} \\
  \textit{Spell-Out} \rightarrow \quad\diagup\diagdown \\
  \textit{PF} \qquad\qquad \textit{LF}
  \end{array}
  $$

  If movement happens in the *stem*/narrow syntax, it will affect both *Logical Form (LF)* and *Phonological Form (PF)*. Most syntactic operations that we've considered happen here.

  Covert movement is often called *Logical Form* or LF movement: The idea is that it happens after Spell-Out, only affecting the LF representation.

- ***Copy theory*** (Chomsky, 1995, a.o.):

  Movement is actually copying structure in the stem/narrow syntax, and then we decide how to pronounce these *chains* later.

  (1)   a.   <u>Narrow syntax:</u> *What* did Alex read *what*?
        b.   <u>English PF:</u> *What* did Alex read ~~*what*~~?
        c.   <u>Hypothetical *wh*-in-situ PF:</u> ~~*What*~~ (did) Alex read *what*?

  Under this view, overt and covert movements differ only at PF:

    – Overt movement = pronouncing  the *highest* copy
    – Covert movement = pronouncing  the *lowest* copy

  Under this perspective, Spell-Out refers to the process of deciding, at PF, how to pronounce the result of the narrow syntax.

## 2   Multiple *wh*-fronting in Slavic

What happens if you have multiple *wh*-phrases in a question? Consider English:

(2)   Alex will give some book to some friend.

(3)   a.   *Which book* will Alex give ___ to *which friend*?

   b.   *Which friend* will Alex give *which book* to ___?

(4)   a.   * *Which book which friend* will Alex give ___ to ___?

   b.   * *Which friend which book* will Alex give ___ to ___?

English requires  <u>exactly one *wh*-phrase</u>  to move to the beginning of the question.

(5)   a.   *What* will Alex give ___ to *who(m)*?

   b.   * *Who(m)* will Alex give *what* to ___?

If there are two *wh*-words (not *wh*-phrases), the higher must move.
(Recall: This is  <u>Superiority</u> , an NP asymmetry.)

In contrast to English, Bulgarian, Serbo-Croatian, Romanian, and Russian are all *multiple wh-fronting* languages. All data here is Bulgarian, mostly from Bokovi 2002.

(6)   a.   *Koj   kakvo* e     kupil?
        who what PAST bought
        'Who bought what?'

   b.   * *Koj* e kupil *kakvo*?

   c.   * *Kakvo koj* e kupil?

(6) shows that Bulgarian requires  <u>both *wh*-phrases</u>  to move to the beginning of the question.
- (6b) shows that the lower *wh*-phrase cannot  <u>be in-situ</u> ;
- (6a) shows that the order of *wh*-phrases must  <u>obey Superiority</u> .

(7) shows that the same holds for long-distance movement.

(7)   a.   *Koj   kakvo* misli   Ivan [e     ___ obuslavlja ___]?
        who what thinks Ivan  that     conditions
        'Who does Ivan think conditions what?'

   b.   * *Koj*   misli   Ivan [e     ___ obuslavlja *kakvo*]?
        who thinks Ivan  that     conditions what
        Intended: 'Who does Ivan think conditions what?'  =(a)

But something strange happens if the two *wh*-words are identical. Only one *wh*-word moves![1]

(8)   a.   \* *Kakvo kakvo* obuslavlja?
           what  what conditions

      b.   *Kakvo* obuslavlja  *kakvo*?
           what  conditions what
           'What conditions what?'

(9)   a.   \* *Kakvo kakvo* misli   Ivan e      obuslavlja?
           what  what thinks Ivan that conditions
           Intended: 'What does Ivan think conditions what?'

      b.   *Kakvo* misli Ivan e obuslavlja *kakvo*?

Bokovi 2002 argues that this data is best explained by the Copy Theory: *wh*-phrases all move, but then their pronunciation (highest or lowest copy) is decided at PF, after everything is built. In general, the highest copies are pronounced (all overt movements) but this is blocked if the result would have two homophonous *wh*-words right next to each other.

(10)     *Kakvo* postojanno *kakvo* obuslavlja?
         what  always      what conditions
         'What always conditions what?' (Snejana Iovtcheva, p.c.)

Example (10) shows that multiple *wh*-fronting returns if an adverb can be added to break up the two identical *wh*-words.

## References

Bokovi, eljko. 2002. On multiple *wh*-fronting. *Linguistic Inquiry* 33:351–383.

Chomsky, Noam. 1995. *The minimalist program*. MIT Press.

May, Robert Carlen. 1977. The grammar of quantification. Doctoral Dissertation, Massachusetts Institute of Technology.

May, Robert Carlen. 1985. *Logical form: Its structure and derivation*. MIT Press.

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[1]Snejana Iovtcheva (p.c.) tells me that the facts in Bulgarian are more complicated than described in Bokovi 2002; in particular, examples such as (8) is grammatical for Snejana and some other Bulgarian speakers. I present judgments reported by Bokovi here.