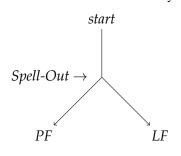# Spell-Out

## 1 Overt vs covert movement

**Last week:** 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)

  *start*

  *Spell-Out* →

  *PF*          *LF*

  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 John read *what*?

        b.   <u>English PF:</u> *What* did John read ~~*what*~~?

        c.   <u>Hypothetical *wh*-in-situ PF:</u> ~~*What*~~ (did) John read *what*?

  Under this view, overt and covert movements differ only at PF: Will the *highest* copy in the chain be pronounced (overt movement)? Or will the *lowest* copy be pronounced (covert movement)?

## 2 Multiple *wh*-fronting in Slavic

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

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

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

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

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

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

Exactly one *wh*-phrase must be moved to Spec,CP, even if there are multiple *wh*-phrases.

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

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

If there are two *wh*-words (not *wh*-phrases), the higher must move. (Recall: This is Superiority, 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 Bošković (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 both *wh*-phrases to move to the beginning of the question. (6b) shows that the lower *wh*-phrase cannot be in-situ; (6a) shows that the order of *wh*-phrases must obey Superiority. (7) shows that the same holds for long-distance movement.

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

    b. * *Koj* misli Ivan če obuslavlja *kakvo*?

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

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

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

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

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

(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.

Bošković (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.

# References

Bošković, Željko. 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*. Number 12 in Linguistic Inquiry Monographs. MIT Press.