Einführungsseminar Sprachwissenschaft B Schwerpunkt Syntax
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CLASS 11: Operators and A'-Movement

Motivation for Wh-Movement

Given that we want to **explain** the properties of language, we should now ask us **why Wh-phrases have to move** to form questions (in English). We have made use of **Checking Theory** before, arguing that a **head** and the **specifier** of its projection enjoy a particularly close relationship. This is borne out in **identical features** that must **match** to be **checked**. So: **[Wh]-feature**?

(1) a. $[_{CP}$ What$_i$ did-C $[_{IP}$ you t$_k$ $[_{VP}$ read t$_i$ yesterday]]]?
~~**[Wh]**~~ ~~**[Wh]**~~
b. $[_{CP}$ [Which book]$_i$ did-C $[_{IP}$ you t$_k$ $[_{VP}$ read t$_i$ yesterday]]]?
~~**[Wh]**~~ ~~**[Wh]**~~

Assume that the **interrogative C-head** bears a Wh-feature, [Wh], that must be checked against a linguistic expression in its specifier, the Wh-phrase (*who, what, which* N etc.). At the time of C-insertion (Merge), "naked C" has an unchecked Wh-feature. The next step in **I-to-C-movement** to make the **strong C active**. Then some element also carrying [Wh] must move to SpecCP — this is **Wh-movement**: movement of a Wh-expression to check the **specifier-feature [Wh] of C**.

If the Wh-expression is **complex**, as in (1b), we would still say that the **Wh-word** itself carries [Wh] — and it **percolates** through the entire projection (cf. *V-features on I*). This is not the easy way out, in fact it's what we must assume anyway, even for **bare Wh-phrases** (cf. *Case on DP*):

(2) a. D**$_{[Wh]}$**
what

b. DP$_{[Wh]}$
D'
D**$_{[Wh]}$**
what

c. DP$_{[Wh]}$
D'
2
D**$_{[Wh]}$** NP
@
which *book*

Economy, Pied-Piping and Uniformity

If any of the structures in (2) are correct, we would, once again, have to **move more** than we **minimally** should: if movement takes place to satisfy a feature [Wh], why not just move the **feature by itself**, or maximally the **lexical element/category** it "belongs to" (viz. **Economy**)?

An obvious answer would be: "Because it simply doesn't." But that's hardly explanatory. Instead we can appeal to **phrase structure properties**: *A chain must be uniform with regard to phrase structure status* (**Uniformity Principle**). Thus we'd get the following **ill-formed structures**:

(3) a. * $[_{CP}$ **[$_D$ what]$_i$** will$_k$ $[_{IP}$ you t$_k$ $[_{VP}$ read **[$_{DP}$ [$_{D'}$ t$_i$]]** tomorrow]]]?
b. * $[_{CP}$ **[$_D$ which]$_i$** will$_k$ $[_{IP}$ you t$_k$ $[_{VP}$ read **[$_{DP}$ [$_{D'}$ t$_i$ books]** tomorrow]]]?

The moved element is a **head** — but the type and the landing site of movement is **phrasal**: head movement cannot target a specifier position and it can't skip intervening heads. And by virtue of filling a specifier slot, the moved element must be a **maximal projection**. (Note that we'd have to say something like this for the structure in (2a) also — yes, it's a head, but it clearly is the maximal projection of a head also, regardless of what label we give it.) So it looks like **Wh-movement is phrasal**. And the **licensing conditions** differ from head movement: it can skip specifier positions along the way, thus be not as locally constrained as head movement (**HMC**).

But there is another sense in which the desired Economy notion can be explored: Move only the features **if possible** — in other words: **Move the smallest unit possible**. If it's just a feature, fine — we can't see it anyway (think of percolation from V to I). But more often than not, grammar requires that we take along stuff, feature-movement **pied-pipes** additional material. Consider:

(4) a. **[$_{D/DP}$ Who]** are you talking to **t**?
b. * **[$_{PP}$ To who]** are you talking **t**?
c. * **[$_{VP}$ Talking to who]** are you **t**?
a'. * **[$_{D/DP}$ Whom]** are you talking to **t**?
b'. **[$_{PP}$ To whom]** are you talking **t**?
c'. * **[$_{VP}$ Talking to whom]** are you **t**?

In some instances, the preposition can be **stranded**, in others it can't: (4a) vs. (4a'). This is most likely to be **stylistic variation**, where a more formal expression is subject to more formal (read: **prescriptive**) constraints, the Wh-object forms *who* (pied-pies **D/DP**) vs. *whom* (pied-pipes **PP**).

(5) a. **Whose class** do you like **t** best?
b. * **Whose** do you like **t class** best?
c. * **Who** do you like **t's class** best?

Genitive *'s* is a determiner D-element that attaches to *who* and **cannot be stranded**.

(6) DP
2
D(P) D'
who 2
D N(P)
's *class*

Operators and A'-Movement

After all this, two questions come up: **Wh-subjects** and **interrogative Operators**…

(7) a. Who read the book?
b. * Who'd/did read the book?

(8) a. $[_{CP}$ Who$_i$ Ø $[_{IP}$ t$_i$ Ø $[_{VP}$ read the book]]]?
b. $[_{IP}$ Who Ø $[_{VP}$ read the book]]?

(9) a. **Is** it raining?

(10) $[_{CP}$ XP**$_{[Wh]}$** / Op**$_{[Wh]}$** C**$_{[Wh]}$** $[_{IP}$ …]]

b. **Whether** had you rather lead mine eyes or eye your master's heels? (EME)

Homework: Exercise 11

A. 🕮 **Review** operators/A'-movement by going over chapter 6 again!
B. 🕮 Prepare next class by thoroughly reading **pp. 151-161** (**chapter 7**)!
C. ✎ **Exercise XI** in Radford: pp. 144-145, *(3a-b), (6* **or** *7a-b)* **and** *(8* **or** *9a-b)*.
D. ✎ **Exercise XII** in Radford: p. 149, pick **any three**.