

January 9, 2003

## CLASS 10: Wh-Movement

### Forming Wh-Questions

English has a pretty straightforward way to ask questions involving **interrogative pronouns**:

- (1) a. **What** did you read yesterday?
- b. **Who** has eaten already?
- c. **Where** are my books?
- d. **Why** can't you sleep?
- e. **Which student** might everybody admire?

In syntactic analysis, the boldfaced elements (the **Wh-phrases**) are understood to have **moved** — moved from a position that is connected with their **thematic origin** and interpretation, such as *what* in (1a) as the complement of the verb (cf. (2a)), *who* in (1b) as the subject of the clause etc.

Another reason to assume **Wh-movement** is that the Wh-phrase can also appear **in situ**. While the interpretation is different (as an **echo-question**), it does indicate a **base position** (cf. (2b-c)).

- (2) a. \* **What** did you read **the book** yesterday?
- b. You read **what**?
- c. Everybody might admire **which student**?

But **what position** does Wh-movement target? Given that the Wh-phrase precedes the auxiliary, which in turn precedes the subject, and given that auxiliaries can invert and move to C: **SpecCP**.

- (3) [CP **what<sub>i</sub>** *did<sub>k</sub>* [IP you *t<sub>k</sub>* [VP read *t<sub>i</sub>* yesterday ]]]?
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(Another reason why SpecCP is a plausible candidate is that Wh-expressions are **operators** and as such need to be in a **scope-taking** position — given that **the Wh-phrase licenses** an entire clause as an **interrogative clause**, think of SpecCP as the **maximum scope-taking position**.)

In other words, **English Wh-questions** are formed by **two movement operations**:

- ① head movement: **I-to-C** movement (aka “auxiliary inversion”)
- ② **XP-movement**: movement of **Wh-XP to SpecCP** (“Wh-movement”)

Movement of a Wh-expression is always **phrasal movement** (in opposition to head movement). Phrasal movement is **similar** to head movement in some aspects, but **also different** in others.

For one, both movement operations leave **traces**: an element that moves leaves its base position, merges to the target position and leaves behind a coindexed trace which needs to be licensed.

### Evidence for Wh-Movement

Let's look at the **evidence** for postulating a **trace** left behind by Wh-movement.

#### • *wanna*-contraction:

- (4) a. All students **want to** learn syntax. → All students **wanna** learn syntax.
- b. Who would **want to** learn syntax? → Who would **wanna** learn syntax?
- c. Who would you **want to** learn syntax? → \*Who would you **want to** learn syntax?

**Strict adjacency** between *want* and *to* is not observed because the **intervening trace**:

- (5) [CP **who<sub>i</sub>** would<sub>k</sub> [IP you *t<sub>k</sub>* [VP *want* [IP *t<sub>i</sub>* *to* [VP learn syntax ]]]]]  
 (cf. the echo-question *You would want who to learn syntax?*)

#### • *have*-cliticization:

- (6) Which students would you **say have** received good grades?  
 → \*Which students would you **say've** received good grades?

**Strict adjacency** between *have* and the element it cliticizes onto is not observed again (*t<sub>i</sub>*):

- (7) [CP [**which students<sub>i</sub>**]<sub>j</sub> would<sub>k</sub> [IP you *t<sub>k</sub>* [VP *say* [IP *t<sub>i</sub>* *have* [VP received good grades ]]]]]  
 (cf. the echo-question *You would say which students have received good grades?*)

- (8) a. **Who has** received good grades? → **Who's** received good grades?
- b. **Who has** the teacher graded well? → **Who's** the teacher graded well?

In these cases, **strict adjacency** between *have* and the element it cliticizes onto is observed:

- (9) a. [CP **who<sub>i</sub>** has<sub>k</sub> [IP *t<sub>i</sub>* *t<sub>k</sub>* [VP received good grades ]]]  
    a'. [IP **who** has [VP received good grades ]]  
    b. [CP **who<sub>i</sub>** has<sub>k</sub> [IP the teacher *t<sub>k</sub>* [VP graded *t<sub>i</sub>* well ]]]

There is additional support for the assumption that Wh-phrases move to **SpecCP**: in dialects, of English (e.g. Belfast) the moved Wh-expression can be **followed by an overt complementizer**.

- (10) a. I wonder [ **which dish<sub>i</sub>** *that* they picked *t<sub>i</sub>* ].  
       b. They don't know [ **which model<sub>i</sub>** *that* we have discussed *t<sub>i</sub>* ].

### Homework: Exercise 10

- A. Review head movement by going over chapter 5 again!
- B. Prepare next class by thoroughly reading the entire **chapter 6**!
- C. Exercise XI in Radford: p. 144, (2a-b), (4a-b) & (5a-b) only.