

November 16, 2004

## CLASS 11: MOVEMENT AND VARIATION

### HEAD MOVEMENT

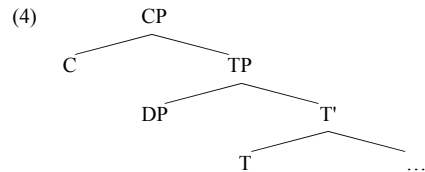
We already came across **movement of an inflectional head** (i.e. perfective or progressive auxiliary) to T (I/Infl) if (i) it's finite and (ii) T is empty:

- (1) a. John ~~may~~ *not* have been kicking the ball.  
 b. John **has** ~~not~~ **has** been kicking the ball.  
 c. John **was** ~~not~~ **was** kicking the ball.

Another type of **head movement** is **T-to-C**, as in yes/no-questions ("inversion"):

- (2) a. **May** John ~~may~~ *not* have been kicking the ball?  
 b. **Has** John ~~has~~ *not* ~~has~~ been kicking the ball?  
 c. **Was** John ~~was~~ *not* ~~was~~ kicking the ball?
- (3) a. \* **Have** John ~~may~~ *not* ~~have~~ been kicking the ball?  
 b. \* **Is/Been** John ~~has~~ *not* ~~been~~ kicking the ball?  
 c. \* **Did** John (was) *not* (was) kicking the ball?

What this tells us — given that the (grammatical) subject always sits in SpecTP (moved there from its base-generated argument position, usually SpecvP) — is that **T moves to C**:



The formation of a **complex head** is the same as in V-to-v movement:

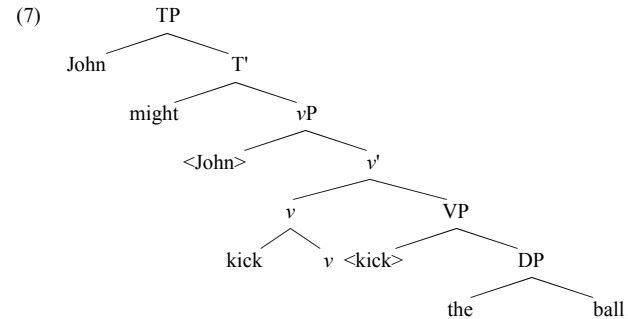
- (5) a. b.

Like v, C is **phonetically empty** when something moves in it. The evidence Radford et al. (1999) cite from **child language acquisition** is very indicative of this type of movement:

- (6) a. **Did** the kitchen light **did** flash?  
 b. **Can** its wheels **can** spin?  
 c. **Is** the steam **is** hot?  
 d. **Was** that **was** Anna?

### A(ARGUMENT)-MOVEMENT

Under the assumptions laid out in Adger (2003) and previous class handouts, **subjects are base-generated (= Merged) within vP**, the predicate's argument structure — specifically, in the specifier of vP, SpecvP. From there **it moves to SpecTP** (EPP-driven; Case/nominative).

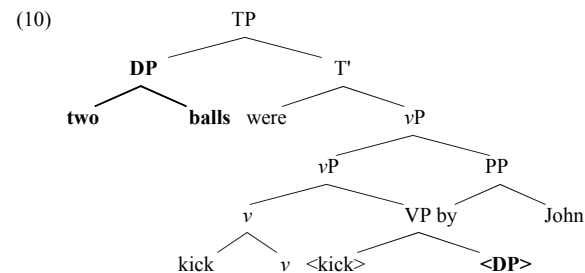


Important for us is that **finite T licenses nominative** case on the subject and the **subject satisfies the EPP** (the postulation that the specifier of T be filled) by movement to SpecTP. This type of movement is often referred to as **A-movement**, or argument movement.

Another type of A-movement is found in **passivization**, where the **direct object (THEME) is promoted to grammatical subject** (but still is the THEME) — i.e. a subject for all purposes of grammatical properties: **nominative** case, subject-verb (auxiliary) **agreement**, and the **EPP**.

- (8) a. John **has** / \***have** kicked two balls.  
 b. Two balls \***has** / **have** been kicked (by John).  
 c. \* **Ø** Has / Have been kicked two balls (by John).
- (9) a. John kissed Mary / **her**.  
 b. **She** was kissed (by John).  
 c. \* **Her** was kissed (by John).

This means that in the absence of an agent (which doesn't exist in a passive), **it is the theme-argument that moves to SpecTP** to check nominative, subject-verb agreement, and EPP:



## OPERATOR / A'-MOVEMENT

A different type of movement is that of an **operator**. Operators are elements needed for a **semantic interpretation (at LF)** of structures like questions (interrogative operator), negation (negative operator), focus (focus operator), and so on. In English, one of the most obvious type of operators is the class of **wh-expressions**: *who, what, when, where, why, how*.

- (11) a. John kicked the ball.  
 b. What did John kick \_\_\_?  
 c. \* What did John kick the ball?
- (12) a. John kicked the ball after a foul.  
 b. When did John kick the ball \_\_\_?  
 c. \* When did John kick the ball after a foul?

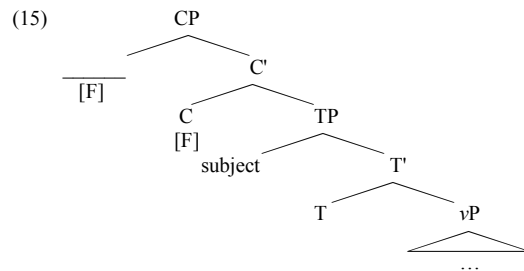
Data such as these suggest that **the wh-expression is generated (Merged) somewhere** in the course of the derivation — if it's an argument, in the respective argument position (11) and if it's an adjunct, in the respective adjunct position (12), for example — and then **moves to a designated operator position**. This operator position the **specifier of CP**, whose head (C/Comp) selects TP — the same C that also introduces embedded clauses (complementizer):

- (13) a. I know **that** John kicked the ball. [C<sub>+FIN,-Q</sub>]  
 b. I asked **if** John kicked the ball. [C<sub>+FIN,+Q</sub>]  
 c. I hope **for** John to kick the ball. [C<sub>-FIN,-Q</sub>]  
 d. I wonder **whether** Ø to kick the ball. [C<sub>-FIN,-Q</sub>]

Just as there are complementizers **selecting different types of embedded TP-complements** (±FINITE, ±QUESTION), so are there complementizers **selecting different types of matrix TPs**.

- (14) a. **The ball** Ø, John kicked \_\_. [C<sub>+FIN,-Q</sub>]  
 b. **What did** John kick \_\_\_? [C<sub>+FIN,+Q</sub>]  
 c. **No ball did** John ever kick \_\_ well.

**Wh-question formation** in English involves two steps: (i) *inversion* (T-to-C movement)  
 (ii) *wh-movement* (to SpecCP)



Here **[F]** is a **general operator feature**, such as [*wh*] / [Q] for interrogative expressions, [NEG] for negative material, [FOC] for focused elements, and so on.

## VARIATION

We have come across **cross-linguistic (or even cross-dialectal) variation** several times, for virtually all components of the grammar. Within the **Principles-and-Parameters approach** to linguistic theory, one promising (though, when looking at the details, not always clean and unproblematic) way of cutting the pie is to tie such variation to different **parameter settings**.

Recall that our working hypothesis is: **all operations (Merge, Move) must be motivated**, i.e. driven by a **formal / morphosyntactic feature**. A simple dichotomy would yield this:

- (16) **Feature Strength**  
 A formal feature is either strong or weak.  
 a. Strong features must be checked overtly.  
 b. Weak features can be checked covertly.

If we see movement in one language and absence of the same in another, the null hypothesis (given that at LF all languages look the same) would be that **when movement occurs, it is driven by a strong feature, and when it doesn't, the same feature is weak** (and movement and/or checking will take place covertly, i.e. at LF — see next class).

- (17) a. How many coconuts **did** he seel? [Standard Modern English]  
 b. Homuch kuoknat im **en** sell? [Jamaican Vernacular English]  
*how-much coconut him PAST sell*

- (i) **T moves to C** in one language (*did* in Standard Modern English),  
 (ii) but **stays in situ** in another (*en* in Jamaican Vernacular English).

In older stages of English, the **main verb also underwent movement to T** (as do Modern French or Greek, for example), whereas **in Modern English it never does**.

- (18) *Early Modern English (Shakespeare)* (19) *Standard Modern English*  
 a. My master **seeks** *not* me. a. My master **does** *not* seek me.  
 b. I **care** *not* for her. b. I **do** *not* care for her.

And **this main verb then participates in inversion**, i.e. moves to C in certain contexts:

- (20) a. [CP Ø **saw** [TP you **saw** [vP you **saw** my sister ] ] ]?  
 b. [CP Ø **spake** [TP you **spake** [ *not* [vP you **spake** these words plain ] ] ] ]?

Other parameters involve specifically:

- the **Null Subject Parameter** — languages (dis)allow *pro* as a phonetically null subject
- the **Wh-Parameter** — languages (don't) move a *wh*-phrase to SpecCP overtly
- the **Head Parameter** — languages Merge the complement to the left / right of a head

**For more** on the theoretical assumptions behind this program and/or detailed discussion, see:

- Adger, David. 2003. *Core Syntax: A Minimalist Approach*. Oxford: Oxford University Press.
- Hornstein, Norbert, Jairo Nunes, and Kleantes K. Grohmann. 2004. *Understanding Minimalism*. [To appear with Cambridge: CUP, 2005 — <http://www.punksinscience.org/Kleanthes/HNG>]