

## 24.902 Summary (October 15)

A few sections of this summary were not done in class for lack of time, but will be covered on Monday.]

### 1. Nominative case

#### (1) Nominative Case assignment

Finite I assigns nominative case to its specifier.

Apparently, non-finite I (the word *to* in English) does not assign case to its specifier. That accounts for contrasts like the following (where  $\emptyset$  is the phonologically null C that occurs in *I hope* [ $\emptyset$  to visit France]):

#### (2) Only finite I assigns case to its specifier

- I am happy [that Mary left the room].
- \*I am happy [ $\emptyset$  Mary to leave the room].

*Mary*, the subject of the embedded CP in (2a), receives nominative case from finite I. The same NP in (2b) does not receive case from *to*, and apparently does not receive case from any other element in the sentence.

### 2. Exceptional case marking

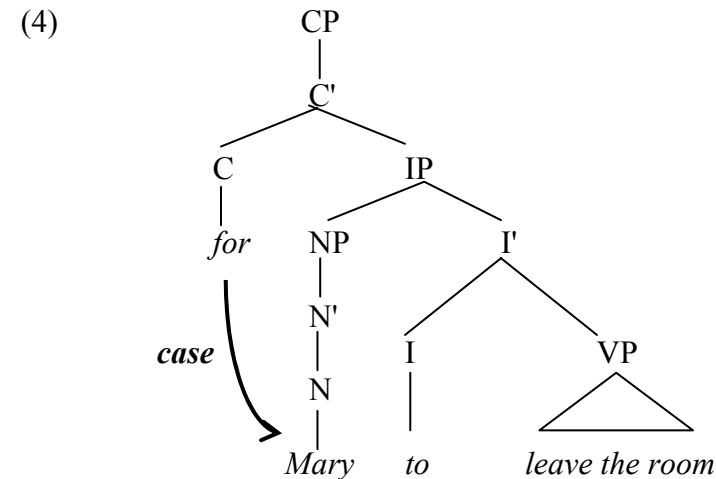
#### For-infinitives

Now compare (3) with (2b):

#### (3) I would be happy [for Mary to leave the room].

Suddenly, *Mary* is acceptable, even though it is still the specifier of a non-finite (infinitival) I. Why?

It appears that the complementizer *for* assigns accusative case to *Mary* in (3). This is surprising and (perhaps) "exceptional" because *Mary* is not the complement of *for*:



What makes us think that *for* is the case assigner to *Mary* here? Adjacency!

*Step #1:* Adverbs occur between C and the specifier of IP. Perhaps they are moved to this position, but -- whatever the reason -- there they are. We demonstrate this for finite clauses:

- a. Sue thinks [that tomorrow the class will have a party].
- b. I am happy [that tomorrow the class will have a [arty].

*Step #2:* Such adverbs may not occur between *for* and the specifier of IP in an infinitival clause:

- a. Sue arranged [for (\*tomorrow) the class to have a party].
- b. I would be happy [for (\*tomorrow) the class to have a party].

We can explain the contrast between (5) and (6) if *for* is the only possible case assigner for the subject of the embedded clauses in (6), and the adverb interferes with adjacency between *for* and that subject.

This means we would need to replace our previous accusative case assignment rule with a formulation that allows accusative case assignment to the specifier of a complement, as well as to a complement:

- (7) **Accusative case assignment (version 2)**  
 $\alpha$  assigns accusative case to  $\beta$  only if:  
 i.  $\alpha$  is V or P (not N or A);  
 ii.  $\beta$  is either the complement of  $\alpha$  or the specifier of the complement of  $\alpha$ ; and  
 iii.  $\alpha$  and  $\beta$  are adjacent.

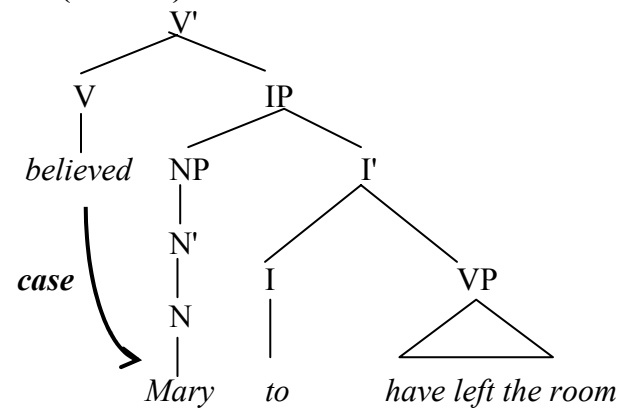
The fact that complementizer *for* is an accusative case assigner should either be built into the rule (" $\alpha$  is V, P or *for*") or else will follow from the "other life" that *for* leads as a preposition. We leave the details open. *For*, when it is a complementizer, is a case assigner.

**Bare IP complementation (ECM)**

Assignment of accusative case by V to the specifier of its sister also looks appropriate for subjects of infinitival clauses that never take *for*, e.g. infinitival complements to verbs like *believe* and *consider*. These are called **ECM infinitivals** in much of the syntax literature, where "ECM" stands for "Exceptional Case Marking". If these complements are IPs, and not CPs, case can be assigned to their subjects by the higher verb without any alteration in (7). The verbs *believe* and *consider* play the role that was played by *for* in the last section:

- (8) **ECM infinitivals**
  - a. Tom believed [<sub>IP</sub> Mary to have left the room].
  - b. Sue considers [<sub>IP</sub> Jill to be the best candidate for the job].

(9) **ECM (bare IP) infinitival**

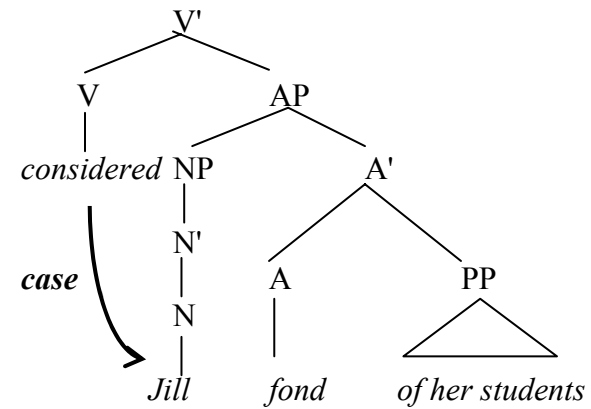


**Small clauses** [NOT DONE IN CLASS YET, BUT HERE IT IS]

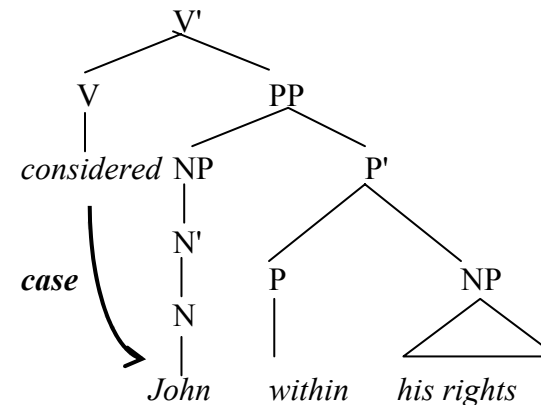
Much the same analysis is available to APs and PPs that function as clausal complements. These are often called **small clauses** (note the absence of *to be*). Here too, accusative case is assigned by V to the specifier of its sister:

- (10) **Small clauses**
  - a. Tom considered [<sub>AP</sub> Jill fond of her students].
  - b. The law considered [<sub>PP</sub> John within his rights].

(11) **AP small clause**



(12) **PP small clause**



**Non-ECM Infinitives**

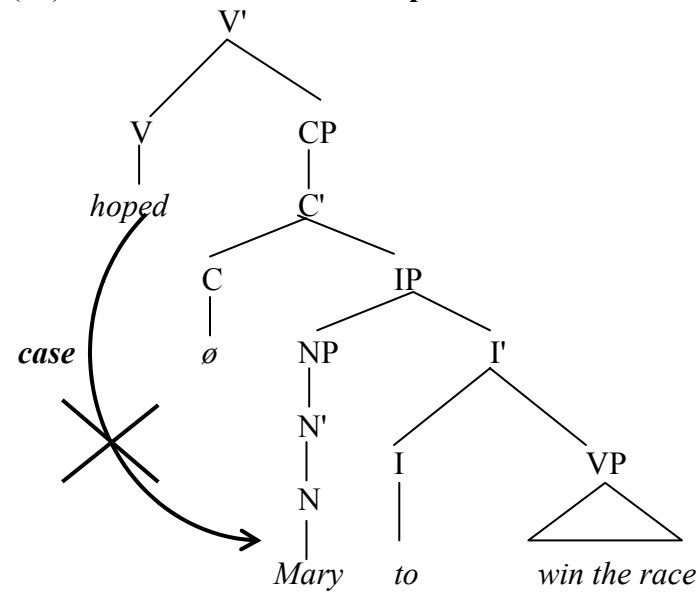
Why is (13) impossible:

- (13) a. \*Bill hoped [Mary to win the race].
- b. \*The students tried [John to be commencement speaker].

One answer might be failure of case assignment to the embedded subject, i.e. violation of the Case Filter.

This makes sense if the subject of the embedded clause in (13a-b) is *not* the specifier of the complement to V. This is true if **the complement to hope and try is a CP, not an IP**, and there is a phonologically null C in the way:

(14) **full CP infinitival complement**



Many verbs that do take infinitival complements but do not assign case to the embedded subject also subcategorize for the complementizer *for*. Thus, the hypothesis that non-ECM infinitives are CPs is plausible.

**Sidebar:** Notice that many of these verbs allow infinitival clauses whose subject is unpronounced. We represent the unpronounced subject as **PRO** and return to PRO next week or the week after:

- (15) a. Bill hoped [PRO to win the race].  
 b. Bill tried [PRO to leave the room].

**3. A Formal Interlude: Minimal c-command**

[Not done in class yet. We'll do this on Monday]

Why "complement and specifier of complement"? What do these two positions have in common?

- The complement to V and the specifier of the complement to V have in common the fact that they are *both c-commanded by V*:

(16) **c-command**

- $\alpha$  *c-commands*  $\beta$  iff
- (i) the node that immediately dominates  $\alpha$  dominates  $\beta$ ;
  - (ii)  $\alpha \neq \beta$ ; and
  - (iii)  $\alpha$  does not dominate  $\beta$ .

What rules out case assignment in (14) is not failure of c-command, however, since V does c-command the embedded subject. The key factor seems to be the fact that C is closer to V than the subject is, and C c-commands the embedded subject too. A concept relevant to this notion of "closeness" seems to be "asymmetric c-command".

- "Asymmetric c-command" is *c-command between non-sisters*. In (11), for example, A' -- the sister of the specifier of AP -- does not get in the way of case assignment by V.

(17) **asymmetric c-command**

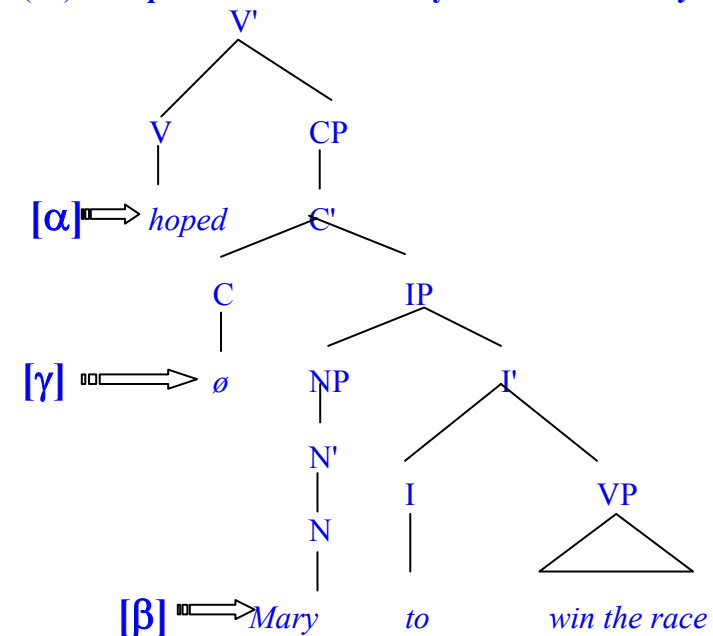
- $\alpha$  *asymmetrically c-commands*  $\beta$  iff
- (i)  $\alpha$  c-commands  $\beta$  and
  - (ii)  $\beta$  does not c-command  $\alpha$ .

- "Minimal c-command" is a relation that holds between two elements in an c-command relation when no third element *intervenes*. The notion "intervene" refers to asymmetric c-command:

(18) **minimal asymmetric c-command**

- $\alpha$  *minimally asymmetrically c-commands*  $\beta$  iff
- (i)  $\alpha$  c-commands  $\beta$  and
  - (ii) there is no  $\gamma$  such that
    - $\alpha$  asymmetrically c-commands  $\gamma$  and
    - $\gamma$  asymmetrically c-commands  $\beta$

(19) **hope does not minimally c-command Mary**



So we might restate (7) as follows:

- (20) **Accusative case assignment (version 3)**  
 $\alpha$  assigns accusative case to  $\beta$  only if:  
 i.  $\alpha$  is V or P (not N or A);  
 ii.  $\alpha$  minimally asymmetrically c-commands  $\beta$ ; and  
 iii.  $\alpha$  and  $\beta$  are adjacent.

Another name for "minimally asymmetrically c-commands" is *governs*. Thus we might replace (ii) in (20) with " $\alpha$  governs  $\beta$ ".

#### 4. Passive

In problem set 4, we looked at simple passive sentences in Japanese and English. We saw some evidence that the subject of a passive verb moved into that position from a position within VP (the direct object position, in the examples that we examined). The evidence included (1) numeral quantifier stranding in Japanese, and (2) idioms in English. There was also the obvious fact that the  $\theta$ -role (e.g. patient) assigned in the active to the direct object is assigned in the passive to the subject, and the fact that a subcategorized complement missing from the VP is found in subject position.

We now observe another fact about passive sentences. When an active verb takes both an NP and a non-NP complement, it is the NP that moves to subject position. The non-NP remains:

- (21) a. The book was put \_\_\_ [under the desk (by Tom)].  
 b. Mary was persuaded \_\_\_ [that the world was ending] (by all her friends).

The NP that moves to subject position in the passive is, of course, exactly that argument that is assigned accusative case by V in the active. It is exactly the argument that *needs* case. This leads to an immediate hypothesis about passive verbs:

- (22) **Hypothesis about passive**  
 A passive verb does not assign accusative case.

A non-NP complement will be unaffected by the difference between active and passive, but an NP complement will violate the Case Filter if it cannot move to a case position.

That is what we will suggest: *the NP in a passive sentence moves in order to receive case*.

If this is correct, then we have (at last) an argument that the higher verb assigns case to the subject of an ECM infinitival or small clause. When this verb is passivized, the embedded subject moves:<sup>1</sup>

<sup>1</sup> Movement from the subject of a VP small clause is deviant: \**Mary was seen leave*. Interestingly, in many cases, *to* is added in the passive, creating an ECM-like structure: *Mary was seen to leave*. We will not deal with this here.

- (23) a. Tom is believed [ \_\_\_ to have left the room].  
 b. Mary is considered [ \_\_\_ intelligent].

Notice also that English sentences need a specifier of IP -- i.e. need a subject. This is sometimes called the **Extended Projection Principle** [not done in class yet], for reasons that do not concern us:

- (24) **Extended Projection Principle (EPP)**  
 IP must have a specifier.

If a verb takes only a CP complement, either the CP moves, or else a dummy *it* supplies the needed subject. That is why verbs like *believe* have two passives:

- (25) a. [That the world is round] was believed \_\_\_ by the ancient Greeks.  
 b. It was believed by the ancient Greeks [that the world is round].

Verbs that take an NP complement have only one passive:

- (26) a. The book was put \_\_\_ under the table.  
 b. \*It was put the book under the table.

This is because, although (26b) satisfies the EPP, the NP *the book* violates the Case Filter.