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Constraining Sideward Movement

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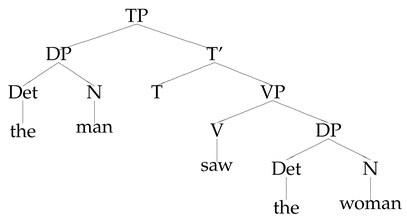
1 Sideward Movement

Sideward movement is expected to be available if (Hornstein 2001):

- Move is Copy+(Re)Merge
- There are multiple derivational "workspaces."

Multiple workspaces are needed independently to derive mixed left/right-branching structures:

(1)



2 What's it good for?

Hornstein (2001) accounts for adjunct control using sideward movement:

(2) a. John$_1$ took the cheese without t_1 asking.

b.

DERIVATION:	
[without John asking]	*Workspace 1*
[$_{v'}$ took the cheese]	*Workspace 2*
[without t_1 asking]	*Workspace 1*
[$_{vP}$ John$_1$ took the cheese]	*Workspace 2*
[$_{TP}$ John$_1$ [$_{vP}$ [$_{vP}$ t'_1 took the cheese] [without t asking]]]	

John moves out of the adjunct-to-be before it is adjoined, thus obviating the CED.

3 Merge over Move

(3) *(this can be made more precise...)*
Merge over Move: If at a stage S in a derivation it is possible to perform a Merge operation, *and if one of the available Merge operations does not block the derivation from eventually converging*, then a Merge operation must be chosen at S.

Important: There is no requirement that the competing derivations evaluated by Merge over Move have the same interpretation (though they must all be convergent).

Hornstein shows that Merge over Move explains the absence of object control into adjuncts:

(4) John$_1$ kissed Mary$_2$ without $t_{1/*2}$ asking.

In (4), it is not possible for one of the DPs to move out of the adjunct to fill the matrix object position, because at this point in the derivation another DP remains in the numeration which could be merged as the object.

4 Blocking overgeneration in adjunct control

The derivation (5b) of (5a) is ruled out by Minimality; the derivation (5c) is ruled out by Merge over Move.

(5) a. John$_1$ kissed Mary without Jane wanting t_1 to leave.

b.

DERIVATION:	
[without Jane wanting John to leave]	*Workspace 1*
[$_{v'}$ kissed Mary]	*Workspace 2*
[without Jane wanting t_1 to leave]	*Workspace 1*
[$_{vP}$ John$_1$ kissed Mary]	*Workspace 2*
⇒ **Minimality violated: "John" moves over "Jane"**	
[$_{TP}$ John$_1$ [$_{vP}$ [$_{vP}$ t'_1 kissed Mary] [without Jane wanting t_1 to leave]]]	

c.

DERIVATION:	
[wanting John to leave]	*Workspace 1*
[$_{v'}$ kissed Mary]	*Workspace 2*
[wanting t_1 to leave]	*Workspace 1*
[$_{vP}$ John$_1$ kissed Mary]	*Workspace 2*
⇒ **No Minimality violation, but MOM is violated because "Jane" could have merged.**	
[without Jane wanting t_1 to leave]	*Workspace 1*
[$_{vP}$ John$_1$ kissed Mary]	*Workspace 2*
[$_{TP}$ John$_1$ [$_{vP}$ [$_{vP}$ t'_1 kissed Mary] [without Jane wanting t_1 to leave]]]	

That is, (5c) is bad because (6) is good:

(6) Jane$_1$ kissed Mary without t_1 wanting John to leave.

5 Features must be valued, not checked

Otherwise, the landing site of an A-moved DP would be predetermined by its unchecked nominative/accusative feature.

6 Selectional restrictions not enforced in the syntax

Otherwise, we would expect to derive (7):

(7) *John dispersed [the swarm of bees]$_1$ without t_1 stinging.

If the selection restriction on *disperse* were enforced syntactically then it would be permissible to violate Merge over Move, since the alternative derivation in (8) would be ungrammatical:

(8) # [The swarm of bees]$_1$ dispersed John without t_1 stinging.

7 "Almost c-command"

Sideward movement allows for a kind of "late adjunction." After initial merger of a DP, an adjunct can be adjoined to the DP in a separate workspace. When we consider adjunct PPs, we find that DP movement is predicted to be limited to an "almost c-command" configuration:

(9) a. People$_1$ want t_1 to win.
b. People$_1$'s friends want t_1 to win.
(Bad in English, but on the face of it predicted to be OK; see Boeckx & Hornstein (2004, 2007))
c. * A friend of John$_1$ wants t_1 to win.

Again, this requires the assumption that the syntax isn't too concerned with semantic/selectional niceties. For example, the derivation in (9c) must be blocked by the availability of the derivation in (10b):

(10) a. [John$_1$ [of a friend]] wants t_1 to win.

b.

[$_{v'}$ wants John to win]	*Workspace 1*
[$_{v'}$ wants t_1 to win]	*Workspace 1*
[John$_1$ [of a friend]]$_2$	*Workspace 2*
[$_{vP}$ [John$_1$ [of a friend]]$_2$ wants t_1 to win]	*Workspace 1*
t_2	*Workspace 2*

Movement of *John* in (9c) is illicit because at the point in the derivation when it occurs, there is also the option of merging *of* with *a friend*.

Deriving almost-c-command in a principled fashion is an interesting result. The relation is known to restrict certain phenomena (e.g. variable binding), but it has previously seemed a rather *ad hoc* structural relation.

There is some evidence that the interpretative interface cares about almost-c-command:

(11) a. Everyone$_1$ loves his$_1$ mother.
b. [Everyone$_1$'s mother] loves him$_1$.
c. * [The mother of everyone$_1$] loves him$_1$.

(12) a. An occasional sailor walked by.
b. An occasional sailor's arms went up.
c. # An arm of an occasional sailor went up.
(Not acceptable under the weird scope reading available for (a) and (b).)

Since binding in (11) is probably not derived via movement, and since the weird scope reading in (12a/b) certainly is not, it seems that almost-c-command may ultimately derive from an interface requirement of some sort. Merge over Move restricts the syntax to movement dependencies that accord with this interface requirement.

References

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