



Verb-copying verb phrase topicalization

ν P movement and verb movement interact, generating two copies of the verb:

- (1) [ν P lavar o carro] o João lavou.
 wash.INF the car the João wash.PST.3SG
 'Wash the car, João did.' [Portuguese, Bastos 2001]

Under the COPY THEORY OF MOVEMENT (CTM), ν P movement creates an additional copy of the verb, which gets pronounced:

- (2) [$\sqrt{\text{lav-}}$ o carro [TP o João lav-ou [ν P [$\sqrt{\text{lav-}}$ o carro]]]

But moving phrasal material does not create multiple pronounced copies. Only one copy is pronounced.

- (3) [Entregada (*la medalla) al ganador], la medalla ha sido entregada.
 awarded.PASS (the medal) to.the winner, the medal has been awarded.PASS
 'Awarded to the winner, the medal has been.' [Spanish, Vicente 2007]

The proposal: If head movement is not modeled under the CTM, the distinction between heads and phrases falls out.

- ▶ Head movement under the CTM generates additional copies that only avoid deletion by stipulation (see Nunes 2004).
- ▶ If head movement is not generated by copying, then these stipulations are unneeded.

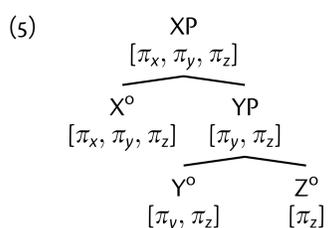
Conflation

Chomsky (2001) suggests head movement is not derived by the operation MOVE (Copy + Merge).

- ▶ I will adopt Harley's (2004) CONFLATION implementation.

Central assumptions:

- (4) a. The label of a constituent has *all* the features of the head, including a representation of the phonological matrix π .
 b. Conflation occurs when a constituent α is merged with a sister head β whose set of features is 'defective'. The features π_α are merged into π_β .
 c. For Economy reasons, the conflated π is only pronounced once, in its uppermost position.



The upshot: Morphological material associated with one head appears on another, deriving the effect of head movement.

Chain reduction: The basics

Nunes (2004) proposes that additional copies are deleted at PF to allow them to be linearized.

- ▶ Copies of the same element are not distinct.
- ▶ An element cannot both precede and follow itself:
 If α precedes β , then $\alpha \neq \beta$
- ▶ Linearizing two copies of the same element thus leads to a LINEARIZATION PARADOX.
- ▶ Additional copies must therefore be deleted to resolve this.

The mechanism for this is Chain Reduction:

- (6) CHAIN REDUCTION (CR):
 Delete the minimal number of constituents of a nontrivial chain CH that suffices for CH to be mapped into a linear order in accordance with the LCA. [Nunes 2004]

In (7), the two copies of *John* cannot both be pronounced because *John*_i would have to both precede and follow itself.

- (7) [John_i² [was [elected John_i¹]]]
- ▶ *John*¹ is deleted by CR in order to avoid the paradox.
 - ▶ *John*² is preserved on the assumption that it checks more features.

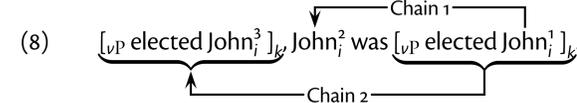
Remnant Movement

When multiple movement chains interact, things become more complicated.

- ▶ Not all copies of an element are necessarily in the same chain.
- ▶ But CR, as defined, only deletes material in the same chain.

Remnant ν P fronting, as shown in (8), introduces complications to CR (Gärtner 1998).

- ▶ Subject movement out of a ν P that fronts is possible (9a).
- ▶ Yet, the copy of *John* in the topicalized ν P cannot be pronounced (9b). Only the copy in SpecTP can be.



- (9) a. Elected, John was.
 b. * Elected John, John was.

As shown in (8), the subject copy of *John*² does not form a chain *John*³.

- ▶ Because of this, CR cannot license the deletion of *John*³ in the fronted ν P.

Nunes proposes that CR is 'BLIND'.

- ▶ To linearize *John*² and *John*¹, CR deletes the copy of *John*_i that is the sister of *elected*.
- ▶ This targets both *John*³ and *John*¹.

This addendum works for phrasal movement, but it will prove problematic when applied to syntactic head movement.

Proposal: ν P movement with Conflation

If verb movement is actually Conflation, then there is only one chain to be reduced: The ν P movement chain.

- (10) [[ν [V ...]] ; C [T⁰ [ν [V ...]]]]

The phonological features of V^0 and ν^0 conflate with T^0 . ν P will be deleted by CR.

- (11) [[ν [V ...]] C [T [ν [V ...]]]]

T^0 and the fronted ν^0 are both the uppermost heads.

- ▶ Consequently, following (4c), they should both be pronounced.
- ▶ In keeping with most work on this topic, we can assume the infinitive in the fronted ν P is either a default form of ν^0 or is used to rescue an unpronounceable verb stem.

This obviates the need to linearize any heads relative to one another.

- ▶ We only need to linearize the copies of ν P.
- ▶ Since the verbal heads are not copied, CR does not apply to them.

ν P movement with CTM

The situation with syntactic head movement is more complicated.

- ▶ There are multiple chains: The ν P movement chain, and the head movement chain(s). There are five copies of the verb.

- (12) [[V⁵+ ν [V⁴ ...]] C [V³+ ν +T [V²+ ν [V¹ ...]]]]

CR will delete the lower ν P, taking care of V^1 and V^2 .

- ▶ But V^5 and V^3 are copies of each other.
- ▶ We pronounce both of them, but this should cause a linearization paradox.

The proposed blindness of CR is also a problem:

- ▶ To linearize V^3 with V^2 , V^2 will be targeted for deletion.
- ▶ Deleting V^2 should also delete V^5 (both are sisters of ν^0).
- ▶ This solves the paradox, makes the wrong empirical prediction!

Nunes's approach to multiple copies is called MORPHOLOGICAL REANALYSIS (MR).

- ▶ Material internal to a (morphological) word can become invisible to the linearization process, and therefore, invisible to CR.
- ▶ Nunes proposes that the $V^0+\nu^0+T^0$ complex in the topicalized ν P is morphologically reanalyzed.
- ▶ V^3 is rendered invisible to CR. Therefore there is no reason to delete V^2 . Since V^2 is not targeted, V^5 is not either.

The problem: There is no independent way to know what will undergo MR.

- ▶ V-to-T movement does not normally require MR, and cannot.
- ▶ MR is only invoked here to explain why two copies are pronounced.
- ▶ But that should be the thing we want to explain!

Why non-movement does better

The main issue with the CTM approach to head movement is that it generates so many copies of the verb.

- ▶ Under the CTM approach, the linearization computation has to ignore certain copies of the verb to avoid linearization paradoxes.
- ▶ The Conflation approach sidesteps this by generating fewer copies of the verb. The paradoxes do not arise.

Under the CTM, we are forced to stipulate which copies are ignored.

- ▶ This is what MR does, but there is no principled way of determining which copies will undergo MR.
- ▶ This means that the CTM approach basically requires us to state that some copy will be ignored (and thus pronounced). It cannot predict which copies will be pronounced.

Thus, this is not just a parsimony argument! The Conflation approach is not just simpler than the CTM approach.

- ▶ There is no need to ignore any copies of the verb.
- ▶ There is no need to make use of MR.

Other non-movement approaches to head movement should behave similarly (e.g., Brody 2000 or Platzack 2013).

Excursus: Germanic

Germanic has both ν P movement and verb movement, but the languages display *do*-support instead of verb-stranding:

- (13) [Vaskede bilen] gjorde / *vaskede Jasper t_{VP}.
 wash.PST car.DEF do.PST / wash.PST Jasper
 'Wash the car, Jasper did.' [Danish, (Houser et al.)]

- ▶ This is actually a general problem for any approach to head movement, since both CTM and Conflation predict that verbs should be stranded in Germanic.

One possibility is that *do*-support may not be last-resort in these languages (Houser et al. 2011).

- ▶ Assume that an auxiliary (as opposed to movement of the main verb) may be necessary to license ν PT. This element must be in the numeration for the derivation to converge (Haddican 2007).
- ▶ Presence of *do* would block movement of the main verb to T^0 .
- ▶ But why does Germanic behave this way and not other languages?

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