

# Antecedent-Contained Deletion within NPs: QR or Copy-and-Delete?

Ron Artstein

December 16, 1997

## 1. The problem: antecedent-contained deletion within NPs

A sentence such as (1) below is an example where an antecedent-contained deletion structure is present within a PP complement of an object NP. Such a sentence can only receive the interpretation in (2), not the one in (3).

- (1) I drank a shot of every whiskey John did.
- (2) “I drank a shot of every whiskey John drank a shot of.”
- (3) #“I drank a shot of every whiskey John drank.”

Examples with a structure similar to (1) are used by Kennedy (1997) to argue for a QR analysis of antecedent-contained deletion, and against Hornstein’s (1995) analysis of antecedent-contained deletion as being the result of A-movement at LF. I will explore a third possibility, namely copying combined with free deletion of structure at LF. Such an analysis is an extension of Hornstein’s, and it allows generation of the interpretation in (2); however, it does not exclude the interpretation in (3), and in this respect it contrasts with Kennedy’s analysis.

I will first review Hornstein’s analysis and the objections to it that Kennedy raises; I will then show how the problem can be handled with copying and deletion.

## 2. Hornstein’s and Kennedy’s accounts

Structures of antecedent-contained deletion as in (4) pose a problem to theories that construct the interpretation of the deleted VP through copying of the matrix VP into the position of *did*.

- (4) John kissed everyone that Sally did.

The matrix VP in the above sentence includes the gap in the embedded clause. Thus, copying the VP into the position of the gap will result in a new gap, and the sentence will still not be interpretable.

- (5) John kissed everyone that Sally [kissed everyone that Sally did].

In order to get the desired interpretation, namely “John kissed everyone that Sally kissed”, we first have to pull the object out of the matrix clause, and then copy what remains of the VP, which now has a gap as its object. This is conveniently done by assuming that the object has raised at LF to a position higher than the VP.

(6) John [everyone that Sally did] kissed *e*.

With an LF such as (6), copying the VP will indeed lead to the desired interpretation.

(7) John [everyone that Sally kissed *e*] kissed *e*.

The problem now is motivating an LF movement operation that will yield a representation such as the one in (6).

Hornstein (1995) argues against several analyses of the movement operation as A-bar movement, and advocates the position that the movement in (6) is triggered by Case. Under Minimalist assumptions, every object DP has to raise at LF to (Spec, Agr<sub>o</sub>) in order to check its accusative Case; this movement is sufficient to pull the object outside the VP. Hornstein makes the observation that A-movement, unlike A-bar movement, is not subject to Chomsky’s Preference Principle which prefers reconstruction in chains. Hence, the entire DP can remain in the higher position at LF, and we get the configuration in (6).

A problem with Hornstein’s account is that Case-driven movement will always take the entire object DP outside the VP. Kennedy (1997) notes that in sentences such as (8), where the deleted VP is contained within a prepositional complement of N, the gap in the copied VP is not the object of the verb, but rather the object of the preposition.

(8) Beck read a report on every suspect Kollberg did.

Sentence (8) thus receives the following interpretation.

(9) Beck read a report on every suspect Kollberg read a report on.

However, Hornstein’s Case-driven movement analysis predicts that the LF of (8) should be the one in (10), which does not yield the correct interpretation after copying.

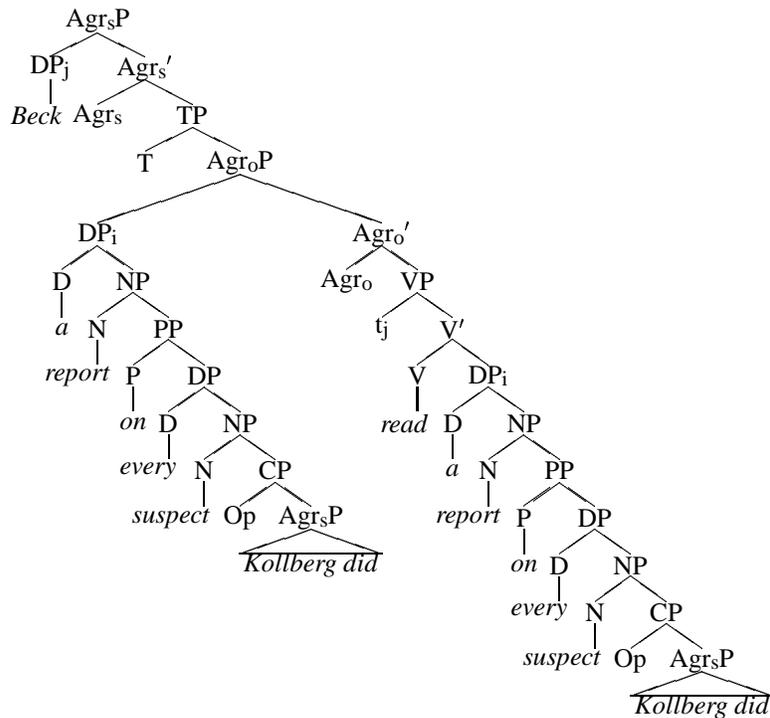
(10) Beck [a report on every suspect Kollberg did] read *e*.

So Kennedy argues that Hornstein’s analysis is incorrect, and that the LF movement operation is QR, which only pulls out the DP *every suspect Kollberg did*. As for the objections Hornstein raises against an analysis of A-bar movement, Kennedy notes that given the Minimalist assumption that it is only features that move in LF, a similar objection holds against an A-movement analysis; Kennedy saves his QR account by suggesting that in the case of QR, movement of the entire structure is necessary for interpretation, and thus for convergence at LF. Kennedy’s argumentation does not crucially rely on his operation being a form of A-bar movement, so if movement of more than features is allowed in LF in order to save a derivation from crashing, then the same principle should also license A-movement. In the next section I will show how copying and free deletion can rescue the Case-driven A-movement analysis from the empirical problems raised by Kennedy.

### 3. Copy-and-delete

Hornstein’s account does indeed make the prediction that the entire object DP should be moved out of the VP. We may still be able to account for sentence (8) above if we assume that deletion is free at LF. Recall that in Minimalism, movement is actually copying. Thus, the following tree represents that structure of (8) after movement has taken place.

(11)



Hornstein (1995: 186) makes the following distinction between deletion in A- and A-bar movement:

- (12) In an A-chain, any link can delete.  
 In an A-bar chain, deletion is subject to the Preference Principle: all things being equal, delete contentful expressions from A-bar Positions.

The condition on deletion in A-chains is used by Hornstein to give an A-movement analysis of scope phenomena. We can extend this condition, and allow not only deletion of whole links, but also free deletion *within* links. Of the two copies of DP<sub>i</sub> in (11) we can retain the elements *every suspect Kollberg did* in the higher position, and *a report on* in the lower one. This will give us an LF that can be used for copying the remaining VP into the place of *did*, deriving the desired interpretation. We can actually argue that this is the only possible derivation that would lead to a reasonable interpretation, because a reading meaning “Beck read a report on every suspect Kollberg read” can plausibly be dismissed on other grounds.

The free deletion account does predict, however, that when moving the entire DP outside the VP results in a coherent interpretation, such an interpretation should be available. This is not the case, as we have seen in examples (1)-(3), repeated below.

- (1) I drank a shot of every whiskey John did.
- (2) “I drank a shot of every whiskey John drank a shot of.”
- (3) #“I drank a shot of every whiskey John drank.”

This is also a problem for Kennedy’s analysis: so far, there is nothing in his theory that prohibits QR of the whole object DP. Addressing this issue, Kennedy appeals to work by Diesing and suggests that whether QR is possible or not depends on the nature of the quantifier: “Whereas presuppositional indefinites and strong quantifiers are interpreted as generalized quantifiers and must undergo QR, weak indefinites remain inside VP...” (p. 682). If the availability of readings depends on the quantificational nature of a DP, then an analysis in terms of QR appears to be favorable. We will examine this in the next section.

#### 4. The significance of quantifiers

Kennedy’s account predicts that if the object DP in a configuration such as (1) is one that naturally undergoes QR, then the gap in the copied VP should be in the object position. This is not the case; as Kennedy himself notes, the following sentence does not have the interpretation “Melander requested every copy of most of the tapes Larsson requested”.

- (13) \*Melander requested every copy of most of the tapes Larsson did.

Kennedy admits (footnote 19, p. 683) that the unavailability of such a reading for sentence (13) is a problem for his theory. He judges the sentence to be ungrammatical; it is my feeling, however, that the sentence *does* have an acceptable reading, namely “Melander requested every copy of most of the tapes Larsson requested every copy of”. Kennedy’s theory predicts that such a reading is blocked because the object DP is headed by the strong quantifier *every* and therefore must QR outside the matrix VP.

The difference between the copy-and-delete analysis and Kennedy’s QR analysis can thus be summarized as follows: in sentences such as (1), copy-and-delete predicts that the gap in the copied VP can be either in the position of the object DP or in the position of the complement of the preposition; QR predicts that the gap should be at the position of the DP that is eligible for QR, and at the higher position of the two when both DPs are eligible. Both theories have a problem explaining why a gap cannot ever occur at the position of the object DP. The QR analysis makes the right prediction when only the lower DP is eligible for QR (as in (1) and (8)); when both DPs are eligible, as in (13), copy-and-delete predicts that a reading with a gap in the position of the lower DP is available, while QR predicts it is not. Which prediction is correct is an empirical matter, depending on the judgment of sentence (13).

## References

- Hornstein, Norbert (1995). *Logical Form: From GB to Minimalism*. Oxford, England and Cambridge, MA: Blackwell.
- Kennedy, Christopher (1997). Antecedent-Contained Deletion and the Syntax of Quantification. *Linguistic Inquiry* 28:4, 662–688.