

Antecedent-contained deletion in negative polarity items*

Jason Merchant

This squib investigates a paradox that arises from the interaction of two well-studied domains of grammar: antecedent-contained deletion and the licensing of negative polarity items. The conflict arises from a simple set of facts that have been overlooked in the literature, given in (1).

- (1)
- a. That boy won't do a damn thing I ask him to.
 - b. Abby doesn't have to read anything we did when we were young.
 - c. Ben rarely grants an interview to a single reporter who wants him to.
 - d. Jack wasn't able to get an interview with a single person you were.
 - e. The suspect didn't answer a single question he was required to.

These examples show that antecedent-contained deletion can occur inside negative polarity items. In the next two sections, I briefly review our current understanding of antecedent-contained deletion and negative polarity items, showing how the standard analyses come into conflict when confronted with examples like those in (1). In the final section, I show that by giving up part of the assumptions underlying these orthodox analyses, we can successfully accommodate these data without losing the advantages of the standard accounts of these phenomena.

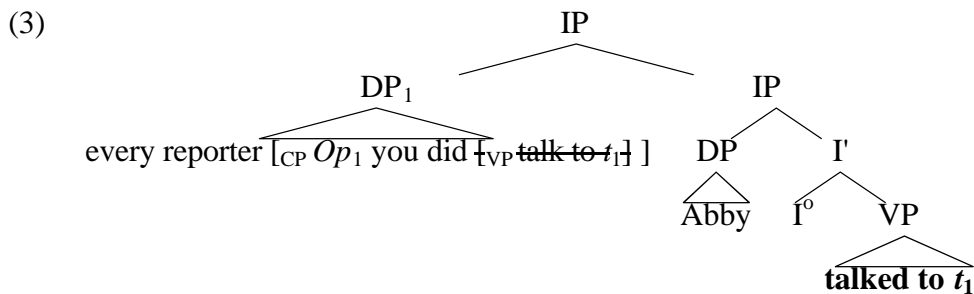
1 Antecedent-contained deletion

Antecedent-contained deletion (ACD), first discussed in Bouton 1970, and more recently in May 1985, Hornstein 1995, and Kennedy 1997, arises when an ellipsis site is properly contained within its antecedent. Typical examples with verb phrase ellipsis are given in (2).

- (2) a. Abby talked to every reporter you did.
 b. Ben is willing to see most movies Abby is.

The problem is that any attempt to resolve the VP ellipsis by identity with an antecedent VP (following, in general outline, Sag 1976a and Williams 1977) will result in infinite regress, whether this identity is established at LF or on the basis of a more abstract semantic representation (see Merchant 1999 for discussion).

May 1985 argued, following Sag and Williams, that the key to understanding why ACD in (2) is grammatical lies in the quantificational nature of the noun phrase containing the ellipsis site. Under his account, the DP containing the null VP raises out of the VP at LF via QR, adjoining to IP. This yields the LF in (3) for (2a), where the struck-through material represents the elided VP subject to licensing by the antecedent VP in bold.



The matrix VP, now containing only a trace of the QRed DP, provides an appropriate VP (structure or meaning) to license the ellipsis of the VP inside the relative clause.

Fiengo and May 1994, which we can take to represent the orthodox analysis of ACD, state explicitly that “antecedent-contained deletion must involve adjunction to S” (p. 238 and Ch. 6 passim), since they assume in general that a quantified phrase adjoined to VP will be contained in the reconstruction of that VP. This requirement, we will see below, is the locus of conflict with negative polarity items.¹

2 Negative polarity items

Negative polarity items (NPIs) form a heterogeneous class of items which occur only in certain restricted environments. As implied by the name, these environments are often characterized by negation (as discussed in Klima 1964 and Lasnik 1972). The exact semantic requirements on the different kinds of polarity items will not be my concern here (see Ladusaw 1979 and Giannakidou 1998 for semantic characterizations of the class of relevant licensing operators). Of interest to us is the general agreement in the semantic literature on these items that at least one class of them behaves like the weakest of indefinites, and undergoes no movement at LF. This class includes minimizers like those italicized in (4), and perhaps the NPI *any* in English (though not necessarily the free-choice *any*).

- (4)
- a. Ben hasn't spent *a red cent* in years.
 - b. If you hear *a damn* thing, you call me immediately!
 - c. Few linguists have heard *a single* live speaker of Ojibwe.
 - d. It's unlikely Abby will give *a damn* what you think.
 - e. Mark never cared *a whit* about anyone but himself.
 - f. I'll be surprised if he budges *an inch* on that proposal.
 - g. Do you ever see *anyone* around here at night?

The consensus on the general immobility of these items derives from the fact that they always take narrowest scope with respect to any other operators. For many purposes, in fact, they seem to behave like incorporated indefinites in languages with these, and are sometimes analyzed on a par (see Giannakidou 1998:36ff. for a proposal and references); note also that minimizers are always indefinite in form in languages like English (in general, like predicate nominals). NPIs are also similar to nonspecific indefinites in languages like German in that they do not scramble, remaining inside the VP (M. Krifka, personal communication). These facts have been analyzed by claiming that these items do not QR,

and are ‘semantically incorporated’ into the verb (see Acquaviva 1993 for a related proposal).

This scopal property relates to another point that has been the focus of much work—namely the observation that NPIs generally cannot be moved overtly out of their licensing domains, even where such movement is otherwise licit. This is illustrated by the contrasts in (5)-(7).

- (5) a. We didn’t hear a single thing.
- b. *A single thing wasn’t heard.
- c. *A single thing, we didn’t hear.
- (6) a. There wasn’t a single thing wrong with him.
- b. *A single thing wasn’t wrong with him.
- (7) a. There didn’t seem to be a single thing wrong with him.
- b. *A single thing didn’t seem to be wrong with him.

These data indicate that NPI-licensing cannot be thought of simply as a condition which must be met once at some point in the derivation (at D-structure, upon Merger, or the like), after which the item is not subject to positional restrictions. S-structure licensing conditions have proven equally problematic (see Linebarger 1980, Uribe-Etxebarria 1994, Hoeksema 1997, Giannakidou 1998, and de Swart 1998 for discussion). What *is* accepted in the literature is the following broad generalization:

- (8) A negative polarity item must be in the scope of its licenser.

Assuming that scope relations are encoded at LF, we can take ‘scope’ here to mean c-command at LF for our present purposes, as many of the above authors do. Though this is clearly a simplification in general, the main point here is most easily seen if we restrict our attention to readily identifiable licensers with relatively clear positions at LF, like sentential negation.

I will assume that negation, as either an adverb or a head, does not move at LF; there is certainly no type-theoretic reason for it to do so, and allowing negation to QR would introduce a number of spurious ambiguities (cf. the difference between *Bob doesn't often finish on time*, which only allows the reading *not > often*, and *Bob often doesn't finish on time*, which only allows *often > not*); see Ladusaw 1977, 1988 for detailed arguments against LF-movement of negation, as well as Höhle 1991:159. McCloskey 1997:207 also presents evidence from NPIs and the surface position of negation that would be mysterious if negation moves at LF.

3 ACD in NPIs

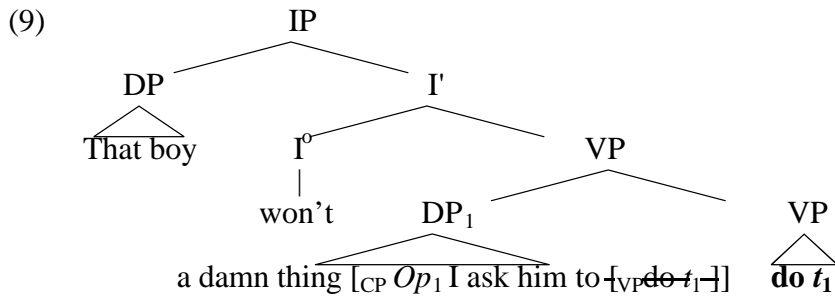
We are now in a position to see the problem raised by the data in (1), repeated here in part.

- (1) a. That boy won't do a damn thing I ask him to.
b. Abby doesn't have to read anything we did when we were young.

The conflict is simple: the standard account of ACD resolution requires that the noun phrase containing the ellipsis site QR to adjoin to IP, above negation, but the licensing condition on NPIs requires that they not move above the negation. Clearly, part or all of these premises must be modified.

We can satisfy the scope requirement on NPIs in (8) while providing a VP for ellipsis licensing if we give up both the assumption that NPIs cannot move at all and Fiengo and May's position that QR in ACD resolution targets IP. It is usually assumed that QR can target VP as an adjunction site in general (see Sag 1976a, Williams 1977, May 1985, Fiengo and May 1994:226ff.)—it is only for ACD that it has been argued that the quantificational DP containing the ellipsis site must adjoin outside the VP entirely (Kennedy 1997's recent defense of the QR approach tacitly assumes this as well).² The data presented here provide strong empirical motivation for giving up this ancillary

assumption. Assuming that VP-adjunction is licit, we generate the following LF for (1a) after QR.³



The embedded segment of the VP is now a licit antecedent for the missing VP, and licenses ellipsis of the VP in the relative clause.

This account has required us to modify the initial assumptions in two respects. First, NPIs must be able to move at least somewhat, as long as they remain within the scope of their licensers. But this move is harmless, since the scope condition in (8) will still be satisfied in structures like (9); indeed, if NPIs (and indefinites in general) are interpreted as generalized quantifiers, some QR will be necessary in any case.⁴

The second modification that is necessary is the abandonment of the assumption that QR only targets IP for adjunction of raised quantificational elements in ACD constructions.⁵ Again, such a move is harmless semantically, and is consonant with other data indicating that VP segments can provide antecedents to VP ellipsis in general.

4 Conclusion

In presenting new data on ACD and NPIs, the goal of this squib has been narrow, but important for the investigation of two domains of great interest in recent work on the nature of quantification and LF. I have shown that the fact that antecedent-contained deletion can occur within negative polarity items requires us to modify some of the standard assumptions regarding these phenomena and sheds light on both. I have argued that the present data can be simply accounted for by allowing QR, the mechanism by which ACD is

resolved, to adjoin NPIs to VP, making the lower VP segment available for resolution of the ellipsis in ACD. This account forces us to give up the notions that NPIs are immobile at LF, and that QR can only target IP in ACD constructions, but leaves intact the widely accepted approaches to NPI licensing and ACD resolution in general.

References

- ACQUAVIVA, P. 1993. The Logical Form of negation: A study of operator-variable structures in the syntax. PhD thesis, Scuola Normale Superiore, Pisa. [Published 1997 by Garland, New York.]
- AGBAYANI, B. 1996. Interpretation of noun phrases and feature licensing. In Proceedings of ConSole 4, 1-14. Leiden University.
- BAKER, C.L. 1970. Double negatives. *Linguistic Inquiry* 1: 169-186.
- BOUTON, L. 1970. Antecedent-contained proforms. In Proceedings of CLS 6, 154-167. University of Chicago.
- FIENGO, R, and R. MAY. 1994. Indices and identity. MIT Press: Cambridge.
- GIANNAKIDOU, A. 1998. Polarity sensitivity as (non)veridicality. J. Benjamins: Amsterdam.
- HOEKSEMA, J. 1997. NPIs: Triggering, scope, and c-command. Ms., University of Groningen.
- HÖHLE, T. 1991. On reconstruction and coordination. In H. Haider and K. Netter (eds.), Representation and derivation in the theory of grammar, 139-197. Kluwer: Dordrecht.
- HORNSTEIN, N. 1995. Logical Form: From GB to Minimalism. Blackwell: Oxford.
- KENNEDY, C. 1997. Antecedent-contained deletion and the syntax of quantification. *Linguistic Inquiry* 28: 662-688.
- KLIMA, E. 1964. Negation in English. In J. Fodor and J. Katz (eds.), The structure of language: Readings in the philosophy of language, 246-323. Prentice Hall.

- LADUSAW, W. 1977. The scope of some sentence adverbs and surface structure. Proceedings of NELS 8, 97-111. GLSA, Univ. of Massachusetts, Amherst.
- LADUSAW, W. 1979. Polarity sensitivity as inherent scope relations. PhD thesis, University of Texas, Austin.
- LADUSAW, W. 1988. Adverbs, negation, and QR. In *Linguistics in the morning calm 2*, Selected papers from SICOL-1986, 481-488. The Linguistic Society of Korea: Seoul.
- LASNIK, H. 1972. Analyses of negation in English. PhD thesis, MIT.
- LINEBARGER, M. 1980. The grammar of negative polarity. PhD thesis, MIT.
- MAY, R. 1985. *Logical Form*. MIT Press: Cambridge.
- McCLOSKEY, J. 1997. Subjecthood and subject position. In L. Haegeman (ed.), *Elements of grammar*, 197-235. Kluwer: Dordrecht.
- MERCHANT, J. 1999. The syntax of silence: Sluicing, islands, and identity in ellipsis. PhD thesis, University of California, Santa Cruz.
- PARK, M.-K. 1998. The ACD and NPI interaction: Towards an extraposition analysis of ACD. *Studies in Generative Grammar* 8.2: 365-402.
- QUINE, W. v. O. 1976. *The ways of paradox and other essays*. Revised and enlarged edition. Harvard University Press: Cambridge.
- SAG, I. 1976a. Deletion and Logical Form. PhD thesis, MIT.
- SAG, I. 1976b. A note on verb phrase deletion. *Linguistic Inquiry* 7: 664-671.
- de SWART, H. 1998. Licensing of negative polarity items under inverse scope. *Lingua* 105: 175-200.
- URIBE-ETXEVARRIA, M. 1994. Interface licensing conditions on negative polarity items: A theory of polarity and tense interactions. PhD thesis, University of Connecticut.
- WILDER, C. 1997. Phrasal movement in LF: *de re* readings, VP-ellipsis and binding. In Proceedings of NELS 27, 425-439. GLSA, University of Massachusetts, Amherst.

Notes

* This paper was presented at the annual Taalkunde in Nederland (TIN)-Dag, Utrecht, January 1998. Thanks to that audience, as well as Anastasia Giannakidou, Chris Kennedy, Bill Ladusaw, Jim McCloskey, and David Pesetsky for discussion, and to the reviewers for their comments. This work was funded in part by a Fulbright grant to the author.

¹ Such a requirement cannot hold in general for VP-adjuncts, as pointed out essentially in Sag 1976b, and demonstrated also by examples like (i):

(i) Abby [_{VP:1} [_{VP:2} quit] because I did ~~{quit}~~], but Ben didn't ~~{quit because I quit}~~.

In such cases, the first elided VP must take as its antecedent the lower VP segment (VP₂), while the second elided VP must be resolved by the higher VP segment VP₁.

² Agbayani 1996 reports the contrast in (i):

- (i) a. ?* Robin didn't read some books that any students did.
b. Robin didn't read some books that any students read.

Agbayani accounts for the degradation in (ia) by following Fiengo and May in assuming that the ACD in the relative clause requires the DP headed by *some* to QR to IP, taking the NPI *any students* out of its licensing domain. While I agree that (ia) is ill-formed, I have been unable to confirm the reported contrast: none of the three native speakers of English I interviewed detected any contrast, finding instead that (ib) was as degraded as (ia). What seems to be going wrong in both the examples in (i) is that *some* is a positive polarity item (see Baker 1970, Ladusaw 1979, Giannakidou 1998), whose licensing conditions are incompatible with that of the embedded NPI: while *some* must take wide scope with respect to negation, the NPI requires narrow scope (see e.g. the discussion in Ladusaw 1979:164 of his example (19)). In fact, acceptable examples structurally identical to Agbayani's can be constructed, and were judged grammatical by the three informants who rejected (ia,b):

- (ii) a. Robin didn't read any books that any teacher {recommended / read / did /

told her to}.

- b. Robin wouldn't review any article that any American wrote.

The grammaticality of the examples in (ii), with and without ACD, shows that the effects discussed by Agbayani (also with respect to the determiner *two* in addition to *some*) is independent of the presence of ellipsis (cf. the similar remarks on the influence of relative clauses in Fiengo and May 1994:242 fn 6). This difficulty carries over also to the analysis presented by Park 1998 on the basis of similar data.

³ Clearly, any kind of movement of the DP to a position outside VP but under negation will solve the problem described here (such as A-movement to SpecAgr_oP, as in Hornstein 1995; but see Kennedy 1997 for problems with such accounts).

⁴ The same point is made by (ia), which is unambiguous, having only the reading given in (ib).

- (i) a. Ben didn't read every book Abby did.
b. $\neg x[(\mathbf{book}(x) \ \mathbf{read}(\mathbf{abby}, x)) \ \mathbf{read}(\mathbf{ben}, x)]$

Again, if negation is not subject to reordering operations at LF, this reading requires that the object DP QR to adjoin to VP below negation. (Why the \neg reading is unavailable here is an independent issue; see Quine 1976:46 for this observation.)

⁵ This assumption is also abandoned for independent reasons by Wilder 1997, who shows that 'long' QR can target an embedding VP in ACD, as in (i):

- (i) John thought more trees had died than Mary did [~~think x many trees had died~~]

Wilder also assumes that a segment of a VP can resolve the ellipsis in ACD, as I argue here.