On the Structure of Antecedent-Contained Deletion in English
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Antecedent-Contained Deletion (ACD) is a special case of VP ellipsis, in that the ellipsis site is contained in an argument of the antecedent VP at surface structure.   This is shown in (2), and the problem ACD raises can be seen from the contrast between (1) and (2).

(1)　a.　　John likes Mary, and I do, too.
　　　b.　　John [$_{VP}$ likes Mary], and I do [$_{VP}$ e], too.
　　　c.　　John [$_{VP}$ likes Mary], and I do [$_{VP}$ <like Mary>], too.
(2)　a.　　John likes every boy Mary does.
　　　b.　　John [$_{VP}$ likes every boy Mary does [$_{VP}$ e]].
　　　c.　　John [$_{VP}$ likes every boy Mary does [$_{VP}$ <likes every boy Mary does [$_{VP}$ e]>]].
　　　d.　　John [$_{VP}$ likes every boy Mary does [$_{VP}$ likes every boy Mary does [$_{VP}$ <likes every boy Mary does [$_{VP}$ e]>]]].

(1a) is an example of the ordinary VP ellipsis.   That is, as the antecedent VP does not contain the elided one (1b), the antecedent VP can be copied into the ellipsis site at LF (1c).   On the other hand, in the ACD case (2a), the elided VP is contained in the argument of the antecedent VP *every boy* (2b), hence we would get into a vicious circle: every time the antecedent VP is copied into the ellipsis site, the elided VP, a part of the antecedent VP, is also copied (2c-d), thus resulting in an uninterpretable structure (Call this the regress problem).

Several proposals have been developed to solve this problem (eg. May's (1985) QR analysis and Hornstein's (1994) A-movement analysis) under the trace theory of movement.   For example, (2a) is analyzed under the QR analysis as moving the object and the relative clause containing the elided VP at LF to the adjunction site of TP.   In this structure, the elided VP is not contained in the antecedent VP, thus not causing the regress problem.   With the adoption of the copy theory of movement, however, the early proposals, those trying to solve the regress problem by movement at LF, all seem not to work any longer.   In particular, the copy theory of movement takes movement as a copying operation that does not eliminate an element from its base position.   If so, even if the elided VP is moved out of the antecedent VP by LF movement, a copy of the elided VP is still left in the antecedent VP.

In order to solve the regress problem under the copy theory of movement,

two proposals have been developed: Fox (2002) and Chomsky (2004). Let us first briefly review Fox's (2002) proposal, the late merger analysis. According to this analysis, the DP acting as the head of an adjunct relative clause first moves out of the antecedent VP via rightward QR, and is later merged with a relative clause containing the elided VP. The derivation is illustrated in (3).
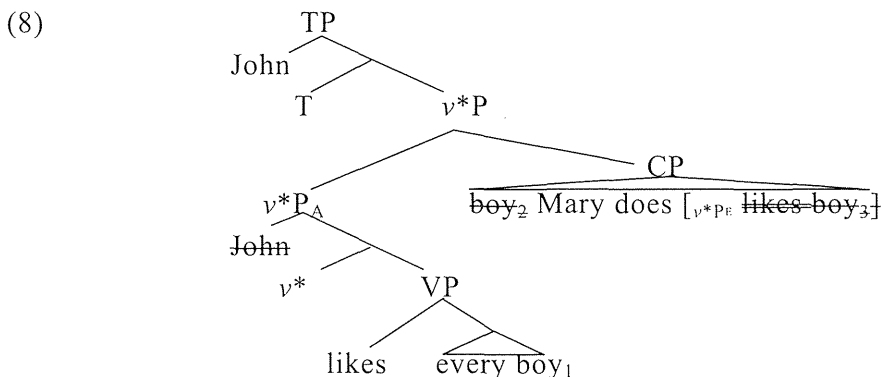
(3) [$_{VP}$ John likes every boy] $\xrightarrow{\text{DP movement}}$

[[$_{VP}$ John likes every boy] *every boy*] $\xrightarrow{\text{adjunct merger}}$

[[$_{VP}$ John likes every boy] every boy *that Mary does <likes boy>*]

Please refer to Chomsky (2004) for a discussion of the problems this analysis bears. What I would like to emphasize here is that QR is an indispensable tool for such a derivation. It means that all the DPs, quantifiers or common nouns, can be quantificational. I have no space to thoroughly discuss the problems QR bears; suffice it to say that there is enough motivation to assume some other derivation without QR.

Let us now turn to Chomsky's (2004) proposal, the afterthought analysis. This proposal is supported by the fact that very similar expressions are generated independently, namely, those that introduce qualifications or afterthoughts, as in (4)-(5) for adjunct extraposition and (6)-(7) for ACD. In the ACD case (7), for example, the DP in the adjoined phrase *every boy* is destressed and can undergo normal ellipsis, yielding (6). The problem is that the derivation for the afterthought structure is unclear.

(4) a. We saw [$_{NP}$ a painting] yesterday [$_{ADJ}$ from the museum].

b. I gave him [$_{NP}$ a painting] yesterday [$_{ADJ}$ from John's collection].

(5) a. We saw [$_{NP}$ a painting] yesterday, (that is,) a painting (one) [$_{ADJ}$ from the museum].

b. I gave him [$_{NP}$ a painting] yesterday, (more precisely,) a painting (one) [$_{ADJ}$ from John's collection].

(6) John [$_{vP}$ likes [$_{NP}$ every boy Mary does <likes *t*>]].

(7) John likes every boy (that is, more accurately...) every boy Mary likes.

Bearing the problems the previous analyses have in mind, I spell out my alternative proposal, the split relative clause analysis: the relative clause in ACD is not generated adjacent to the DP it modifies within the antecedent VP, but is base-generated at the adjunct position of the antecedent VP:

(8)

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                        TP
              John
                  T          v*P
                         v*P_A              CP
                         John      boy₂ Mary does [_v*P_E likes boy₃]
                             v*        VP
                                   likes   every boy₁
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Following Fox (2002) and Cresti (2000), I assume that relative clauses are both head external and head internal. In the relative clause in ACD construction the external head is base-generated within the antecedent $v*$P, and the rest part of the relative clause (ACD) is base-generated as an adjunct of the antecedent $v*$P.

Two assumptions are made in this structure. First, following Johnson (2004), I assume that the elided category in VP ellipsis is $v*$P. Consequently, it is natural to assume that the adjunct relative clause is base-generated at the adjunct site of the antecedent $v*$P. Second, the relative clause containing ACD has a matching structure. In a matching structure, a relative clause is both head internal and head external. The relation between the copy at the original site and the internal head is movement, and that between the external head and the internal head is identity. In ACD only under the matching structure can the internal head boy_2 and the external head boy_1 be identified.

The licensing of ellipsis is illustrated in (9)-(11):

(9)   every boy₁ [boy₂ [Mary does [_v*P_E likes boy₃]]]
                ⇕   ⇕   ⇕
         external head internal head   copy

(10) boy_1=boy_2 (via identity), boy_3=boy_2 (via movement)
    ⇨ boy_1=boy_2=boy_3

(11) $v*P_A$= "likes boy_1", $v*P_E$="likes boy_3"
    ⇨ $v*P_A$=$v*P_E$
    ⇨ $v*P_E$ is elided

Since this alternative analysis is based on the assumption of base-generation of ACD outside of the antecedent VP, the regress problem does not arise in the first place. Neither does it have the problems caused by QR.

Furthermore, it also articulates the afterthought analysis by assuming the ACD to be a matching structure of a relative clause.

Next let us see how this theory works. The first example is first discussed in Tiedeman (1995), which refers to the contrast in grammaticality found in the following examples: when ACD appears in the subject of a subordinate clause, exemplified by the sentence in (12), the complex sentence is judged ungrammatical; but the complex sentence becomes totally grammatical when ACD arises in the object of the subordinate clause (13).

(12)   *   I expect that everyone you do will visit Mary.

(13)   I expect that everyone will visit Mary that you do.

(14)   [$_{TP}$ I [$_{v*P}$ [$_{v*P_A}$ expect that everyone will visit Mary] [~~everyone~~ [$_{CP}$ that you do [$_{v*P_E}$ ~~expect that one will visit Mary~~]]]]]

Under the analysis proposed here, the structure for (13) is (14), in which the subject of the subordinate clause *everyone* is taken as the head of the following relative clause. By contrast, the structure for (15) would be extremely odd, in that the relative clause must adjoin to the external head *everyone* acting as the subject of the subordinate clause *and* the antecedent *v**P. This kind of adjunction is admittedly impossible, thus the ungrammaticality of (12).

Let us consider another example called the NP-contained ACD in (15a). As Kennedy (1997) observes, the elided VP is contained in a prepositional complement of N^0 *a report*. (15a) is predicted to be ambiguous under my proposal, and the two possible derivations are illustrated in (15b-c).

(15) a.   Beck read [$_{DP}$ a report on every suspect Kollberg did [$_{VP}$ *e*]].

   b.   [$_{TP}$ Beck [$_{v*P}$ [$_{v*P_A}$ read a report on every suspect] [~~report on every suspect~~ [$_{CP}$ Kollberg did [$_{v*P_E}$ ~~read report on every suspect~~]]]]]

   c.   [$_{TP}$ Beck [$_{v*P}$ [$_{v*P_A}$ read a report on every suspect] [~~suspect~~ [$_{CP}$ Kollberg did [$_{v*P_E}$ ~~read a report on suspect~~]]]]]

Crucially, in a string like *read a report on*, the preposition *on* can only be interpreted as a preposition modifying *report*. Therefore, the string can be composed into a whole verb without ambiguity. This possibility is depicted in (15c), in which *every suspect* can be considered as the object of the whole verb.

In sum, I demonstrated that together with assumptions about the structure of a relative clause and the category of the deleted constituent, the alternative proposal provides a solution to ACD under the copy theory of movement.