

ACD Revisited

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abstract

This paper attempts to provide a principled explanation of some peculiar restrictions on the occurrence of antecedent-contained deletion (ACD) in English syntax from the perspective of the Minimalist Program. I am mainly concerned with ACD-structures in Spec, TP. I also deal with ACDs in objects and ACDs in DPs. My approach to ACD is based on the idea that the subject of a finite clause does not move to Spec, TP on its way but moves directly to Spec, CP from Spec, vP.

This relates to the question of whether a *wh*-subject moves to Spec, TP on its way in English. My result suggests that a *wh*-subject does not move to Spec, TP on its way but moves directly to Spec, CP from Spec, vP, even in languages like English.

key-words

antecedent-contained deletion, subject A-bar movement, ACD-resolving QR, Spec, TP

1 . Introduction

This paper attempts to provide a principled explanation of some peculiar restrictions on the occurrence of antecedent-contained deletion (ACD) in English

syntax from the perspective of the Minimalist Program. I am mainly concerned with ACD-structures in Spec, TP. I also deal with ACDs in objects and ACDs in DPs. My approach to ACD is based on the idea that the subject of a finite clause does not move to Spec, TP on its way but moves directly to Spec, CP from Spec, vP. This assumption is inspired by work in syntax that assumes that the subject of a finite clause is generally a freezing position (Boeckx 2008, Rizzi and Shlonsky 2007 and others).

The structure of the paper is as follows. Section 2 introduces background assumptions concerning deletion licensing, the analysis of relative clauses, ways of forming questions and other A-bar constructions which target subjects, and others. In section 3, I will consider some puzzling restrictions on the distribution of ACD in Spec, TP. In section 4, I briefly review two analyses of ACD structures in Spec, TP that predict some restrictions on this type of ACD: the QR+late merger analysis of Fox (2002) and the QR+extraposition analysis of Wilder (2003). Section 5 provides an analysis of the type of ACD considered in section 3. Section 6 shows how the analysis developed in section 5 can be extended and modified so that it can deal with ACDs in objects and ACDs in DPs. Section 7 concludes the paper.

2. Some Background Assumptions

2.1 Mechanism of Ellipsis

Within the generative framework, two analyses have been considered for VP ellipsis resolution. Analysis I holds that elided VPs are base-generated as empty VPs, and interpretation of elided VPs is achieved by LF copying, replacing an empty VP with a copy of the antecedent VP; see Chung, Ladusaw, and McClosky (1995) for reference. Analysis II holds that the gap results from phonological

deletion (or suppressed spell out), with the unpronounced VP merged in syntax from lexical items and *wh*-pronoun movement proceeding in the regular way ; see Merchant (2001) and Fox (2002) for such systems and references. While I assume Analysis II in this paper, since it sits easily with the merge theory and copy theory of movement in the Minimalist Program, nothing hangs on this.

Various accounts of ACDs hold that (1) holds at some level :

- (1) An elided VP may not be contained in its antecedent.

In order to satisfy this condition (parallelism in PF or semantic approaches to ellipsis resolution), the part of the structure containing the ellipsis site must move out of its antecedent.¹⁾ In (2a), for example, the object DP containing ACD moves to a VP-external position, as in (2b).

- (2) a . Tom [_{VP} likes every boy Mary does [_{VP} e]]

- b [_{VP} every boy Mary does [_{VP} e]_i v Tom [_{VP} likes t_i]]

(Throughout this article I will use [_{VP} e] to indicate antecedent-contained deletion. This choice is merely a matter of presentational convenience.) In (2b), the null VP is not contained in the antecedent VP, so that the deletion site can be licensed.

2.2 Relative Clauses

Many scholars assume that relative clauses are both head external and head internal. In this paper, however, the raising analysis does not play a role. The reason for this is that as has often been noted (see Saurland 2004), raising relative clauses are generally incompatible with ACD. Since I am exclusively concerned

1) Fox (2002 : 64) states Parallelism as in (i).

(i) *Parallelism*

An eluded VP must be identical to an antecedent VP at Logical Form (LF).

I will not discuss the specific details as it requires an extensive discussion of issues that are not necessary for the remainder of the paper. Instead I urge the reader to consult Fox (2002), Merchant (2001), and Takahashi and Hulsey (2009) for a detailed discussion.

with ACD-constructions in this paper, I will pretend that only the matching analysis of relative clauses is possible.

2.3 Finite Subjects are Freezing Positions

A number of authors have argued that finite subjects are generally freezing positions (cf. Boeckx 2008, Rizzi and Shlonsky 2007 and others). There is much cross-linguistic evidence for this view. Hence, I assume, without argumentation, that the view is correct. One significant consequence of this analysis is that the subject of a finite clause does not move to Spec, TP on its way but moves directly to Spec, CP from Spec, vP, even in languages like English, in a manner at least partially analogous to the one proposed for (the Romance) null subject languages, as discussed by Rizzi and Shlonsky (2007). I assume with Rizzi and Shlonsky (2007) and others that the subject of a finite clause moves directly to Spec, CP. Since this assumption plays a major role in my analysis, I will provide in section 2.5 a brief sketch of empirical evidence culled from the literature.

2.4 Scope and terminology

ACDs are observed in various constructions in English. In this article, I am almost exclusively concerned with ACD-structures in Spec, TP. Although a major part of this paper concerns the analysis of restrictions on ACD in Spec, TP, I examine two other ACD constructions : ACDs in objects and ACDs in DPs.

A word is in order about the terms ACD-resolving QR and Scope-QR. In this article, following Fintel and Iatridou's (2003) insight, I will distinguish two kinds of QR : ACD-resolving QR and Scope-QR. The former holds when QR contains the relative clause with ACD at the start of the derivation and the latter when QR contains no ACD.

2.5 Arguments from the Literature

This section discusses previous arguments bearing on subject *wh*-movement. It must be emphasized that there are a number of cross-linguistic facts which support the idea that a *wh*-subject moves directly to Spec, CP without moving to Spec, TP.

The first piece of evidence for the idea that a *wh*-subject moves directly to Spec, CP is provided by the following Yiddish example :

- (3) Ikh veys nit [_{CP} ver [_{TP} es iz gekumen]]

I know not who expl is come

‘I don’t know who has come.’ (Diesing 1990 : 68)

In Yiddish, an expletive *es* ‘it’ can be merged to Spec, TP when a subject is *wh*-moved, as shown in (3). The grammaticality of this example is expected if the *wh*-subject moves to Spec, CP from Spec, vP in one fell swoop. If this observation is correct, we can say with fair certainty that a *wh*-subject does not move to Spec, TP on its way.

In addition to this fact, curious agreement facts from Icelandic quirky (*wh*-) subjects strongly suggest that a *wh*-subject moves directly to Spec, CP without moving to Spec, TP. For illustration, let us look at the following examples (from Holmberg and Hróarsdóttir 2003 : 998).

- (4)(a) Mér virðast _{TNP} [hestarnir vera seinir]

meDat seemPL the-horsesNOM be slow

‘It seems to me that the horses are slow.’

- (b) að virðist/*virðast einhverjum manni [hestnir vera seninir]

EXPL seems/seem some manDAT the-horsesNOM be slow

‘It seems to some man that the horses are slow.’

- (c) Hvaða manni veist þu að virðist/*virðast _{t_{wh}} [hestarnir vera seinir]

which manDAT know you that seems/seem the-horses be slow

‘To which man do you know that the horses seem to be slow?’

The first point to note is that the dative NP is usually raised to subject position, as in (4a). It, however, can remain in Spec, VP if it is indefinite. This is shown in (4b). In the former case, the matrix verb is able to optionally agree with the nominative subject of the infinitive clause. In the latter case, it cannot agree with the relevant subject due to the fact that the intervening DP blocks agreement. Crucially, if the dative NP is *wh*-moved, it still blocks agreement, as shown in (4c). On the basis of this, the conclusion drawn in Holmberg and Hróarsdóttir (2003) is that the *wh*-phrase moves directly to Spec, CP without passing through Spec, TP, or the relevant trace would not be a *wh*-trace, by standard assumptions.

That a subject *wh*-phrase moves directly from Spec, vP to Spec, CP was also proposed, for independent reasons, by Holmberg (2000). According to Holmberg (2000), in Icelandic Stylistic Fronting sentences such as (5), a subject *wh*-phrase moves directly to the embedded Spec of CP without passing through Spec, TP, as illustrated in (6).

- (5) Hver heldur þú að stolið hafi hjólinu ?

Who think you that stolen has the bike

‘Who do you think has stolen the bike?’

- (6) [CP hverj að [TP stoliði hafi + T [vP t_j [vP t_i hjólinu]]]]

Notice that the EPP-feature of T is satisfied by Stylistic Fronting, which is an operation which moves a category to Spec, TP to satisfy the EPP-feature of T in sentences where the subject is not in Spec, TP. Assuming that Holmberg’s analysis is correct, we can say that the *wh*-subject moves directly to Spec, CP.

In addition to what has been mentioned in the preceding paragraphs, there is a lot of discussion in the literature as to whether a *wh*-subject moves to Spec, TP on its way. Rizzi and Shlonsky (2007) discuss this question thoroughly, and conclude that it does not move to Spec, TP on its way but moves directly to Spec, CP from Spec, vP. They argue that there is a covert expletive directly merged in Spec, TP,

making it possible for the *wh*-phrase to move this way. Lohndal (2010) concurs with Rizzi and Shlonsky (2007) that a *wh*-subject moves directly to Spec, CP from Spec, vP.

As has often been noted (see Kiss 1987 and others), in Hungarian, the subject of the subordinate clause can be marked accusative Case when it is a long-distance extracted *wh*-word. Dikken (1999) suggests that in such constructions, an expletive *pro* occupies Spec, TP. Under this analysis, the accusative-marked subject is generated in Spec, vP. It then raises to the embedded Spec, CP, as in (7).

(7) [_{CP} *wh*-subject_i [_{TP} *pro* [_{vP} *t_i* *v* ...]]]

The key idea is that the raised *wh*-word does not pass through TP. If this analysis is on the right track, it provides evidence for the idea that a *wh*-subject moves directly to Spec, CP.

As noted by a number of different researchers (cf. Barbosa 1995, Conteras 1991, Pollock 1983), preverbal subjects in (the Romance) null subject languages do not appear in Spec, TP. Focused preverbal subjects, for instance, are base-generated VP internally and Focus-moved to Spec, CP without passing through TP occupied by *pro*. This indirectly suggests that a *wh*-subject moves directly to Spec, CP.

Chomsky (2008) also argues that an example like (8) is derived by two separate operations, one moving *who* from Spec, vP to Spec, TP and the other moving *who* from Spec, vP to Spec, CP.

(8) Who saw Mary ?

This means that a *wh*-subject moves directly to Spec, CP from Spec, vP. The relation between Spec, CP and Spec, TP is indirect only.

3. The Problem

It has been noted in the literature on ACDs that ACD-repairing movement is bounded in finite clauses, as shown in (9): (I indicate elided material by *e*, and the intended interpretation of the elided material in parentheses.)

- (9)(a) *I expect (that) everyone you do [_{VP} *e*] will visit Mary. (=expect *t* will visit Mary)
- (b) *Who believed (that) which man that Hoover did [_{VP} *e*] is a spy. (=believe *t* is a spy)
- (c) *Terry believes that every boy that Mary does [_{VP} *e*] was given a book. (=believe *t* was given a book)

Sentences like (9) appear to show that the subject of a finite clause cannot host an ACD site. However, the situation is complicated by the fact that long-distance ACD (LDACD) can be rescued if rightward movement of the relative clause containing the null VP takes place, as shown in the following examples, which were noted by Tiedeman (1995) and discussed by Wilder (2003) and Fox (2002).

- (10)(a) I expect (that) everyone will visit Mary that you do [_{VP} *e*]. (=expect *t* will visit Mary)
- (b) I said (that) everyone arrived that you did [_{VP} *e*]. (=said *t* arrived)

These examples are grammatical in spite of the fact that the subject of the finite clause hosts the ACD site. The contrast between (9) and (10) poses the following question :

- (11) Why do we need extraposition to rescue LDACD in cases such as (10) ?
We also find LDACDs in fronted *wh*-phrases, as in (12).
- (12) Who that you did [_{VP} *e*] did Harry predict has been a liar ? (=predict *t* has been a liar)
- (cf. *Who believed (that) which man that Hoover did [_{VP} *e*] is a spy. (=

believed *t* is a spy)

Lasnik (1999) observes that example (12) can have the interpretation in which the antecedent of the null VP is the matrix VP. Topicalization also rescues LDACD in Spec, TP :

- (13) Everyone you do [_{VP} *e*], I (too) expect will visit Mary. (=expect *t* will visit Mary)

These facts show that with LDACD, overt *wh*-movement and topicalization, like extraposition, have a dramatic effect on acceptability. The contrast between (9) and ((12)/(13)) poses the following question :

- (14) Why do we need overt *wh*-movement/topicalization to rescue LDACD in Spec, TP ?

An ACD site is also found with an ECM subject. Examples are given in (15).

- (15) a . John believed everyone that you did [_{VP} *e*] to be a genius. (=believed *t* to be a genius)
 b . I expect everyone you do [_{VP} *e*] to visit Mary. (=expect *t* to visit Mary)

This raises the question of why the examples in (15) are far better than (9).

4 . Previous Approaches to LDACD

4.1 Fox's (2002) QR+Late Merger Analysis

Fox (2002) has suggested a QR+late merger account for LDACD. He proposes that restrictive relative clauses can be inserted after covert rightward phrasal movements. Under this assumption, the restrictive relative clauses in (10) need not be inserted prior to movement, but can be inserted after the covert rightward movement of the DP *everyone*. Thus the example (10a) (repeated here as (16a)) may have the representation in (16b) at some stage in the derivation.

- (16)(a) I expect (that) everyone will visit Mary that you do [_{VP} *e*]. [=expect *t* will

visit Mary]

- (b) [_{VP} [_{VP} v+expect (that) everyone will visit Mary] **everyone** that you do [_{VP} e]]

(The boldface indicates where the phonological material of an element is *not* found.) In this configuration, the restrictive relative clause containing the null VP is not inserted prior to movement, but is inserted after the movement of the subject DP, generating an LF structure where the intended interpretation of (16a) is provided.

As mentioned in section 3, the subject of a finite clause cannot host an ACD site. Compare (16a) and (17) (repeated from (9a)).

- (17) *I expect (that) everyone you do [_{VP} e] will visit Mary. (=expect t will visit Mary)

Under the QR+late merger system, for ACD to be resolved, QR must be followed by late merger of the relative clause containing the null VP. In (17), in contrast to (16a), word order indicates that the relevant relative clause has not been added after QR. Consequently, parallelism is not satisfied, explaining the fact that examples such as (17) are ungrammatical.

The LDACD fact in (12), which involves *wh*-movement, may receive a unified explanation in Fox's analysis if it is assumed, following Lebeaux (1991) and Nunes (2004), that restrictive relative clauses can be inserted after *wh*-movement. The reasoning is essentially identical to that used in the case (16a) with respect to licensing of ACD. Example (12) begins with the following structure :

- (18) Harry did predict [_{CP} [_{TP} has been [_{VP} who a liar]]]

The *wh*-word moves to the Spec of the embedded T for the purpose of checking its Case, and then moves again to its surface position through the Spec of the embedded C. Merge attaches the restrictive relative clause containing the null VP to the fronted *wh*-phrase. In this derivation, the relative clause is added after the

wh-phrase has been moved to the Spec of the matrix C. Consequently, the null VP in the relative clause can be identical to the matrix VP, explaining the fact that example (12) exhibits a matrix reading. The same story carries over to example (13), which involves topicalization.

Fox's analysis is also consistent with ACD facts in examples such as (15), one of which is repeated here for ease of reference.

- (19) I expect everyone you do [_{VP} e] to visit Mary (=expect t to visit Mary) (= (15b))

Under the standard assumption that example (19) involves leftward movement of the ECM subject to the edge of vP, the grammaticality of (19) does not pose a puzzle ; as pointed out by Fox (2002), ACD in this example would be resolved by object shift followed by late merger of the relative clause with ACD.

However appealing, this analysis of the ACD facts in section 3 is not plausible. Fintel and Iatridou (2003 : 183) distinguish two kinds of QR : ACD-resolving QR and Scope-QR. The latter, unlike the former, is bounded in finite clauses, as in (20).

- (20) A different/Some student said that Mary likes every boy.
(*every > a different/some)

What has to be noticed is that the QR+late merger analysis for the presence of LDACD is crucially based on the assumption that Scope-QR is not bounded in finite clauses. If Fintel and Iatridou's observation is correct, we will not be able to impute the presence of LDACD to QR and later merger of a relative clause.²⁾ A way out of this dilemma would be to assume that Scope-QR can move a subject quantifier out of a tensed clause only when it is followed by late merger of a relative clause containing a null VP, thus creating a configuration for the licensing of the

2) See Lebeaux (2009) for some recent arguments that Scope-QP is bounded in finite clauses.

null VP. The obvious problem for this analysis is lookahead. Example (10a) at one point has the structure in (21).

- (21) [_{CP} **every one** [_{C'} (that) everyone will visit Mary]]

To drive movement out of Spec, CP, we need to know whether late merger of the relative clause containing the null VP takes place. But at the point where the embedded clause is built we do not know whether such merger takes place. We will know this only after the structure is expanded further. In other words, we need lookahead: at the point when (21) has been built, we need to know that late merger of the relative clause containing the null VP will eventually take place. Such lookahead is needed in Fox's (2002) system. This raises a serious conceptual problem for the analysis.

Additional argument against the QR+late merger analysis of LDACD constructions, which requires QR-movement out of a tensed clause, is provided by the following example, which involves negation.

- (22) John said that Mary will not pass every student that we predicted he would [_{VP} e].

According to Fintel and Iatridou (2003), example (22) is grammatical even when it has an interpretation in which the null VP is replaced by the matrix VP. This fact does not follow automatically from the QR+late merger analysis. Fintel and Iatridou (2003) shows that Scope-QR, unlike ACD-resolving QR, cannot cross negation, as in (23).

- (23) John didn't touch every dessert. (*? Every > not)

If this is so, then in the case of example (22) the quantifier cannot be raised out of the embedded clause over sentential negation by Scope-QR before late merger of the relative clause containing ACD takes place. Thus, the availability of a matrix reading in (22) is not explained.

In summary Fox's theory covers all the empirical ACD data that have been

discussed in the previous section. But at the same time it suffers from some conceptual and empirical problems.

4.2 Wilder's (2003) Analysis

In section 4.1, I briefly outlined Fox's solution of the ACD problems under consideration in terms of QR+ late merger. We have seen that Fox's analysis is not plausible. In this section I briefly outline another solution to the ACD problems: Wilder's (2003) QR+extraposition solution. I argue that this solution cannot adequately account for all the facts of ACD in Spec, TP.

Wilder (2003) has suggested a QR+extraposition account for the ACD facts in section 3. He proposes that the grammaticality of the examples in (10), one of which is repeated here for ease of reference, is accounted for by assuming that extraposition extracts a relative clause from the NP it modifies and right-adjoins it to the VP, followed by QR.

(24) I expect (that) everyone will visit Mary that you do. (= (10a))

In the grammatical (24), extraposition extracts the restrictive relative clause containing the deletion site out of the NP it modifies and adjoins it to the matrix VP. The resulting structure is (25).

(25) I [_{VP} expect (that) everyone **that you do** will visit Mary] that you do]

Wilder proposes that the operation is responsible for resolving antecedent-containment at PF. According to his theory, an ellipsis site may not be contained in its antecedent string at PF.³⁾ On his analysis, in the case of (24), once the stage in (25) is reached, extraposition leaves exactly the same element as the preposed element, as we have seen and, therefore, QR extracts the subject DP containing the

3) In Wilder's system, in addition to the condition (ia) that holds at LF, there is an independent condition (ib), holding at PF.

(i) a. A VP-deletion site may not be contained in its antecedent constituent at LF.

b. A VP-deletion site may not be contained in its antecedent string at PF.

ACD out of the embedded clause and adjoins it to the matrix TP. As a consequence, antecedent containment is voided at LF. So the grammaticality of (24) is immediately explained.

The problem for Wilder is that under his analysis, extraposition leaves a copy of the relative clause containing the ACD behind. This idea, however, has been challenged by a variety of authors, as we shall see later in the next section. Conceivably, Wilder could deny that extraposition does not leave a copy of the relative clause with ACD behind; however this move would create a new problem. As Fintel and Iatridou (2003) point out, QR without ACD is bounded in finite clauses (see (20)). The grammaticality of examples (10) does not follow if clause-boundedness holds.

Where a relative clause with ACD appears in subject position as exemplified in constructions such as (9), a problem arises because of the fact that the relative clause containing ACD has not been extraposed, so that the null VP is contained in its antecedent string at PF. Hence, the fact that the antecedent of the null VP cannot be the matrix VP is not surprising.

A problem arises in connection to Wilder's treatment of these examples. He adds a new assumption. The additional assumption Wilder makes is this: A VP-deletion site may not be contained in its antecedent string at PF. It is far from clear, however, that this is a necessary assumption. In fact, ACD constructions such as (9) could be accounted for without the additional assumption in Fox's analysis, as we observed.

Finally, the analysis proposed in Wilder (2003) allows for a principled explanation of the presence of ACDs in fronted *wh*-phrases, as in (12), which he does not discuss. As is generally assumed, restrictive relative clauses do allow pied-piping, so that the subject *wh*-phrase containing the null VP undergoes A-bar movement to the Spec of the matrix CP. This results in a configuration where

antecedent containment is avoided both at LF and at PF, explaining the grammaticality of (12). Hence, no problem arises in contexts where the subject *wh*-phrase with ACD undergoes A-bar movement to the Spec of the matrix CP. The same story carries over to the presence of ACDs in topicalization, as in (13).⁴⁾

In sum, then, although providing a good account of the ACD facts under consideration, Wilder's analysis raises two objections. First, Wilder argues, contrary to what has been assumed in the literature, that relative clauses with ACD have to be included in the copy of extraposition. Secondly, the analysis suggested by Wilder has the disadvantage of adding a new assumption. It is far from clear that this assumption is necessary. In fact, as we have seen, ACD constructions such as (9), to exclude which it only exists, could be accounted for without it in Fox's analysis. More importantly, as will become clear later, our analysis is able to account for the relevant data without the addition of a special assumption.

5. Proposal

In this section, I will present a new analysis that accounts for ACD data in Spec, TP. The principal claim is that these ACD data can be accounted for once we adopt the idea that a subject in Spec, vP moves directly to Spec, CP.

Consider example (9a), repeated as (26)

- (26) *I expect (that) everyone you do [_{VP} e] will visit Mary (=expect t will visit Mary)

The ACD phenomenon is widely assumed to be a reflex of Quantifier Raising (QR). Under the QR system, in order to generate a structure that allows the antecedent of the null VP in (26) to be the matrix VP, the quantifier *everyone* must move out of its

4) Interestingly, Wilder (2003) points out that the ECM examples in (15) are not instances of ACD. Rather, he takes examples of this type to involve two adjacent deletions.

clause to the matrix VP node. However, this movement contradicts the frequent claim that Scope-QR is clause-bounded. Hence, the fact that the antecedent of the null VP in (26) cannot be the matrix VP is not surprising. This view is, however, open to objection. As is well known, ACD-resolving QR, unlike Scope-QR, is not clause-bounded (cf. Fintel and Iatridou 2003 : 183, Fox 2002). If this is so, then in the case of (26) the quantifier *everyone* can be raised out of the embedded clause over the matrix VP. Thus, the absence of a matrix reading in (26) is not explained.

Someone might claim that as noted by many linguists, A-bar movement is incapable of optionally leaving a full copy at the tail of the chain, so that Scope-QR leaves a full copy behind, explaining the absence of ACD in (26). Notice that leaving a copy of the relative clause with ACD does not eliminate antecedent containment. However, it seems that this is not a valid claim, since relative clauses with ACD do not have to be included in the copy of Move. The idea has been proposed in different forms by a variety of authors (Brody 1995, Fox 1995, Fox and Nissenbaum 1999, Merchant 2000, Sauerland 2004). These authors differ from one another in technical details, but overall, they share the claim that Move does not leave a copy of the relative clause containing the ACD.

I will now present an alternative approach to the absence of ACD in (26). We noted earlier that a number of authors assume that Spec, TP is generally a freezing position (cf. Takahashi 1994 ; Stepanov 2001 ; Boeckx 2008 ; Lasnik and Park 2003 ; Rizzi 2006 ; Rizzi and Shlonsky 2007). Assuming the view suggested by these authors to be reasonable, it must be the case that ACD-resolving QR cannot move the subject DP containing the deletion site to the matrix vP-edge position. Hence, the fact that the antecedent of the null VP cannot be the matrix VP is not surprising. Because the null VP cannot be shifted to out of the antecedent VP, the construction does not satisfy Parallelism.

So far I have illustrated that Spec, TP is a freezing position, so that the subject

of a finite clause cannot host an ACD site. The question is why the subject of a finite clause can host an ACD site if rightward movement of the relative clause containing the null VP takes place, as in (10), one of which is repeated here for ease of reference :

- (27) I expect (that) everyone will visit Mary that you do [_{VP} e]. (expect t will visit Mary)

The acceptability of (27) is a direct consequence of the proposal made here. Suppose that Merge has constructed the following structure :⁵⁾

- (28) [_{CP} (that) [_{TP} THERE T [_{VP} everyone that you do [_{VP} e] will visit Mary]]]

Given that the subject of a finite clause does not move to Spec, TP on its way, the vP-internal subject with ACD moves directly to the Spec of the embedded CP, leaving no copy of the relative clause with ACD behind. This movement is covert, so that the copy at the tail of the chain is pronounced. The resulting structure is (29).

- (29) [_{CP} **everyone** that you do [_{VP} e] (that) [_{TP} THERE T [_{VP} everyone will visit Mary]]]

(The boldface indicates where the phonological material of an element is *not* found.) The preposed subject with ACD then undergoes rightward ACD-resolving A-bar movement to the edge of v. Crucially, this movement does not leave a copy of the relative clause containing the ACD behind, thus creating a configuration for the licensing of the null VP, as in (30).

- (30) [_{VP} [_{CP} **everyone** (that) [_{TP} THERE T [_{VP} everyone will visit Mary]]] **everyone** that you do [_{VP} e]]

Thus, no problem arises for this case with respect to ACD repair, accounting for the grammaticality of (27).

5) I will follow Rizzi and Shlonsky's (2007) proposal and assume that there is a silent THERE in Spec, TP in ACD constructions in which a *wh*-subject/an ACD subject moves directly to Spec, CP from Spec, vP.

Note also that our approach allows for a principled explanation of the grammatical example in (12), which is repeated here for ease of reference as (31).

(31) Who that you did [_{VP} e] did Harry predict has been a liar?

The reasoning is essentially identical to that used in the case (27) with respect to licensing of LDACD. The present analysis requires that the *wh*-subject with ACD in (31) move directly to Spec, CP from Spec, vP, yielding (32).

(32) [_{CP} who that you did [_{VP} e] [_{TP} THERE T has been [_{VP} **who** a liar]]]

Recall that Move does not leave a copy of the relative clause containing the ACD. In the next steps, the matrix V merges with the whole structure, followed by the merger of the matrix v and movement of the *wh*-phrase with ACD over the matrix VP. Obviously, this movement does not leave a copy of the relative clause with ACD behind. The resulting structure is (33).

(33) [_{VP} who that you did [_{VP} e] Harry v [_{VP} predicted [_{CP} **who** [_{TP} THERE T has been [_{VP} **who** a liar]]]]]

At this point of the derivation, the elided VP is not contained within the antecedent VP. Thus, no problem arises for this case with respect to ACD repair, accounting for the fact that the null VP in example (31) can take the matrix VP as its antecedent.

The same story carries over to example (13), which involves topicalization. Suppose that Merge has constructed the following structure:

(34) [_{CP} c [_{TP} THERE will [_{VP} everyone you do [_{VP} e] visit Mary]]]

In the present analysis, the vP-internal subject with ACD moves directly to the Spec of the embedded CP, leaving no copy of the relative clause behind. This movement is overt, so that the copy at the tail of chain is not pronounced. The resulting structure is (35).

(35) [_{CP} everyone you do [_{VP} e] C [_{TP} THERE will [_{VP} **everyone** visit Mary]]]

The preposed subject with ACD then moves to its surface position through the Spec of the matrix vP, leaving no copy of the relative clause containing ACD behind. In

this derivation, the constituent with ACD is outside the antecedent VP. Thus, no problem arises for this case with respect to ACD repair, accounting for the fact that the null VP in example (13) can take the matrix VP as its antecedent.

The grammaticality of the ECM examples in (15), one of which is repeated in (36), is also accounted for.

- (36) I expect everyone you do [_{VP} e] to visit Mary (=expect t to visit Mary) (= (15b))

Although displaced subjects in finite clauses are freezing positions, as I have mentioned before, displaced subjects in nonfinite clauses are not freezing positions. The reason for this is that there is no checking in these positions. This means that the ECM subject with ACD is allowed to move through the embedded Spec, TP to the edge of the matrix vP. Since this movement does not leave a copy of the relative clause containing the ACD behind, as we have seen, no problem arises for this case with respect to ACD repair, accounting for the grammaticality of (36).

In summary, we have seen that an alternative analysis incorporating the idea that the subject of a finite clause moves directly to Spec, CP from Spec, vP provides a more principled account of ACDs in Spec, TP. It does not run into the lookahead problem that Fox's analysis faced. The reason for this is that we don't need Scope-QR and later merger to rescue ACDs like (10), which involve extraposition. Adopting ACD-resolving QR instead of Scope-QR makes it possible to circumvent the empirical problem that Fox faced. As shown above, ACD is licensed even when it crosses negation. This fact does not follow automatically from the QR+late merger analysis, since Scope-QR cannot cross negation. However, this is not a challenging fact for the alternative analysis. The reason for this is that it does not rely on Scope-QR. Furthermore, it is worth noting that the proposed analysis fares better than Wilder's account appealing to two assumptions that do not seem to enjoy some external currency and validity. As stated above, in

our system, the dubious assumptions can be eliminated. The ability to eliminate them from the theory of grammar would be advantageous. Importantly, the new analysis requires no special assumptions or addition to the basic theory.

6. Extensions

In the previous section we have examined a range of ACD constructions that appear to fit nicely into the proposed analysis. In this section, I will introduce some data bearing on the syntax of ACD. This broadening of empirical coverage reinforces the proposed analysis of ACD constructions.

6.1 ACDs in Objects

As is well known, we find ACDs in objects of verbs, as in (37).

- (37) a . I read every book (that) you did [_{VP} e]. (=read t)
 b . I saw everyone yesterday that Lou did [_{VP} e]. (=see t)
 c . I gave everyone (that) you did [_{VP} e] two dollars. (=give t two dollars)
 d . I gave a book on linguistics that you did [_{VP} e] to Mary. (=give t to Mary)

Example (37a) illustrates a standard case of ACD. The direct object of the verb *read* is raised out of VP to the right edge of vP by covert ACD-resolving QR, generating a structure that allows the antecedent of the null VP in (37a) to be the matrix VP, as in (38).

- (38) [_{VP} v [_{VP} read every book] **every book** that you did [_{VP} e]]

In this configuration, the phonological material of the relative clause with ACD has to be found in its surface position, since ACD-resolving QR does not leave a copy of the relative clause with ACD behind. Example (37b) illustrates a case where the relative clause with ACD is right-adjoined to vP. In parallel with example (27), where rightward movement of the relative clause with ACD allows the subject of a

finite clause to host an ACD site, the quantifier *everyone* containing the relative clause with ACD moves out of its VP to the right edge of vP, leaving no copy of the relative clause behind. This movement is covert, so that the copy at the tail of the chain is pronounced. The resulting structure is (39).

- (39) [_{VP} v [_{VP} saw everyone] yesterday **everyone** that Lou did [_{VP} e]]

Notice that in this configuration, the relative clause with ACD cannot be pronounced in its base position, since it does not have to be included in the copy of Move. The final structure is acceptable since the elided VP is removed from within the antecedent VP, thereby satisfying Parallelism. Consequently, the availability of the intended interpretation is a direct consequence of the proposal made here.

Let us turn to (37c), which illustrates a case of ACD in the double DP frame. As pointed out by Larson and May (1990), in (37c) the null VP is followed by *two dollars* that belongs to the antecedent VP and is therefore plausibly contained within the antecedent VP. If indeed the null VP is contained within the antecedent VP in (37c), then our analysis is not applicable to (37c). The reason for this is that ACD-resolving QR is not involved in the derivation of this construction.

However, there is a possible way in which this problem might be solved. One might suggest, following Fox (2002), that the constituent that follows the null VP in (37c) is also outside the antecedent VP (due to the availability of rightward movement). Given this assumption, our analysis is straightforwardly applicable to (37c), since it is possible for ACD-resolving QR to be involved in the derivation of the construction. Example (37c) can be derived in the following way :

- (40) [_{VP} everyone you did [_{VP} e] [_{VP} gave two dollars]]

ACD-resolving QR \Rightarrow

[_{VP} [_{VP} everyone [_{VP} gave two dollars]] **everyone** you did [_{VP} e]]

additional overt rightward movement \Rightarrow

[_{VP} [_{VP} [_{VP} everyone [_{VP} gave **two dollars**]] **everyone** you did [_{VP} e]] two

dollars]

This derivation does not crash because antecedent containment is voided at LF, yielding the acceptable (37c).

Turning now to example (37d), one might suggest, following Fox (2002), that the prepositional phrase that follows the null VP is also outside the antecedent VP (due to the availability of rightward movement). Given this assumption, our analysis is straightforwardly applicable to (37d), since it is possible for ACD-resolving QR to be involved in the derivation of the construction. To be more specific, example (37d) can be derived in the following way :

- (41) [VP gave a book on linguistics that you did [VP e] to Mary]

ACD-resolving QR \Rightarrow

[VP [VP gave a book on linguistics to Mary] **a book on linguistics** that you did [VP e]]

additional overt rightward movement \Rightarrow

[VP [VP [VP gave a book on linguistics **to Mary**] **a book on linguistics** that you did [VP e]] to Mary]

This derivation yields a representation that satisfies Parallelism and therefore (37d) is acceptable.

6.2 ACDs in DPs

We find ACDs in DPs, as in (42).

- (42) Mary read a review of every play that John did [VP e].

Kennedy (1997) observes that (42) has the interpretation in (43).

- (43) Mary read a review of every play that John read a review of.

It does not have the interpretation in (44), however.

- (44) Mary read a review of every play that John read.

The fact that (42) exhibits the interpretation of (43) is expected in the proposed analysis.

Under the standard assumption that DPs are phases, the quantifier *every play* containing the relative clause with ACD moves to Spec, DP. This movement does not leave a copy of the relative clause with ACD behind. In the next step, the quantifier is adjoined to the right edge of the matrix vP, leaving no copy of the relative clause with ACD behind. The resulting structure is (45).

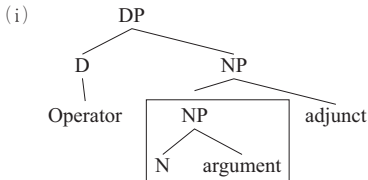
- (45) [_{vP} v [_{VP} read [_{DP} **every play** a view of every play]] **every play** that John did [_{VP} e]]

The final representation satisfies Parallelism because the elided VP is not contained within the antecedent VP. Hence, example (42) has the interpretation in (43).

The fact that example (42) does not exhibit the interpretation of (44) is also expected in the proposed theory. Assume, following Sauerland (2004), that in complex structures such as (46), movement of the higher DP/NP must leave a copy of the relative clause with ACD behind.⁶⁾

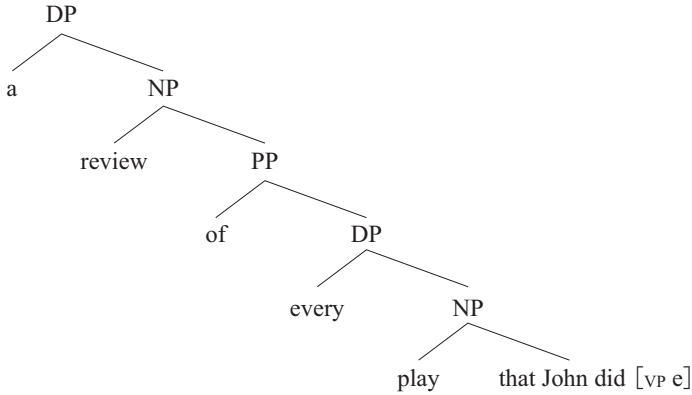
6) To be more precise, Sauerland (2004) assumes that for any DP, the phrase consisting of the head noun N of the NP that is the complement of the determiner heading the DP and all arguments to N is what Sauerland (2004) calls a ‘core NP’.

(i) illustrates this definition: the core NP is marked by the box (the diagram in (i) is adapted from Sauerland 2004: 66):



Sauerland argues that if DP-movement happens, the core NP must be repeated in the trace position.

(46)



As we have already seen, movement of the lower DP/NP allows the relative clause with ACD not to leave its copy behind. Namely, the critical difference between these two cases has to be with the degree of embedding of the relative clause with ACD. Crucially, in order for example (42) to have the interpretation in (44), the higher DP must move to the right edge of the matrix vP. Since this movement, unlike movement of the lower DP/NP, has to leave a copy of the relative clause with ACD behind, there is no legitimate structure where the intended interpretation of (42) is provided, explaining the fact that example (42) cannot have the interpretation in (44).

Note finally that our analysis of DP-contained ACD may be justified on the grounds that it allows for a principled explanation of the ungrammaticality of the following ACD constructions from Kennedy (1997: 638).

(47) a . *Beck read most reports on every suspect Kolberg did [VP e].

b . *Melander requested every copy of most of the tapes Larsson did [VP e].

As Kennedy (1997) notes, these examples of DP-contained ACD in which a deleted VP is contained in a quantificational complement of V are not acceptable when they have an interpretation in which the null VP is replaced by the matrix VP containing the DP, as in (48).

(48) a . Beck read most reports on every suspect Kolberg read most reports on.

b . Melander requested every copy of most of the tapes Larsson requested every copy of.

This fact can be directly accounted for by the analysis of DP-contained ACD adopted here. It is assumed in much current work that in general, extraction from strongly quantified DPs is not allowed.⁷⁾ Given this consideration, the lower quantifier with the relative clause with ACD cannot be moved out of the higher DP. As a consequence, it is always within the higher DP. There is, then, no legitimate structure where intended interpretation of (47) is provided, explaining the fact that example (47) cannot have the interpretation in (48).

Kennedy (1997) also observes that each of the sentences in (47) is ungrammatical even when it has an interpretation in which the null VP is replaced by the matrix VP which does not contain the DP, as in (49).

(49) a . Beck read most reports on every suspect Kolberg read.

b . Melander requested every copy of most of the tapes Larsson requested.

This fact is also be accounted for, under the current proposal. To derive the interpretation in (49a), it must be the case that the higher quantified DP *most reports* containing the relative clause with ACD must move to the right edge of the matrix vP. Crucially, however, this movement leaves a copy of the relative clause with ACD behind, as we have seen. Hence, the fact that example (47) cannot have the interpretation in (49a) is not surprising.⁸⁾ The same story carries over to example (49b).

In sum, in section 5 I have examined a range of ACD constructions. The facts examined there establish the proposed approach to ACD as a very promising one.

7) Cases like (i) below illustrate this point.

(i) *Who did you see every picture of?
 *Who did you see most pictures of?
 (cf. Who did you see pictures of?)

Whether this premise can be fulfilled depends upon what it says about regular ('short distance' or clause-bound) ACDs. I therefore considered in this section how regular ACD facts might be explained in the framework proposed here. We have just seen that the proposed approach offers an elegant treatment of regular ACDs. It is reasonable, then, to conclude that the new analysis offers serious competition to previous accounts of ACDs.

7. Conclusion

In this article, I have first shown that there are empirical puzzles that cannot be explained by any previous approaches to ACD-structures without running into problems. I have argued that an alternative analysis incorporating the idea that the subject of a finite clause does not move to Spec, TP on its way provides a more principled account of these puzzles. It is interesting that the claim, which was motivated by the need to account for facts of various kinds, has turned to be extremely useful in ACD cases.

In addition to providing strong support for the proposed view and against the alternative views, these findings allow us to draw conclusion on some large issues as well. One such issue is whether a *wh*-subject moves to Spec, TP on its way. The

8) Kennedy (1994) and Sauerland (2004) present another factor that has an influence on the grammaticality of ACDs in DPs, namely, the lexical content effect in ellipsis. The effect is demonstrated in (i).

(i) *John visited a town that's near the lake Mary did (visit)
(Sauerland 2004 : 76)

(cf. John visited a town that's near the lake Mary visited.)

Sauerland (2004) claims that the ACD in (i) is ungrammatical because of the fact that the head noun of the object of the matrix verb (i. e., *town*) is semantically distinct from the head noun of the object of the elided verb (i. e., *lake*). Because of space limitations, I will not go over Sauerland's proposal in greater detail. What is important is that examples like (i) do not challenge the proposed account of ACD, since Sauerland's proposal could be incorporated into the current analysis.

analysis developed in this paper suggests that a *wh*-subject does not move to Spec, TP on its way but moves directly to Spec, CP from Spec, vP.

Furthermore, the conclusions reached in this article cast doubt on the existence of late merger that has hitherto been accepted as a deeply problematic property of human language. The proposed theory of ACDs is able to capture certain noted properties of ACD structures without making use of the notion of late merger. The ability to eliminate late merger from the theory of grammar would be advantageous, since the overall theory of grammar can potentially be simplified.

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