

## THE DOUBLE OBJECT CONSTRUCTION AT THE INTERFACES\*

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### 1 Introduction

This paper focuses on two issues raised by the double object construction in English, exemplified in (1):

- (1) a. Jan showed Greg the diary  
b. Cindy gave Bobby Kitty Karryall  
c. Mike sent Bibi Galini the plans

The first is, How are the two objects licensed in the structure? That is, how is Case assigned to the two DPs? And second, What are the structural relations held between the two objects and other VP type elements at the different levels of representation?

I will make essentially two points: first, overtly, or at PF, both objects appear in VP-external functional specifiers, which I identify as AGRO specifiers, where Case is checked; second, I will adapt the analysis of the double object construction proposed by Johnson (1992) and show that the two objects are licensed by the same functional specifier.

- (4) a. I denied each worker his paycheck  
 b. \*I denied its owner each paycheck
- (5) a. I showed every friend of mine his photograph  
 b. \*I showed its trainer every lion

DP<sub>1</sub> headed by *each* licenses *the other* in DP<sub>2</sub>, but not vice versa, as (6) shows:

- (6) a. I have each man the other's watch  
 b. \*I gave the other's trainer each lion

And a negated DP<sub>1</sub> licenses a negative polarity item in DP<sub>2</sub>, but not vice versa, as (7) shows:

- (7) a. I gave no one anything  
 b. \*I gave anyone nothing

The generalization these tests point to is that at whatever level of representation the conditions on these phenomena must be satisfied, DP<sub>1</sub> seems to asymmetrically c-command DP<sub>2</sub>. The tree in (8) is an abstract schema of the type of structure that these tests point to:

- (8)
- |      |  |   |          |
|------|--|---|----------|
| send | X  |   |          |
|      | Y  |   |          |
|      | $\begin{matrix} \text{DP}_1 \\ \text{ZZ} \end{matrix}$ | Z | (8) a. . |

- (13) a. Alice gave Sam each dog on the other's leash  
 b. \*Alice gave Sam the other dog on each's leash
- (14) a. John sent Bill each check after the other expired  
 b. \*John sent Bill the other check after each expired

And a negated DP<sub>2</sub> can license a negative polarity item in a VP adjunct, but not vice versa, as (15) and (16) show:

- (15) a. Laverne gave Shirley nothing at any of the events  
 b. \*Laverne gave Shirley anything during none of the events
- (16) a. Richie showed Fonzie none of the pictures during any of the exhibitions  
 b. \*Richie showed Fonzie any of the pictures during none of the exhibitions

These tests all suggest that DP<sub>2</sub> also asymmetrically c-commands VP material, at the relevant level of representation. The tree in (17) is an abstract schema of what the representation should look like. DP<sub>1</sub> asymmetrically c-commands DP<sub>2</sub>, which asymmetrically c-commands DP<sub>3</sub>, which is in a VP adjunct:

- (17)
- |                 |                        |
|-----------------|------------------------|
| X               |                        |
| send            | Y                      |
| DP <sub>1</sub> | Z                      |
| DP <sub>2</sub> | W                      |
|                 | ...DP <sub>3</sub> ... |

is addressed: each is Case-checked in a Spec,AGRo phrase.

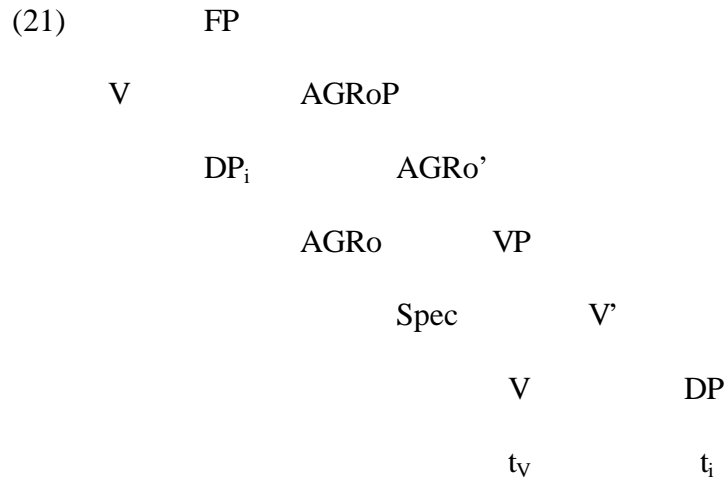
### 3 Further Motivation

Barss & Lasnik's (1986) tests illustrated in (2) through (16) show asymmetric c-command at some level of representation, but not necessarily the overt (or PF) representation; to motivate (18) as a surface representation I will look at constituency and adverb placement. Before turning to that, however, a few comments on verb position are in order.

#### 3.1 Preliminaries: V position

In Runner (1995, 1998) I argue, following Johnson (1991), that the main verb in English moves to a functional head position external to VP. This differs from the currently standard view on verb movement. (19) illustrates the Pollock (1989)/Chomsky (1995) account of verb movement in French and English:

(19) a. DP verb [<sub>VP</sub>



Now I will turn to arguing for (18), which incorporates the verb movement illustrated in (21). The structure in (18) is the overt structure of the double object construction in English.

### 3.2 V and DP<sub>1</sub> are external to a constituent containing DP<sub>2</sub> and other VP material

I will outline several arguments in favor of the claim embodied in (18) that the verb and DP<sub>1</sub> are external to a constituent containing DP<sub>2</sub> and the other VP material. In (18) this constituent is the AGRo<sub>2</sub> Phrase.

#### Coordination

Coordination examples like those in (22), which are adapted from Larson (1988) and Johnson (1991), point towards such a conclusion, as (23) illustrates:

- (22)
- a. I gave John [the book in the morning] and [the magazine in the evening]
  - b. Rachel sent Marcia [a telegram at her office] and [a box of roses at her apartment]
  - c. I showed Sam [my gardenias after breakfast] and [my daffodils after lunch]

What we see, then, is a constituent containing the second object and a verbal adjunct being coordinated independently of the first object and the verb. We have something like the following:

- (23) I
- |   |        |
|---|--------|
| . | 1AGRo' |
|---|--------|

targeting in this case is the lower AGRoP:

(25) [<sub>AGRo2P</sub> a pewter mug [<sub>VP</sub> t<sub>V</sub> t [<sub>for Christmas</sub>]]]

### 3.3 Both objects are external to VP

The structure in (18) suggests, secondly, that DP<sub>1</sub> and DP<sub>2</sub> should also be external to a constituent containing the remainder of the verbal material; that is, VP.

#### Coordination

Coordination examples like (26) seem to support the claim that DP<sub>1</sub> and DP<sub>2</sub> are external to a constituent containing the remainder of the VP, along the lines outlined in (27):

- (26) a. I gave Greg a gift on purpose last Christmas but only reluctantly this year  
 b. I sent Sam a telegram quickly yesterday but less hurriedly today  
 c. I sent Tom a letter at home this morning and at his office this afternoon

The coordinated VP would look like the following:

(27) [<sub>VP</sub> [... at home ] this morning ]

#### Right Node Raising

Right node raising examples like those in (28) seem to point to the same conclusion: DP<sub>1</sub> and DP<sub>2</sub> are external to VP:

- (28) a. I've given Bill a pewter mug and Sam has given Peter a toaster without regrets for Christmas.  
 b. I've sent Tom a letter and John has sent Bill a telegram from home in the morning.

(29) [<sub>VP</sub> [... from home ] in the morning ]

### 3.4 Adverb Placement

A third type of argument for the structure in (18) comes from the distribution of adverbs. Jackendoff's (1972) Class II adverbs, like *quickly*, *slowly*, *quietly*, *frequently*, etc., is what I will focus on. The distribution of this class of adverbs is highly constrained in the functional area of the tree but they are freely distributed within the VP area of the tree. Consider the following examples:

- (30) a. (Quietly) Mikey (\*quietly) has (\*quietly) not (?quietly) been (quietly) visiting (\*quietly) his parents (quietly).  
 b. (Loudly) Betsy (\*loudly) has (\*loudly) not (?loudly) been (loudly) singing (\*loudly) the anthem (loudly).  
 c. (Quickly) Chris (\*quickly) has (\*quickly) not (?quickly) been (quickly) hitting (\*quickly) the dog (quickly).

Assuming these adverbs are adjoined to various projections in the tree, the following describes their distribution:

Adjunction to (with reference to example (30)a and a structure incorporating (21)):

- AGRsP = okay (before *Mikey*)
- AGRs' = \* (before *has*)
- NegP = \* (before *not*)
- TP = ? (before *been*)
- FP = okay (before *visiting*)
- AGRoP = \* (before *his parents*)

The point of all this is that in the functional area of the tree Class II adverb-placement is highly constrained. While I do not attempt to provide a complete theory of adverb placement, it seems clear that reference to particular functional heads/projections is necessary to adequately constrain adverb distribution (see Potsdam (1998) for an analysis).

Now let's consider VP-internal adverb-placement; as (31) shows Class II adverbs freely mingle with VP-internal elements:

- (31) Sam talked (quietly) to Carol (quietly) about Oliver (quietly).

What is relevant for our purposes is the fact that an adverb cannot precede a DP object. I take this to mean that adjunction to AGRoP is impossible (this is an assumption that Koizumi (1995) also makes, and is perhaps derivable from a general ban on adjunction to filled Specifiers (Kayne 1994)). I assume, then, that this is one of the restrictions, among several, on the distribution of these adverbs among the functional categories.

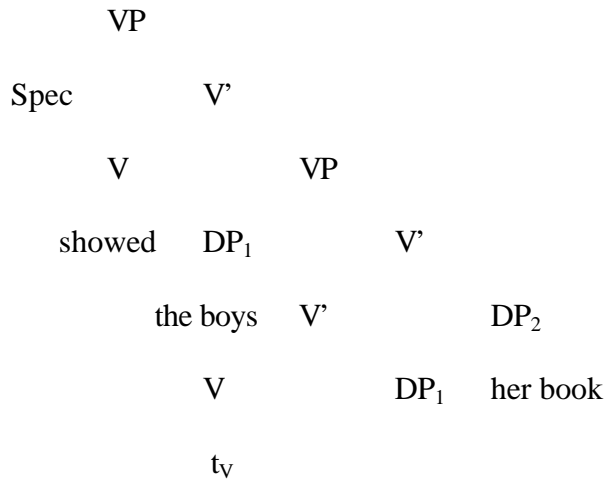
Now consider the double object construction. According to (18), both objects appear overtly in the specifiers of VP-external AGRoP Phrases. If it is the case that adverbs cannot adjoin to AGRoP, as we noticed above, then we predict that no adverbs should be able to appear between the verb and DP<sub>1</sub>, or between DP<sub>1</sub> and DP<sub>2</sub>. This is indeed the case:

- (32) a. Cindy showed (\*quietly) the boys (\*quietly) her book (quietly)  
 b. John sent (\*quickly) Mary (\*quickly) a letter (quickly)  
 c. Greg gave (\*slowly) Jan (\*slowly) the present (slowly)

### 3.5 Larson's (1988) Account

Let's briefly discuss Larson's (1988) account (see Runner 1995, 1998 for more complete discussion). The following tree represents Larson's (1988) proposal. DP<sub>2</sub> is adjoined to V' on the right.

(33) Cindy showed the boys her book





**Right Node Raising**

- (38) a. I have given John and Sam has given Bill [a pewter mug for Christmas]  
 b. I showed Sam and once even showed Peter [the tattoo on my leg in the shower]

Much more can be said about Larson's (1988) influential proposal (and a bit more will be said directly below) but these two points suggest that there are fundamental problems with it.

In summary, what this section has tried to motivate is that  $DP_1$  and  $DP_2$  appear overtly in VP-external Case positions: AGRo specifiers, as in (18).

**4 The Underlying Structure of the Double Object Construction**

This section will focus on the underlying structure of the double object construction. I will explore an approach to the double object construction advocated by Johnson (1991), developing it to account for the facts we have already determined and others that I will turn to immediately.

**4.1 Lack of Connectivity in the Double Object Construction**

The first point to make relates to Larson's (1988) proposal in (33).  $DP_1$  originates in a position c-commanded by  $DP_2$ . Larson accepts Belletti & Rizzi's (1988) "anywhere" version of Condition A, which was adopted in part to explain the binding in examples like (39):

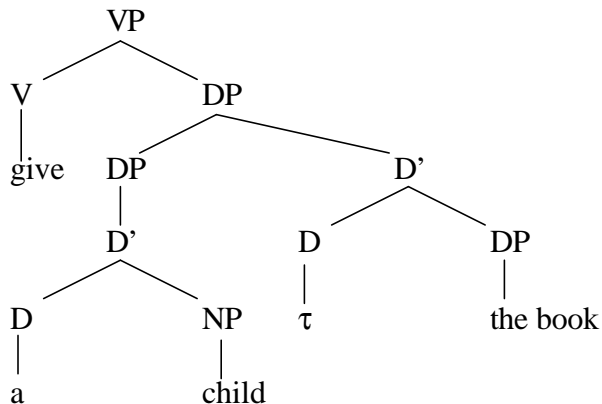
- (39) a. Pictures of himself worry Max  
 b. [e [<sub>VP</sub> [<sub>V</sub> [worry pictures of himself] Max ] [D-structure]

Similar connectivity effects are expected in the double object construction. That is, DP should be able to bind  $DP_1$  contrary to fact, as (40) reminds us:

- (40) a. I showed Bill and Tom each other's friends  
 b. \*I showed each other's friends Bill and Tom

Thus, in the underlying structure we adopt  $DP_2$  should never c-command  $DP_1$

## (41) Johnson's (1991) Clausal DP



Since DP<sub>2</sub> never c-commands DP<sub>1</sub> connectivity is not a problem.

I will now examine a few of the arguments in favor of the clausal DP proposal, and ultimately adopt it with a few changes for the analysis provided here. Kayne (1984) points out that the small clause approach perhaps explains why nominalized double object verbs do not have the same argument structure as their verbal counterparts; the same is true of other verbs taking small clauses, as (42) through (45) show (Johnson 1991, citing Kayne 1984):

- (42) a. \*the gift of Gary (of) the book  
 b. \*Gary's gift (of) the book
- (43) a. \*envy of Sam (of) his job  
 b. \*Sam's envy (of) his job (with relevant meaning)
- (44) a. \*the belief of Mittie intelligent  
 b. \*Mary's belief intelligent
- (45) a. \*a consideration of Chris unhappy  
 b. \*Chris's consideration unhappy

Johnson (1991) provides (46) through (48) as cross-linguistic evidence for his treatment of the double object construction. In (46) we see that DP<sub>1</sub> asymmetrically c-commands DP<sub>2</sub>, allowing for anaphor-binding, but not vice versa (Johnson 1991, citing Herslund 1986):

- (46) a. \*Jeg fortalte drengen<sub>i</sub> om sin<sub>i</sub> bamse [Danish]  
 I told boy-the about self's teddybear  
 b. ?De gav ham<sub>i</sub> sin<sub>i</sub> bekomst  
 They gave him self's what-he-deserved

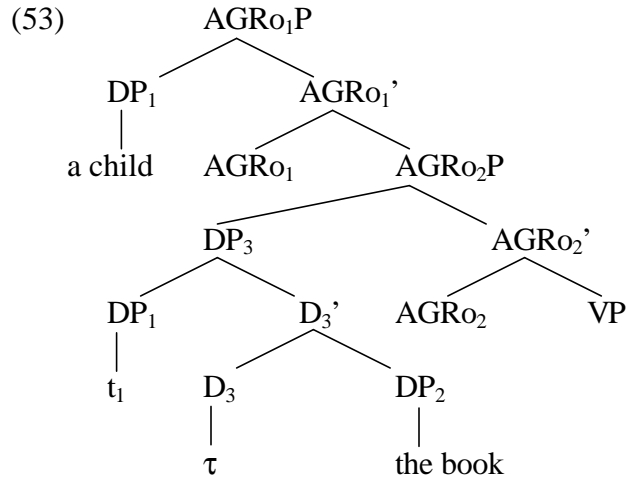
In (47) we see that object shift moves both objects of the double object construction, which Johnson (1991) analyzes as movement of the clausal DP itself (Johnson 1991, citing Vikner 1990):

- (47) Peter viste [hende den] jo [Danish]  
 Peter showed her it indeed

Finally, (48) shows that the DP<sub>1</sub> can undergo object shift alone, but DP<sub>2</sub> cannot (Johnson 1991, citing

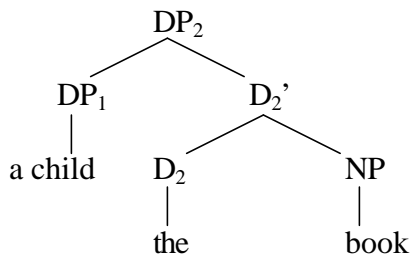
Vikner 1990):

(48) a.

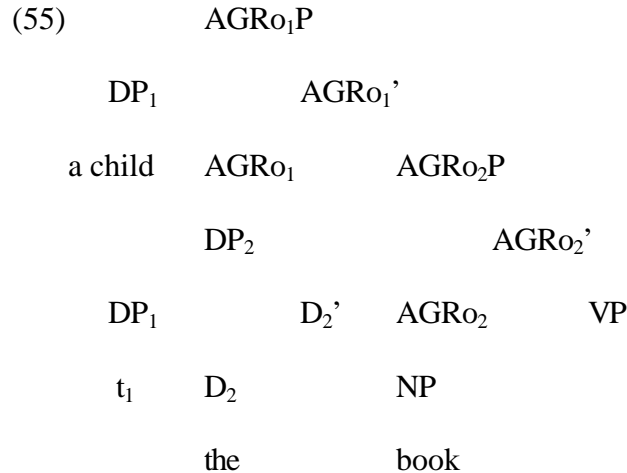


The solution to the former problem, that  $DP_2$  asymmetrically c-commands VP-internal and VP-adjoined material is still a problem because of Johnson's (1991) claim that head of the clausal DP is an independent functional head  $\tau$ . The problem is that  $DP_2$  cannot c-command VP. There is too much structure in between, created by  $\tau$ . Johnson assumes that  $\tau$  incorporates into the verb, Case-licensing  $DP_2$ . But our AGR approach obviates the need for such a mechanism, and any need for  $\tau$  itself, since  $DP_2$  checks Case in Spec,AGR<sub>02</sub>. I will assume the revised clausal DP in (54), where  $DP_1$  is actually in the specifier of  $DP_2$  underlyingly:

(54) Revised Clausal DP



Without the extra structure  $\tau$  provided,  $DP_2$  can c-command into VP, solving our first problem, the fact that  $DP_2$  can c-command VP after moving to Spec,AGR<sub>0</sub>:



I will now turn to some consequences of the revised clausal DP proposal in (54) and (55).

## 5 Some Consequences and Further Motivations

Since DP<sub>1</sub> originates in the specifier of DP<sub>2</sub> and moves to Spec,AGRO<sub>1</sub>, an empty position will appear in DP<sub>2</sub>. This position makes itself known in several ways.

### 5.1 Floating Quantifiers

The examples in (56), showing floated quantifiers in the double object construction, are puzzling (adapted from Maling 1976):

- (56)
- a. I gave the kids both a quarter
  - b. I gave the kids all some candy to keep them quiet
  - c. Dad bought the twins both bicycles for Christmas

If, as Sportiche (1988) argues, the presence of a floated quantifier indicates a DP position, it would seem that there is an extra DP position between the two objects, as (57) illustrates:

- (57) I gave [the kids]<sub>1</sub> [both t<sub>1</sub>] [3 Tw ( s12 Tf -0.078 Tf -0.078 Tf -7sd6pe0/ /F1 7. TD /F1 6) Tj 2T87

- (59) a. The teacher assigned some student every problem [some > every]  
 b. The teacher assigned every problem to some student [ambiguous]
- (60) a. I promised to rent someone every apartment in the building [some > every]  
 b. I promised to rent every apartment in the building to someone [ambiguous]

The two objects of the double object construction have a fixed scope with respect to one another, as the (a) examples show. DP<sub>1</sub> always has scope over DP<sub>2</sub>. This is surprising considering that other DPs can interact scopally, as the (b) examples show.

The clausal DP proposal, which places the trace of DP<sub>1</sub> in DP<sub>2</sub>, provides a potential solution to this problem: since the trace in DP<sub>2</sub> must be bound at LF by DP<sub>1</sub> to satisfy the ECP, DP<sub>2</sub> can never QR above DP<sub>1</sub>. That would result in an unbound trace, as (61)c and (62)b show:

- (61) a. promise [someone]<sub>1</sub> [t<sub>1</sub> every apartment]<sub>2</sub>  
 b. [someone]<sub>1</sub> [t<sub>1</sub> every apartment]<sub>2</sub> promise ... t<sub>1</sub> t<sub>2</sub>  
 c. \*[t<sub>1</sub> every apartment]<sub>2</sub> promise [someone]<sub>1</sub> t<sub>2</sub>
- (62) a. assign [some student]<sub>1</sub> [t<sub>1</sub> every problem]<sub>2</sub>  
 b. \*assign [t<sub>1</sub> every problem]<sub>2</sub> [some student]<sub>1</sub> t<sub>2</sub>

DP<sub>1</sub> must c-comm Tj fP<sub>1</sub>

Let us re-think passive for a moment. The Case assignment approach I have been taking, following essentially Chomsky (1995), is that the verb itself has Case features that it checks off in AGRo. If the verb has one internal argument, it has one Case feature. If it has two internal arguments, it has two Case features. The fact that a verb has Case features to check implies that the functional array of the tree had better have the correct number of AGRo projections. If the verb has one Case feature, one AGRoP is needed. If the verb has two Case features, two AGRoP's are needed. The functional projection AGR does not itself have Case features; it simply mediates between the DP and the verb. And, following Chomsky, I assume that every AGR is the same. It is just a functional element mediating Case checking.

If this is on the right track, then passive of a double object verb absorbs one of the two Case features the verb has to check. With only one Case feature left, only one AGRoP is needed in the functional array. Let us assume, for the argument, that we have the surface account of the double object construction I argued for above except without the clausal DP idea. That is, underlyingly the two arguments are generated in VP independently. If the double object verb is passivized, then one Spec,AGRo is licensed to mediate Case-assignment. Thus, one of the two arguments can move to Spec,AGRo. The other can go to Spec,AGRs (since alongside losing accusative Case, the verb loses its external argument). On the hypothesis that we do not have a clausal DP, how is it to be determined which DP moves to Spec,AGRs and which to Spec,AGRo? Without some extra machinery, ungrammatical (c) is as likely to be derived as grammatical (b).<sup>2</sup>

On the other hand, if the clausal DP approach is adopted, only one possibility exists for which DP moves to Spec,AGRs: the DP which is underlyingly in Spec,DP of the clausal DP. Why? Because if the clausal DP itself moved to Spec,AGRs the trace of the other DP within it would not satisfy the ECP:

- (64) a Buddy<sub>1</sub> was sent t<sub>1</sub> [t<sub>1</sub> the letter]<sub>2</sub>  
 b \*[t<sub>1</sub> the letter]<sub>2</sub> was sent Buddy<sub>1</sub>

#### 5.4 Position and Interpretation

A well-known correlation between the interpretation of a DP and whether it can be extracted out of, and a little-known effect partially correlating the interpretation of the first object in a double object construction with the interpretation of the second, lead us to look a little more closely at DP interpretation and IF positions of objects. I will essentially follow Diesing's (1992) Mapping Hypothesis and assume that objects appearing in VP at LF (e.g. by "lowering" there) are interpreted as nonspecific/existential. Those which remain in Spec,AGRo are interpreted as specific/quantificational/etc. My account of the double object construction, which puts a close relationship between the two objects--the first binding a trace in the second--constrains their LF configurational possibilities. We see more evidence for this when we observe the facts about extraction out of the objects in the double object construction, as well as the interpretations possible for the two objects.

<sup>2</sup> Extra machinery might include the perhaps already required minimalist notion of equidistance (Chomsky 1995).

### 5.4.1 A Prediction: Extraction out of DP<sub>1</sub>

Diesing (1992) discusses the well known observation that extraction out of DP is sensitive to the interpretation of the DP. Consider the following contrasts (taken from Diesing 1992, p.97):

- (65) a. Who did you see pictures of?  
 b. Who did you see a picture of?  
 c. Who did you see many pictures of?  
 d. Who did you see several pictures of?  
 e. Who did you see some pictures of?
- (66) a. \*?Who did you see the picture of?  
 b. \*?Who did you see every picture of?  
 c. \*?Who did you see most pictures of?  
 d. \*?Who did you see each picture of?  
 e. ??Who did you see the pictures of?

The DPs in (65) all are interpreted as existential or nonspecific DPs; the DPs in (66), however, are quantificational or presuppositional.

According to Diesing (1992), interpretation is guided by the Mapping Hypothesis, which determines which part of the syntactic tree maps onto which part of the semantic (DRT) representation:

- (67) *Mapping Hypothesis*: Material from VP is mapped into the nuclear scope. Material from IP is mapped into the restrictive clause.

What this means for us is that if a phrase is presuppositional or quantificational, such as a definite DP or specific indefinite DP, it must be VP-external at LF in order to map onto the restrictive clause. If a phrase is existential, nonpresuppositional, etc., such as a nonspecific indefinite DP, it must be VP-internal at LF to map onto the nuclear scope of the representation.

Diesing argues then that the link between interpretation and grammatical extraction out of DP is only indirect. The grammatical extraction examples all involve extraction out of an DP which is in VP at LF; the ungrammatical examples involve extraction out of an DP external to VP at LF. She argues that the extraction is sensitive to the position, not the interpretation, of the DP.

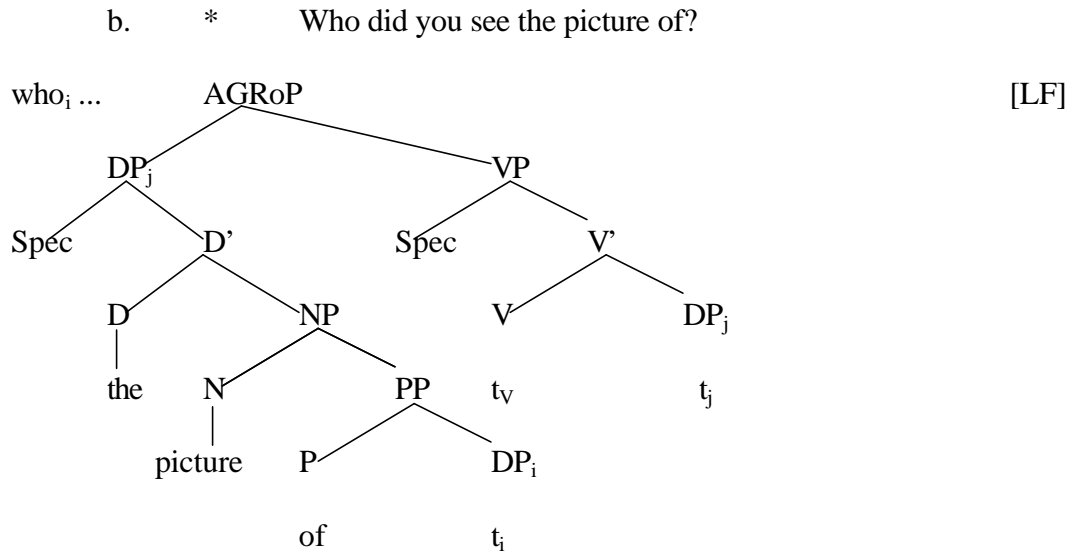
To make this proposal more concrete I will abstract away from the details of Diesing's (1992) analysis, since she assumes objects to be in VP at PF, and implement her idea in my framework. On my account, objects are VP-external--in Spec,AGRo--at PF. That implies that at LF, they either remain there, and get interpreted as quantificational (being mapped onto the restrictive clause), or they lower to their VP-internal base position, and get interpreted as existential (mapped onto the nuclear scope).<sup>3</sup>

What about extraction? Diesing attributes the ungrammaticality of (66) to the ECP. Intuitively, looking at the LF representations, we can describe the generalization as the following: an LF complement of V is not a barrier to extraction; and an LF non-complement is a barrier to extraction. Assuming barrierhood is defined to include a statement about theta government, essentially the contrast

<sup>3</sup> In Runner (1995,1998, Chapter 7) I develop an approach to what I am calling lowering here which exploits the copy and delete strategy for movement. Here I will simply assume the "lowered" construction is available somehow and leave it open if it comes about by syntactic lowering or by copy and delete movement.







In the grammatical example, (68)a, since  $DP_j$  is to be interpreted as existential it has "lowered" to VP at LF. Diesing (1992) assumes syntactic lowering; I will exploit the copy and delete strategy in Section 6 below. Whatever the mechanics of it, the phrase appears in VP at LF.  $DP_j$ , then, is theta governed by the trace of V at LF. Thus,  $DP_j$  is not a barrier for extraction of  $DP_i$ . In the ungrammatical example, (68)b,  $DP_j$  is in Spec,AGRoP at LF. This is because it is meant to obtain a nonexistential reading. Being nonexistential it must be VP-external at LF. Since it is not in VP, it is not theta governed by anything at LF. Thus,  $DP_j$  is a barrier for the extraction of  $DP_i$ , hence the ungrammaticality.

Now, let us turn to the double object construction. Not surprisingly, extraction out of the second object is fine:

- (69) a. Who did you say Cindy sent Bobby a picture of t?  
 b. What did Mary tell you John bought Shirley a box of t?  
 c. Who did Ron say Kim sent me a story about t?

These examples are all acceptable assuming a nonspecific interpretation of the second object. If the account outlined above is on the right track, that implies that the second object can appear in a theta governed position at LF.

Before turning to the structure, let us consider the behavior of the first object. Perhaps surprisingly, extraction out of the first object is significantly worse:

- (70) a. \*Who did you say Cindy sent a friend of t a picture?  
 b. \*What did Mary tell you John bought friends of t a book?  
 c. \*Who did Ron say Kim sent an acquaintance of t a threatening letter?

To avoid the specificity effect, to be discussed in the next section, the second object must be nonspecific in order to allow the first also to be nonspecific. Even with this, though, the examples are bad. This, then, implies that the first object in the double object construction cannot be in a theta governed position at LF.

Now, let us consider the account of double objects I have proposed. Underlyingly, the two

objects form one clausal DP in VP. In the overt syntax each object moves to its own Case position external to VP. In order to receive nonspecific interpretations the objects can lower to VP, following the Mapping Hypothesis. However, in VP, only the second object, the clausal DP itself, is theta governed. The second object's DP will not be a barrier to extraction. On the other hand, the first object, in the specifier position of the clausal DP, is not theta governed. Thus, it's DP will be a barrier to extraction.

Consider the structures:

(71) Extraction out of the Objects in the Double Object Construction.

a. Who did you say Cindy sent Bobby a photo of t?

who<sub>i</sub> ...AGRoP

[LF]

DP<sub>1</sub> VP

Bobby Spec V'

V DP<sub>2</sub> sent Bobby a photo of t?

2 2 VP

v 1 P V

b. \* Who did you say Cindy sent a friend of t a picture

who<sub>i</sub> ...AGRoP [LF]

Spec VP

Spec V'

V DP<sub>2</sub>

t<sub>v</sub> DP<sub>1</sub> D'

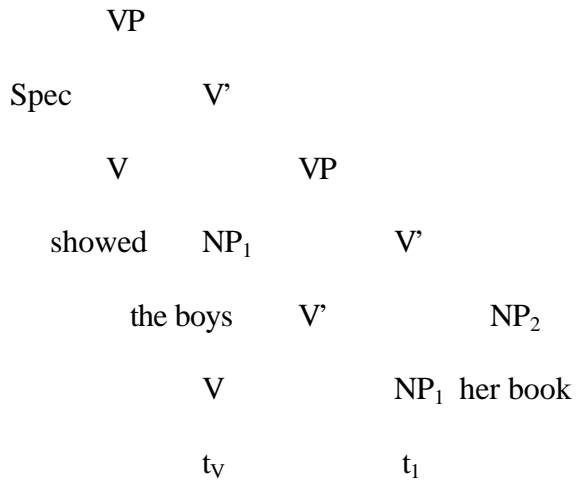
Spec D' D NP

D NP a picture

a N PP

friend

(72) Cindy showed the boys her book



Taking Larson's (1988) structure at face value and applying my account of extraction out of object it appears that the wrong predictions are made. DP<sub>1</sub> is a D-structure complement and thus should be able to lower to that position, be theta governed, and not be a barrier. DP<sub>2</sub> is adjoined to V', but its V' sister, according to Larson (1988), reanalyzes as V to assign inherent Case, so perhaps it also theta governs in that configuration.

Thus, the problem is DP<sub>1</sub>. Larson (1988) is of course not obligated to follow my analysis so let us consider other accounts consistent with his structure. He could claim that the ECP must be satisfied at S-structure. At S-structure DP<sub>1</sub> is in a specifier and thus is a barrier.

However, recall that extraction out of regular objects is acceptable, if they are nonspecific. On Larson's (1988) account a transitive object is base generated as a sister to V if there are no lower arguments. If there are lower arguments, the DP is base generated as a specifier:

- (73) a     [<sub>IP</sub> e [<sub>VP</sub> John [<sub>V'</sub> saw Mary ]]]  
       b     [<sub>IP</sub> e [<sub>VP</sub> John [<sub>V'</sub> e [<sub>VP</sub> Mary [<sub>V'</sub> saw in the park ]]]]]

In (a), the object

extraction out of all LF specifiers. Larson's (1988) account, which treats the first DP in the double object construction on a par with a normal transitive object does not predict the extraction contrasts found.

### 5.4.2 The Specificity Effect

Having touched on the relationship between position and interpretation I will mention a curious generalization appearing to hold for the double object construction in English that was pointed out in a paper by Janina Radó (1994). If the second object is definite or specific, the first must also be. That is, if a potentially nonspecific indefinite object is DP<sub>1</sub>, it must be given its specific interpretation if DP<sub>2</sub> is definite or also specific. The effect is more obvious when compared to the non-double object alternants:

- (75) a I sent a doctor the letter  
b I sent the letter to a doctor

The effect is subtle and difficult to nail down. Comparing (a) and (b), (b) can mean that I sent some letter under discussion to some doctor or other. It seems to be unimportant to me or the hearer who the doctor is. (a) on the other hand implies that there is a specific doctor that I have in mind and that, though this doctor is not already salient in the discourse (hence the use of the indefinite), the hearer should take it to mean that I didn't just send the letter to any old doctor. (b) can be the answer to the question, "What did you do with the letter?" (a) does not seem an appropriate answer to this question.

This effect does not appear to be present when both objects are potentially nonspecific indefinites:

- (76) a I sent a doctor a letter  
b I sent a letter to a doctor

I think for (a) and (b) both indefinites can get a nonspecific interpretation. This means that I am saying that I sent some doctor some letter and that the hearer need not be concerned with which doctor or letter. These can both be an answer to the question, "What did you just do?"

I will not give a full analysis of this phenomenon but will point in the direction of an answer. Diesing (1992), as discussed above, argued that the LF position of an indefinite determines its interpretation. A VP-internal indefinite is interpreted as an existential/non-specific indefinite. A VP-external indefinite and definite gets a presuppositional/specific interpretation; this is essentially her Mapping Hypothesis. Without going into the motivation for Diesing's (1992) hypothesis let us consider what it predicts for the cases at hand.

If nonspecific indefinites must be in VP at LF, then the mapping from S-structure to LF will have to involve lowering nonspecific subjects and objects back into their VP-internal base positions. On the other hand if specific indefinites and definites must be VP-external at LF to get the appropriate interpretation, they can remain in their S-structure, VP-external, positions for the mapping to LF.

Consider now the examples showing our specificity effect. The second object is specific/definite. It must be VP-external at LF. If the first object wants to be nonspecific it must lower to VP at LF. However, if the first object lowers to VP, it will not be able to bind its trace in the second object at LF, violating the ECP:



In favor of this is the possibility of leaving a floating quantifier in the position of t:

- (81) a I consider the boys each a good friend  
 b I consider [the boys<sub>i</sub> [each t<sub>i</sub> [a good friend]]]

Given this, the following duplicates the problem pointed out above:

- (82) Q: Do you consider John your best friend?

peYeTD I wouldTD /F1[42]imp/58fflen8JTD (Jf, 427 Tw ( [your best frien061 7.8 Tf 0.2 ( ) Tj 27 0 TD -0.1165 Tc 0.



moved phrase containing  $t_1$  to be in the position of  $t_2$ . Notice that this problem is duplicated for other small clauses:

- (88) Q: What do you consider John?  
            $[_{DP} t_1 [\text{what}]]_2$  do you consider John<sub>1</sub>  $t_2$   
 A: I consider John a good friend

And passive can blatantly move the small clause subject uncontroversially leaving a trace in the moved wh phrase:

- (89) Q: What has John always been considered?  
            $[_{DP} t_1 [\text{what}]]_2$  has John<sub>1</sub> always been considered  $t_2$   
 A: He's always been considered t a very close friend  
       He<sub>1</sub>'s always been considered  $[_{DP} t_1 [\text{a very close friend}]]$

Notice that if the small clause is indeed a DP, an alternative analysis which might claim that only *a very close friend* is what *what* questions cannot be correct. The reason is that *a very close friend*

Many questions are left open by this proposal. For example, what is this step, "akin to QR"? what ensures the correct deletion? etc. However, it does leave us with exactly the LF representation we need. *John* c-commands  $t_1$  at LF and thus satisfies the ECP as desired. I will then leave this problem as potentially solvable.

## 6.2 Reconstruction: Wh-movement vs. QR

Once the question of how a wh-phrase can contain a trace is answered, a second question arises. If it is possible to "reconstruct" the DP containing the trace of  $DP_1$  at LF, thus allowing  $DP_1$  to bind  $t_1$ , why is the same sort of operation not available for QR? Recall the scope freezing phenomenon found in the double object construction (from Section 5.2):

(94) The teacher assigned some student every problem

This can have only the interpretation in which  $DP_1$  has scope over  $DP_2$ . I suggested that this followed from the clausal DP proposal since  $DP_2$  contains the trace of  $DP_1$ :

- (95) a. [some student]<sub>1</sub> [ $t_1$  every problem]<sub>2</sub>  
 b. \*[ $t_1$  every problem]<sub>2</sub> [some student]<sub>1</sub>  $t_2$

Interestingly the same facts hold for QR of expressions containing overt anaphors. Consider the following:

- (96) Mary thought that some boy bought every picture of himself  
 a. [some boy]<sub>1</sub> [every picture of [himself]<sub>1</sub>]<sub>2</sub>  
 b. \*[every picture of [himself]<sub>1</sub>]<sub>2</sub> [some boy]<sub>1</sub>  $t_2$

This can only be interpreted with *a*), *not*

- (97) Q: Who thinks that John bought which pictures of himself?  
 A: Marcia thinks he bought the nude  
 Greg thinks he bought the one in the clown outfit  
 Cindy thinks he bought the one with the green frame

LF wh movement of the wh phrase in situ is assumed to account for the readings observed. What is important for us is that these readings are available even with the binding of *himself* by *John*. This suggests that an LF like the following is available:

- (98) which<sub>i</sub> who thinks John<sub>1</sub> bought t<sub>j</sub> pictures of [himself<sub>i</sub>]

This is predicted on the copy and delete strategy for A'-movement. If covert wh-movement is LF movement then the hypothesis that LF movement does not employ the copy and delete strategy seems unlikely. However, an alternative explanation exists. It is conceivable that covert wh-movement is in fact copy movement prior to the split to PF and LF, followed by deletion of the top copy at PF. This will give the appearance of LF movement where none occurs. If this is the strategy that "covert" wh-movement takes, then our hypothesis that LF movement does not use the copy and delete strategy is maintained.

### 6.3 "Overt" Movement and Reconstruction

We are left with an interesting dichotomy. Wh-movement, which applies in the "overt" syntax (prior to the split to PF and LF), employs the copy and delete strategy as evidenced by the reconstruction effects observed. QR, which applies at LF, does not use copy and delete movement and shows no reconstruction effects. Why should there be such a dichotomy? Why is the copy and delete strategy not available at LF?

A potential answer to that question is available, depending on what exactly copying is considered to be. Let us assume that copying involves selecting the relevant (identical) elements from the lexicon and inserting them into the tree in the appropriate positions. What this means is that employing copying requires access to the lexicon. Chomsky (1995) argues that in principle access to the lexicon should be denied beyond the split to PF and LF, otherwise words could be inserted at PF that have no connection with LF, or vice versa. Thus, copying should be unavailable to LF "movement". This, then, derives our dichotomy: only movement prior to the split to PF and LF can employ the copy and delete strategy; therefore only such movement can show reconstruction effects. LF movement must use some other strategy, and no reconstruction effects are found.

## 7 Conclusion

In this paper I argued that both objects of the double object construction appear in VP-external Spec,AGRoP positions in the overt syntax. That part of the proposal accounts for the constituency and adverb facts. It also answers a very basic question about this construction: How are the two NPs licensed in the structure? The answer to this question is that they are licensed in the same way as typical direct object NPs are licensed: in a VP-external Case position. Further, I argued that underlyingly the two objects form a type of small clause, in which the first is in the specifier of the

second; this is meant to account for several semantic characteristics of the construction. That part of the proposal also makes a number of interesting predications about the LF relationships available to the two objects: since the first object is related to the specifier of the second by movement, the first object must always c-command the second at LF. This prediction is fulfilled in several ways, including a restriction on Passive, a "scope freezing" effect, a specificity effect and restrictions on extraction from the construction.

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