

Clausal Edges and their Effects on Scope*

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Clausal edges seem to have an effect on the scopes that arguments residing at those edges can have. In particular, they influence whether an argument may be interpreted at a lowered, or reconstructed, position within the clause. This is probably what is responsible for the difference between (1a) and (1b), which formed the focus for the debate in Stowell 1991 and Williams 1983.

- (1) a. A linguist seems to be unhappy.
- b. A linguist seems unhappy.

While (1a) allows for a reading in which *a linguist* is interpreted as part of the clausal complement to *seem*, (1b) strongly favors the reading in which *a linguist* has root wide scope. That is, whereas both (1a) and (1b) can be read as statements that ascribe to some linguist or other the appearance of unhappiness, only (1a) can also be understood as a statement about the appearance of unhappy linguists. If we hold constant the idea that the complement of *seem* is a clause in both these cases, and that *a linguist* receives its θ -role from within this clause, then the contrast can be described in terms of conditions on reconstructing *a linguist* into that clause.

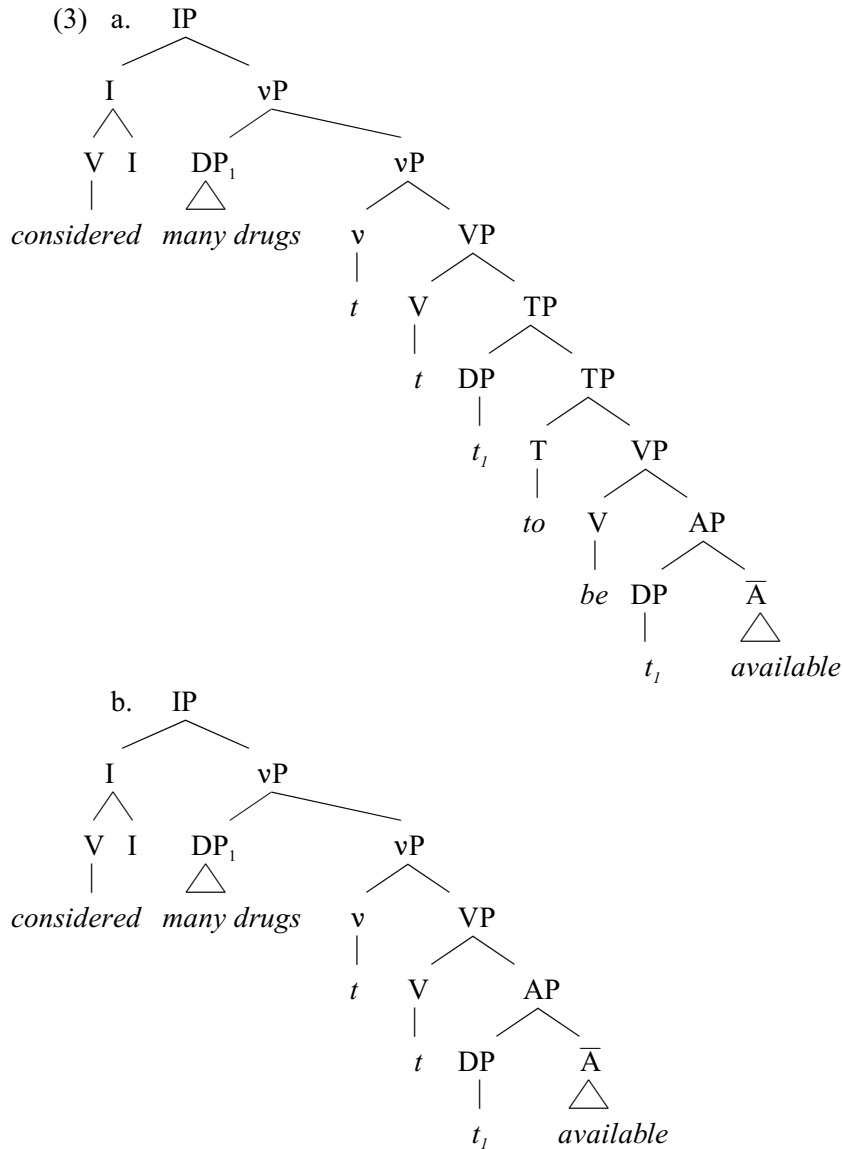
Heycock 1995 argues that the same sort of contrast emerges in clauses with accusative subjects; (2a) allows only a presuppositional reading for *many drugs*, whereas (2b) permits a reading in which *many drugs* gets a weak, cardinal, interpretation.

- (2) a. She considered many drugs available.
 - b. She considered many drugs to be available.
- (Heycock 1995, (40b): 234)

The readings involved here are rather like those for (1). In both of the examples in (2) the embedded clause can be construed as a proposition about some large number of drugs, one that ascribes to them availability. Only (2b), however, can be understood as a proposition about the availability of a large number of drugs. If we adopt the view that the accusative subjects of these cases have raised to surface in the root clause, as shown in (3), then this contrast too can be described in terms of constraints on reconstruction.

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Let me say a few words about these representations. I've adopted the view that accusative Case-marked DPs overtly adjoin to vP, the phrase responsible for determining the external θ -role. If the DP surfaces in this position, then the main verb, which originates within vP, must also move overtly, as indicated. Finally, the argument bearing an external θ -role assigned by a verb originates in the Specifier of vP, and moves into its surface position; this is suppressed in the representations above. The argument bearing the external θ -role of an adjective, by contrast, originates within that AP, as shown in (3b).

If the cases in (1) and (2) are put together, it would seem that reconstructing phrases into small clauses is proscribed. I suggest this is related to the fact that these clauses are small. In particular, there is evidence that the *to*-infinitives in (1a) and (2b) have an empty Specifier

position that the parallel small clauses lack. One fact that suggests this is that predicate inversion is possible in *to* infinitives but not in small clauses:

- (4) They consider me (to be) the real problem.
- (5) a. They consider the real problem to be me.
b. *They consider the real problem me.

This style of predicate inversion probably involves moving the DP in predicate position past the subject into an empty Specifier position. (See Moro 1997 and Heycock 1995 among others.) Thus, the underlying order in (4) yields the word-order in (5a), but is blocked from doing the same to the small clause in (5b). As the parses in (3) indicate, this difference will follow under such an analysis of predicate inversion. If small clauses contain only the Specifier in which the subject gets its θ -role, and the *to*-infinitival has the additional Specifier of TP, then only in *to*-infinitivals will there be a place for the inverted material to move.

If the conclusion that small clauses do not have Specifier positions beyond the one that is θ -marked is correct, then the contrast in reconstruction that (1) and (2) illustrate can be captured with (6).

- (6) Nothing may be reconstructed into its θ -marked position.

It may be possible to derive (6) – at least for the relevant cases – from a theory of generalized quantifiers which forces them to be relations between formulae.¹

It's this effect that clausal peripheries have on reconstruction that I will concentrate on here. I will argue that the constraint in (6) plays a central role in the puzzling rigidity of scope that materializes in the double object construction.

Unlike the majority of two complement constructions, which allow either object to fall within the scope of the other (cf. (7)), in the double object construction the second object must fall within the scope of the first (cf. (8)).

- (7) Hermione gave a broom to every boy.
 - a. = There is a broom that Hermione gave to every boy.
 - b. = For every boy, there's a broom that Hermione gave to him.
- (8) Hermione gave a boy every broom.
 - a. = There's a boy that Hermione gave every broom to.
 - b. ≠ For every broom, there's a boy that Hermione gave it to him.

Barss and Lasnik 1986 demonstrate that virtually every phenomena sensitive to semantic scope behaves in a parallel fashion; the double object construction prevents the first object from falling

¹See Johnson and Tomioka 1998.

within the scope of the second, whereas other double complement frames don't. For example, a pronoun cannot be bound from the second object if it resides in the first object of a double object construction. But this is otherwise possible; compare (9a) to (9b).

- (9) a. *Hermione showed a friend of its₁ inventor every toy₁.
 b. Hermione showed an account of his₁ finances to every man₁.

Throughout this paper, I shall use the interaction of quantifiers to represent all the other scope sensitive phenomena, leaving outstanding a demonstration that my proposals actually work for the whole class.

Whatever force is responsible for the contrast in (7) and (8), it is not something that unilaterally blocks the second object in the double-object construction from taking wide-scope.² The second object is able to have the subject within its scope, as (10a), from Bruening 2000 indicates, and it may escape the scope of negation as well, as in (10b).

- (10) a. A different teacher gave me every book.
 b. I haven't shown you most of the facts yet.
 = The majority of facts are such that I haven't shown them to you yet.

We are in need of something that controls just the local relation of the two objects in the double object frame, and so we should look at how the double-object frame differs from other two complement constructions with regard to how the objects are related.

One limitation of this paper is that it will not directly address how general scope rigidity is in the syntax of complementation. In particular, it will not address how the scope rigidity found in the double object construction is related to other instances of scope rigidity in English. For example, as Bruening (2000) discusses, there are alternations similar to that in (7) and (8) found in the *spray/load* alternation:

- (11) a. Cleo wrapped a dress around every bedpost.
 = For every bedpost, there a dress that Cleo wrapped around it.
 b. Cleo wrapped a bedpost with every dress.
 ≠ For every dress there's a bedpost Cleo wrapped it with.
 (Bruening 2000, p. 6)

I believe there is nothing that stands in the way of extending my suggestions to these cases, but that will not be demonstrated.

²As suggested in Hornstein 1995, for example.

I'll begin by reviewing the most recent, and thorough, attempt to capture these cases: Bruening (2000). Then I'll argue that using the constraint on lowering that is discussed above permits an improvement on his account.

1. BRUENING'S ACCOUNT

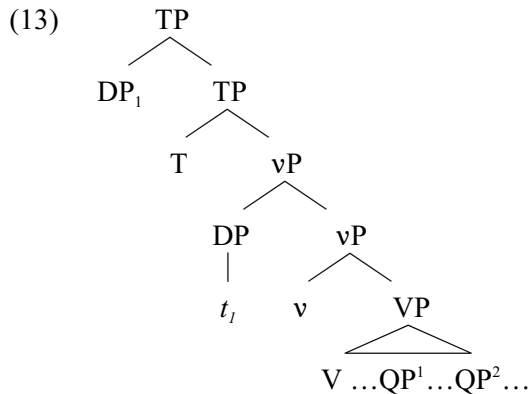
The central idea in Bruening 2000 is that there is a constraint on quantifier interaction which is quite regularly obscured in English but reveals itself in the double object construction. The constraint is a generalized version of Superiority, which Bruening calls Shortest.³

(12) Shortest

A pair P of elements $[\alpha, \beta]$ obeys Shortest iff there is no well-formed pair P' which can be created by substituting γ for either α or β , and the set of nodes c-commanded by one element of P' and dominating the other is smaller than the set of nodes c-commanded by one element of P and dominating the other.

(Bruening, 2000 11:(40))

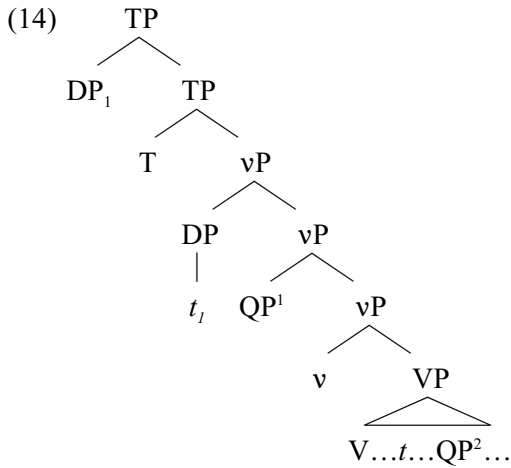
Shortest is embedded within a framework of movement that sees it as a special instance of attraction between a functional head and the moved phrase. Shortest governs this relation. It therefore allows only the highest of two phrases attracted to some functional head to move to that head. In the context of quantifier scope, Bruening assumes that various heads can come into syntactic representations with a feature that attracts quantificational DPs. Consider the concrete case where v, the head that determines the external θ -role, comes equipped with this feature.



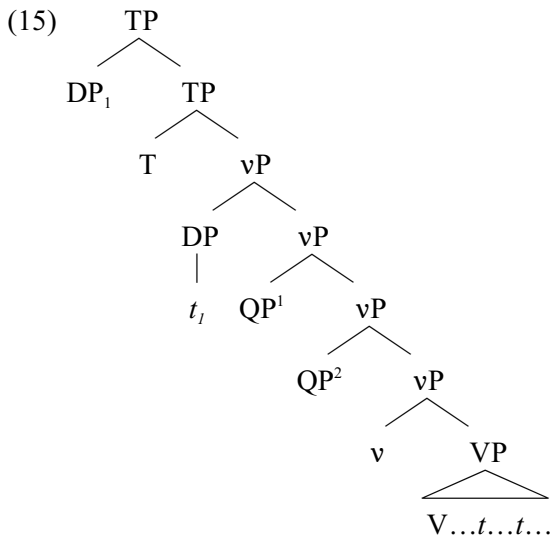
Imagine that (13), where the subject has overtly raised from Specifier of vP to its surface position in Specifier of TP, is the input to QR. If v is attracting quantifier phrases, then Shortest will allow only the highest of them to adjoin to vP. Thus, if QP¹ is higher in the phrase marker than is QP², only QP¹ will be allowed to move. If both QP¹ and QP² are attracted to v – that is if both QR – then QP² will have to move after QP¹ has moved out of the way. Its input will be (14).

³Following Richards 1997.

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Assuming that movement is also subject to Shortest, QP² will have to adjoin to vP in a position lower than QP¹, as in (15). (It's for this reason, incidentally, that QP¹ has adjoined below the subject's trace in (14).)



In general, then, these assumptions have the effect of imposing on the output of QR the hierarchical relationship between quantificational phrases that is present before QR. If one quantificational phrase is higher in the phrase marker than another underlyingly, QR will not be able to produce a different scopal relation. Therefore, whenever the scopes of two arguments are able to commute, it is because they have two different ways of being arranged underlyingly.

An obvious apparent counterexample to this consequence is the relationship between quantificational subjects and objects. In many cases, a subject is able to fall within the scope of an object, even when the evidence points to always placing subjects in a position higher than objects underlyingly. Bruening suggests that in these cases quantifier lowering plays a central

role. Because subjects are driven into their surface position by a feature that is distinct from that which drives quantifier raising, its movement does not figure in calculating Shortest with respect to the feature fixing the scopes of other arguments. As a consequence, it is conceivable that quantifier raising could bring an object to a position higher than where the subject originated. This could be achieved if the feature that attracts quantifiers is associated with a head higher than *v*, or if the definition of Shortest were manipulated so as to allow the QPs that have moved in (15) to adjoin higher than the trace left by the subject. For a subject quantifier to fall within the scope of an object, then, it would be sufficient to let the subject quantifier phrase reconstruct into its underlying position.

There is evidence that this, in fact, is the only method by which a subject may fall within the scope of an object; Bruening cites arguments from Hornstein 1995 and Johnson and Tomioka 1998 on behalf of this conclusion. One of Hornstein's arguments, for instance, involves the contrast in (16).

- (16) a. Everyone met a boy_i before he_i left.
 b. A boy_i met everyone before he_i left.

It is possible to understand (16a) in such a way that the values given to *a boy* and the pronoun it binds, *he*, vary as according to those given to *everyone*. That is, *a boy* can fall within the scope of *everyone* and still bind *he*. But that reading is much less available in (16b). In this case, for *a boy* to bind *he* it is much preferred to understand it having scope wider than *everyone*. This would follow if (1) the *before*-clause holding *he* is structurally higher than the underlying position for the subject and (2) *a boy* must lower into its underlying position to fall within the scope of *everyone*. Facts of these sorts, then, support the conclusion that subject lowering is a necessary ingredient in giving the object higher scope – let's call this the Obligatory Lowering Effect. To the extent that Obligatory Lowering Effect follows from Bruening's use of Shortest to control QR, it can be seen as support for this view as well.

If we are to combine this account of how objects gain scope over subjects with the constraint on quantifier lowering in (6), we will have to let objects move beyond vP at LF. If lowering is not permitted into an argument's underlying position, as (6) requires, then subjects will not be able to lower as far as Specifier of vP. There must instead be some intermediate position into which they can reconstruct – let's call this Specifier of XP – and QR must be able to bring objects beyond this position.

Bruening's account of the difference in scope rigidity between double object constructions and other two complement constructions has two components, then. One is Shortest, in conjunction with a feature-driven model of QR. The second is the premise that the first object in a double object construction is unambiguously positioned higher than the second object, but that other two complement constructions allow their objects to be arranged ambiguously with either one or the other object higher.

2. MY ALTERNATIVE

2.1. The difference in double object and other two complement structures

Like Bruening’s account, I will suggest that the difference between double objects and other two complement constructions is tied to the underlying arrangement of the objects in these constructions. And like Bruening, I will suggest that these different arrangements interact with constraints on QR in such a way that scope rigidity materializes in just the double object construction. I don’t believe that that constraint is Shortest, however, nor that the feature-driven account of QR is correct. There will be, as a result, no need to allow two complement constructions to have ambiguous underlying representations – a feature of Bruening’s account that does not, to my knowledge, have independent support. Instead, I will tie the difference in scope that the objects of these two constructions allow to constraints on their surface arrangement, and on the condition on quantifier lowering sketched in the introduction.

We should abandon Bruening’s approach to this problem for the following reason. Because his system prevents one object from QRing past another, it predicts that the surface arrangement of objects should be faithfully reproduced in the LF representation. If we can find a way of guaranteeing that one object is higher than the other in the surface representation, this should have a disambiguating effect on Bruening’s proposal. But this isn’t the case. In (17) the direct object has escaped the elided VP, which contains the indirect object.⁴

- (17) Hermione might give a broom to every wizard, but she wouldn’t Δ a wand.
 Δ = give to every wizard

Assume, for concreteness sake, that the elided constituent in (17) is present syntactically, but is simply left unspoken. The direct object that has escaped the ellipsis must, therefore, be higher than the indirect object in the surface representation. And yet (17) allows for an interpretation in which the direct object falls within the scope of the indirect object: the values given to *a wand* can vary as a function of the values given to *every wizard*.⁵ The scope rigidity of the double object frame is preserved in these ellipsis contexts, incidentally, so we need not worry that there is something special about ellipsis that is interfering with the constraint we are in search of.

- (18) Hermione might give a wizard every broom, but she wouldn’t Δ a witch.
 Δ = give every broom
 * *every broom* > *a witch*

⁴See Lasnik 1995 and references cited therein for an analysis of this construction.

⁵The same is true for *Hermione might give a broom to most wizards, but she won’t Δ a wand*, in which it is easy to determine that *most wizards* is not necessarily scoping out of the coördination. It doesn’t seem, therefore, that the inverse scope reading in these cases is contingent on giving the indirect object in the first clause wide-enough scope to embrace the arguments of the second clause.

I don't see a way of escaping this counterexample to Bruening's proposal: it seems to require an account which allows QR to change the hierarchical arrangement that complements have on the surface.

Rather than see the double object construction as representing, unobscured, the constraints on QR, and casting the other two-complement constructions as having exceptional means of overcoming these constraints, we should treat the double object construction as exceptional. There are other ways in which the double object construction is unique among two-complement constructions. There is evidence from two directions that it involves a silent predicate which is otherwise absent.

Green 1974 argues that there was a pattern to the meanings that double object constructions involve that suggests they all share a common predicate. This similarity across double object constructions can be best appreciated by contrasting the meanings that the double object constructions have to the meanings that the same verbs invoke when they combine with DP and PP complements. Unlike the DP+PP frame in (19b), for instance, the double object frame in (19a) only allows for an interpretation in which Sara bought a toy for Max to own.

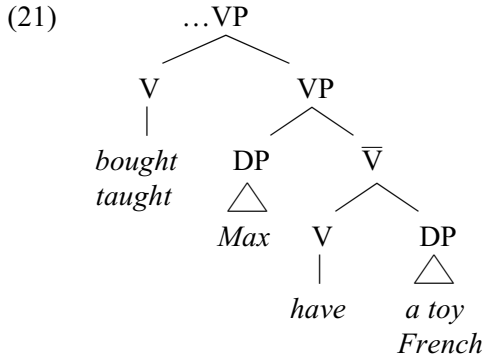
- (19) a. Sara bought Max a toy.
 b. Sara bought a toy for Max.

The range of meanings in (19b) is considerably broader: Sara could have bought a toy on Max's behalf, for instance. Unlike (19b), (19a) necessarily involves a possession relation between *Max* and *a toy*. A similar contrast is found in (20), in which only (20a) entails that Max came to learn French.⁶

- (20) a. Sara taught Max French.
 b. Sara taught French to Max.

Again, this can be derived if part of the meaning of the double object construction requires possession between the two objects. Green recommends, then, giving the double object construction a hidden possession predicate that combines with the meaning of the overt verb to produce the resulting meanings. Embedding this idea into current syntactic conventions, the examples in (19) and (20) can be parsed as (21), in which the silent possession predicate is represented as *have*.

⁶See Oehrle 1976 for discussion of this example.



The meaning of *buy* in this structure can be paraphrased as “intend by buying,” and the meaning of *teach* as “cause by teaching,” accounting for the narrowing of the meaning in (19a) and the entailment in (20a).

Decomposing the double object construction into two predicates of this sort has other reflexes. It might account for the oddness of (22b) when compared to (22a), Green suggests.

- (22) a. John sent a letter to New York.
 b. John sent New York a letter.

(Green 1974, (107): 103)

The possession relation that the silent *have* expresses might select for animate subjects, precluding the locative reading that the *to* phrase in (22a) expresses. Another reflex of Green’s account arises in those cases where the overt verb’s meaning centrally involves a causative reading in its double object frame. In these cases, the subject of the double object construction can take on a non-agentive role even when it can’t in the DP+PP frame. There is an unnaturalness to (23a), for example, that is absent in (23b).

- (23) a. This book showed a new approach to me.
 b. This book showed me a new approach.

Green’s argument for a hidden small clause in the double object frame derives from the semantics of the construction. Kayne 1984, by contrast, produces a wholly syntactic argument for the existence of a hidden small clause in the double object construction that is absent in the DP+PP complement structure. His argument is based on the observation that double object verbs cannot nominalize, even when they can with their DP+PP complements.

- (24) a. *her teacher’s gift of Mary of the letter
 b. *her rental of John of office space

(Kayne 1984, (74): 152)

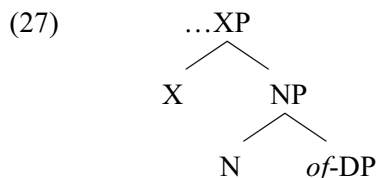
- (25) a. her teacher’s gift of the letter to Mary
 b. her rental of office space to John

The same is true of small clauses in general:

- (26) a. *her consideration of Mary intelligent
 b. *her belief of Hermione careful

Kayne develops a government-based account of Case assignment that blocks assignment of the Case marker, *of*, across clausal boundaries. Assuming then that the argument structure of the nominalized versions of verbs is preserved, the double object case collapses with the small clause case, on the assumption that double objects also have an embedded clause in them.

Government-based styles of Case assignment are now largely disused, so I'll sketch a version of Kayne's argument that is based on more current ideas about Case assignment. Kayne's argument is based on the assumption that the correlate of structural Case assignment in the nominal projection is expressed by *of*, and that the same principles which are responsible for assigning structural Case in the verbal domain are at play in the nominal domain. Presently, the leading idea about structural accusative Case assignment in the verbal domain is that it is assigned by a functional head which embeds the lexical verb. The assignment relation is mediated by a locality constraint that prevents the recipient of Case from being too distant from the relevant functional head. In some contexts, the assignment relation causes the Case assignee to move and adjoin to a projection of the Case assigning functional head.⁷ This system is designed to account for why structurally Case-marked arguments typically precede and asymmetrically c-command other material in the VP,⁸ properties that are also largely true of the *of*-marked argument within NPs. Embedding this account within nominal projections then requires that there be some functional projection – let's call it "X" – that assigns *of* in the configuration in (27).



The locality condition on Case assignment is reflected in those instances where it triggers movement by constraints on that movement. A well-known constraint on Case-driven movement in nominal projections is that they cannot escape embedded clauses. There is no nominal correlate to the raising construction, for instance:⁹

⁷See Chomsky 1995.

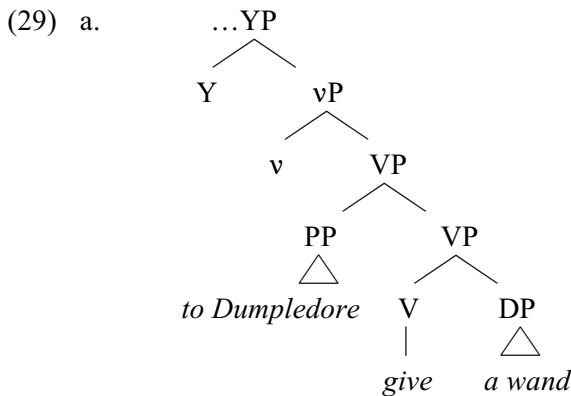
⁸See Larson 1988, Johnson 1991 and much subsequent work.

⁹See Ross 1974.

- (28) a. *Mary's appearance to have left
 b. *it's likelihood not to be there
 (examples from Kayne 1984, (47): 142)

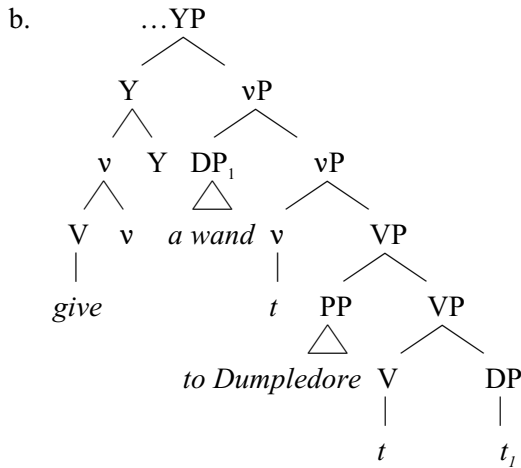
This is likely tied to the more general islandhood of clausal complements to nouns, what Ross dubbed the Complex NP Constraint. Whatever is responsible for the islandhood of these clauses, then, will not only block the raising in (28), but will also block Case assignment into the small clauses of (26). Thus, if double object constructions, but not other two-complement constructions, invoke a small clause then the ungrammaticality of *of*-assignment in (24), and the grammaticality of (25), will be understood.

Together, then, Kayne's argument from the syntax of Case assignment and Green's argument from the common, and distinguishing, element of interpretation that double object constructions receive, recommend giving double object constructions the small clause organization in (21). Moreover, they suggest that the remaining two-complement constructions should be given some other structure. If we follow Takano 1996, the underlying structure for non-double-object constructions might be as in (29a),¹⁰ which surfaces as (29b) after the direct object has moved in response to Case assignment, and the main verb has moved into the functional architecture of the clause.¹¹

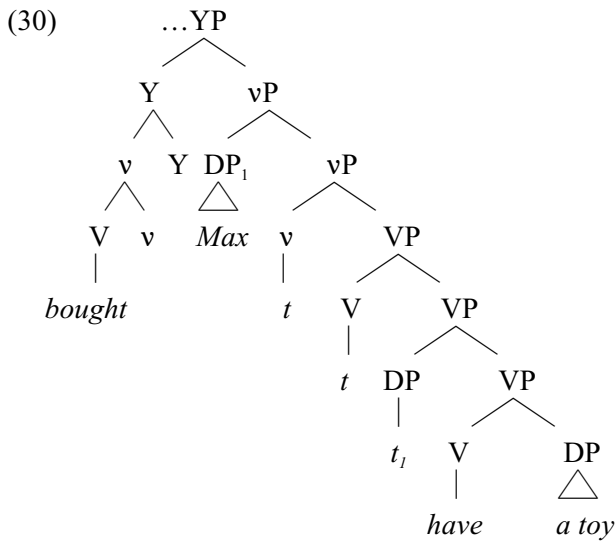


¹⁰An alternative would be to follow Larson 1988 and switch the positions of the direct and indirect objects. It won't matter for the proposals here which alternative is taken.

¹¹These representations suppress the underlying position of the subject argument.



The underlying structure for double object constructions in (21) will lead to a surface representation like (30), in which the first object has raised in response to Case assignment, in a fashion parallel to (29b).



It's this contrast in structure that the difference in scope possibilities should be tied to.

2.2. The constraints

Two sorts of conditions are required. One will affect how QR gives arguments a higher position than the one they occupy on the surface. This condition will do the work that Bruening's Shortest is intended for: it will prevent the second object of the double object construction from out-scoping the first object; but it will not have a similar effect on the indirect object PP in (29). As already noted, this condition must allow the second object of a double object construction to take wider scope than the subject of the clause, and to escape the scope of sentential negation as well. So, this condition must allow the second object to raise to a position beyond the underlying

position of the first object. This is where the need for a second condition is felt. Something must prevent the first object from being construed in its underlying position, for this would let back in a reading in which the second object includes the first in its scope.

I suggest that this second condition is (6). If the small clauses that are hidden in the double object construction are small in the same sense that those in (1b) and (2a) are, then (6) will prevent quantifier lowering throughout. It is (6), then, that plays a central role in accounting for why the second object of a double object construction may have the subject in its scope, but not the first object. The first condition – the one that limits how far QR may move an argument – will allow the second object to gain scope not only over the underlying position of the subject, but also over the intermediate position that subjects transit through on the way to their surface position. I called this position, Specifier of XP earlier. Even though this condition will allow the second object to move this far, it will still prevent it from moving beyond any position that the first object occupies, except for its underlying position. The condition on quantifier lowering in (6) will then permit the subject to lower beneath the second object, but will prevent the first object from doing so.

So let's consider, then, what the condition limiting QR must look like. Although we have focused on the consequences this condition has on the scopes of complements, it is likely that it has a parallel effect on their surface positions as well. It is not just that a PP complement can have a neighboring DP complement in its scope, it may also overtly precede that DP complement, as in (31).

(31) Hermione gave to Dumbledore a wand.

And, similarly, it is not just that the second object of a double object construction cannot take the first in its scope, it's also that it cannot precede the first object, as in (32).

(32) *Hermione gave a wand Dumbledore.

Moreover, when a PP complement precedes the DP complement, as in (31), it must have wider scope than the DP. In examples such as (33), *a witch* cannot fall within the scope of *every wand*.

(33) Hermione gave to a witch every wand.

All of this suggests that we should see these so-called "Heavy NP Shift" word-orders as the product of QR. Before making a proposal about the bounding condition on QR, then, let me first sketch out how QR can be used to fix these surface word-orders.

The surface representations of sentences must be slightly more complex than we have so-far countenanced. Because QR is responsible for bringing complements into a position high enough for them to include the subject in their scope and escape the scope of sentential negation, it will be necessary for the representation of sentences like (31) and (33) to have this consequence, if these are word-orders that QR produces. We will not want to let QR bring these complements into a position higher than where we see them in (31) and (33) because this would

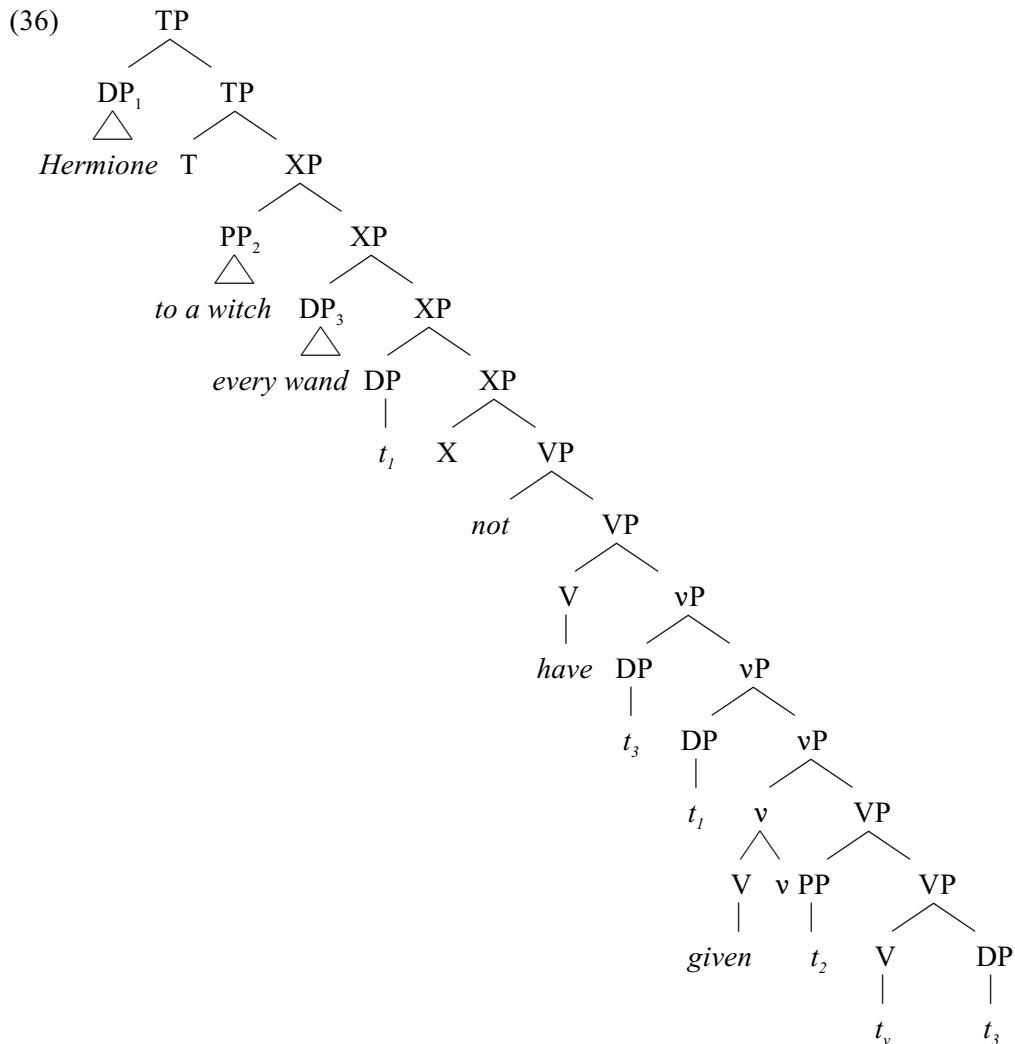
wrongly allow the indirect object in (33) to fall within the scope of the direct object. Nor is it that these Heavy NP Shift word-orders fix the scopes of the complements in an unusually low position: these word-orders also allow the complements to escape the scope of negation, as in (34), and contain the subject within their scope, as in (35).

- (34) a. She hasn't given to most of the witches a wand.
 = There's a majority of witches to which she hasn't given a wand.
- b. She hasn't shown to me most of the wands.
 = There's a majority of wands that she hasn't shown to me.
- (35) a. A different witch gave to every warlock a wand.
 every warlock > a different witch
- b. A different witch showed to me every wand.
 every wand > a different witch

There must be a way in which the complements in these constructions are in their highest scope-taking position, and yet can still include the subjects and negation which precede them to fall in their scopes.

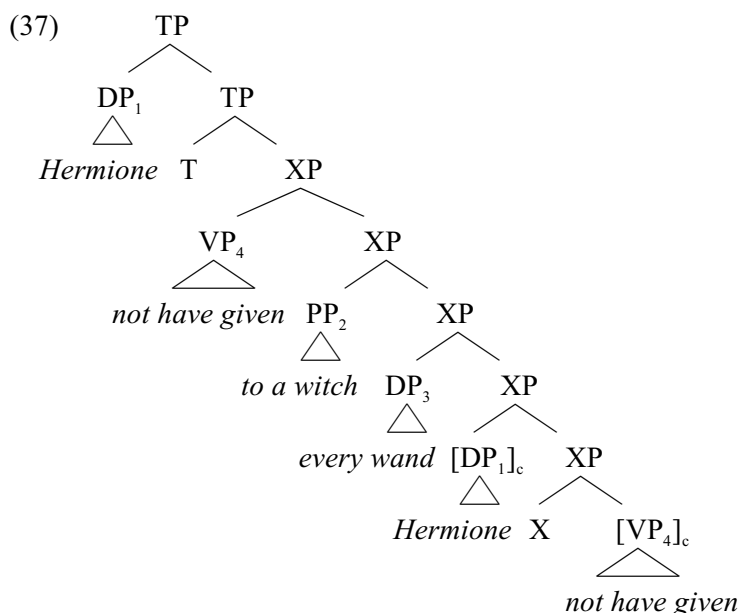
We have already seen evidence that for a subject to fall within the scope of an object requires the subject to lower – the Quantifier Lowering Effect of the first section. That the objects in (35) can include the subjects in their scopes might therefore indicate that their surface position is higher than where the subjects can lower to. We can exploit a suggestion in Kayne 1998 to engineer the same sort of consequence for the cases of negation in (34). Under present assumptions, QR can produce a representation like (36).¹²

¹²I treat sentential negation as a VP adjunct in this representation. Adopting the more popular Pollockian view that *not* heads its own phrase will have no consequences for the conclusions reached here.



The subject originates in Specifier of vP, moves through XP, and surfaces in Specifier of TP. The direct object is adjoined to vP as part of the expression of its structural accusative Case, and then is adjoined to XP by QR. QR also moves the indirect object to XP adjoined position. If the subject is construed in the Specifier of XP position, this representation will allow the complements to have scope over both the subject and negation. For this representation to have the surface word-order in (34) and (35), the VP headed by *have* must undergo movement, a possibility that Kayne 1998 has argued for on the basis of other correlations between scopal relations and surface word-order. Surface representations that involve overt applications of QR must therefore be as indicated in (37).¹³

¹³A final, and unrepresented, step in deriving the surface order, involves bringing *have*, and its cliticized *not*, into T° position.



I have expressed movement in terms of the copy theory of movement here, leaving unpronounced versions of the moved phrases (enclosed in “[]_c”), in order to make explicit how the interpretation will go through. This representation forces the indirect object to have wider scope than the direct object (deriving the unambiguity of (33)), but allows both to have wider scope than the subject and negation (if the lower copies of the subject and negation are interpreted) or lower scope than the subject and negation (if the higher copies of the subject and negation are interpreted). Because the choice of which copy of the subject to interpret is independent of the choice of which copy of negation to interpret, the complements may fall within the scope of either one and outside the scope of the other. Further, because the direct object is allowed by (6) to be construed within the lower copy of the moved VP – there is a copy of the direct object in its structurally Case-marked, adjoined-to-vP, position – the scopes that the complements take relative to the subject and negation are independent too. Thus, every permutation of scope is possible, except those in which the indirect object falls within the scope of the direct object. So far as I can tell, this is the correct outcome.

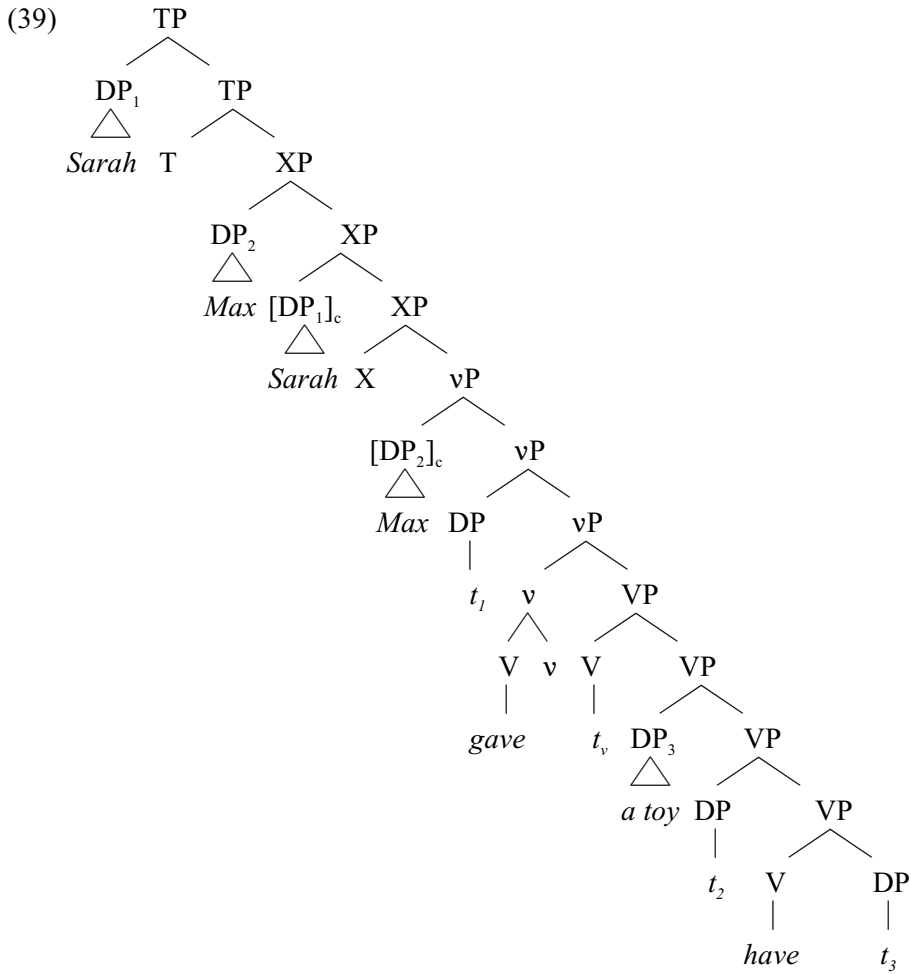
We are now in a position to consider why QR cannot reverse the order of objects in the double object construction, permitting the outcome we have just witnessed for DP+PP complements. Compare the differing structures given to these two cases in (29b) and (30). In (30), QR is confronted with the prospect of moving the second object past the position that the first object occupies and out of the VP in which that first object gets its θ -role. In (29b), QR is faced with a similar prospect: to move the PP past the direct object and out of the VP in which the direct object is θ -marked. One difference in these two scenarios, though, is that the verb which θ -marks the higher object in (29b) has moved, whereas it hasn't in (30). If we consider what QR is faced with in bringing either complement in both (29b) and (30) past the underlying position of the subject, we see a similar situation. It must move the complement past an argument

and out of the vP in which that argument gets its θ -role. But in these cases too, the v which θ -marks the subject has moved. What we want, then, is a way of limiting QR just when it must move something past an unmoved verb and an argument which that verb θ -marks; when the verb has moved, this limitation is relaxed. That verb movement can have the effect of relaxing constraints on movement is a known phenomenon. Baker 1988 chronicled instances of it in causative and other constructions where constraints on A Movement appeared to be relaxed, and Chomsky 1995 Chapter 3 fashions a formulation of the effect using tools from the Minimalist program. To the extent that constraints on QR are reminiscent of those on A Movement, it is not surprising that the same effect might be found. Because the clausal architecture assumed here is different from that in Chomsky 1995, I cannot use the condition that he formulates unchanged. Instead, I suggest we adopt (38), which preserves the spirit of his idea but fits our cases.

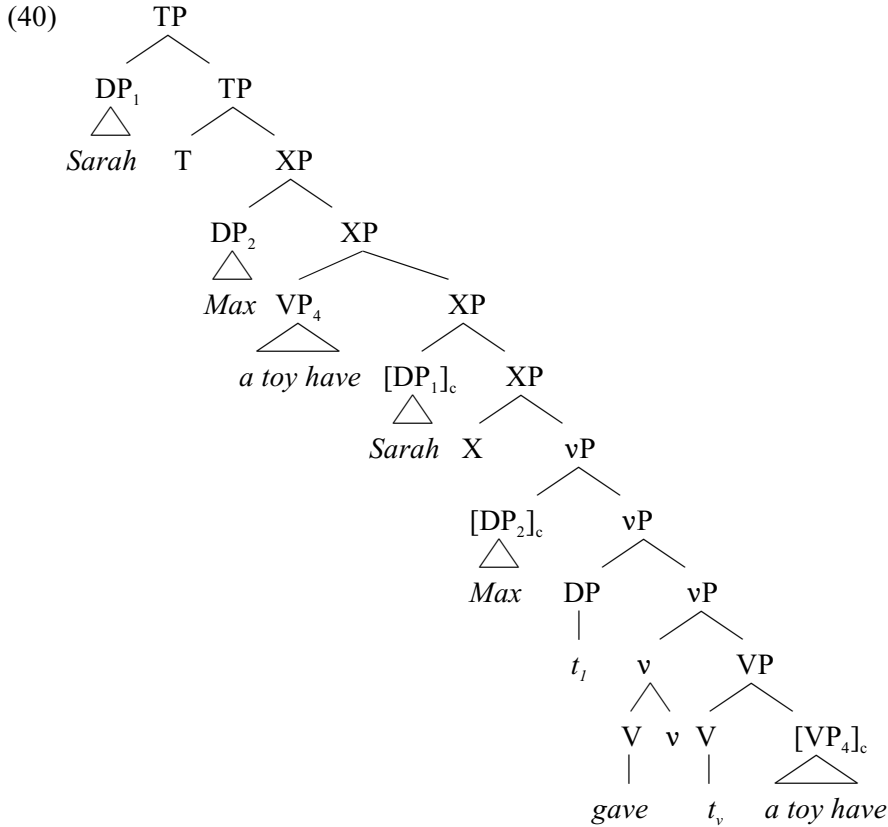
- (38) Do not move α out of ϕ , if ϕ contains an argument, β , that c-commands α and all of the copies of β 's θ -marker are in ϕ .

While I believe we should regard (38) as nothing more than a description of the effects required of A Movement and QR, to be derived, hopefully, from something more general, I will limit my goals here to showing that it applies correctly to our cases.

As desired, (38) will allow the first object of the double object construction, and either object of the DP+PP cases, to move beyond the subject. Moreover, it will allow the indirect object PP in (29b) to move beyond the direct object. But it will prevent the second object of the double object construction from escaping the VP in begins in. In fact, the highest position it will permit this object is shown in (39).



When combined with the constraint on quantifier lowering in (6), this will correctly prevent the second object from having the first in its scope. But, as it stands, it would also wrongly prevent the second object from gaining scope beyond the subject or negation. To produce these readings, I suggest that the entire small clause moves, in much the same way that the VP in (37) has. This will create a representation like (40).



Once vP undergoes the movement indicated in (37), this will produce the licit surface word-order: *Sarah gave Max a toy*. The representation in (40) correctly puts *a toy* high enough for it to escape the scope of negation, which, if present in this sentence, would be adjoined to vP. It also places *a toy* higher than the Specifier of XP, where the subject may be construed. But because *a toy* does not c-command the Specifier of XP, the standard means for making the values assigned to a subject construed in this position contingent on the values assigned to *a toy* cannot be used. That is, for this representation to permit an interpretation in which the subject falls within the scope of the second object, some special interpretive mechanism will have to be employed. In this regard, the configuration in (40) is rather like the configuration that obtains in situations of inverse linking, illustrated by (41).

(41) A monument in every city impresses its residents.

Under the standard analysis of these cases, QR adjoins *every city* to the DP containing it, from which position it is capable of binding *its*.¹⁴ Whatever mechanism is capable of producing such an interpretation out of such a structure (see Heim and Kratzer 1998 for some suggestions) should be capable of giving what is needed in (40) as well. Because (40) is parallel in all relevant

¹⁴See May 1985.

respects to (37), it will allow for every permutation of scope relations between complements, subject and negation except those in which the indirect object falls within the scope of the direct object: precisely the desired outcome.¹⁵

The question of why the second object cannot outscope the first now devolves to understanding why QR cannot produce a representation parallel to (40), but in which the fronted small clause is higher than the first object. This likely follows from the fact that the small clause contains a trace in its Specifier position that is bound by the first object. In general, traces left in ungoverned Specifier positions cannot surface in positions that are not c-commanded by their antecedents. This is what is responsible for the inability of raising infinitives to topicalize as in (42) (compare the relative goodness of the topicalized control infinitive in (43)).

(42) *It's [*t* to eat] that Ron seemed.

(43) ?It's [PRO to eat] that Ron tried.

Traces left in governed positions have considerably more freedom in this regard; for instance, the trace left by passivizing the first object of a double object construction can surface in a position higher than its antecedent (as in (44)), but only because it is in a governed position in this configuration.

(44) It's [given [*t* a potion]] that Snape will be.

See Müller 1993, Müller and Sternefeld 1993, Müller 1996 and Takano 1995, Takano 1996, Takano 2000 for discussion of the conditions governing the distribution of governed traces, and Rizzi 1979 for an evaluation of the relative strictness of the condition that ungoverned traces obey. Whatever is responsible for this fact will correctly block moving the small clause in a double object construction beyond the first object. This, in turn, will guarantee that the highest scopes that QR can give to the objects of a double object construction are represented by (40). The ability of these objects to have the subject and negation in their scopes is wholly a function of quantifier lowering, or reconstruction, then, limited by the constraint in (6).

¹⁵There is one relevant difference between (37) and (40). The direct object in (37) is allowed to reconstruct into the VP from which it has QR'd. The condition in (6) allows this direct object to be interpreted in the position from which it gets Case: the adjoined-to-*v*P position. The same is possible for the direct object in (40), and these opens the possibility that the direct object could be interpreted in a position beneath the indirect object in this, the double object, frame. However, because it is not the indirect object that has moved into the higher position in (40), but instead the small clause containing the indirect object, if the direct object is construed in a lower position, so will the indirect object. This is because the small clause containing the indirect object also contains a variable bound by the first object, and LFs in which variables are unbound are illicit. (This is an independent effect from the surface condition on ungoverned traces discussed immediately below.) Thus, unlike (37), in (40) if the direct object reconstructs so also will the small clause that contains the indirect object, thereby ensuring that the indirect object always falls within the scope of the direct object.

REFERENCES

- Baker, Mark. 1988. *Incorporation*. Chicago, Illinois: University of Chicago Press.
- Barss, Andrew, and Lasnik, Howard. 1986. A Note on Anaphora and Double Objects. *Linguistic Inquiry* 17:347-354.
- Chomsky, Noam. 1995. *The Minimalist Program: Current Studies in Linguistics*. Cambridge, Massachusetts: MIT Press.
- Green, Georgia M. 1974. *Semantics and Syntactic Regularity*. Bloomington, Indiana: Indiana University Press.
- Heim, Irene, and Kratzer, Angelika. 1998. *Semantics in Generative Grammar: Blackwell textbooks in linguistics ; 13*. Malden, MA: Blackwell.
- Heycock, Caroline. 1995. The Internal Structure of Small Clauses: New Evidence from Inversion. Paper presented at *Proceedings of the North East Linguistic Society 25*, University of Pennsylvania.
- Hornstein, Norbert. 1995. *Logical Form: from GB to minimalism*. Cambridge, Massachusetts: Basil Blackwell.
- Johnson, Kyle. 1991. Object Positions. *Natural Language and Linguistic Theory* 9:577-636.
- Johnson, Kyle, and Tomioka, Satoshi. 1998. Lowering and mid-size clauses. Paper presented at *Proceedings of the 1997 Tübingen workshop on reconstruction*, Tübingen, Germany.
- Kayne, Richard. 1984. Unambiguous Paths. In *Connectedness and Binary Branching*, 129-164. Dordrecht: Foris Publications.
- Kayne, Richard. 1998. Overt vs. Covert Movement. New York: New York University.
- Larson, Richard. 1988. On the Double Object Construction. *Linguistic Inquiry* 19:335-392.
- Lasnik, Howard. 1995. A Note on Pseudogapping. In *Papers on Minimalist Syntax*, eds. Rob Pensalfini and Hiroyuki Ura, 143-164. Cambridge: MITWPL.
- May, Robert. 1985. *Logical Form: Its Structure and Derivation*. Cambridge, Massachusetts: MIT Press.
- Moro, Andrea. 1997. *The raising of predicates : predicative noun phrases and the theory of clause structure: Cambridge studies in linguistics ; 80*. Cambridge ; New York ;: Cambridge University Press.
- Müller, Gereon. 1993. On Deriving Movement Type Asymmetries, Seminar für Sprachwissenschaft, Eberhard-Karls-Universität Tübingen: Doctoral Dissertation.
- Müller, Gereon, and Sternefeld, Wolfgang. 1993. Improper Movement and Unambiguous Binding. *Linguistic Inquiry* 24:461-508.
- Müller, Gereon. 1996. A Constraint on Remnant Movement. *Natural Language and Linguistic Theory* 14:355-407.
- Oehrle, Richard. 1976. The Grammatical Status of the English Dative Alternation, Massachusetts Institute of Technology: Doctoral Dissertation.
- Richards, Norvin W. III. 1997. What Moves Where When in Which Language?, Massachusetts Institute of Technology: Doctoral Dissertation.

- Ross, John. 1974. Nouniness. In *Three Dimensions of Linguistic Theory*, ed. O. Fujimura, 137-257. Tokyo: TEC Corporation.
- Stowell, Timothy. 1991. Small Clause Restructuring. In *Principles and Parameters in Comparative Grammar*, ed. Robert Freidin, 182-218. Cambridge, Massachusetts: MIT Press.
- Takano, Yuji. 1995. Predicate Fronting and Internal Subjects. *Linguistic Inquiry* 26:327-340.
- Takano, Yuji. 1996. Movement and Parametric Variation, University of California, Irvine: Doctoral Dissertation.
- Takano, Yuji. 2000. Illicit Remnant Movement: an argument for feature-driven movement. *Linguistic Inquiry* 31:141-156.
- Williams, Edwin. 1983. Against Small Clauses. *Linguistic Inquiry* 14:287-308.