Double Object Constructions Disguised as Prepositional Datives

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Remarks
and
Replies

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Recent work by Bresnan and colleagues (Bresnan 2007, Bresnan et al. 2007, Bresnan and Nikitina 2007) has argued that double object and prepositional dative constructions are essentially identical, the choice between them being conditioned by various factors. I argue against this conclusion, showing that the grammar clearly distinguishes double object from prepositional dative constructions. Under certain circumstances, the first object of a double object construction can shift to the right, with the preposition *to* appearing, but the grammar still distinguishes this from a prepositional dative construction that looks identical on the surface. The phenomena that I investigate are scope interactions with quantifiers and locative inversion. In addition, the rightward reordering operations investigated here indicate that constraints on variable binding, including weak crossover, must be formulated in terms of linear order rather than hierarchy.

Keywords: ditransitives, double object constructions, quantifier scope, weak crossover, locative inversion

1 Ditransitive Constructions

In a series of papers, Bresnan and various colleagues (Bresnan 2007, Bresnan et al. 2007, Bresnan and Nikitina 2007; hereafter, Bresnan et al.) have argued that the double object construction (1a) and the prepositional dative construction (1b) are essentially the same syntactically and semantically, with overlapping contexts of use. Speakers choose which to use on the basis of various factors, such as definiteness, animacy, discourse accessibility, the relative length of the two object NPs, whether they are pronouns or full NPs, whether they are discourse-given or not, and so on.[1]

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[1] A note on terminology: I will refer to the goal or recipient NP as the *goal* NP, whether it is the first object of the double object construction or the object of the preposition in the prepositional dative construction. I will refer to the other internal argument as the *theme* NP, and to the *external argument* as such, where relevant. These terms are used as descriptive labels only; no theory of thematic roles is intended.

(1) a. We give children candy.
   b. We give candy to children.

Bresnan et al. argue specifically against a family of analyses that claim that the double object construction and the prepositional dative are two distinct constructions, with different syntax and different denotational semantics (some recent representatives of this family include Goldberg 1995, Pesetsky 1995, Harley 1997, Bruening 2001, Richards 2001, Beck and Johnson 2004). This family of analyses points to contrasts like the following to argue that the two constructions have distinct meanings and hence should not be related (e.g., Green 1974, Oehrle 1976, Gropen et al. 1989):

(2) a. The lighting here gives me a headache.
   b. *The lighting here gives a headache to me.

(3) a. The count gives me the creeps.
   b. *The count gives the creeps to me.

In addition, there are some nonalternating verbs like *deny*:

(4) a. The boss denied George his pay.
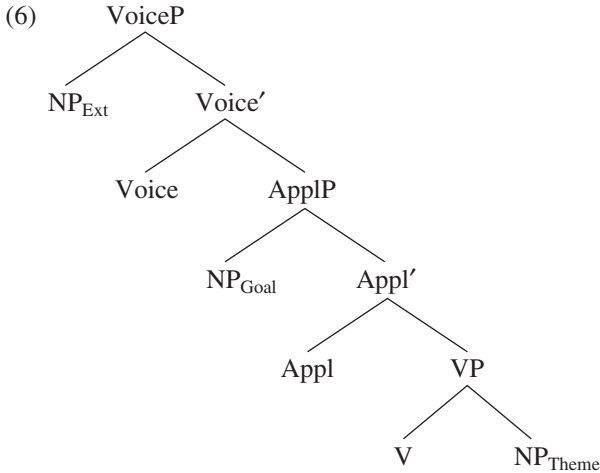   b. *The boss denied his pay to George.

Bresnan et al. argue that such contrasts are spurious. They have found examples like the following in studies of corpora of spoken and written language, and they report that speakers accept them under the right conditions (such as when the goal NP is relatively long):

(5) a. . . . a stench or smell is diffused over the ship that would give a headache to the most athletic constitution. (Bresnan and Nikitina 2007:4, (15))
   b. This story is designed to give the creeps to people who hate spiders. (Bresnan et al. 2007:72, (6b))
   c. Who could deny something to someone so dedicated to the causes of international friendship and collaboration? (Bresnan and Nikitina 2007:6, (22))
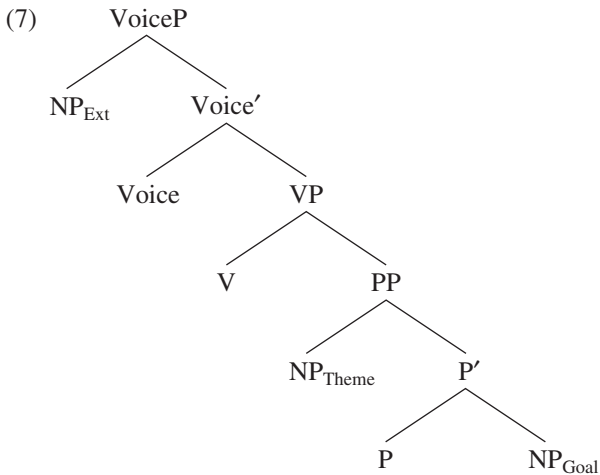
Such examples certainly are attested, and native speakers that I have consulted (including myself) do find them much better than the examples in (2b), (3b), and (4b). However, an alternative approach to the type of data in (5) is to maintain that the double object construction and the prepositional dative are two distinct constructions, but under certain conditions the relative order of the two NPs in the double object construction can be reversed. When it is, the preposition *to* appears.[2] I will refer to this reversal as *R-dative shift* (suggesting ''rightward dative shift''); on the surface, the result of R-dative shift is identical to the prepositional dative, but the two have very different derivations.

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[2] I first heard this theory suggested by Alec Marantz in a seminar at MIT sometime around the year 2000. As far as either of us is aware, the idea is original to him. The only discussions I have seen of it in print are brief mentions in footnote 4 of Richards 2001 and on pages 43–45 of Harley 2002 (referring to Richards).

To be concrete, I will assume as illustrated in (6) that the double object construction has the goal NP introduced by an Appl(icative) head (Marantz 1993) that appears between the lexical V, which introduces the internal (theme) argument, and Voice, which introduces the external argument (Kratzer 1996).

(6)

```
                VoiceP
             ┌────┴──────┐
          NP_Ext       Voice′
                     ┌───┴─────┐
                  Voice      ApplP
                          ┌────┴─────┐
                       NP_Goal     Appl′
                               ┌─────┴─────┐
                             Appl         VP
                                       ┌───┴────┐
                                       V    NP_Theme
```
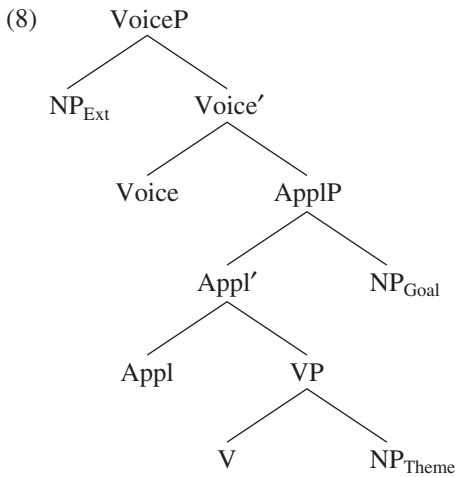
In contrast, as shown in (7), the prepositional dative has a small clause structure, where the theme argument is the specifier of a prepositional phrase headed by *to* (e.g., Den Dikken 1995).[3]

(7)

```
                VoiceP
             ┌────┴──────┐
          NP_Ext       Voice′
                     ┌───┴─────┐
                  Voice        VP
                          ┌─────┴─────┐
                          V          PP
                                 ┌────┴─────┐
                            NP_Theme       P′
                                        ┌───┴─────┐
                                        P        NP_Goal
```
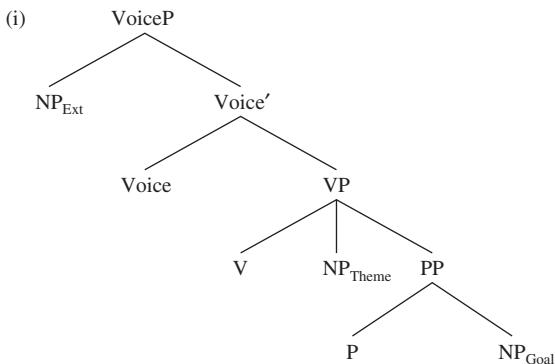
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[3] I explicitly do *not* adopt a theory like that of Harley (1997, 2002), where the double object construction and the prepositional dative have parallel structures—for Harley, a small clause PP in both cases, but with the two NPs reversed and related by different directional prepositions (''LOC'' vs. ''HAVE''). Such a theory has no ready way to account for the scope asymmetry between the two constructions, since they are assigned parallel structures.

The important difference between these structures is that in (6), the goal and theme NPs are arguments of different heads and appear in different phrases, but in (7), they are arguments of the same head and occupy the same phrase. In addition, in (6), the goal NP asymmetrically c-commands the theme NP, but in (7), the theme NP and a constituent consisting of the preposition and the goal NP (P′) c-command each other.[4]

What I am calling R-dative shift involves the structure in (6), not that in (7). In linear order, the two are identical, because of the shift of the goal NP and the appearance of *to*, but their syntactic structures are very different. For reasons that I will outline below, I will analyze R-dative shift as having exactly the same structure as the typical double object construction, except that the specifier of ApplP is projected on the right as in (8).

(8)

```
                    VoiceP
                   /      \
              NP_Ext      Voice′
                        /       \
                   Voice        ApplP
                              /        \
                          Appl′        NP_Goal
                         /      \
                     Appl       VP
                              /     \
                             V      NP_Theme
```

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[4] An alternative to the small clause analysis of the prepositional dative is a ternary-branching structure as in (i), where the theme NP and the PP are both arguments of the verb.

(i)

```
                    VoiceP
                   /      \
              NP_Ext      Voice′
                        /       \
                   Voice         VP
                              /   |    \
                             V  NP_Theme  PP
                                       /    \
                                      P    NP_Goal
```

Both the small clause analysis and the ternary-branching structure can account for the scope asymmetries discussed here. I stick to the small clause analysis in the text simply because most current theories of syntax disallow ternary branching. However, the ternary-branching analysis may fare better in accounting for idiom formation. Since it treats the theme NP and the PP on a par, it can account for the fact that either one can combine with the verb to form an idiom to the exclusion of the other (assuming an approach to idiom formation something like that in O'Grady 1998). There are idioms like

When it appears on the right, the goal NP must be marked by the preposition *to*.[5]

This rightward projection does not appear to be freely available; otherwise, examples like (2b), (3b), and (4b) would always be acceptable. I will therefore assume that the rightward projection of ApplP's specifier is licensed only when the goal NP is extracted, via *wh*-movement, relativization, or some other Ā-movement process.

(9) *The Extraction Constraint on Rightward Specifiers*
   The specifier of ApplP may be ordered to the right of its sister only if the NP that occupies it undergoes Ā-extraction.

One of the most important processes of Ā-extraction here will be heavy shift. Under conditions of prosodic heaviness, the goal NP can move further to the right as shown in (10), right-adjoining to VoiceP, I will suppose (taking with it the preposition *to* that appears as a consequence of R-dative shift).

(10)

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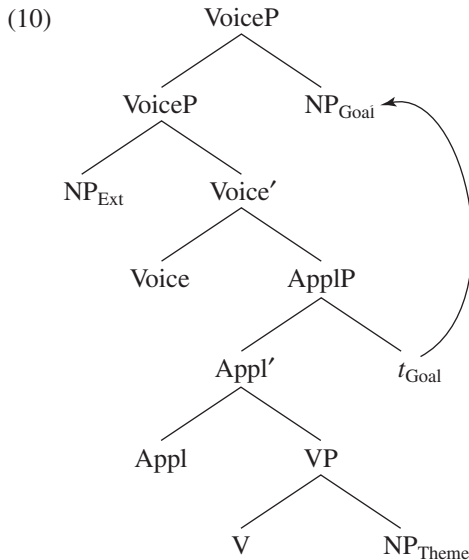
throw X to the wolves, *send X to the showers*, where the verb and the PP form an idiom to the exclusion of the theme NP, and there are also idioms like *give the lie to X*, *lend color to X*, where the verb and the theme NP form an idiom to the exclusion of the PP. It is more difficult for the small clause analysis to account for either type of idiom. However, O'Grady (1998:301) argues that the preposition in idioms like *give the lie to X* is a crucial part of the idiom. If this is true (it is hard to tell with alternating verbs like *give* and *lend*, because they only ever allow the preposition *to*), then the small clause analysis may actually be better equipped to account for the existing idioms: since the theme NP is not directly an argument of the verb (instead, it is the subject of the small clause), V + PP idioms are expected to exist (*throw X to the wolves*), but V + NP idioms are not expected to exist without the intermediacy of the preposition.

[5] There are many possible analyses of the appearance of *to*. To mention just three: (a) the two NPs must be distinguished when their canonical order is reversed; (b) the null dative case marker corresponding to *to* is only licensed adjacent to the verb; (c) *to* obligatorily deletes when adjacent to the verb. I will not attempt to construct an analysis of case here, since my only purpose is to argue for the existence of R-dative shift. I should note, however, that the *to* that appears as a result of R-dative shift acts in numerous ways like a regular preposition: it can be stranded by *wh*-movement, but not by heavy shift, for instance.

Other types of Ā-extraction, like *wh*-movement, will also license R-dative shift.

The important point of this analysis is that, although R-dative shift looks identical on the surface to the prepositional dative construction, it is really a double object construction. Most crucially, the base position of the R-dative-shifted goal NP asymmetrically c-commands the theme NP, in contrast with the prepositional dative construction in (7) where this is not true.

As just stated, one of the environments where R-dative shift happens is under the conditions for heavy shift. So, the following sentence has two possible derivations:

(11) I give candy to anyone who offers me a seat on the bus.

In one derivation, the goal NP starts out as the object of the preposition *to* in the prepositional dative construction in (7). In the other, it starts out as the first object of the double object construction in (6), but in a rightward specifier, as in (8) (R-dative shift). It then undergoes heavy shift to right-adjoin to VoiceP, as in (10). Because it started out in a rightward specifier, *to* appears.

This hypothesis then accounts for Bresnan et al.'s data by claiming that phrases like *give X the creeps* and *give X a headache* are always double object constructions. The examples in (5) are underlyingly double object constructions, with the goal NP shifted to the right and *to* appearing as a consequence. This is allowed because all of the goal NPs in these examples are prosodically heavy and undergo further extraction to right-adjoin to VoiceP.

The evidence that this hypothesis is correct comes from two sources: scope interactions between quantifiers, and locative inversion. Both phenomena show that examples like (5) pattern with double object constructions and not with prepositional dative constructions. They are therefore not prepositional dative constructions, but a special variant of the double object construction.

2 Scope Interactions

In order to test the R-dative shift hypothesis, we have to look at examples like *give X the creeps* and *give X a headache*, or *deny X Y*, where in many situations (like those in (2b), (3b), and (4b)) most English speakers have the intuition that the prepositional dative is not allowed. Cases like (11) are simply ambiguous; since they allow the prepositional dative, that derivation is always possible, and we will not be able to find evidence for the alternative double object derivation.

The first type of data I will look at involves the relative scope of quantifiers. As is well known (Larson 1990, attributing the observation to David Lebeaux; see especially Bruening 2001), the second object in the double object construction cannot take scope over the first. This contrasts with the prepositional dative construction, where inverse scope is possible:

(12) a. I gave a different candy bar to every child. (every > a)
     b. I gave a different child every candy bar. (*every > a)

In all of the examples in (12)–(16) and (18)–(21), the reading of interest is one where the universal quantifier takes scope over and distributes over an indefinite, marked as *every > a*. I try to bring out this reading by using *different* with the indefinite. If the distributive reading is unavailable, *different* will sound strange or have to be understood contextually, as in (12b). (One can also construct contexts like this: ''If there are ten children, and I want to give a different candy

bar to every child, I'm going to need ten different candy bars.'' Because this is a perfectly coherent discourse, the universal quantifier must be able to take scope over the indefinite. Such a context does not work with the double object construction: ''#If I have ten candy bars, and I want to give a different child every candy bar, then I'm going to need ten children.'') Note that readings where the indefinite takes scope over the universal quantifier are not helpful; they are also compatible with the opposite scope order, and so their availability tells us nothing.

Surface scope readings are also possible in both constructions, as one would expect.

(13) a. I gave every candy bar to a different child. (every > a)
    b. I gave every child a different candy bar. (every > a)

This is the general case in English: scope readings corresponding to the linear order of the quantifiers are usually available and the most salient. This will be significant below, where scope readings corresponding to the surface order of the quantifiers are unexpectedly unavailable.

In the theory developed in Bruening 2001, the difference between the double object construction and the prepositional dative shown in (12) follows from the trees in (6) and (7). In the double object construction in (6), the goal NP asymmetrically c-commands the theme NP. The goal NP will therefore always move first in any scope-taking movement, given standard locality constraints on movement, and it will be impossible for the theme NP to cross over the goal. In the prepositional dative construction in (7), in contrast, the theme NP and the constituent labeled P′ c-command each other and are equidistant for movement to higher positions to take scope. Hence, either the theme NP moves first and takes higher scope, or the goal NP plus the preposition (P′) move and take scope higher than the theme. (See Bruening 2001 for details, especially pages 264–265, where it is shown that pied-piping of the preposition seems to be crucially involved in allowing the goal to move over the theme.)

If this is correct, and R-dative shift is just a double object construction but with the specifier of ApplP on the right, as in (8), then we expect R-dative shift to pattern just like the double object construction in scope possibilities. The goal NP asymmetrically c-commands the theme NP even though it follows it, and the theme NP should be unable to take scope over the goal NP. Further movement, like heavy shift in (10), will only take the goal NP to an even higher position; it will have no effect on scope.

In this light, consider (14) and (15).[6]

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[6] All judgments reported here were elicited from between four and ten native speakers of English and have been further verified with other native speakers who commented on earlier versions of this article. The only disagreements I have found involve the relative strength of the weak crossover data reported below; in addition, one speaker found a three-way contrast in scope between the double object construction, the prepositional dative construction, and R-dative shift, with wide scope for the goal NP difficult but not impossible in R-dative shift, in contrast with its impossibility in the double object construction and its easy availability in the prepositional dative. At the moment I have no account of this one speaker's judgments.

(14) a. This lighting gives everyone a different kind of headache. (every > a)

    b. This lighting gives a different person every kind of headache. (*every > a)

    c. This lighting gives every kind of headache to a different (type of) person. (*every > a)

    d. This lighting gives a different kind of headache to everyone who enters the room. (every > a)

(15) I give every kind of candy to a different (type of) person. (every > a)

The crucial sentence here is (14c). According to the hypothesis argued for here, the NP after *to* is actually the first object of the double object construction, exactly as in (14b). It patterns with it in scope possibilities: surprisingly, the scope reading that corresponds to the surface order of the quantifiers is unavailable, just as the same reading is unavailable in (14b). In this it contrasts with the prepositional dative in (15), where—of course—the surface scope reading is perfectly available. In (14d), we see that inverse scope is available, corresponding exactly to (14a).

In other words, in scope possibilities *give a headache to X* patterns exactly like *give X a headache*. It does not pattern with the prepositional dative construction, where either scope order is possible. This fact strongly indicates that *give a headache to X* indeed *is* the double object construction, but with a different surface variant that happens to look identical to the prepositional dative.

The structure that I am suggesting for (14c) is (16).

(16)
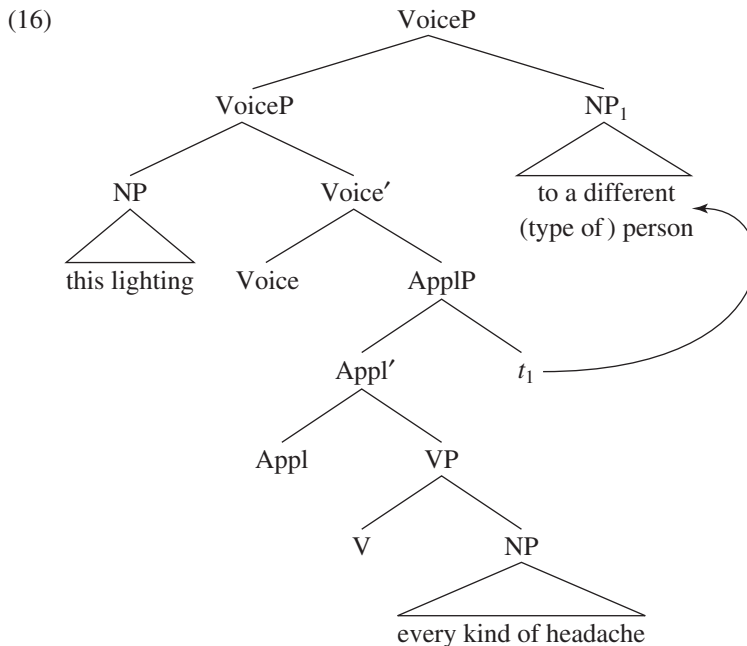
Because *a different (type of) person* asymmetrically c-commands *every kind of headache* both before and after rightward adjunction to VoiceP, it will always take higher scope, regardless of

linear order. (*This lighting* will move to the surface subject position, Spec,TP, irrelevantly to the point of this article.)

The same facts emerge with the nonalternating verb *spare*. I now use *some N or other* to try to bring out the distributive reading.

(17) a. Let's spare everyone some ordeal or other. (every > a)
b. Let's spare someone or other every ordeal. (*every > a)
c. Let's spare some ordeal or other to every prisoner that comes before us. (every > a)
d. Let's spare every ordeal to someone or other (who comes before us today). (*every > a)

Again, the shifted variants in (17c–d) pattern like the double object constructions in (17a–b). Surprisingly, again, surface scope is unavailable in (17d), just as the same scope reading is unavailable in (17b). The latter, by hypothesis, is the underlying form of (17d).

Exactly the same facts emerge with the nonalternating verb *deny* (which I include because some speakers do not accept R-dative shift at all with *spare*).

(18) a. The bosses denied every applicant a new position. (every > a)
b. The bosses denied some applicant or other every position. (*every > a)
c. The bosses denied a new position to every applicant from within the bureau. (every > a)
d. The bosses denied every position to some applicant or other from within the bureau. (*every > a)

Once again, the shifted variants in (18c–d) pattern like the double object constructions in (18a–b). They do not pattern like the prepositional dative construction.

As stated above, R-dative shift (i.e., projecting the specifier of ApplP on the right) is licensed by further Ā-extraction, including heavy shift. If heavy shift is always right-adjunction to VoiceP, then we expect similar scope facts to emerge with heavy shift. To show this, we need to find a construction where inverse scope is disallowed, as in the double object construction, but heavy shift is allowed. The *spray-load* class of verbs is exactly what we need. As is well known, this class of verbs is like the double object construction in not allowing the theme argument to take scope over the goal argument in its *with* variant, in contrast with its *to* or *on* variant where the roles are reversed.[7]

(19) a. I presented a different medal to every track and field athlete. (every > a)
b. I loaded a different pile of boxes on every tractor-trailer rig. (every > a)

(20) a. I presented a different track and field athlete with every medal. (*every > a)
b. I loaded a different tractor-trailer rig with every pile of boxes. (*every > a)

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[7] Larson (1990) attributes this observation to an unpublished 1988 manuscript by Patricia Schneider-Zioga.

In Larson 1990 and Bruening 2001, this unavailability of inverse scope is related to the same unavailability in the double object construction; as argued in Bruening 2001, it can receive the same structural account (asymmetric c-command, with the goal argument introduced by an Appl head in the *with* variant but a small clause structure in the other variant). Unlike the double object construction, however, the *spray-load* class of verbs permits heavy shift of the goal object, the one that obligatorily takes wide scope. Just as the surface scope reading of R-dative shift is unavailable in (14c), (17d), and (18d), surface scope is also unavailable under heavy shift with this class of verbs.

(21) a. I presented with every medal a different track and field athlete. (*every > a)
     b. I loaded with every pile of boxes a different tractor-trailer rig. (*every > a)

In other words, heavy shift does not change the admissible scope relations between the two arguments. This supports the notion that the unavailability of surface scope in R-dative shift with a prosodically heavy goal NP has a heavy-shift-type etiology.

Note, however, that heavy shift is only one of the contexts that licenses R-dative shift. *Wh*-movement of the goal NP is another type of Ā-extraction that does so.

(22) Who does he give the creeps to?

For many speakers (call them *Dialect A*), extraction of the goal NP in the double object construction is ungrammatical, unless the goal NP is shifted to the right and *to* appears.

This fact (among others) indicates that we should not equate R-dative shift and heavy shift. But it also enables us to further test scope possibilities with R-dative shift, for now we can look at the availability of pair-list readings in questions with quantifiers. As shown in Bruening 2001, pair-list readings are available with the prepositional dative, but not with the double object construction, for other speakers who accept extraction of the goal NP (call them *Dialect B*). I bring out the pair-list reading by embedding the question under *Let's make a list of . . . .*

(23) a. Let's make a list of what he gave to everyone. (pair-list OK)
     b. #Let's make a list of who he gave everything. (*pair-list, for Dialect B; ungrammatical for Dialect A)

Now consider the following examples, with nonalternating *deny* (these are grammatical for both Dialect A and Dialect B):

(24) a. Let's make a list of what he denied everyone. (pair-list OK)
     b. #Let's make a list of who he denied every request to. (*pair-list)
     c. Let's make a list of who he assigned every request to. (pair-list OK)

In (24a), the pair-list reading is readily available, because the goal *everyone* can take scope over the theme *what*. The theme *every request* in (24b), in contrast, cannot take scope over the goal *who*, even though this is perfectly possible with an alternating verb in (24c). Again, shifted *deny* does *not* pattern with the prepositional dative construction; it patterns with the double object construction.

The same holds for *give a headache to X*, as pointed out by a reviewer.

(25) a. Let's make a list of what kind of headache this lighting gives everyone. (pair-list OK)
     b. #Let's make a list of who this lighting gives every kind of headache to. (*pair-list)

(The pair-list reading is also available, perhaps more readily, in *Let's make a list of what kind of headache this lighting gives to everyone*, where the goal has undergone R-dative shift but still takes scope over the theme.)

More examples can be given, but they all lead to the same conclusion. Bresnan et al.'s examples do not show that there is no syntactic/semantic difference between the double object construction and the prepositional dative construction. If their examples in (5) were just the prepositional dative construction, there would be no reason that scope readings corresponding to the surface order of the quantifiers would be unavailable. Quantifier scope shows that such examples are actually double object constructions.

3 Locative Inversion

At least one other phenomenon, locative inversion, distinguishes double object constructions that have undergone R-dative shift from the prepositional dative.

As is well known, passives are a major source of locative inversion (e.g., Bresnan 1994: 78–79), and this includes the passive of the prepositional dative construction.

(26) a. To the guests were given goblets of gold and silver.
     b. To the people were distributed morsels of consecrated bread.

However, R-dative shift does *not* participate in locative inversion. Phrases like *give X hell* and *give X a good scrubbing* that are only grammatical with *to* under certain circumstances do not permit locative inversion.

(27) a. To the generals that lost the battle were given helicopters.
     b. *To the generals that lost the battle were/was given hell.
     c. The generals that lost the battle were given hell.

(28) a. I gave the tables a good scrubbing.
     b. I gave a good scrubbing to the tables we inherited from Aunt Selma.
     c. *To the tables we inherited from Aunt Selma was given a good scrubbing.
     d. The tables we inherited from Aunt Selma were given a good scrubbing.

In (27b) and (28c), locative inversion is ungrammatical, in contrast with passivization in (27c) and (28d). The locative inversion examples (27b) and (28c) are very strange, at best.

Similarly, locative inversion with R-dative-shifted *give X a headache* only has a funny handing-over reading, where someone literally hands over a headache.

(29) a. #To anyone who stays too long in this room is given a horrible headache.
     b. Anyone who stays too long in this room is given a horrible headache by the flickering lights and foul odor.

In this it contrasts with the passive, where the usual sense of *give X a headache* holds.

Moreover, passives of double object constructions do not participate in locative inversion at all (Postal 2004:47, Bresnan 1994:79, fn. 9 on benefactives).

(30) a.   At that battle were given to the generals enough helicopters to block out the sun.
     b. *At that battle were given the generals enough helicopters to block out the sun.

This holds equally of R-dative-shifted double object constructions, again distinguishing them from prepositional datives like (30a).

(31) a. *At that battle was/were given the generals who lost hell.
     b. *At that battle was given to the generals who lost hell.

(32) a. *In that room is/are given anyone who stays long enough horrible headaches that don't go away.
     b. *In that room are given to anyone who stays long enough horrible headaches that don't go away.

(33) a. *At that time was/were given the tables we inherited from Aunt Selma a good scrubbing.
     b. *At that time was given to the tables we inherited from Aunt Selma a good scrubbing.

(34) a. *With that Supreme Court decision were denied minorities some of the rights they had fought so long to enjoy.
     b. *With that Supreme Court decision were denied to minorities some of the rights they had fought so long to enjoy.
         Compare:
     c.   With that Supreme Court decision were taken from minorities many of the rights they had fought so long to enjoy.

Again, R-dative shift does not pattern like the prepositional dative. It patterns like the double object construction. Taken together with the scope facts above, this fact indicates that the double object construction is distinct from the prepositional dative, even when they look identical on the surface because of R-dative shift.[8]

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[8] An anonymous reviewer suggests that some unnamed constraints on locative inversion that have been described in the literature will account for the failure of locative inversion with R-dative shift, without the need to posit an operation of R-dative shift. I have been unable to find any constraint in the literature that will do the job. The reviewer suggests one possible constraint, namely, that transfer of possession must be involved for locative inversion to be acceptable. He or she cites *To the receptionist was given my name* as ungrammatical and as proof that transfer of possession is necessary. However, it is clear that locative inversion in general does not require any type of transfer (*Under the bridge lived a fat, ugly troll*). The reviewer's example also becomes perfectly acceptable if the postverbal NP is made longer: *To the receptionist should be given the name of anyone who comes into the office*. Moreover, no constraint on what can be fronted in locative inversion will explain the ungrammaticality of (31)–(33) and (34a–b), because the adjunct PPs that are fronted in those examples are generally fine in locative inversion, as witness (30a), (34c), and naturally occurring examples like *With that decision came a new outlook on life* (http://www.surfinthespirit.com/business/leading-me -home.html), *At that time appeared the ''Spectateur Belge'' of Father de Foere* . . . (http://www.newadvent.org/cathen/ 11671a.htm).

4 The Nature of R-Dative Shift

As stated above, I analyze R-dative shift as being identical to the normal double object construction, except that the specifier of ApplP is projected on the right. This rightward projection is only licensed by Ā-extraction of the NP. One such type of extraction is heavy shift: when the goal NP is prosodically heavy, it can move and right-adjoin to VoiceP.

An alternative would be to move the goal NP directly to VoiceP, from a normal leftward specifier. R-dative shift would then consist of this rightward Ā-movement, which could be licensed by *wh*-extraction or by prosodic heaviness. There are several reasons not to take this route, and to distinguish R-dative shift from heavy shift.

First, if R-dative shift were rightward movement, adjoining the goal NP to VoiceP, we would expect it to be possible for the goal NP to appear outside of adjuncts, or at least have some freedom of ordering with respect to adjuncts. This is not true, however. When R-dative shift takes place because of extraction of any type besides heavy shift, *to* must appear inside of all adjuncts.

(35) a.   Who did he give the creeps to last night?
     b. *Who did he give the creeps last night to?

(36) a.   The man that he gave the creeps to last night is over there.
     b. *The man that he gave the creeps last night to is over there.

If adjuncts adjoin higher than ApplP (to VoiceP, say), the rightward-specifier analysis predicts this ordering restriction.

When R-dative shift is licensed by prosodic heaviness, then the goal NP can follow adjuncts.

(37) a. He gave the creeps last night to everyone he engaged in conversation with.
     b. This lighting gave headaches for years to whoever had to work in its harsh glare.

This indicates that heavy shift operates on top of R-dative shift, moving the goal NP even further to the right than the position where it appears in (35a).

Second, as pointed out by an anonymous reviewer, Ā-movement typically renders a PP impermeable to further extraction (e.g., Wexler and Culicover 1980).

(38) a.   I think that, to a person like him, you should never give anything.
     b. *Who do you think that, to *t*, you should never give anything?

This holds of heavy shift to the right, as well.

(39) a.   I gave some money on Saturday to every boy who had helped me clean the yard.
     b. *Who did you give some money on Saturday to?

In contrast, as discussed above, one of the licensing contexts for R-dative shift is precisely extraction of the goal NP, stranding the preposition *to*, as in (35a). If R-dative shift is rightward Ā-movement, like heavy shift, this would not be expected to be possible. Hence, R-dative shift must consist of base-generation in a rightward specifier.

Furthermore, when prosodic heaviness shifts a goal NP further, over adjuncts, then the goal *does* become impermeable to further extraction.

(40) a.   Who did this lighting give headaches to for years?
     b. *Who did this lighting give headaches for years to?

So, again, we need to distinguish R-dative shift, base-generation in a rightward specifier, from an additional operation of heavy shift.

To summarize, then, R-dative shift simply consists of projecting the specifier of ApplP in a double object structure to the right. This rightward projection is licensed only when the goal NP undergoes Ā-extraction from the rightward specifier. Heavy shift is one type of licensing extraction, moving the goal NP to right-adjoin it to VoiceP.

5 Some Consequences for Weak Crossover and Variable Binding

The topic of this article has been operations that reorder elements to the right, like R-dative shift and heavy shift. Because rightward reordering processes have not, to my knowledge, been systematically investigated in the large literature on weak crossover and variable binding, I end this article with some data on these topics. Theories of these phenomena will have to incorporate these data; hopefully they will lead to improved understanding. It is not my purpose here either to construct a complete account of the phenomena or to provide a comprehensive overview of the extensive literature on these topics, so the presentation will be rather sketchy.

The first observation is that *wh*-extraction with R-dative shift gives rise to weak crossover.

(41) a. *Who$_1$ did you spare his$_1$ ordeal to?
     b. *Who$_1$ did the boss deny his$_1$ pay to?

Both of the questions in (41) are reasonably grammatical if *his* is interpreted as referring to someone else; (41a) is still odd, though, because it is strange to spare someone someone else's ordeal. But (41b) is perfect on the nonbound reading.

If R-dative shift is identical to the double object construction except in linear order, hierarchical accounts of weak crossover (e.g., Koopman and Sportiche 1983, Safir 1984, 1996, Ruys 2000) would predict (41a–b) to be grammatical, because the trace of the *wh*-word c-commands the pronoun. In contrast, linear accounts of weak crossover (e.g., Chomsky 1976, Higginbotham 1980, Williams 1995) predict the data in (41), because the trace of the *wh*-word does not precede the pronoun. Hence, if this analysis of R-dative shift is right, then weak crossover must be about linear order, and not hierarchical order.

Moreover, existing linearity accounts may need to be modified. If the condition is that the trace of the moved quantifier must precede the pronoun that it needs to bind, as in Chomsky 1976, Higginbotham 1980, and Williams 1995, then we would not expect heavy shift to the right to give rise to weak crossover. It does, however. For instance, variable binding becomes degraded with heavy shift in the *with* variant of *spray-load* verbs.

(42) a.   I presented [every nominee]$_1$ with the plaque she$_1$ had chosen.
     b. ??I presented with the plaque she$_1$ had chosen [every nominee for the category of Best Period Hairdo]$_1$.

An anonymous reviewer suggests that variable binding becomes degraded with heavy shift in general, and this generally seems to be true.[9]

(43) a. ??Mary kissed in his_1 car [every boy that played for the football squad]$_1$.
b. ??Thelma embarrassed in front of his_1 friends [every boy that had asked her out]$_1$.
c. ??Moses beat with his_1 own whip [every slavemaster who had shown excessive cruelty]$_1$.

Similarly, Phillips (1997) notes that heavy shift also seems to give rise to weak crossover ((44b) is his example (20b), which he rates as ''*''; I find it on a par with (43a–c)).

(44) a.   I gave money to every boy_1 on his_1 birthday.
b. ??I gave money on his_1 birthday to [every boy who had helped me clean the yard]$_1$.

See also Williams 1995:155; Williams claims that weak crossover is computed on the output of heavy shift, not the input, although his examples are not of the same type as those under discussion here.

   In all of these cases, the base position of the shifted element precedes (and probably also c-commands) the pronoun. Linear accounts of weak crossover based on leftness (Chomsky 1976, Higginbotham 1980, Williams 1995) would therefore predict that variable binding should be perfect. That this is not so indicates that weak crossover is literally about crossover, in a linear sense. It seems to arise whenever the highest A-position of the moved quantifier and its surface (Ā-)position are separated by a constituent containing the pronoun. It therefore appears that some of the earliest formulations of the condition, like those in Ross 1967 and Postal 1971, are more descriptively adequate than those based on leftness or precedence. The following is Ross's condition:

(45) *The Crossover Condition*
   No NP mentioned in the structural index of a transformation may be reordered by that rule in such a way as to cross over a coreferential NP. (Ross 1967:73, (4.30))

Ross's Crossover Condition makes no reference to directionality, so crossing over a pronoun in either a leftward or a rightward direction is expected to violate it.

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[9] However, I disagree with this reviewer (as do my consultants) in finding the effect only when the heavy NP shifts over an adjunct PP, as in (43), and not an argument PP.

(i) a. John put back on its_1 pedestal [every sculpture that the rioters had knocked down]$_1$.
b. John gave back to its_1 author [every unpublished manuscript in the collection]$_1$.

Examples (43a) and (ia–b) are from the reviewer; he or she gives (ia–b) two question marks, but I and others I have asked find them acceptable, in contrast with (43a–c). Another possibly relevant difference between (ia–b) and (43a–c) is the choice of the pronoun: *its* versus *him/her*. However, the following example appears to indicate that the argument/adjunct distinction is more important than the choice of the pronoun:

(ii) ??Thelma broke in front of its_1 creator [every sculpture that she had commissioned earlier that year]$_1$.

However, there is another potential reason for the failure of variable binding in these heavy shift examples. This arises from the fact that R-dative shift plus heavy shift also seems to destroy the possibility of variable binding, strongly for some speakers and more weakly for others.

(46) a.   Let's spare everyone$_1$ his$_1$ upcoming ordeal.
     b.   ??Let's spare his$_1$ upcoming ordeal to [every third prisoner with blond hair]$_1$.

(47) a.   The boss denied every worker$_1$ his$_1$ pay.
     b.   ??The boss denied his$_1$ pay to [every illegal immigrant working for him]$_1$.

This is not crossover in any sense in the analysis advocated here, since the base position of the goal NP is to the right of the theme NP (and it c-commands the theme NP), and heavy shift simply moves it higher and further to the right in these examples. If the only constraints on binding a pronoun as a variable are that the pronoun be within the scope of the quantifier doing the binding and that the Crossover Condition not be violated, then (46b) and (47b) should be perfectly grammatical.

I see two possible responses to this phenomenon. The first, which I will not adopt, is to regard R-dative shift, projecting the specifier of ApplP on the right rather than on the left, as a transformation for the purposes of the Crossover Condition. The sense in which it is a transformation is that it changes the canonical ordering of elements of the English clause. If R-dative shift is a reordering operation in this sense, then it will fall under a properly reformulated version of Ross's Crossover Condition.

The other response, which I will advocate here, is to suggest that there is a linear constraint on variable binding in addition to a scope (c-command) constraint, along these lines:

(48) A quantifier Q can bind a pronoun P as a variable only if
     a. Q takes scope over P (Q c-commands P) and
     b. Q precedes P.

The condition in (48a) is inviolable; the strength of (48b) varies from speaker to speaker.

Then, even though the goal NP takes scope over the pronoun in (46b) and (47b), it will be unable to bind it as a variable because it does not precede it.

The reason to prefer this account is that it unifies judgments on (46b) and (47b) with similar judgments where there is no rightward shift of any kind. For example, as we saw above, the goal NP can easily take scope over the theme NP in the prepositional dative construction (49a), but many people find variable binding degraded in (49b), which is cited as ungrammatical by Williams (1995:155, (94b)).

(49) a.   I gave a copy of the syllabus to every boy. (every > a)
     b.   ??I gave a copy of his$_1$ grades to every boy$_1$.

However, the same people who find (46b) and (47b) only slightly degraded, as I do, make the same judgment about (49b). It therefore appears desirable to account for them in the same way, with a (weak) precedence condition like that in (48b).

Note that the constraints in (48) are not meant to account for weak crossover. For speakers like me, weak crossover is quite strong with overt *wh*-movement, but the effects of (48b) are very weak in examples like (46b), (47b), and (49b). It therefore seems undesirable to formulate (48b) in such a way that it would also encompass weak crossover.

But now the question arises of whether the failure of variable binding with heavy shift illustrated above is due to weak crossover or to the condition in (48b). If it is not due to weak crossover, then existing linearity accounts of weak crossover are perfectly adequate, and there is no need to use Ross's Crossover Condition. I will not attempt to decide this here, but will simply end with the conclusion that variable binding has a strong linear component. There appears to be a precedence condition (48b) on top of a scope requirement (48a) for variable binding, and a linear approach to weak crossover fares much better than a hierarchical one for the data discussed here. The best account of weak crossover may refer to leftness, or it may refer to crossing, but either way, it is about linear order and not hierarchical order.

6 Conclusion

I have argued here that some apparent instances of the prepositional dative construction are actually double object constructions that have undergone R-dative shift. In scope possibilities and their interaction with locative inversion, they pattern exactly like double object constructions and do not pattern like prepositional dative constructions. Hence, there are nonalternating uses of *give*, like *give X a headache* and *give X the creeps*, and nonalternating verbs like *deny* and *spare*, which truly do never alternate. When they appear with *to*, as in Bresnan et al.'s examples, they are still double object constructions, but they have undergone R-dative shift, which I have suggested involves simply projecting a specifier on the right rather than on the left.

The facts presented here therefore indicate that the grammar distinguishes the double object construction from the prepositional dative construction, both syntactically and semantically. The two constructions are not syntactically and semantically indistinguishable, as Bresnan et al. argue. They appear to have distinct semantics, such that phrases like *give X a headache* can only be double object constructions, and can never be prepositional dative constructions.[10]

Finally, the rightward reordering operations investigated here indicate that constraints on variable binding, like weak crossover, need to be formulated in linear rather than hierarchical terms.

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[10] The other main claim made by Bresnan et al. is that the factors governing the choice of syntactic frame, and a probabilistic algorithm for making that choice, are part of speakers' *grammar*. However, this claim is never backed up with evidence that the choice between syntactic frames could not be part of language *use* rather than grammar. Speakers have to make such choices in every situation, not just those involving ditransitives. They must choose whether to use an active or a passive, for instance, to describe the same event (*The dog chased the cat* vs. *The cat was chased by the dog*). Many of the same factors identified by Bresnan et al. go into making that choice: discourse accessibility, animacy, givenness, definiteness, and so on (e.g., Ferreira 1994 and references there). Speakers must decide whether to apply optional transformations, like topicalization; whether to use a simple declarative or a cleft; whether to use control (*He decided to leave*) or a finite clause (*He decided that he should leave*); and so on. Bresnan et al. provide no compelling argument that such choices must be internal to the grammar, rather than part of language use.

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A Tenseless Analysis of Mandarin Chinese Revisited: A Response to Sybesma 2007

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Sybesma (2007) argues for the existence of a syntactic T node in Chinese on the basis of general theoretical considerations and parallel empirical data from Dutch and Chinese. This reply shows that a tenseless analysis of Chinese is an equally viable alternative or even a better one, given some empirical problems that the tensed analysis has to face. The tenseless analysis is backed up not only by its ability to explain the data in a more elegant way but also by syntactic facts that seem to be unrelated coincidences under a tensed analysis but are natural consequences under a tenseless alternative.

Keywords: tenseless language, tenseless analysis, temporal interpretations, Chinese

1 Introduction

It has often been claimed or assumed that Mandarin Chinese is syntactically a tenseless language in that it has no grammaticalized morphosyntactic forms that locate events or constrain topic times in the present, past, or future of a reference time.[1] However, Sybesma (2007) has challenged this claim, arguing that Mandarin Chinese, just like Dutch, should have a syntactic Tense head, though it is a null one. This article aims to contribute to the debate over tensed and tense-

[1] See Lin 2003b, 2006 and Smith and Erbaugh 2005, for example.