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'To' in two places and the dative alternation

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1 Introduction

This paper addresses the well-known controversy over whether the 'dative alternation' is, in fact, a syntactic alternation, or whether sentences such as (1a) and (1b) are generated as entirely separate structures.

- (1) a. John sent a letter to Mary. (PP Goal)
- b. John sent Mary a letter. (DP Goal)

Many researchers have addressed the observation that the double object construction does not seem to be fully productive, in that it seems to be blocked in cases where one might expect it to occur, such as (2):

- (2) * John sent London a letter.

However, as noted in Larson (1988), there is a fundamental problem with this observation when stated as such, since it seems not that the construction is unproductive, but rather that it is our expectations of its occurrence which are wrong. Larson argues, in defense of his derivational analysis of the relationship between the prepositional and double object constructions (here called PP and DP Goal structures), that "dative shift" is fully productive, but that it has certain semantic constraints.

The answer to this question largely hangs upon the assessment of the thematic roles involved in (1a) and (1b), namely whether they are the same in both structures. If we assume some version of Baker (1988)'s Universal Theta Alignment Hypothesis (UTAH), then this matter is crucial in deciding whether the arguments are generated in the same position of the hierarchy in both. Larson (1988), Baker (1988), and Den Dikken (1995), among others, have argued for a syntactic derivational relation between such sentences, considering the thematic roles to be equivalent. Most recent literature, however, has taken the opposite tack, arguing that there are different thematic roles involved which justify an "alternative projection" approach, which derives each variant entirely independently (Pesetsky 1995, Harley 2002, Beck and Johnson 2004).

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In this paper, I will discuss in more detail some of the cases meant to show that the thematic roles in the PP Goal structures are different from DP Goals, and argue that such a conclusion is unfounded. I will show that, to the contrary, once we place aside irrelevant data, the thematic roles are consistent, and thus the alternation *is* systematic. I will focus on alternations with *to*-PPs, but a similar analysis should extend to the *for*-PP alternation as well.

2 Two Places for *to* (and Only One Relevant One)

2.1 Why Do Only Some *to*-PPs Alternate?

The ungrammaticality of (2) has been described as the result of a ‘possessor’ or ‘animacy’ constraint on DP Goals by Green (1974), Pinker (1989), Harley (2002), Pykkänen (2002) and others. *London* is ungrammatical as a DP Goal because it is not animate or a potential possessor. Thus, it has been argued that the thematic role in the DP Goal construction is something like a Possessor, and something else for a PP Goal.

However, I will argue that what this constraint on DP Goals corresponds to the same constraint on objects of the preposition *to* when it appears in a particular structural position. *To* in a different position can also take Directional objects (locations) which do not, and should not, be expected to alternate.

2.2 Structural Differences in *to*-PPs

Although Animate Recipient and Directional PPs look similar in English, there is evidence that they are **structurally different**. One initial diagnostic is found in the *wh*- words which correspond to the various PPs, as illustrated in (3) and (4):

- (3) a. John sent the letter to Mary.
 b. **Who** did John send the letter to?
 c. John sent Mary the letter.
- (4) a. John sent the letter to London.
 b. **Where** did John send the letter?
 c. * John sent London the letter.

The (c) examples show that the PP in (3) can also appear as a DP Goal, while the PP in (4) cannot. Corresponding to this difference, we find that the PP in (3) corresponds to the *wh*-word *who* (plus the stranded preposition *to*),

whereas (4) corresponds to *where*. This is due to the fact that *Mary* is an Animate Recipient, whereas *London* here is a location, and the PP as a whole is Directional.

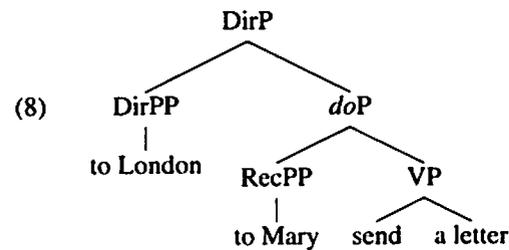
Further evidence for a structural difference is found in British *do*-ellipsis, a construction illustrated in (5):

- (5) John didn't sent the letter to London, but he will **do** to Sydney.

The *do* in (5) stands in for an elided constituent, here 'sent the letter'. We find a similar split between Animate Recipient and Directional objects of *to* in (6) and (7):

- (6) a. John sent the letter to Mary.
 b. ?* John didn't send the letter to Mary, but he will **do to Jane**.
 c. John sent Mary the letter.
- (7) a. John sent the letter to London.
 b. John didn't send the letter to London, but he will **do to Sydney**.
 c. * John sent London the letter.

What we see here is that the PP in (6) cannot co-occur with British *do*-ellipsis (the sentence is grammatical if *to Jane* is omitted), while the one in (7) can¹. The precise analysis of British *do*-ellipsis is not crucial here. However, one thing that is certain is that it suggests a structural difference between the two PPs. If, as standardly assumed, ellipsis targets constituents, then this contrast would be due to the fact that the Animate Recipient PP occurs within the targeted constituent, and thus cannot appear when ellipsis has occurred. The Directional PP (DirPP), on the other hand, has a higher position, which 'survives' the ellipsis. This is sketched out schematically in (8), where I mark the constituent targeted for the Recipient PP (Rec PP) ellipsis as *doP* (which may be the projection immediately dominating RecPP or a larger constituent containing it, still lower than DirPP):



¹Thanks to Mark Baltin for bringing this contrast to my attention.

These distinctions are due to the presence of two distinct positions for *to*-PPs, the heads of which I will call *to(f)*, for 'functional' *to*, and *to(dir)*, for 'directional' *to*. Only objects of *to(f)* share the same thematic role as that required for the DP Goal position, so only these should be expected to appear in the same part of the thematic hierarchy.

This 'split' analysis of *to*-PPs garners additional support from cross-linguistic and diachronic comparison. For one, Directionals and Recipients are often marked in other languages with different prepositions or cases. Similarly, McFadden (2002) shows that in older forms of English, modern *to(dir)* dates back to the days of robust morphological case in the language, whereas *to(f)* did not exist per se, and was realized only with dative case marking. The preposition *to* only began appearing with Recipients during the transitional period when English lost overt dative case marking.

A summary of the properties of *to(f)* and *to(dir)* is given in Table 1:

PP	object-type	<i>wh</i>	OK w/British <i>do</i> -ellipsis	Alternates with DOC
<i>to(dir)</i>	Direction	where	yes	no
<i>to(f)</i>	Animate Recipient	to-who	no	yes

Table 1: Properties of *to(f)* and *to(dir)*

The examples given so far seem to be either Animate Recipients of Directionals as a function of the properties of the complement of the preposition (*Mary vs. London*). However, it is not always immediately transparent from the DP object of the preposition what type of PP is being dealt with, as I will show in the next section.

3 The *Donate* Problem

Donate is a verb which has been cited in the literature as ungrammatical with DP Goals, in contrast with the seemingly similar verb *give*. In support of my claims above, the non-alternating PP occurring with *donate*, even when potentially animate, behaves like the Directionals above, in appearing in British *do*-ellipsis sentences and being able to answer a *where* question, as shown in (9):

- (9) a. John donated ten dollars to Kerry.

- b. **Where** did John donate ten dollars? / **Who** did John donate ten dollars to?²
 - c. John didn't donate ten dollars to Dean, but he will do **to Kerry**.
 - d. * John donated Kerry ten dollars. (But see section 3.2)
- (10)
- a. John gave ten dollars to Jane.
 - b. **Who** did John give ten dollars to?
 - c. * John didn't give ten dollars to Mary, but he will do **to Jane**.
 - d. John gave Mary ten dollars.

These facts are at first puzzling, considering that, at first glance, *Kerry* in (9) would seem to have more in common with the examples above containing the Animate Recipient *Mary*, rather than those with the Directional *London*. As the appearance of *where* and the absence from the *do*-ellipsis constituent show, however, *Kerry* is a Directional as well. In this section, I will explain why this might be so.

3.1 Goals of *Donate* as Primarily Directional

The non-alternation of verbs such as *donate* has been attributed to their morpho-phonological properties, or to their being a part of the Latinate (vs. Germanic) lexicon (Storm 1977, Pinker 1989, Harley 2002). This provides another argument that the dative alternation is not systematic, since it would seem to be something stipulated on lexical entries. However, I will again show that this argument should not lead us to this conclusion, as the ungrammaticality of verbs like *donate* can be attributed to semantic factors, and there is no need to make stipulations in the lexicon.

While verbs such as *give* and *send* are commonly used both to indicate a transfer to an Animate Recipient as well as a transfer to a Directional, *donate* is rarely used with a true Animate Recipient. Because both verbs can both be used in a number of contexts, it at first seems that they have very similar semantics. However, closer examination reveals that *donate* is impermissible in cases where *give* is acceptable, even with a PP Goal:

- (11)
- a. For Christmas, Sue gave a gift to each of her employees.
 - b. * For Christmas, Sue donated a gift to each of her employees.
 - c. For Christmas, Sue donated a gift to the Salvation Army in each of her employees' names.

²*to(dir)* can also be realized as *to-what* or *to-who*, as seen here, but if *where* is possible, this is a definite diagnostic for *to(dir)*

The distinction between (11a) and (11b) illustrates that while Sue can give a gift to her employees, she cannot donate a gift to them. *Donate* does not fit the context. She can, however, as in (11c) donate a gift; the difference here is that she is donating to an organization rather than a person. Such an organization is a Directional, rather than an Animate Recipient.

Donate is primarily used in the context of giving a gift to a charity. These charities or causes redistribute this money (or other type of gift) to their respective causes. For example, the Salvation Army takes donations and then passes goods and funds along to those who need them. Therefore, the Salvation Army is not so much a Recipient, but rather a drop-off center for goods to be redistributed. This is much different from the sense of giving a gift. In contrast, one would most likely be quite insulted if a gift given to a friend was later redistributed! The act of donating is often not to an active Recipient, but rather an intermediary transfer to a location. Semantically, *donate* appears to largely refer to transfer to a location.

Because of this meaning of *donate*, it is seldom used to indicate transfer to a person. It is only used in this sense when a person is substituting for an organization in metonymy, or when the person is seen as a charity case of some sort. The former is similar to situations such as (2), where the sentence becomes plausible if London is substituted for an underlying Animate Recipient, such as the mayor of London. This applies to sentences such as (12):

(12) John donated money to Kerry.

While it seems that the person *Kerry* is the goal, here the name *Kerry* stands in for John Kerry's presidential campaign. The sentence connotes a very different meaning than that in (13):

(13) John gave money to Kerry.

Here it is perfectly plausible that John has bumped into Kerry on the street and given him a fiver. While it could also mean the same as (12), with *give* it would be more usual to fully specify the Kerry campaign for clarity's sake. There is no such ambiguity in (12).

This analysis of *donate* is also consistent with several other facts. *Donate* is much more commonly used with *where* than with *whom*, and in a sense, *where* seems to be the default; unless there is something in the context to specify explicitly that the donation was directly to a person, *where* would typically be used. So, if an accountant is assisting a client with his tax return, (14a) is normal and (14b) is somewhat strange:

(14) a. Where did you donate money last year?

- b. ?? Who did you donate to last year?

These facts all illustrate that *donate* is used primarily with *to(dir)*. It is therefore not semantically identical to *give* and this is evidenced in its syntactic usage.

3.2 *Donate* with Animate Recipients

An interesting complication to this story is the fact that *donate* with a DP Goal is not ungrammatical for all speakers, and in fact some have judgments which vary with the nature of the Goal, similarly to what was seen above with *send*. On the one hand, this militates strongly against a morpho-phonological account, which should not allow for variation due to the semantics of the Goal, which does not affect such properties of the verb. On the other hand, it requires some explanation, considering the view of *donate* outlined above as well. In this section, I will describe these facts and provide an explanation for the differences found in such speakers. Keeping the facts from the previous sections in mind, we will see that this seems to be due to speaker variation in allowing a *to(f)* type interpretation for *donate*.

The relevant speakers with varying judgments find DP Goals with *donate* more acceptable in the context of organ donation, so that (15) is better than (16):

- (15) John donated Mary a kidney.
(cf. John donated a kidney **to(f)** Mary.)
- (16) * John donated the ASPCA money.
(cf. John donated money **to(dir)** the ASPCA.)

This, in fact, is consistent with the *wh*-behavior in (17):

- (17) * Where did John donate a kidney? (with the answer (15))

and judgments of British English speakers who accept (15), and also find (18) degraded (since they would have *to(f)*):

- (18) ?* John didn't donate a kidney to Mary, but he will do to Jane.

For those speakers who find *donate* ungrammatical with DP Goals in all instances, the overwhelming usage of *donate* with *to(dir)* may exclude the possibility of analyzing the Goal as an Animate Recipient. For others, however, *donate* may be more flexible, allowing a DP Goal in cases where the Goal is semantically compatible with being an Animate Recipient. A clear case of

such semantic compatibility is the context of organ donation. The act of donating an organ is both an act of charity and one which results irrefutably in possession of the kidney by the Goal. It is then not surprising that many native speakers find *donate* much more acceptable with a DP Recipient in an organ donation context.

This fact explains why *donate* has typically been viewed as unacceptable in the construction - the necessary context or appropriate type of Animate Recipient object is not provided. When there is such a context, the sentences are accepted and produced by many speakers. For these speakers, *donate* is like *send* (optionally taking a *to(f)* or *to(dir)* complement); when there is an Animate Recipient, then a DP Goal is acceptable.

3.3 First Conclusions

So far, I have shown that the an entire class of *to*-PPs that have been claimed to be problematic for a dative alternation analysis should be discarded from the discussion. If we ignore the irrelevant (e.g., Directional) cases, then we see no thematic differences between the DP and PP Goals. In addition, I have shown that there is no need to resort to Latinate/Germanic lexicon distinction or the stress patterns of verbs to account for the availability of DP Goals, thus eliminating another barrier to viewing DP Goals as systematically alternating with PP Goals due to their semantics, rather than lexical stipulation. In essence, DP Goal compatibility turns out not to be a property of verbs, but rather depends on the properties of the Goal and its relation to the Theme.

4 A Syntactic Analysis

4.1 Thematic Hierarchy

Now that I have provided arguments supporting the equivalence of thematic relations between Themes and DP or PP Animate Recipients, I must address the consequences of this conclusion for the syntactic analysis of these structures. I will adopt a relativized thematic hierarchy, in the spirit of that in Larson (1990):

- (19) *Relativized UTAH*: Identical thematic relationships are represented by identical relative hierarchical relations between items at D-Structure.

This type of UTAH states that thematic arguments should be consistently ordered with respect to each other, though not necessarily always in the same

positions, introduced by the same heads. The Animate Recipient Goals under discussion should thus both be generated either above or below the Theme. I will advocate the hierarchy Goal > Theme, an ordering consistent with that posited by Grimshaw (1990) and Damonte (2004).

The approach I will take is somewhat of a 'hybrid' between the derivational and alternative projection analyses. On the one hand, I am arguing that the thematic relations are the same, and that there should therefore be a non-trivial structural similarity between the two constructions. However, I am not proposing that the two structures are derived from exactly the same 'numeration'. Rather, the remaining differences between the two structures merit the presence of separate lexical items introducing the arguments. The difference between the structures reduces to the fact that DP Goals are introduced by null applicative heads (see below), while PP Goals are introduced via a preposition.

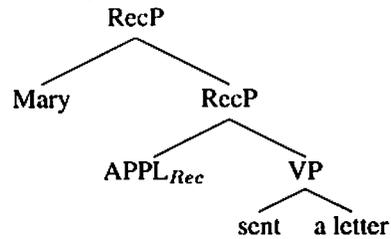
Applicative heads are primarily associated with affixes found on English DP Goal-like structures in Bantu, where an additional affix is found on the verb (vs. sentences with only one DP object). This is illustrated in the Chichewa example below, with the *ir* applicative morpheme: (Baker (1988) example 121)

- (20) a. Ngombe zi-na-tumiz-a mitolo ya udzu kwa mbuzi.
 cows SP-PST-send-ASP bundles of grass to goats
 The cows sent bundles of grass to the goats.
- b. Ngombe zi-na-tumiz-ir-a mbuzi mitolo ya udzu.
 cows SP-PST-send-APPL-ASP goats bundles of grass
 The cows sent the goats bundles of grass.

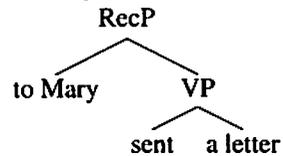
(20a) resembles PP Goal structures in English, where the Goal is introduced by a preposition glossed as *to*. In (20b), there is no preposition and the Goal linearly precedes the Theme, just as in an English DP Goal Structure. The main difference between the Chichewa and English versions of DP Goal structures is that there is an applicative morpheme in (20b). I am following the idea put forward in Baker (1988), Marantz (1993), and Pytkäinen (2002) that there is a similar functional head in English, APPL, which is phonologically null.

A sketch of the structures for English, with APPL as the null applicative head, is given below. The crucial part of these structures is that in both, the Animate Recipient occurs in a position which is lower than a Directional phrase (i.e., in the same position in the thematic hierarchy), and I abstract away from details such as whether RecP should be considered the 'same' projection in both, and whether these projections are actually within VP or not.

(21) DP Recipient:



(22) PP Recipient:



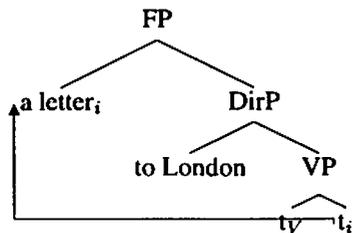
On this account, semantic differences which do remain between alternating forms are due to the differing properties of the applicative head which introduces a DP as in (21) and a PP (22).

4.2 Proposed Structures

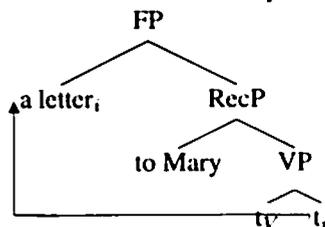
Considering the hierarchy established above, in order to derive the word order Theme > Goal, movement is necessary. The same is not true for Goal > Theme, which may leave the arguments *in-situ*. The analysis that I propose has the Theme remaining below the Animate Recipient when that Goal is a DP, and moving to a higher position, 'FP', when the Goal (or other present argument or adjunct) is a PP. Thus the derivations for a Directional, PP Goal, and DP Goal would be as below:

(23) a. Directional PP:

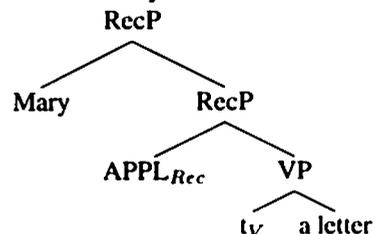
John sent a letter to London.



- (24) a. **Animate Recipient PP:**
John sent a letter to Mary.



- (25) a. **DP Animate Recipient:**
John sent Mary a letter.



FP may be some kind of discourse-related, perhaps 'scrambling', position for DPs. It does not seem to be a case position, since movement to FP appears to be optional – the Theme does not move there in DP Goal structures (25a). Another reason to view this as a discourse-related position is that this provides a potential framework for understanding 'weight'-related phenomena observed in ditransitive structures, illustrated in (26):

- (26) a. John sent it to Mary.
b. * John sent Mary it.
c. John sent to Mary a really long letter about his trip to Alaska.
d. *? John sent to Mary a letter.

(26a) and (26b) show that weak pronoun Themes are fine with PP Goals, but are ungrammatical with DP Goals. (26c) and (26d) show that the normally ungrammatical order PP > DP is acceptable when the DP is particularly 'heavy'. On the current account, this can be explained as conditions on movement to FP. Namely, weak pronouns must move to FP, but Themes only move to FP when a PP is present, so in (26b) this is not possible. It is an open question why the Theme only moves in PP Goal structures. One possible explanation is that the preposition, in contrast with an applicative head, is implicated in the motivation for the Theme's movement. Therefore, when no P

is present, 'FP' is not projected and the Theme is not attracted to a higher position. Another possibility is that the closest DP is attracted to FP; in the case of DP Goal structures, the DP Goal will be attracted, rather than the Theme. The weak pronoun would then be unable to move to FP for reasons of Relativized Minimality (Rizzi 1990). For the time being, I will remain agnostic as to the answer to this question, leaving it as an issue for further research. The case of the 'heavy NP' is less complicated. No matter which story we have for the weak pronouns, sentences such as (26c) are the result of the optionality of movement to FP for heavy constituents. What we see is in fact the Theme remaining *in-situ*.

Object shift in English has also been proposed for English in Johnson (1991) and Collins and Thrainsson (1993), but for Case-related reasons. The current analysis shares more in common with proposal for English object shift as scrambling in Takano (1998), which argues that Theme DPs scramble, or in current terms, move to FP. Note that this would be compatible with the story above which motivates Theme movement via PP, but not that which moves the closest DP (including Goals) to FP. The latter account would require modification of a Takano-style analysis, and this is again a question for further investigation.

This analysis also can account for the 'scope freezing' facts found in the DP Goal structure, observed by Larson (1988, 1990). This refers to the fact that there are two possible scope readings for the PP Goal structure in (27a), and only one for the DP Goal example (27b):

- (27) a. John gave a book to every student. $\forall > \exists, \exists > \forall$
 b. John gave every student a book. $\forall > \exists, * \exists > \forall$

(27a) can mean either that there is one particular book that John gave to each student (existential > universal), or that for every student, there was some book that John gave him or her (universal > existential). In (27b), the only possible reading has the universal scoping over the existential. On the current account, this would be due to the fact that in (27a) *a book* started out in a position lower than *every student*, and therefore there is an availability of 'surface' or reconstructed scope. (27b), where the Theme is still *in-situ*, has no reconstruction option, and thus only has the surface scope reading.

5 Conclusion

In this paper, I have shown that what has previously been described as one construction, the "prepositional" construction, in fact must be broken down

into at least two different structures, one hosting *to(f)*, the other *to(dir)*. I have also shown that those *to*-PPs which alternate with DP Goals form a class syntactically, not just semantically. This provides further support for maintaining a syntactic analysis for DP and PP Goal structures which respects their common thematic properties. More specifically, I have argued for the ordering Directional > Animate Recipient (Goal) > Theme in the thematic hierarchy, and detailed a potential syntactic analysis for the DP > PP word order as a result of a discourse-structure motivated movement of the Theme. This analysis is also compatible with the weight phenomena observed in such constructions. The standard ordering of DP > PP in English as discussed in Johnson (1991) suggests that this type of movement is quite general, and thus similar analyses will hopefully extend to other DP-PP alternations as well.

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