

ARGUMENT STRUCTURE AND
DITRANSITIVE VERBS IN JAPANESE

Ditransitive verbs such as *send* and *give* appear in two distinct structures in English, the double object and the *to*-dative constructions. It is well known that the two differ semantically and syntactically. In some recent works, it is suggested that the semantic differences observed by Bresnan (1978), Oehrle (1976) and others, and the structural properties noted by Barss and Lasnik (1986), Larson (1988), and others, can both be captured by postulating an extra head for the Double Object Construction (DOC, e.g., Marantz (1993), Harley (1995), Pykkänen (2002)). This head, which corresponds to the applicative head in Bantu languages, takes the goal as its specifier and relates it either to the VP that contains the verb and the theme (Marantz (1993)), or directly to the theme (Pykkänen (2002)). The applicative head contributes the meaning distinct to the DOC, and it gives rise to the hierarchical structure noted by Barss and Lasnik. This applicative head is missing in the *to*-dative so that this construction has an argument structure distinct from the DOC. In this paper, we will look at the corresponding construction(s) in Japanese. Unlike English, Japanese appears to have only one structure, in which the goal is marked with the dative and the theme with the accusative case marking. The goal-theme order is assumed to be the basic order (Hoji (1985), Takano (1998), Yatsushiro (1998, 2003)). The only variation is that the theme can occur before the goal, but this is viewed simply as an instance of optional scrambling. We will give arguments that the difference between English and Japanese is only apparent. With close scrutiny, we find that the two argument structures corresponding to the DOC and the *to*-dative in English exist in Japanese.

1. INTRODUCTION

English ditransitive verbs often allow two distinct structures, the double object and the *to*-dative constructions.

- (1) Double object construction (DOC)
John sent Mary a package.
- (2) *to*-dative construction
John sent a package to Mary.

What is the relationship, if any, between these two constructions? Not all ditransitive verbs permit both constructions, as, for example, in the case of *introduce* which only allows the *to*-dative. But when the verb does allow both, the two constructions have virtually the same meaning, which naturally suggests an analysis that derivationally relates the two. However, there are well-known barriers to relating the two derivationally. Simply put, the two constructions appear to be associated with distinct argument



structures. One well-known fact pointed out by Oerhle (1976) is that the DOC, but not the *to*-dative, may be associated with a causative meaning (cf. also Harley (1995), Larson (1988), Pesetsky (1995), Pinker (1989), Gropen et al. (1989), Pylkkänen (2002), Richards (2001), among others).

- (3) a. The article gave me a headache.
 b.*The article gave a headache to me.

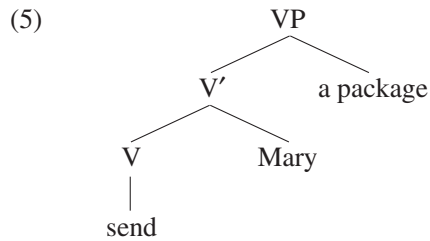
The (a) example is interpreted as my having read the article was responsible for *causing* my headache. The (b) example, the *to*-dative counterpart of (a), cannot convey this causative meaning, so the sentence is odd (but see note 15). If the presence of the causative interpretation in the DOC, and its absence in the *to*-dative, is viewed as reflecting the argument structure of the constructions, one is led to an analysis in which the two constructions have distinct sources rather than being derivationally related.

Another difference has to do with the nature of the goal phrase. As noted by Bresnan (1978, 1982), the goal phrase in the DOC is more restricted than in the *to*-dative (cf. also Harley (1995), Mazurkewich and White (1984), Pesetsky (1995), Pinker (1989), among others).

- (4) a. I sent the boarder/*the border a package.
 b. I sent a package to the boarder/the border.

In the DOC example in (a), the animate goal *the boarder* is fine but not the inanimate *the border* while the *to*-dative in (b) allows both. This distinction arises from the requirement of the goal of the DOC to be construed as the possessor of the theme while in the *to*-dative the goal is construed as locative (Mazurkewich and White (1984)). As a possessor, the DOC goal is usually animate; if inanimate, there needs to be an understanding that animate entities are implied, as in the case of a country (*France gave some African countries humanitarian aid.*) These differences in argument structure have led some to postulate different underlying structures for the two constructions (e.g., Marantz (1993), Harley (1995), Pylkkänen (2002)). We will elaborate on this proposal shortly.

There is an entirely different consideration: what is the underlying structure of the two constructions from a purely hierarchical point of view? Take the DOC. In the absence of any additional assumption, one might postulate something like the following phrase structure.



Assuming binary branching, this is the most obvious structure we can associate with a DOC. However, as argued convincingly by Barss and Lasnik (1986), in the DOC the goal phrase (*Mary*) asymmetrically c-commands the theme (*a package*). We can see this in anaphor binding.

- (6) a. John showed Mary herself.
 b.*John showed herself Mary.

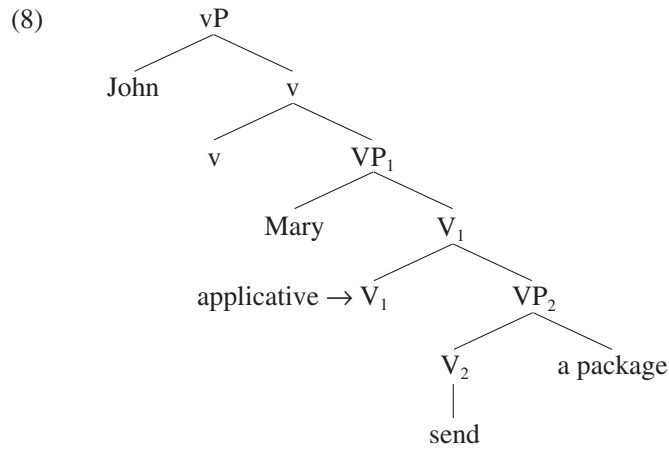
We can also see this with licensing of NPI.

- (7) a. John sent no one anything.
 b.*John sent anyone nothing.

Any, being an NPI, must occur in the scope of a negative element, in this case *no X*. In (a) *anything* is c-commanded by *no one* while in (b) the goal *anyone* fails to be licensed by the theme *nothing*, indicating that this goal phrase asymmetrically c-commands the theme.

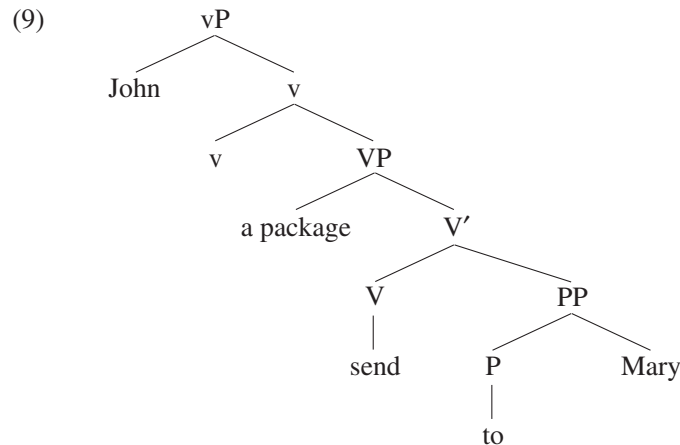
This observation by Barss and Lasnik led Larson (1988) to make an important proposal for the DOC: VP shell. The VP shell makes it possible for the goal to c-command the theme. A more recent approach by Marantz (1993), extended by Harley (1995), Bruening (2001) and Pykkänen (2002), builds on Larson's "VP shell" idea. We will adopt this approach since it is able not only to capture the c-command relationship noted by Barss and Lasnik (1986) but at the same time account for the argument structure facts noted earlier.

Marantz (1993), taking a hint from Bantu languages that have applied arguments, argues that the DOC has the following structure.



The ditransitive verb *send* begins in the lowest VP, which is selected by the applicative head V_1 . This applicative head relates the event in the lower VP to the goal *Mary*. It is this applicative head whose semantics can give rise to the causative interpretation illustrated earlier. It is also its semantics that requires a possessive interpretation of the goal in the DOC. The interpretation is something like *send a package to the possession of Mary* (cf. Pyllkänen (2002)). With this applicative construction for the DOC, we get both the argument structure effects of causation and possession and also the hierarchical structure in which the goal asymmetrically c-commands the theme.

In contrast, the *to*-dative construction has a simpler structure, in which the applicative head is missing; the causative and the possessive interpretations do not arise as a result. The following is adopted from Marantz (1993).



2. DITRANSITIVE CONSTRUCTION IN JAPANESE

Unlike English, Japanese does not have two different structures for ditransitive verbs. The only variance is in the word order of the two internal arguments: goal-theme/theme-goal.

- (10) a. Taroo-ga Hanako-ni nimotu-o okutta.
 Taro-Nom Hanako-Dat package-Acc sent
 'Taro sent Hanako a package.'
- b. Taroo-ga nimotu-o Hanako-ni okutta.
 Taro-Nom package-Acc Hanako-Dat sent

Japanese has scrambling, and the standard analysis of this word-order permutation is that it is a result of scrambling. Hoji (1985) proposed, based on quantifier scope data and others, that the goal-theme order in (a) is basic, and the theme-goal order in (b) is derived by scrambling (cf. also Fukui (1993), Saito (1992), Tada (1993), Takano (1998), and Yatsushiro (1998, 2003), among others). Hoji (1985) observes that if quantifiers occupy the VP-internal positions in the order "goal-theme," the goal asymmetrically takes scope over the theme.

- (11) Taroo-ga dareka-ni dono-nimotu-mo okutta.
 Taro-Nom someone-Dat every-package sent
 'Taro sent someone every package.'
 some > every, *every > some

In contrast, in the theme-goal order, the scope is ambiguous.

- (12) Taroo-ga dono-nimotu-mo_i dareka-ni t_i okutta.
 Taro-Nom every-package_i someone-Dat t_i sent
 some > every, every > some

Hoji takes this scope ambiguity as evidence that movement has occurred.¹ As indicated by the trace, the theme "every package" is proposed to have moved from its original complement position adjacent to the verb, leaving behind a trace, and it is this trace that makes the inverse scope (goal > theme) possible.² This leads him to the conclusion that the goal-theme order is the base word order and the theme-goal order is derived from it by scrambling the theme across the goal.

Hoji's analysis has become the standard approach in the field. When considered Japanese-internally, it is certainly a plausible analysis: Japanese has scrambling, and the case morphology appears to be invariant, with *ni* for the goal and *o* for the theme regardless of the word order. What is

puzzling about this analysis is that it would make the ditransitive construction in Japanese fundamentally different from that in English. Unlike English, in Japanese there is only one structure associated with ditransitive verbs, and any variation is due to scrambling. Is this really correct?

This standard analysis predicts that, unlike English, we should not find any argument-structure differences in the ditransitive constructions because there is only one structure associated with ditransitive verbs. However, it turns out that this is incorrect. Recall that the quantifiers in the goal-theme order are scopally unambiguous. But if we change the quantifier slightly, ambiguity obtains more readily.³

(13) **inanimate goal**

Taroo-ga dokoka-ni dono-nimotu-mo okutta.
 Taro-Nom some place-to every-package sent
 ‘Taro sent every package to some place.’
 some > every, every > some

We have consulted with a large number of native speakers, and for those who find the earlier example in (11) unambiguous, most found it easier to detect ambiguous scope in this example although some felt that it is a delicate judgment. The only difference between the two examples is in the animacy of the goal. In the earlier example the goal is animate (*dareka* ‘someone’), but in the example here the goal is inanimate (*dokoka* ‘some place’). This sentence is in the goal-theme order; it is also ambiguous in the other order of theme-goal. Why should an inanimate goal lead to scope ambiguity?

Recall that, as noted by Bresnan (1978, 1982) and others, the DOC does not (usually) tolerate an inanimate goal because this goal must be interpretable as the ultimate possessor of the referent of the theme, but no such restriction occurs in the *to*-dative. Suppose that, contrary to the standard analysis, Japanese has distinct structures corresponding to the DOC and the *to*-dative. On this account, we would say that the example in (13) can only be a *to*-dative construction because the goal is inanimate. But does this solve the scope mystery? In fact, Aoun and Li (1989) pointed out that there is a scope difference between the two constructions, DOC and *to*-dative.

- (14) a. John sent some student every article. *every > some
 b. John sent some article to every student. every > some

In the DOC, the two quantifiers are scopally unambiguous, limited only to the surface scope, while in the *to*-dative, we get the inverse scope. Marantz (1993) suggests that this difference arises from the fact that the

DOC has a complex structure with an applicative head, with the goal QP outside of the VP that contains the theme QP. In this structure the theme QP cannot raise by QR over the goal QP. But in the *to*-dative, which has a simpler structure in which both the theme and the goal are inside the same immediate VP, either the theme QP or the goal QP can raise first by QR, leading to ambiguity (cf. also Aoun and Li (1989), Bruening (2001)). If we apply this analysis to Japanese, we get the right result. The DOC requires an animate goal; if the goal is inanimate, the structure is a *to*-dative, which, in turn, makes scope ambiguity possible. This is what we have seen above.⁴

Let us look at another fact. In the DOC, the goal is a DP, but in the *to*-dative it is a PP. This reflects the fact that in the DOC the goal is a possessor but in the *to*-dative it is a location. If Japanese has these two constructions, as suggested by the quantifier-scope facts, we would expect this difference in categorical status, DP vs. PP, to arise. There is a way to test for this in Japanese. A numeral quantifier may float off its host only if the host is a DP (Shibatani (1978)), as shown in (a) below. If the host is a PP, it cannot float, as shown in (b).

- (15) a. Taroo-ga mati-o futa-tu otozureta.
 Taro-Nom towns-Acc 2-CL visited.
 ‘Taro visited two towns.’

- b.*Hito-ga mati-kara futa-tu kita.
 people-Nom towns-from 2-CL came
 Intended: ‘People came from two towns.’

Returning to the ditransitive construction, what we have observed with quantifiers is that if the goal is animate, it can be a DOC, which means that the goal is a DP that should allow quantifier float. However, if the goal is inanimate, it is in a *to*-dative construction, and the goal is a PP, which should block quantifier float. These predictions are borne out.

- (16) Taroo-ga gakusei-ni futa-ri nimotu-o okutta.
 Taro-Nom students-Dat 2-CL package-Acc sent
 (Miyagawa (1989))
 ‘Taro sent two students a package.’

- (17) *Daitooryoo-ga kokkyoo-ni futa-tu heitai-o okutta.
 president-Nom borders-to 2-CL soldiers-Acc sent
 (Lit.) ‘The President sent two borders soldiers.’

The inanimate goal is fine with the quantifier so long as there is no float, as shown below.^{5, 6}

- (18) Daitooryoo-ga futa-tu-no-kokkyoo-ni heitai-o okutta.
 president-Nom 2-CL-Gen-borders-to soldiers-Acc sent
 ‘The President sent soldiers to two borders.’

The quantifier scope and the numeral quantifier float facts converge to suggest that the ditransitive verbs in Japanese have both the DOC and the *to*-dative, just as in English. This means that, contrary to the standard analysis, the ditransitive construction in Japanese is associated with two distinct argument structures. This is not an entirely new idea. Some version of the distinct underlying structure analysis has already been proposed for Japanese by Harley (1995), Kishimoto (2001), Kitagawa (1994), Miyagawa (1995, 1997), and Watanabe (1996), among others. In the remainder of this article, we will further defend this distinct underlying structure analysis of the ditransitive construction.

3. TWO GOAL POSITIONS: HIGH AND LOW

In the previous section, we have shown that the quantifier scope and numeral quantifier facts suggest that Japanese, just like English, have two distinct structures for ditransitives, corresponding to the DOC and the *to*-dative. A problem that arises with what we have observed so far is that, unlike in English, the difference between the DOC and the *to*-dative in Japanese is not a function of word order. The order goal-theme may be the DOC if the goal is animate, but it must be the *to*-dative if the goal is an inanimate that cannot be construed as the ultimate possessor of the referent of the theme. Is there a difference in structure between these two despite the same word order? In particular, is there a difference of the sort proposed by Marantz (1993) between the DOC and the *to*-dative? In fact, our idea is that Japanese and English are quite similar in an important respect: there are two dative positions, high and low; the DOC chooses one (high) while the *to*-dative chooses the other (low).

3.1. *Proposal*

We propose that there are two goal positions, one higher than the other; the theme may occur before or after the low goal.

- (19) a. high goal (possessive) . . . low goal (locative) . . . theme
 b. high goal (possessive) . . . theme . . . low goal (locative)

The clearest evidence for the claim that there are two goal positions comes from the fact that, given an appropriate ditransitive verb, it is possible for

both goals to appear in the same sentence. First recall that for ditransitive verbs such as *okuru* ‘send’, the *ni*-marked goal can either be possessive ((a)) or locative ((b)).

- (20) a. Taroo-ga Hanako-ni nimotu-o okutta.
 Taro-Nom Hanako-Dat package-Acc sent
 ‘Taro sent Hanako a package.’
- b. Taroo-ga Tokyo-ni nimotu-o okutta.
 Taro-Nom Tokyo-to package-Acc sent
 ‘Taro sent a package to Tokyo.’

Given the right ditransitive verb, both the possessive and the locative goals can occur in the same sentence. ‘Send’ is such a verb.⁷ Other verbs in this category include *todokeru* ‘deliver’, *kaesu* ‘return’, *kakeru* ‘ring’, *ataeru* ‘give’, *dasu* ‘send’, and *azukeru* ‘entrust’.⁸

- (21) Taroo-ga Hanako-ni Tokyo-ni nimotu-o okutta.⁹
 Taro-Nom Hanako-Dat Tokyo-to package-Acc sent
 ‘Taro sent Hanako a package to Tokyo.’

The meaning of this sentence is that Taro sent a package to Tokyo, which is a location, with the intention that Hanako will come to possess it. Hanako does not need to be in Tokyo; she could be in Boston, but Taro has the knowledge that sending the package to (some destination in) Tokyo will guarantee that Hanako will receive the package. The surface order here reflects the proposed hierarchy in (19): high goal-low goal.¹⁰

A surprising property of this “two-goal” construction is that the word order is quite rigid. As shown below, the low goal cannot precede the high goal.

- (22) *Taroo-ga Tokyo-ni Hanako-ni nimotu-o okutta.
 Taro-Nom Tokyo-to Hanako-Dat package-Acc sent
 ‘Taro sent Hanako a package to Tokyo.’

Likewise, for many speakers it is not possible for the theme phrase to occur in front of the high goal.

- (23) */?Taroo-ga nimotu-o Hanako-ni Tokyo-ni okutta.¹¹
 Taro-Nom package-Acc Hanako-Dat Tokyo-to sent
 ‘Taro sent Hanako a package to Tokyo.’

On the other hand, it is possible for the theme to occur in front of the low goal.

- (24) Taroo-ga Hanako-ni nimotu-o Tokyo-ni okutta.
 Taro-Nom Hanako-Dat package-Acc Tokyo-to sent
 ‘Taro sent Hanako a package to Tokyo.’

As far as we can tell, this permutation of low goal-theme/theme-low goal is the only word order flexibility allowed in this two-goal construction.

We have seen that a sentence may have two goals, high and low. But what if a sentence has just one goal? Is it the high goal or the low goal? If the goal is inanimate, we know that it must be a low goal. But what if it is animate as below?

- (25) Taroo-ga gakusei-ni ronbun-o okutta.
 Taro-Nom student-NI article-Acc sent
 ‘Taro sent his students an article.’

This is in the goal-theme order; given what we have said so far, we cannot tell whether this goal is high or low. In the absence of something that would force one interpretation or the other (such as having another goal, or having an inanimate goal), there is no way to tell which goal is present. Now take the theme-goal order below.

- (26) Taroo-ga ronbun-o gakusei-ni okutta.
 Taro-Nom article-Acc student-NI sent

Here, the goal must be low. We know this from the two-goal construction in which we saw that the theme cannot occur in front of the high goal, but it may do so before the low goal.

We can in fact confirm that if the goal follows the theme, it must be a low goal. The low goal is a locative, which means that it is a PP, not a DP. As noted by Miyagawa (1995, 1997) and Watanabe (1996), the following distinction that Haig (1980) observes is consistent with the fact that a goal following a theme is a PP.

- (27) a. Taroo-ga tomodati-ni futa-ri nimotu-o okutta.
 Taro-Nom friends-NI 2-CL package-Acc sent
 ‘Taro sent two friends a package.’
 b.???Taroo-ga nimotu-o tomodati-ni futa-ri okutta.
 Taro-Nom package-Acc friends-NI 2-CL sent

Quantifier float is possible off the goal if the goal is in front of the theme; this is shown in the (a) example above. This goal is the high goal, which is a DP, which makes the quantifier float possible. But in the (b) example, with the order theme-goal, the goal is a PP, which blocks quantifier float.

Thus, we have seen that in both the two-goal construction and the single-goal construction, the high goal always appears before the theme while the low goal may appear either before or after the theme. This casts new light on the issue debated in the literature, namely, whether the word order permutation in a ditransitive construction is by movement or the two word orders are base generated. In the standard approach, the goal-theme/theme-goal permutation is characterized as free scrambling of the theme over the goal. Others have argued that the two word orders have different sources (Harley (1995), Kishimoto (2001), Kitagawa (1994), Miyagawa (1995, 1997), Watanabe (1996)). Now, we can be more precise: *the permutation, whether it is by movement or by base generation, only happens with low goals.*

This conclusion relates to an interesting proposal by Takano (1998) who attempts to draw a generalization between English and Japanese. Takano argues that in English, the theme object in the *to*-dative begins lower than the goal PP and undergoes overt short scrambling over the PP. (The idea that the theme starts low was made earlier by Pesetsky (1995).)

- (28) John sent a book_i to Mary t_i.

This captures directly the observation by Aoun and Li (1989) that in the *to*-dative, the goal is able to be interpreted above the theme despite the surface word order. Thus, for example, we get scope ambiguity, as already noted earlier (b). Backward binding is also possible (cf. Barss and Lasnik (1986)).

- (29) (?) Mary sent his_i paycheck to every worker_i.

In Takano's theory, this movement is optional in itself. However, if it does not apply, the derivation crashes at LF because the theme (if it remains in-situ) cannot be attracted to the higher functional head for Case-checking due to the intervening goal phrase. In other words, only the derivation involving scrambling of the theme converges, thereby rendering the theme-goal order rigid in the English *to*-dative construction.¹² In contrast, Takano argues that in Japanese, this movement is not necessary for convergence because Case on the theme is licensed differently. Thus, in Japanese, we get both orders, goal-theme and theme-goal.

- (30) a. Taroo-ga gakusei-ni ronbun-o okutta.
 Taro-Nom student-NI article-Acc sent
 b. Taroo-ga ronbun-o_i gakusei-ni t_i okutta.
 Taro-Nom article-Acc_i student-NI t_i sent

He thus upholds the standard analysis but with an interesting twist about

the correlation with English, with the difference captured by the nature of Case marking.

Without ever mentioning the difference between high and low goals, Takano actually captures something we have observed: the word-order permutation in Japanese is found in a construction that corresponds to the English *to*-dative construction. The permutation thus involves only the low goal. This much we agree with. We also agree that there does appear to be a difference in licensing of Case on the object between the two languages, along the lines Takano argues for. However, we will argue that the two orders in Japanese are base generated, not one derivationally derived from the other. We will take up the movement/base-generation issue later in section 5 and give evidence that the two orders are base generated. As part of our discussion we will address issues raised by Yatsushiro (1998, 2003) who defends the standard approach against a base-generation approach.

Our analysis raises a question about scope judgment. Why is a goal-theme construction with an animate goal judged unambiguous? The example is repeated below.

- (31) Taroo-ga dareka-ni dono-nimotu-mo okutta.
 Taro-Nom someone-Dat every-package sent
 ‘Taro sent someone every package.’
 some > every, *every > some

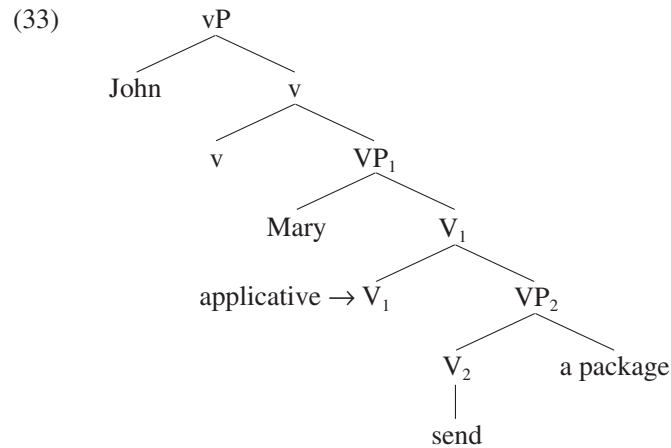
Based on what we have said, the animate goal could be a possessor, in which case this construction would be a DOC, and the lack of ambiguity is expected. However, there is nothing to prevent interpreting this goal as locative, which would make this construction a *to*-dative, identical to the construction with an inanimate goal. On this interpretation we should expect ambiguity, just as we saw with an inanimate goal. In fact, although in the minority, examples such as this have been claimed in the literature to be ambiguous (Kuroda (1993), Kitagawa (1994), Miyagawa (1997)). This is what we expect based on our distinct underlying structure analysis of ditransitive constructions. If this is correct, then there is apparently a preference (a strong one for many people) to interpret an animate goal in the goal-theme order to be the possessor and not the locative. We do not know why such a preference should exist, and we leave this as an open question.¹³ Finally, if Q-float is associated with the goal, no ambiguity obtains even for one of the authors who otherwise is able to detect the ambiguity even with an animate goal.

- (32) Taroo-ga gakusei-ni futa-ri dono-ronbun-mo okutta.
 Taro-Nom students-Dat 2-CL every-article sent
 ‘Taro sent two students every article.’
 two > every, *every > two

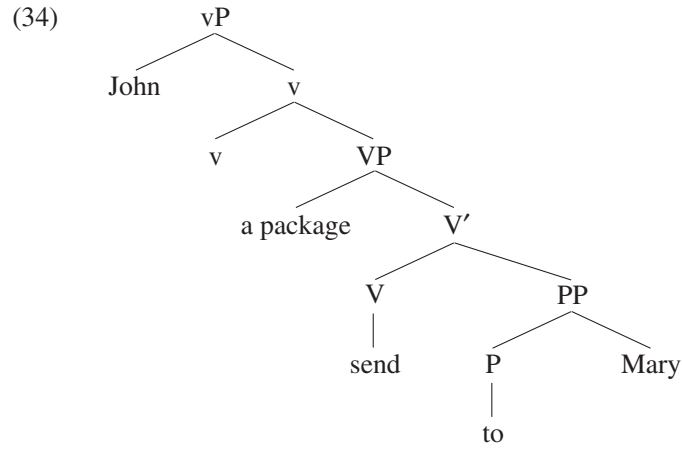
This is expected because the Q-float forces the goal to be a DP, thus a possessor. This construction can only be a DOC as a result, and we don’t expect ambiguity to obtain.

3.2. *The Structure of High and Low Goals*

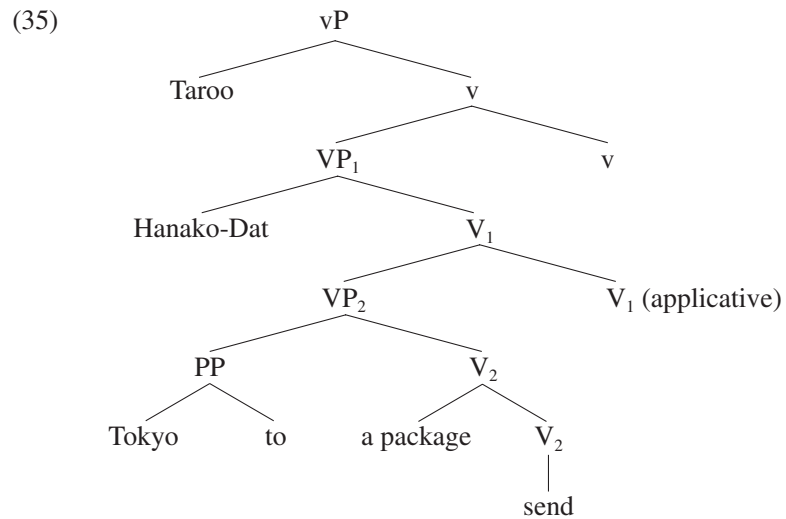
We now turn to the structural representation of the high/low goal constructions. What type of structure can we postulate to account for the high/low goal constructions? Let us begin with the high goal. This goal is what emerges in the DOC. Marantz (1993) proposes that the structure of the DOC is the following.



The applicative head, V_1 , relates the high goal, *Mary*, to the event in VP_2 , particularly, that the theme of this event, *a package*, ultimately comes into the possession of *Mary*. The *to*-dative construction is the following.



Building on Marantz's proposal, the two-goal construction is the following.¹⁴ We give it in the Japanese order.



This sentence means that Taro sent a package to Tokyo, to the possession of Hanako. The specifier of the applicative head (V_1), *Hanako-Dat*, must be the possessor. The order of the PP and the theme in the lower VP (VP_2) may be generated in this order, or in the order theme-PP (cf. Marantz (1993) for relevant discussion).^{15, 16}

4. EVIDENCE FOR HIGH AND LOW GOALS

In this section we will give several pieces of evidence for the various aspects of the structure we have proposed for the high and low goals.

4.1. *Quantifier Scope in the Two-goal Construction*

One piece of evidence for the high and low goals comes from the quantifier scope facts in the two-goal construction. In the canonical order, the high goal takes wide scope over both the low goal ((36)) and the theme ((37)).

- (36) Taroo-ga dareka-ni subete-no-basho-ni nimotu-o
 Taro-Nom someone-Dat all-Gen-place-to package-Acc
 okutta.
 sent
 ‘Taro sent someone a package to every place.’
 some > every, *every > some

- (37) Taroo-ga dareka-ni Tokyo-ni subete-no-nimotu-o
 Taro-Nom someone-Dat Tokyo-to all-Gen-package-Acc
 okutta.
 sent
 ‘Taro sent someone every package to Tokyo.’
 some > every, *every > some

In contrast, the locative goal allows inverse scope with the theme.

- (38) Taroo-ga Hanako-ni dokoka-no basho-ni
 Taro-Nom Hanako-Dat some-Gen-place-to
 subete-no-nimotu-o okutta.
 all-Gen-package-Acc sent
 ‘Taro sent Hanako every package to some place.’
 some > every, every > some

This sentence is also ambiguous in the order theme-low goal. We follow Marantz (1993) in assuming that Quantifier Raising (QR) can target either of the quantifiers if they are in the same immediate VP. This is the reason why, according to Marantz (1993), we get scope ambiguity in the *to*-dative (cf. also Bruening (2001)). Thus, in the English example *John sent some package to every boy*, [_{VP} *some package to every boy*] is the VP, hence either quantifier can QR over the other. In contrast, in the DOC, the goal and the theme are not in the same immediate VP; the goal is in the specifier

of the applicative head, which selects the VP containing the theme as its complement. Hence we get scope freezing.¹⁷ What we saw above in (36)–(38) demonstrate exactly these characterizations. The high goal is in the specifier of the applicative head, hence it is outside the VP that dominates the low goal and the theme, so it always takes wide scope over either of these other phrases. But the low goal and the theme are in the same immediate VP, which correctly predicts scope ambiguity between these two.

4.2. *Categorical Status of the High and Low Goals*

We can confirm the categorical status of the high goal and the low goal using passivization. While the high goal can be passivized, the low goal cannot.

- (39) a. Taroo-ga nimotu-o okur-are-ta.
 Taro-Nom package-Acc send-PASS-PAST
 ‘Taro was sent a package.’
- b.*Tokyo-ga nimotu-o okur-are-ta.
 Tokyo-Nom package-Acc send-PASS-PAST
 ‘Tokyo was sent a package.’

The difference in the categorical status of high and low goals predicts this difference. The high goal is a DP that is assigned Case, and under passivization this Case may be absorbed. But the low goal is a PP, so there is no Case to absorb, and passivization cannot apply. The English equivalents show that the same thing holds for English. The exact same pattern is observed in the two-goal construction.

- (40) a. Taroo-ga Tokyo-ni nimotu-o okur-are-ta.
 Taro-Nom Tokyo-to package-Acc send-PASS-PAST
 ‘Taro was sent a package to Tokyo.’
- b.*Tokyo-ga Taroo-ni nimotu-o okur-are-ta.
 Tokyo-Nom Taroo-Dat package-Acc send-PASS-PAST
 (Lit.) ‘Tokyo was sent a package to Taro.’

We thus see that passivization helps to distinguish between the high goal, which is a DP, and the low goal, which is a PP.

The same point can be made by looking at the distribution of floated numeral-quantifier. The following is a minimal pair.

- (41) a. Gakusei_i-ga Taroo-ni t_i san-nin nimotu-o
 students_i-Nom Taro-by t_i 3-CL package-Acc
 okur-are-ta.
 send-PASS-PAST
 ‘Three students were sent a package by Taro.’
 (cf. Kubo (1992), Miyagawa (1996))
- b.*Gakusei_i-ga Taroo-ni nimotu-o t_i san-nin
 students_i-Nom Taro-by package-Acc t_i 3-CL
 okur-are-ta.
 send-PASS-PAST
 ‘Three students were sent a package by Taro.’
 (Miyagawa (1996))

The only difference between these two examples is the position of the stranded numeral quantifier that is intended to modify the externalized goal “students.” In (a), it is in the position of the high goal, but in (b), it is in the position of the low goal because it follows the theme. Remember that the goal can follow the theme only if the goal is low. By placing the numeral quantifier after the theme in (b), we are forcing a PP interpretation of the goal “students.” Because a PP is not associated with Case, this cannot be an extraction site for passivization, hence there is no trace to support the stranded numeral quantifier. No such problem arises in the (a) example; the stranded numeral quantifier is in the position of the high goal, which is a DP.

We saw that the high goal is a DP, but the low goal is a PP. We can also see this readily by substituting the postposition *-e* ‘to’. This is a true postposition, hence it can only occur where a PP occurs. Note that, in a two-goal construction, only the low goal may take this postposition.

- (42) Taroo-ga Hanako-ni/*-e Tokyo-ni/-e nimotu-o
 Taro-Nom Hanako-Dat/-to Tokyo-to/-to package-Acc
 okutta.
 sent

As shown below, the postposition *-e* ‘to’ may occur with an animate goal in either order, confirming that an animate goal may emerge as a low goal.

- (43) a. Taroo-ga Hanako-e nimotu-o okutta.
 Taro-Nom Hanako-to package-Acc sent
 ‘Taro sent a package to Hanako.’

- b. Taroo-ga nimotu-o Hanako-e okutta.
Taro-Nom package-Acc Hanako-to sent

Recall from the earlier discussion that if the goal is inanimate, scope ambiguity obtains even in the goal-theme order.

(44) **inanimate goal**

- Taroo-ga dokoka-ni dono-nimotu-mo okutta.
Taro-Nom some place-NI every-package sent
'Taro sent every package to some place.'
some > every, every > some

We now know that this is because an inanimate goal cannot be a high goal, because it cannot take on the meaning of a possessor. Thus it is a low goal which occurs in the same immediate VP as the theme. We predict that scope ambiguity should obtain even if the goal is animate, if this goal is marked with *-e* 'to'. Although the judgment is somewhat delicate, we believe that the following is easier to get scope ambiguity than with *-ni*.

- (45) Taroo-ga dareka-e dono-nimotu-mo okutta.
Taro-Nom someone-to every-package sent
'Taro sent every package to someone.'
some > every, every > some

This is predicted from our discussion of *-e*. This particle, being a post-position, only occurs on low goals regardless of whether it is animate or inanimate.

4.3. *Locality and Passivization*

In the discussion earlier, we looked at the passivization possibility of the goal phrase. In this subsection we will look at the passivization of the theme. In English (for many dialects), and in many other languages, passivization of the theme is limited to the *to*-dative construction.

- (46) a. The package was sent to Mary.
b.*The package was sent Mary.

The ungrammaticality of the (b) example follows from locality: in a DOC, there are two DPs, and the operation responsible for externalizing an internal-argument DP must target the closer DP, which is the goal, not the theme. It is fine to passivize the goal in a DOC.

- (47) Mary was sent a package.

What about Japanese? The following is an example in which the theme has passivized.

- (48) Nimotu-ga Taroo-ni (yotte) Hanako-ni okur-are-ta.
 package-Nom Taro-by Hanako-NI send-Pass-Past
 ‘The package was sent (to) Hanako by Taro.’

What is the nature of the *ni* particle on the goal phrase in this example? If Japanese is like English, we expect the goal phrase here to be a PP, not a DP. If it is a DP, it is the high goal, and it should interfere in the raising of the theme, which occurs below it. We can again turn to the numeral quantifier to confirm this (cf. Miyagawa (1996)).

- (49) *Nimotu-ga Taroo-ni (yotte) gakusei-ni futa-ri
 package-Nom Taro-by students-NI 2-CL
 okur-are-ta.
 send-Pass-Past
 ‘A package was sent two students by Taro.’

The numeral quantifier *futa-ri* has a classifier that goes with an animate entity, in this case, “students.” As shown, this construal is impossible because the goal phrase containing “students” is a PP.

One question about the above example is, where does the theme originate? Is it above or below the low goal? In principle, either should be possible. Even if it starts out below the low goal, the low goal would not interfere since it is a PP, not a DP. We can see that such a derivation is possible.

- (50) a. Nimotu-ga Taroo-ni (yotte) Hanako-ni futa-tu
 package-Nom Taro-by Hanako-to 2-CL
 okur-are-ta.
 send-Pass-Past
 ‘Two packages were sent to Hanako by Taro.’
 b. Nimotu-ga Taroo-ni (yotte) futa-tu Hanako-ni
 package-Nom Taro-by 2-CL Hanako-to
 okur-are-ta.
 send-Pass-Past

In the (a) example, the numeral quantifier that goes with the externalized “packages” occurs after the low goal. In (b), the stranded numeral quantifier occurs in front of the (PP) goal phrase.¹⁸

5. WORD ORDER PERMUTATION: DERIVED OR BASE GENERATED?

We now turn to the issue of the order of low goal and theme. As we have seen, these two may occur in either order.

- (51) a. Taroo-ga Hanako-ni Tokyo-ni nimotu-o okutta.
 Taro-Nom Hanako-Dat Tokyo-to package-Acc sent
 ‘Taro sent a package to Hanako to Tokyo.’
- b. Taroo-ga Hanako-ni nimotu-o Tokyo-ni okutta.
 Taro-Nom Hanako-Dat package-Acc Tokyo-to sent

What we want to know is this: what is the relationship between these two orders? Are they derivationally related, or are they base generated? This is the same debate that is in the literature for the two possible orders, goal-theme and the theme-goal, but now, it is recast as a permutation involving *low* goal and theme. Whatever arguments given in favor of the standard approach would be applicable here, as well as the arguments given in favor of a base-generation approach. We will defend the base generation approach (e.g., Miyagawa (1995, 1997)) by first giving new evidence for it, then responding to Yatsushiro’s (1998, 2003) argument for a movement approach.

5.1. *Idioms*

Ditransitive verbs occur in many idioms. Larson (1988) postulates that a phrasal idiom indicates that the parts of the idiom, e.g., goal and verb, must be base generated adjacent to each other. On this assumption, we find evidence for the base-generation hypothesis of the low goal-theme word order variation. That is, we find idioms both of the goal-V type and the theme-V type. The most interesting of these are idioms composed of the same verb, with the two orders appearing in different idioms. These are given below. For all these idioms, the reverse order leads to disappearance of the idiomatic meaning. If no idiom is involved, all of these verbs readily allow both the goal-theme and the reverse theme-goal orders.

(52) *dasu* ‘let out, send’

a. goal-V idiom

Taroo-wa omotta koto-o **kuti-ni** **dasu**.
 Taro-Top thought thing-Acc mouth-to let.out

‘Taro says what’s on his mind.’

??? . . . **kuti-ni** omotta koto-o **dasu**.

b. theme-V idiom

Taroo-wa hito-no koto-ni **kuti-o dasu.**
 Taro-Top person-Gen business mouth-Acc let.out
 ‘Taro cuts in on someone else’s business.’
 * . . . **kuti-o** hito-no koto-ni **dasu.**

(53) *kakeru* ‘hang’

a. goal-V idiom

Taroo-wa sainoo-o **hana-ni kaketeiru.**
 Taro-Top talent-Acc nose-to hanging
 ‘Taro always boasts of his talent.’
 * . . . **hana-ni** sainoo-o **kaketeiru.**

b. theme-V idiom

Taroo-wa sono giron-ni **hakusya-o kaketa.**
 Taro-Top that controversy-to spur-Acc hang
 ‘Taro added fresh fuel to the controversy.’
 * . . . **hakusya-o** sono giron-ni **kaketa.**

(54) *ireru* ‘put in’

a. goal-V idiom

Taroo-wa kuruma-o **te-ni ireta.**
 Taro-Top car-Acc hand-in put in
 ‘Taro acquired a car.’
 * . . . **te-ni** kuruma-o **ireta.**

b. theme-V idiom

Taroo-wa genkoo-ni **te-o ireta.**
 Taro-Top draft-to hand-Acc put in
 ‘Taro revised the draft.’
 * . . . **te-o** genkoo-ni **ireta.**

(55) *ageru* ‘raise’

a. goal-V idiom

Taroo-wa itumo zibun-no sippai-o **tana-ni ageru.**
 Taro-Top always self-Gen mistake-Acc shelf-to raise
 ‘Taro always shuts his eyes to his own mistakes.’
 * . . . **tana-ni** zibun-no sippai-o **ageru.**

b. theme-V idiom

Taroo-wa maajan-ni **timiti-o** **ageta.**
 Taro-Top mah-jongg-to blood vessel-Acc raise
 ‘Taro was obsessed with mah-jongg.’
 * . . . **timiti-o** maajan-ni **ageta.**

The standard analysis would predict that no idiom of the form *goal-V* should exist because under this approach *goal-V* is always derived by moving the theme across the goal. As we can see from the idioms above, this is clearly incorrect.^{19, 20}

5.2. Chain Condition

In order to maintain the base generation hypothesis, we need to respond to an interesting challenge to it by Yatsushiro (1998, 2003). Although Yatsushiro was arguing for the standard approach, which does not distinguish between high and low goals, we can view it as also a challenge to the word order variation involving low goal and theme. Yatsushiro’s work is in part a response to Miyagawa’s work (1995, 1997), in which Rizzi’s (1986) Chain Condition is used to argue that the two orders, goal-theme/theme-goal, are base generated.

The Chain Condition is designed to capture the ungrammaticality of examples such as the following.

(56) * Gianni_i si_i è stato affidato t_i
 Gianni to-himself was entrusted t
 ↑ _____ ↓

The problem here is that *Gianni* crosses the clitic *si*. The Chain Condition is given below.

(57) Chain Condition (Rizzi (1986))

Chains: $C = (x_i, \dots, x_n)$ is a chain iff, for $1 < i < n$, x_i locally binds x_{i+1}
 (x locally binds x' iff it binds x' and there is no closer potential binder y for x')

Consider again the Italian example in (56). It has the form given below.

(58) XP_i anaphoric element_i t_i
 ↑ _____ ↓

Rizzi’s suggestion is that an anaphoric element enters into a chain by chain

formation. By the Chain Condition, which imposes a strict locality on the members of a chain, there are only a handful of possibilities, all respecting the hierarchical ordering (XP, anaphor, t). So, the XP and the anaphor can form a chain, or the anaphor and the trace can form a chain, but the XP and the trace cannot form a chain to the exclusion of the anaphor. To see one illustration of how an ill-formed chain results, suppose one forms a three-member chain with all three of these elements as members of the same chain. The Chain Condition is satisfied because all non-head members are locally bound. However, this results in a chain with two theta roles (anaphoric element, t), violating the Theta Criterion. Other possibilities are equally bad for independent reasons.

Snyder (1992) and Koizumi (1995) showed that the Chain Condition applies to Japanese with the reciprocal anaphor *otagai* ‘each other’.

- (59) ?*[John-to Bob]_i-o otagai_i-ga t_i nagutta.
 [John-and Bob]_i-Acc each other_i-Nom t_i hit
 ‘John and Bob, each other hit.’

This structure parallels Rizzi’s Italian example. If the reciprocal anaphor is embedded in a larger phrase, the Chain Condition problem disappears.

- (60) [John-to Bob]_i-o [otagai_i-no hahaoya]-ga
 [John-and Bob]_i-Acc [each other_i-Gen mother]-Nom
 t_i nagutta.
 t_i hit
 ‘John and Bob, each other’s mothers hit.’

In this example, the reciprocal anaphor does not c-command the trace, making it possible for the antecedent “John and Bob” and the trace to form a chain by themselves, leading to a well-formed chain with one theta role and one Case.

Based on this, it is noted in Miyagawa (1995, 1997) that the two orders in the ditransitive construction, goal-theme/theme-goal, must be viewed as base generated. Neither order evidences a Chain Condition violation.

- (61) a. goal-theme
 John-ga [Hanako-to Mary]-ni_i otagai_i-o
 John-Nom [Hanako-and Mary]-NI_i each other_i-Acc
 syookaisita.
 introduced
 ‘John introduced Hanako and Mary to each other.’

b. theme-goal

(?) John-ga [Hanako-to Mary]-o_i (paatii-de)
 John-Nom [Hanako-and Mary]-Acc_i (Party-at)
 otagai_i-ni syookaisita.
 each other_i-NI introduced

‘John introduced Hanako and Mary to each other (at the party).’

The crucial example is (b); as shown, the sentence is essentially fine despite the fact that this is a theme-goal order. According to the standard approach, this theme has been scrambled across the goal, but that should trigger a Chain Condition violation. The fact that it does not suggests that no such movement has occurred, in turn opening the door to the base-generation analysis.

Yatsushiro (1998, 2003) criticizes the use of the reciprocal anaphor *otagai* for Chain Condition. She gives several interesting arguments to show that *otagai* ‘each other’ does not always display a Chain Condition violation where one expects it.²¹ Because we have already given evidence for the base generation hypothesis using idioms, we will not attempt to respond to the issues she brought out for reciprocals, setting them aside for this article. More important to our present purpose is Yatsushiro’s contention that the “reflexive anaphor” *kare-zisin* ‘he-self’ is an anaphoric expression that is truly subject to the Chain Condition, and, as she argues, its behavior supports the standard, movement analysis. We will respond to this argument that uses *kare-zisin*. The relevant data is given below. First, as with *otagai* ‘each other’, *kare-zisin* ‘he-self’ appears to show the problem triggered by the Chain Condition.

(62) * Taro-o_i kare-zisin_i-ga t_i hometa.
 Taro-Acc_i he-self_i-Nom t_i praised
 ‘Taro, himself praised.’

Yatsushiro then points out that *kare-zisin* is fine in the goal-theme but not in the theme-goal, order (we have changed the English translation slightly; it has no bearing on the argument).

(63) a. ? Hanako-ga (kagami-o tukatte) Taro-ni_i kare-zisin_i-o
 Hanako-Nom (mirror-Acc using) Taro-NI_i he-self_i-Acc
 miseta.
 showed
 ‘Hanako showed Taro himself (in the mirror).’

- b.(*) Hanako-ga (kagami-o tukatte) Taroo-o_i
 Hanako-Nom (mirror-Acc using) Taro-Acc_i
 kare-zisin_i-ni miseta.
 he-self_i-NI showed
 ‘Hanako showed Taro to himself.’
- c. Hanako-ga (kagami-o tukatte) Taroo-o_i
 Hanako-Nom (mirror-Acc using) Taro-Acc_i
 [kare-zisin_i-no hahaoya]-ni miseta.
 [himself_i-Gen mother] NI showed
 ‘Hanako showed Taro to himself’s mother.’

The example in (a) is what we are calling the DOC. The antecedent *Taroo* in the goal position can be co-referential with the reflexive anaphor in the theme position. In contrast, in (b), which is what we are calling the *to*-dative, the reflexive anaphor in the goal position cannot be co-referential with the antecedent in the theme position. The asterisk in parentheses indicates that there are some speakers who did not judge this example as ungrammatical (Yatsushiro (2003)); these speakers also judged (b) as well-formed. In (c), which is the same construction as (b), the reflexive anaphor is embedded in a larger phrase, presumably making it possible to avoid a Chain Condition violation.

While we find this new empirical discovery interesting, we believe that the conclusion that this reflexive anaphor gives evidence for the movement analysis is unwarranted. It is important to understand the details of Rizzi’s Chain Condition: the Chain Condition is designed to allow chain formation that goes beyond the normal notion of chain – head and its traces – as defined in Chomsky (1981). In Chomsky (1981, pp. 332–333), a chain is defined as being formed from *links* (a_j, a_{i+1}), where a_j locally A-binds a_{i+1} . The head of the chain is “a lexical category, PRO, or a variable, and each non-head is a trace coindexed with the head” (p. 332). Rizzi extends this notion of a chain by allowing an anaphor in the appropriate position to participate in the composition of a chain. The crucial point is that, as given in the definition of the Chain Condition above, for an anaphor to so participate in chain formation, it must be locally *bound* by another member of the chain.

Based on this notion of chain, it is improbable that the so-called “reflexive anaphor” *kare-zisin* ‘he-self’ would be subject to the Chain Condition. It is in fact misleading to call this item “anaphor.” This item is composed of the pronoun *kare* ‘he’ and the intensifier/reflexive *zisin* ‘self’. An impor-

tant property of *kare-zisin* is that it retains a well-known property of overt pronouns in Japanese, namely, that it cannot be a bound variable (Nakayama (1982), Saito and Hoji (1983)).

- (64) Taro_i-ga/*Dareka_i-ga kare_i-no kodomo-o sikatta.
 Taro-Nom/someone_i-Nom he_i-Gen child-Acc scolded
 ‘Taro/*someone scolded his child.’

It is fine for an R-expression to be the antecedent of the over pronoun *kare* ‘he’ but not a quantifier such as ‘someone.’ This restriction carries over to *kare-zisin* (Aikawa (1995); cf. also Richards (1997)).

- (65) ? Taro_i-ga/*Dareka_i-ga kare-zisin_i-o hometa.
 Taro_i-Nom/*someone_i-Nom he-self_i-Acc praised
 ‘Taro/*someone praised himself.’

The reason why the overt pronoun cannot be bound by an operator is that a pronoun such as *kare* in Japanese is always referential. It has a unique referential index so that any co-reference between it and an NP is just that, co-reference, and not binding.²² Our point is this. Because *kare-zisin* is incapable of being bound, it cannot possibly become a member of a chain by chain formation. Chain formation requires *binding*, which *kare-zisin* does not allow, as we have seen. Suppose, for a moment, that, contrary to fact, *kare-zisin* becomes a part of a chain. The chain will automatically become ill-formed because the chain would be associated with more than one referential index: the referential index of the head and the referential index of *kare-zisin*. The clitic and the reciprocal anaphor in Italian, which were the basis of Rizzi’s original proposal, and the wider range of data on Chain Condition explored by McGinnis (1998), all involve true anaphors that are referentially dependent on the head of the chain, hence they are bound.

Another way to look at the problem with *kare-zisin* is to think about it in the context of copy theory of movement (cf. Chomsky 1993). Each link of a chain is a copy of the head. The intuition behind Rizzi’s Chain Condition is that in certain special cases, such as a clitic, an element that is not internally merged – but instead externally merged – can nevertheless function as a link in a chain because it can function in effect as a copy of the head. But *kare-zisin* can’t possibly function as such because it has a different referential index from the head of the chain, hence by no stretch of the imagination can it be a copy of the head of the chain.²³

We can therefore set aside Yatsushiro’s argument for the movement analysis. This still leaves a question as to why we get the pattern of gram-

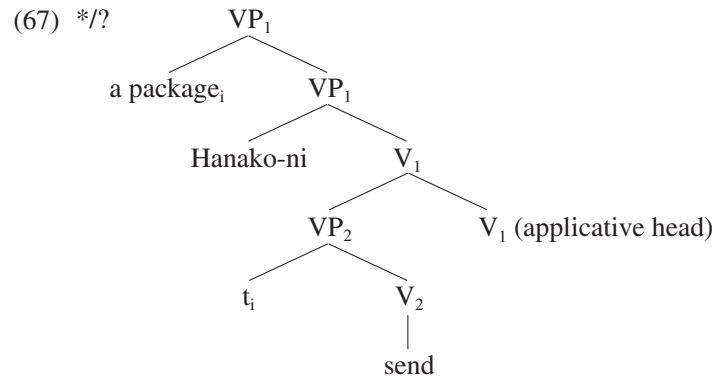
maticality with *kare-zisin* described by Yatsushiro. We leave this problem open.²⁴

6. HIGH GOAL AND WORD ORDER RESTRICTION

We have seen that the theme cannot scramble across the high goal. The example is repeated below.

- (66) */? Taroo-ga nimotu-o Hanako-ni Tokyo-ni okutta.
 Taro-Nom package-Acc Hanako-Dat Tokyo-to sent
 ‘Taro sent a package to Hanako to Tokyo.’

There are two questions to ask. First, why can’t the theme adjoin to the applicative phrase?



Second, why can’t the theme move across the high goal to *vP*?

We will give an EPP-based explanation of both of these questions; we will show that our analysis is confirmed by facts Anagnostopoulou (1999, 2003) observes for Greek. As noted by McGinnis (2002), the applicative phrase may be a phase or not a phase in a particular language (cf. Chomsky (2001) for the notion of “phrase”).²⁵ Miyagawa (2003) suggests that the applicative phrase in Japanese is not a phase. What this means is that the applicative head would never be associated with an EPP feature. Hence, nothing could be attracted to it. This is the answer to the first question – why the theme cannot adjoin to the maximal projection headed by the applicative head. For the second question, we can simply appeal to locality. If the little *v* has an EPP feature, it should attract the closest phrase, which is not the theme but the high goal. The “EPP” based explanation also accounts for why the low goal cannot occur above the high goal.

If our answers to the two questions are on the right track, they point to

scrambling in Japanese as behaving more like the common type of movement that is triggered by a feature (EPP) as defined in Chomsky (2001), something Miyagawa (1995, 1997, 2001) has argued for. Setting aside the issue of how one obtains locality of the object and the subject relative to T (by V-raising (Miyagawa (1997, 2001)) or by moving the object to the edge of the phase (Miyagawa (2003))), this contrasts with the prevailing view that scrambling is free movement without a triggering feature (Fukui (1993), Saito and Fukui (1998), etc.). Fukui (1993), for example, proposes that scrambling in Japanese, which moves an element in the direction of the head projection (to the left), is “costless” (Fukui 1993). What we have seen is that this is incorrect. The theme cannot move across the high goal due to a lack of an EPP feature on the applicative head, or, due to locality that blocks its movement to the vP whose head contains an EPP feature. Where there appears to be free movement (low goal-theme/theme-low goal), we have evidence that the two orders are base generated. Fukui’s proposal, although interesting, is based on insufficient data, and his conclusion appears unwarranted.²⁶

6.1. *Greek*

We turn to Greek (Anagnostopoulou (1999, 2003)), which has a slightly different pattern of grammaticality. The Greek ditransitive construction parallels Japanese in many ways. Unlike Japanese, and like English, Greek has different markings for high and low goals.

- (68) a. Estila tis Marias to vivlio.
 Sent-1sg the Maria-Gen the book-Acc
 ‘I sent Maria the book.’
- b. Estila to vivlio s-tin Maria.
 Sent-1sg the book-Acc to-the Maria
 ‘I sent a book to Maria.’

The (a) example is the DOC; in Greek, genitive and dative cases have merged, with the genitive generalizing to the dative. We can see that (a) is a DOC by the fact that the genitive goal cannot be inanimate. No such restriction holds for the *to*-dative version, as expected.

- (69) a.*Estila tis Gallias to vivlio.
 Sent-1sg the France-Gen the book-Acc
 (Lit.) ‘I sent France the book.’

- b. Estila to vivlio s-tin Gallia.
 Sent-1sg the book-Acc to-the France
 ‘I sent a book to France.’

Greek has scrambling similar to Japanese. One striking difference is that in Greek, it is apparently possible to scramble the theme across the high goal. The following is taken from Anagnostopoulou (2003).

- (70) a. Fanerosa tis Marias tin alithia.
 Revealed-1sg the Maria-Gen the truth-Acc
 ‘I revealed Mary the truth’
 b. ?Fanerosa tin alithia tis Marias.²⁷

The example in (a) is the “normal” genitive-accusative (high goal-theme) order, and in (b) the theme has scrambled across the genitive goal phrase. There is apparently some mild awkwardness in this movement, perhaps reflecting what in Japanese is ungrammatical for most speakers. An interesting point is that this movement in Greek is clearly A’-movement. This is shown by the following.

- (70) a. ?Edhosa tu kathe fititi_i tin ergasia tu_i.
 Gave-1sg the every student-Gen the paper-Acc his-Gen
 ‘I gave every student his term paper’
 b. *?Edhosa to kathe tsek_i tu katochu tu_i.
 Gave-1sg the every check-Acc the owner-Gen its-Gen
 ‘I gave every check (to) its owner’

The example in (a) is the basic order, with the universal quantifier in the goal position able to bind the pronoun inside the theme. In (b), the order has been reversed, and as indicated, the theme, which precedes the goal, cannot bind into the goal. This is a typical A’-scrambling property: it does not create a new binder (Mahajan (1990)). In Greek, then, there is an A’ position somewhere in the region of the vP, and a phrase can move into this position apparently without observing locality. What is the nature of this A’ position? It is possibly a focus position, proposed to occur in this position by Miyagawa (1997).

We noted earlier that even in Japanese, some speakers find scrambling of the theme across the high goal to be essentially fine with only a slight degradation. We surmise that these speakers have the “Greek” A’ position. We can see this from the fact that scrambling to this position does not make a new quantifier scope possible, a hallmark of A’ scrambling as

discovered by Tada (1993) (we have arbitrarily put the trace of the theme after the low goal).²⁸

- (72) */?Taroo-ga dono nimotu-mo_i dareka-ni Tokyo-ni
 Taro-Nom every package_i someone-Dat Tokyo-to
 t_i okutta.
 t_i sent
 ‘Taro sent someone from Tokyo.’
 *every > some, some > every

7. CONCLUDING REMARKS

In this article we explored the question of whether ditransitive verbs in Japanese are associated with the kinds of argument structures well attested in languages such as English. On the surface, it doesn’t appear to be the case. Rather, the only variation we can see is word order, and, in fact, the standard analysis identifies one order (goal-theme) as basic and the other order as derived by the free application of scrambling (Hoji (1985)). We gave ample evidence that this cannot be the case. We gave proof for different argument structures that parallel the DOC and the *to*-dative. We also gave arguments against the most recent version of the standard approach (Yatsushiro (1998, 2003)).

Our study also questions the notion of a completely free optional scrambling (e.g., Fukui (1993)). What we observed is that scrambling within the VP is highly restricted, observing strict locality, which is a hallmark of a feature-driven operation rather than a triggerless, purely optional operation. There is, in fact, a question as to whether there is such a thing as purely free movement.

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of Arizona, University of Calgary, and UC Santa Cruz. We thank the participants for giving us suggestions and raising a variety of issues. Finally, we thank the two anonymous reviewers for their valuable comments.

NOTES

¹ In the above example, the existential quantifier occurs in the lower position. The ambiguity obtains even if the higher quantifier (the “scrambled” quantifier) is existential.

(i) Taroo-ga nanika-o dono-tomodati-ni-mo okutta.
 Taro-Nom something-Acc every-friend sent
 ‘Taro sent something to every friend.’ some > every, every > some

² Hoji’s (1985) observation is based on Kuroda’s (1971) observation that for subject-object, one only gets scope ambiguity under movement of the object across the subject. There are a number of technical implementations of how the existence of the trace leads to inverse scope (e.g., Aoun and Li (1989), Hoji (1985), Hornstein (1995), Johnson and Tomioka (1997)). We will not attempt to argue for one particular approach.

³ We gloss the *ni* here as ‘to’ to reflect the notion, to be defended, that when inanimate, the goal is a PP.

⁴ Marantz’s (1993) “QR” analysis runs into a problem when we introduce the small *v*. We would predict wrongly that a transitive sentence with subject and object quantifiers would not be scopally ambiguous. See Bruening (2001), who addresses this issue directly by suggesting that we can uphold many parts of Marantz’s analysis if we assume that QR is subject to superiority, like any other movement. See his paper for details. We will assume this “superiority” analysis for the different quantifier scope facts in the Japanese DOC and *to*-dative constructions.

⁵ An anonymous reviewer notes that in (17), the combination of *kokkyoo* ‘borders’ and *futatu* ‘two’ is “not quite compatible.” However, both authors feel that this combination is fine, although possibly not optimal, and, in fact, there really is no other choice. We also checked with others, and they do not object to this combination.

⁶ The *-ni* particle also occurs on the source phrase, as in the following.

(i) Taroo-ga Hanako-ni tegami-o moratta.
 Taro-Nom Hanako-NI letter-Acc received
 ‘Taro received a letter from Hanako.’

This ‘source’ *ni* can be replaced with the full postposition *kara*.

(ii) Taroo-ga Hanako-kara tegami-o moratta.
 Taro-Nom Hanako-from letter-Acc received
 ‘Taro received a letter from Hanako.’

We speculate that the *nikara* alteration is similar to the goal alternation, except that in the goal both can be *ni*. See later in the article in which we discuss the goal postposition *e* ‘to’. Finally, speakers vary on the judgment of (16), the example in which a numeral quantifier floats off an animate goal phrase. Both authors feel that it is grammatical, as do many others we have consulted. However, there are those who do not accept this example with the verb *okuru* ‘send’. Kishimoto (2001) develops an analysis in which the goal phrase with this verb is strictly a PP. Our analysis is based on the judgment of speakers who accept this quantifier float.

⁷ We are grateful to Masaki Sano for suggesting the possibility of the two-goal construction in Japanese although he himself finds it somewhat awkward (see discussion below). Toshinobu Mogi (personal communication) pointed out to us that the verb *todokeru* ‘deliver’

is, for him, much better with two goals than the verb we have used, *okuru* ‘send’. As far as we can see, *todokeru* behaves in every way the same as *okuru*, so for speakers who find the two-goal example with *okuru* awkward, we suggest that they replace it with *todokeru*. See Cuervo (in press) for discussion of similar examples in Spanish. Some English speakers find a two-goal sentence as mildly awkward while others reject them.

- (i) ?/* John sent Mary a package to her office.

We don’t know why there is apparently an idiolectal difference.

⁸ Many verbs do not allow the two-goal construction, e.g., *ageru* ‘give’, *syookaisuru* ‘introduce’. To allow the two-goal construction, a verb apparently must be associated with some sort of a “path”, such as *okuru* ‘send’.

⁹ We have been told by a few speakers that they reject two occurrences of *-ni*. We do not know if this is a dialectal or an idiolectal variation. The two authors of this article do not have this restriction and find the two-goal sentences to be grammatical.

¹⁰ Takezawa (2000) makes some extremely interesting observations about the possessive construction that are directly pertinent to our discussion. He observes that the possessor in the possessive construction with *aru* is marked by the dative *ni*.

- (i) Taroo-ni bessoo-ga aru.
Taro-Dat country house-Nom have
‘Taro has a country house.’

If it is correct to assume that the goal of the DOC is a possessor, the fact that it is marked by the dative case marking falls out naturally from the fact that the possessor in Japanese is marked by the dative. As Takezawa notes, this, in turn, would be a natural consequence of adopting Harley’s (1995) approach to the DOC, in which HAVE is assumed to be present in the structure. Although Takezawa himself does not point out the possibility of a two-goal construction, he notes that it is possible to have a location along with the possessor in the possessive construction.

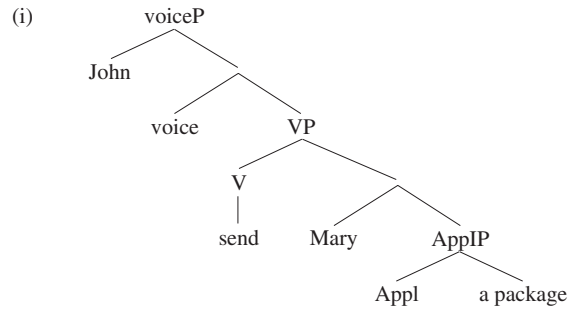
- (ii) Taroo-ni-(wa) Karuizawa-ni bessoo-ga aru.
Taro-Dat-(Top) Karuizawa-in country house-Nom have
‘Taro has a country house in Karuizawa.’

¹¹ Most speakers we have consulted judge this sentence to be ill-formed. However, there are a few who accept it with only a slight hesitation. As we note later, for those who allow this movement, it is, like in Greek, a VP-internal A-bar movement. The existence of this movement for some speakers is not inconsistent with our analysis, as we will show. It is not clear to us why there appears to be an apparent idiolectal variation in how readily a speaker accepts this A’-movement (in Japanese and also in Greek – see the last section for a discussion of Greek).

¹² Takano argues that the movement must be overt since covert short scrambling is disallowed.

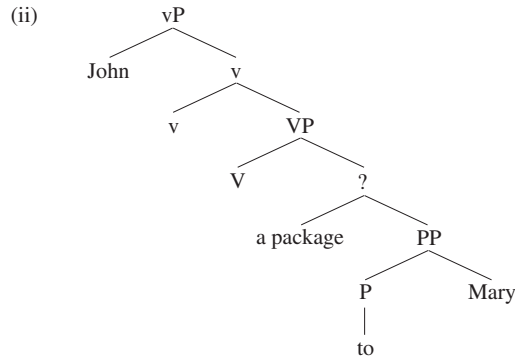
¹³ In a recent presentation, Bresnan and Nikitina (2003) provide data that could shed light on this preference. Using the parsed SWITCHBOARD corpus, they looked at occurrences of the DOC and the *to*-dative. For the verb *give*, they found that of 261 occurrences, 226, or 87%, were the DOC while only 35 were the *to*-dative. The DOC is clearly the “preferred syntactic expression,” possibly because with an animate goal, it is preferable to construe the goal as the possessor.

¹⁴ There is a version of the DOC proposal by Pyllkkänen (2002), who more directly captures the possessive relationship by postulating an applicative head that takes the possessor (*Mary*) as its specifier and the possessee (*a package*) as its complement (Pyllkkänen (2002) uses Kratzer’s (1996) “Voice” instead of little *v*; this difference does not concern us).



The applicative head has the meaning of “possession,” and it relates the possessor, Mary, to the possessee, a package. In this way, this alternative proposal is more attractive in capturing this possessive nature of the high goal. It also captures the fact that this kind of “low” applicative head only occurs with transitive verbs because it occurs with an object (cf. Pyllkkänen (2002)). However, in this article, we will use the earlier version by Marantz because it readily accommodates a two-goal construction.

Also, Bruening (2001) proposes a different structure for the *to*-dative from Marantz (1993).



In this structure for the *to*-dative, the theme and the PP goal are symmetrical; they are directly dominated by the node which Bruening marks with “?”. This node is some sort of a small clause, we presume. An advantage to this structure over Marantz’s is that it makes structurally transparent the word order permutation we find in Japanese between the theme and the low goal (the PP goal). We will argue that this permutation is base generated. While Bruening’s structure may ultimately turn out to be correct, we will continue to use Marantz’s structure for the sake of consistency.

¹⁵ The applicative head imposes the possessor-animate requirement, thereby capturing the observation that the DOC goal must be animate but not the *to*-dative. What about the other argument structure difference we noted? As pointed out at the beginning of the article, the DOC in English may have a causative meaning but not the *to*-dative (Oehrle (1976)).

- (i) a. The article gave me a headache.
- b. *The article gave a headache to me.

In Japanese, there are several verbs of ‘give’, and in no case do we get the kind of distinction we find in English. For example, the verb *ataeru* ‘give’ may have the ostensible causative interpretation in either order.

- (ii) a. Ano-kozin-koogeki-no-ronbun-ga boku-ni zutuu-o ataeta.
 That-personal-attack-article-Nom I-NI headache-Acc gave
 ‘That personal-attack article gave me a headache.’
- b.(?)Ano-kozin-koogeki-no-ronbun-ga zutuu-o boku-ni ataeta.
 That-personal-attack-Gen-article-Nom headache-Acc I-NI gave

Both authors feel that (b) is not as good, but it is still grammatical. If in fact we replace *zutuu* ‘headache’ with *zutuu-no-tane* ‘a seed for a headache’, the sentence is perfect even in the theme-goal order.

In fact, even in English, the *to*-dative version improves if the goal phrase is made “heavier” (Alec Marantz, personal communication).

- (iii) That article gave a headache to every person who had the misfortune of reading it.

The issues appear quite complex, and we will not pursue this “causative” argument structure further in our article.

¹⁶ One of the anonymous reviewers notes that with the verb ‘give’, there seems only to be the meaning of possession regardless of the word order. The example the reviewer gave is the following..

- (i) . . . kodomo-ni kyohusin-o ataeru.
 . . . child-Dat scared feeling-Acc give
 ‘make a child scared.’

As the reviewer correctly notes, in either order the interpretation must be possession. This seems on the surface to be a counterexample to the idea that in the theme-goal order, the construction must be the *to*-dative, hence it only implies location, not possession. However, it is well known that even in English, the verb *give* implies possession even in the *to*-dative. This may be due to a special meaning of *give*, e.g., it is associated with the causative meaning of ‘cause to have’ (cf. Harley (1995), Richards (2001)).

¹⁷ As one of the anonymous reviewers notes, this analysis faces a problem with the subject-object quantifier ambiguity. Marantz proposed his theory before the small *v* was well established as a head for the external argument. If we assume *v*P for a transitive construction, then, Marantz’s theory would incorrectly predict lack of ambiguity for subject-object. See Bruening (2001) for an interesting alternative to the DOC scope freezing that does overcome the subject-object problem. Our analysis is completely compatible with Bruening’s proposal.

¹⁸ There is a question as to whether the theme generated below the locative goal first moves to the position of the “higher” locative goal position before externalizing to the Spec of TP. We will not argue for or against this possibility. See Takano (1998) for relevant discussion.

¹⁹ For an unusual and surprising piece of evidence for the base-generation analysis, see Aldridge (2001), who uses *hentai kanbun* in Classical Japanese for this point.

²⁰ The idioms we presented are those of the “rigid” type, in which no chunk of the idiom can be moved. This is similar to *kick the bucket* in English. In contrast, Miyagawa (1995, 1997) used idioms that allow a chunk to be moved by A-scrambling, such as *X-ni te-o nobasu* ‘Lit: extend one’s hand to X; expand one’s reach to X.’ This type of idiom is like *take advantage*, which allows *take* to be moved, for example, by passivization. Thanks to an anonymous reviewer for noting the distinction between the idioms in this article and those in Miyagawa (1997).

²¹ It is worth noting that Rizzi (1986) gives the reciprocal as being subject to the Chain Condition.

²² See Reinhart (1983) among others for the distinction between co-reference and binding. See Hoji (1995), etc., for study on Japanese that essentially assumes Reinhart’s approach.

²³ An anonymous reviewer wonders if the facts in Yatsushiro cannot be dealt with by some other means, such as reconstruction or, if one is not fond of A-chain reconstruction, by a derivational application of Condition C. Such an approach faces serious doubt by examples such as the following.

- (i) Hanako-ga [Taroo_i-no syasin]-o kare_i-ni okuri-kaesita.
 Hanako-Nom [Taro_i-Gen photograph]-Acc he_i-to sent-back
 ‘Hanako returned Taro’s photograph to him.’

This is in the theme-accusative order, which, in the standard analysis, involves movement. The fact that the intended construal is fine, as opposed to, say, the following, is indication that there is no reconstruction/Condition C effect.

- (ii) * Hanako-ga kare_i-ni [Taroo_i-no syasin]-o okuri-kaesita.
 Hanako-Nom he_i-to [Taro_i-Gen photograph]-Acc sent-back
 ‘Hanako returned him Taro’s photograph.’

²⁴ One possible avenue to explore is the interaction of *kare-zisin* with Condition B. It is well-known that Condition B violation with overt pronouns in Japanese is weak, or for some speakers, even essentially non-existent (cf. Hoji (1995)).

- (i) ?Taroo_i-ga kare_i-o hihan-sita.
 Taro_i-Nom he_i-Acc criticized
 ‘Taro criticized him.’

In the ditransitive construction, there appears to be a difference depending on word order. We don’t indicate the grammatical judgment for these examples.

- (ii) a. Hanako-ga (kagami-o tukatte) Taroo_i-ni kare_i-o miseta.
 Hanako-Nom (mirror-Acc using) Taro_i-Dat he_i-Acc showed
 ‘Hanako showed Taro him using a mirror.’
 b. Hanako-ga (kagami-o tukatte) Taroo_i-o kare_i-ni miseta.
 Hanako-Nom (mirror-Acc using) Taro_i-Acc he_i-to showed
 ‘Hanako showed Taro to him using a mirror.’

We are not certain how good – or bad – (ii)a is. To the extent that it is interpretable, we feel that the theme-goal order in (b) is worse although it is a delicate judgment. If something like this turns out to be the case, we need to look at all of Yatsushiro’s data with Condition B-type violation in mind. We will not pursue this issue further in this article, particularly given the delicate nature of the judgment.

²⁵ To be more precise, McGinnis’s (2002) argues that in a language with what Pykkänen (2002) calls a low applicative, the applicative phrase is not a phase while the applicative phrase of a high applicative is a phase.

²⁶ Fukui’s proposal also faces the well-known counterexample of Slavic, which is a head-initial language, yet scrambling is allowed to the left, against the grain of head projection.

²⁷ There are Greek speakers who find this scrambled version much worse than “?” (Sabine Iatridou, personal communication), reflecting the “*” judgment that the two co-authors of this article attribute to the two-goal constructions in Japanese in which the theme has moved to the left of the high goal.

²⁸ This A’ analysis of the VP-internal scrambling may also shed light on a possible counterexample to our analysis. Takano (1998) points out that it is possible for the theme in theme-goal order to strand a numeral quantifier; he gives Koizumi (1995) credit for first noting this.

- (i) Taroo-ga nimotu-o Hanako-ni futa-tu okutta.
 Taro-Nom package-Acc Hanako-to 2-CL sent
 'Taro sent two packages to Hanako.'

Our analysis would predict that this structure should be impossible. However, if this an A' movement, we have already seen that such movement is not subject to the routine locality found with A-scrambling. On this account this would be something like a focus movement as suggested in Miyagawa (1997).

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