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Diagnosing double object constructions in Bangla/Bengali

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ABSTRACT

This paper examines whether the complex paradigm of patterns reported for ditransitive verbs in Japanese by Miyagawa (1997) and Miyagawa and Tsujioka (2004) might appear in another genetically unrelated but typologically similar SOV scrambling language, Bangla/Bengali. A striking parallelism is found in the two languages, which adds strength to the proposal in Miyagawa (1997) and Miyagawa and Tsujioka (2004) that certain languages allow for variation in the underlying projection of Themes and Locative Goals and there is no fully fixed, single structuring of the lower arguments of ditransitive verbs. Such conclusions about the base forms of double object constructions are shown to have potentially broader implications bearing on the Universal Base Hypothesis.

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1. Introduction

The nature of the underlying structural configuration of double object and ditransitive constructions has regularly been a major subject of debate within formal approaches to syntax, and raises interesting questions concerning assumptions of universality in the projection of syntactic structure across languages and the limits (and possibility) of structural variation between languages. Within verb-final languages showing so-called ‘free word order’ effects, the challenge of identifying the underlying syntax of ditransitive verbs is often especially acute, being frequently masked by the interaction of information structure pressures and the potential occurrence of scrambling. This paper sets out to examine two particularly interesting claims made with regard to double object constructions/DOCs in Japanese in Miyagawa (1997) and Miyagawa and Tsujioka (2004), and investigates whether the patterns discovered in Japanese may possibly be repeated in another typologically similar but genetically and areally unrelated language, Bangla/Bengali. The first claim, made in Miyagawa (1997) is that two different base structures may actually be projected with goal and theme arguments in Japanese, hence there is in fact certain variation in the base that can be projected by ditransitive verbs. The second claim, advanced in Miyagawa and Tsujioka (2004), is that two different goal arguments may occur with various ditransitive verbs, and the structural difference in their base positions adds an important, complicating factor to the analysis of DOCs allowing for various surface patterns that may initially appear confusing and even contradictory. Carefully examining similar sets of data in Bangla, the paper considers whether the conclusions reached in Miyagawa (1997) and Miyagawa and Tsujioka (2004) may possibly reflect isolated, coincidental properties of Japanese, or whether they may have a wider, cross-linguistic significance. Bangla was specifically selected for the trial, comparative study as it has the range of relevant linguistic features necessary to carry out the same kind of testing as in Japanese (variable word order, non-subject-dependent anaphora, floating quantifiers, flexible quantifier scope). Results of the study on Bangla show an interesting, remarkable convergence with the patterns reported for Japanese and are consequently argued to provide strong

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support for the analysis and the hypothesis that the base structure of ditransitives is only partially fixed, and may allow for two hierarchically distinguished goal positions with different properties. The study also reveals an instance of lexico-syntactic difference in Japanese and Bangla, and the conclusion that the goal argument of certain verbs may be mapped to different underlying positions if it does not correspond fully to the prototypical semantics of either 'high' or 'low' goal position. Finally, in addition to its contribution to the cross-linguistic analysis of DOCs, the present paper is (to the best of the authors' knowledge) the first ever attempt to probe and describe in detail the underlying structure of DOCs in a South Asian language by means of tests involving binding, reconstruction and quantifier scope phenomena.¹

The structure of the paper is as follows. Section 2 provides an overview of relevant DOC patterns in Japanese described and analyzed in Miyagawa (1997) and Miyagawa and Tsujioka (2004). Section 3 then introduces certain general properties of Bangla and DOCs in the language. Section 4 presents the main testing of ditransitive structures in Bangla and the consequences of the patterning found. General conclusions of the paper follow on in section 5.

2. The structure of ditransitives in Japanese: Miyagawa (1997) and Miyagawa and Tsujioka (2004)

Like many head-final languages with case distinctions on NPs, Japanese allows considerable variation in the ordering of its subjects, objects and indirect objects, and the latter two NP types do not occur in any fixed linear pattern in DOCs. Both Goal before Theme and Theme before goal orders are possible and occur with significant frequency. An early, important analysis of this word order variation, Hoji (1985), suggested that there is actually a single underlying order of Goal before Theme in Japanese DOCs, with surface Theme > Goal orders being derived by movement of the Theme over the Goal. More recently, this influential 'single base' view has been challenged by Miyagawa (1997), who presents an interesting variety of evidence in support of the conclusion that two different base orders of Theme and Goal are possible – Goal > Theme, and Theme > Goal – and that both of these underlying orders permit movement of the hierarchically lower (rightmost) argument over the argument to its left. As a result of such an analysis, surface Goal > Theme orders may either arise from base generation of Goal and Theme in their surface sequencing, or be the output of movement of the Goal leftwards over the Theme, from an underlying Theme > Goal base: Goal_i Theme t_i. Similarly, Theme > Goal orders may reflect an original base order of Theme > Goal, or alternatively be created by movement of the Theme over the Goal from a Goal > Theme base order: Theme_i Goal t_i.

The evidence which is presented in favor of the dual base analysis of DOCs relates to binding phenomena, quantifier float, and the scopal interactions of Goal and Theme when these are both quantificational elements. First of all, it is noted that reciprocals such as *otogai* 'each other' may be bound by either a Goal or a Theme argument in DOCs, when the reciprocal follows the Goal/Theme antecedent, as in (1a/b):

- (1) a. John-ga [Hanako-to Mary]_i-ni (paatii-de) otagai-o shookai-shita.
 John-Nom Hanako-and-Mary-Dat party-at each other-Acc introduced
 'John introduced Hanako and Mary to each other at the party.'
- b. (?)John-ga [Hanako-to Mary]_i-o (paatii-de) otagai-ni t_i shookai-shita.
 John-Nom Hanako-and-Mary-Acc party-at each other-Dat introduced
 'John introduced Hanako and Mary to each other at the party.'

It is argued that if Japanese were to only allow a single Goal > Theme base structure for DOCs, it might be expected that the Theme > Goal sequence in (1b) would result in reconstruction of the Theme to a position lower than the Goal and a structure in which the Theme would not be able to c-command and bind the reciprocal Goal. Elsewhere in Japanese, the movement of an NP over a reciprocal creates an output in which co-reference between the NP and the reciprocal is not permitted, as shown in (2):

- (2) ?*[John-to-Bob]_i-o otagai-ga t_i nagutta.
 John and Bob-Acc each other-Nom hit
 '*John and Bob, each other hit.'

Miyagawa's conclusion from patterns such as (1a/b) is therefore that (1b) is not created by movement of the Theme over the Goal, and that it must be possible for Theme > Goal sequences to be base-generated, as well as Goal > Theme sequences.²

Turning to the distribution of floating quantifiers, Miyagawa shows that a numeral-classifier/NQ pair interpreted as modifying a Theme argument NP can occur separated from the latter in the linear sequence: Theme Goal NQ:

¹ The current paper is a refinement and development of earlier work initiated in Bhattacharya and Simpson (2004) and Bhattacharya and Simpson (2007). We are very grateful to three anonymous reviewers of the present version of the paper for helpful discussion of both theoretical and data issues.

² Example (2) is an instance of scrambling case where the object has been moved across the subject. Miyagawa and Tsujioka point out that clause-internal scrambling can in fact be either A- or A'-movement. If A'-movement of the object occurs in (2), reconstruction will cause a Condition C violation. However, if the object moves via A-movement and does not reconstruct, no binding theory violation is expected to occur, but the output should give rise to a Chain Condition violation (Rizzi, 1986) as the anaphor will c-command the A-trace. The ungrammaticality of the example indicates that neither an A'-movement nor an A-movement derivation can lead to a well-formed output.

- (3) John-ga pen-o Mary-ni ni-hon ageta.
 Jon-Nom pen-Acc Mary-Dat 2.CL gave
 'John gave two pens to Mary.'

In line with common ideas on the stranding of floating quantifiers (Sportiche, 1988) and earlier work on Japanese in Miyagawa (1989), it is suggested the position of the NQ following the Goal indicates the base position of the associated Theme NP, and consequently shows that surface Theme > Goal sequences may be derived from underlying Goal > Theme structures.

A third set of evidence presented as support for the dual base analysis of DOCs concerns the interpretations available in Theme > Goal and Goal > Theme sequences when both Goal and Theme are quantificational in nature. Miyagawa notes that both such linear sequences may result in ambiguity, and that either argument may take scope over the other argument present, as indicated in (4) below:

- (4) a. Hanako-ga daremo-ni dareka-o shookai-shita.
 Hanako-Nom everyone-Dat someone-Acc introduced
 'Hanako introduced someone to everyone.'
 everyone > someone (different person introduced to each person)
 someone > everyone (one particular person is introduced to everyone present)
- b. Hanako-ga dareka-o daremo-ni shookai-shita.
 Hanako-Nom someone-Acc everyone-Dat introduced
 'Hanako introduced someone to everyone.'
 everyone > someone (different person introduced to each person)
 someone > everyone (one particular person is introduced to everyone present)

Such relative scope ambiguity can be given a principled explanation if it is assumed that both Goal > Theme and Theme > Goal orders are possible underlying structures in Japanese DOCs and that surface orderings of Goal and Theme may either reflect a base-generated order or one derived by movement. The latter possibility will allow for the scope of a moved QP Theme or Goal to be established either from its surface position c-commanding the second QP argument, or from its base position, where it will be c-commanded by the second QP.

The dual base hypothesis initially proposed in Miyagawa (1997) is subsequently developed further in Miyagawa and Tsujioka (2004) in a way which accounts for interesting additional patterns found in of Japanese DOCs. The significant innovation of this second work is the suggestion that there are actually two distinct Goal types associated with different positions which may occur in DOCs. First, with certain ditransitive verbs there is a high Recipient Goal, which is human/animate and interpreted as coming to possess the Theme. Second, with many DOC predicates there is a structurally lower Locative Goal, which is either human or inanimate and interpreted as simply the location to which the Theme is transferred/the action of the verb is directed. Both Goal types may be simultaneously present with certain verbs, as illustrated in (5). Note that Recipient Goals are always marked with *-ni*, while Locative Goals appear with either *-e* or *-ni*.³

- (5) Taroo-ga Hanako-ni Tokyo-ni/-e nimotsu-o okutta.
 Taroo-Nom Hanako-Dat Tokyo-to package-Acc sent
 'Taroo sent a package to Hanako in/to Tokyo.'

The linear sequencing of Goals and Theme in two goal structures is found to be partially fixed, and partially unfixed. While the Locative Goal and the Theme can feely occur in either order, as seen in the comparison of (5) and (6), the Locative Goal may not precede the Recipient Goal (7):

- (6) Taroo-ga Hanako-ni nimotsu-o Tokyo-ni/-e okutta.
 Taroo-Nom Hanako-Dat package-Acc Tokyo-to sent
 'Taroo sent a package to Hanako in/to Tokyo.'
- (7) *Taroo-ga Tokyo-ni/-e Hanako-ni nimotsu-o okutta.
 Taroo-Nom Tokyo-to Hanako-Dat package-Acc sent
 Intended: 'Taroo sent a package to Hanako in/to Tokyo.'

³ An animate *-ni* marked Goal might therefore in principal be either a high Recipient Goal or a low Locative Goal. However, quantifier float phenomena distinguish the two goal types. Locative Goals marked with *-ni* do not permit Q-float, and are analyzed as PPs, which never allow NQs to float away from their associated NPs. With such Locative Goals, the element *-ni* is analyzed as a postposition heading a PP. In contrast to this, Recipient Goals marked with *-ni* do allow for Q-float, and are analyzed as NPs, with *-ni* being a simple case affix rather than a P.

Miyagawa and Tsujioka explain this patterning in the following way. It is suggested that the dual base hypothesis proposed in Miyagawa (1997) essentially captures the availability of two base structures for the Theme and a Locative Goal – either a Theme > Locative Goal sequence or a Locative Goal > Theme base is possible. In contrast with this, the position of Recipient Goals is taken to be uniquely fixed in the base, and always projected in a position hierarchically above (and to the left of) both Theme and Locative Goal, in whatever sequencing the latter two occur. Such assumptions are shown to capture a range of intricate facts involving Q-float, anaphoric co-reference, and also relative scope phenomena, which distinguish the properties of the two types of Goal, and which can be explained in terms of the different structural positions that these elements occur in relative to each other and the Theme. For example, it is noted that the ambiguity of relative scope between Theme and Goal is in fact restricted to interactions between a Theme and a Locative Goal, and is absent when a Theme and a Recipient Goal co-occur. This is illustrated in the contrast in (8) where the same verb *okuru* ‘send’ appears with a Locative Goal in (8a) and scopal ambiguity of the Goal and Theme is present, but with a Recipient Goal in (8b), and no scopal ambiguity occurs:

- (8) a. Taroo-ga **dokoka-ni** dono-nimotsu-mo okutta.
 Taroo-Nom some place-to every-package-even sent
 ‘Taroo sent every package to some place.’
 EITHER: some place > every package (only one destination for all packages)
 OR: every package > some place (a different destination for each package)
- b. Taroo-ga **dareka-ni** dono-nimotsu-mo okutta.
 Taroo-Nom someone-Dat every-package-even sent
 ‘Taroo sent every package to someone.’ (Hoji, 1985)
 ONLY: some person > every package (only one person receives all packages)

In (8a), it is hypothesized that the Locative Goal and the Theme can be base-generated in either order and so (8a) might result from a Theme > Goal base and movement of the Goal across the Theme, allowing for the scope of the Goal relative to the Theme to be established in two possible positions. In (8b), by way of contrast, there is no optionality in the base ordering of the Goal and the Theme, and Recipient Goals may never be base-generated in a position below the Theme. Consequently, there is no underlying Goal position for *dareka-ni* c-commanded by the Theme which would allow for the Theme to take scope over it. Consequently, the kinds of relative scope interpretations possible in DOCs in Japanese can be made good sense of if Recipient and Locative Goals are structurally distinguished, with only the latter allowing for a flexible base-ordering with the Theme, and such an approach dovetails neatly with evidence from other phenomena bearing on differences between Recipient and Locative Goals, as described by Miyagawa and Tsujioka.

3. General properties of DOCs in Bangla/Bengali

Having seen in brief the kind of innovative analysis proposed for DOCs in Japanese in Miyagawa (1997) and Miyagawa and Tsujioka (2004), we will now begin to consider whether such an approach might be warranted for DOCs in other typologically similar languages, focusing specifically on Bangla/Bengali (henceforth simply referred to as Bangla), an Indo-Aryan language spoken in eastern India and Bangladesh. In this section, certain general linguistic background on Bangla is provided, along with an introduction to DOCs in the language. Section 4 then examines the syntactic patterning of DOCs in greater detail, applying the kinds of diagnostic tests made use of for Japanese in Miyagawa (1997) and Miyagawa and Tsujioka (2004).

Like many other south Asian languages with case-marking distinctions on NPs, Bangla has a neutral SOV word order but also considerable freedom in the positioning of grammatical constituents, with a wide range of permutations being possible. As with other well-known ‘scrambling’ languages, word orders other than canonical SOV sequences generally add nuances of meaning which may be absent from the unmarked SOV order. Four case distinctions occur in Bangla and assist in the parsing of scrambled word order: nominative, objective, genitive and locative.⁴ Of these four cases, the most relevant for the present study is ‘objective’ case, which is realized as *-ke* with singular animate nouns and pronouns. Inanimate nouns are not marked with *-ke*. Plural animate nouns in objective roles are marked with the non-subject plural suffix *-der* or with *-der* and *-ke* combined: *-der-ke*.⁵

- (9) mini chele-Ta-ke/chele-der(-ke)/boi-Ta(*-ke) dekhlo
 Mini boy-CL-Obj/boy-Pl-Obj/book-Cl-Obj saw
 ‘Mini saw the boys/book.’

⁴ Nominative case is not marked in any overt way. Genitive case occurs on a range of NPs, including the arguments of psych predicates, in a way similar to dative case in Hindi.

⁵ This alternation is dialectal, with western Bangla (in West Bengal, India) favoring *-der* and eastern Bangla (in Bangladesh) favoring *-der-ke*. One of the two authors of the current paper (Bhattacharya) is a native speaker of the former, Indian variety of Bangla, and the standard variety of western Bangla is regularly made use of in the paper. The following symbols are used to represent sounds in Bangla: T, D, R represent retroflex /t/, /d/, /r/; S is palato-alveolar /s/, N a velar nasal, and M nasalization.

Importantly, in addition to marking direct objects/Themes, *-ke* also occurs on animate Goals/indirect objects (10), and when both the Goal and Theme in DOCs are animate, both may appear marked with *-ke* (11):

(10) ami mini-ke ek-Ta-boi dilam.
I Mini-Obj 1.Cl.book gave
'I gave Mini a book.'

(11) ami mini-ke bacca-Ta-ke dilam
I Mini-Obj child-Cl-Obj gave
'I gave the child to Mini.'

Despite such parallels in the marking of animate Themes and Goals, there are also two ways in which the use of *-ke* with Goals differs from *-ke*-marking with Themes. First, objective *-ke* can be omitted/dropped from a Theme when this occurs either in a verb-adjacent position (12a), or in a pre-Goal position in various instances (12b).⁶ However, animate Goals cannot appear without/drop *-ke* in any position, unless they are marked with the plural non-subject marker *-der*. Because of this difference, (12a) and (12b) are unambiguous in their interpretation – in both instances the NP without *-ke* is interpreted as the Theme, and the *-ke*-marked NP is the Goal⁷:

(12) a. ami robi-ke bagh dilam b. ami bagh robi-ke dilam.
I Robi-Obj tiger gave I tiger Robi-Obj gave
'I gave a tiger to Robi.' 'I gave a tiger to Robi.'

A second difference in the patterning of *-ke* with Themes and Goals concerns the effects of *-ke* marking on interpretation. With Themes, the occurrence of *-ke* corresponds with a *specific* interpretation of direct objects. Where numerals and classifiers occur combined with nouns marked with *-ke* as direct objects, these are interpreted as specific indefinites (13), whereas the absence of *-ke* on an animate Theme with a numeral and a classifier causes such NPs to be interpreted as non-specific indefinites (14) (Bhattacharya, 1999):

(13) ami Ek-jon nars-ke khuMjchi
I 1-Cl nurse-Obj searching
'I am looking for a (specific) nurse.' (Her name is Mini Singh)

(14) ami Ek-jon nars khuMjchi
I 1-Cl nurse searching
'I am looking for a nurse.' (I need a nurse to help me, any nurse will do.)

'Bare' Theme NPs which do not occur with numeral-classifier pairs are interpreted as definite when marked with *-ke* (15a) and non-specific indefinite when no *-ke* occurs (15b):

(15) a. ami beRal-ke dekhechi b. ami beRal dekhechi
I cat-Obj have-seen I cat have-seen
'I saw the cat.' 'I saw a cat.'

When Goals are suffixed with *-ke*, however, this does not give rise to parallel effects on interpretation, and indefinite animate Goals occur marked with *-ke* *whether these are to be interpreted as specific or non-specific*. Consequently, (16) below allows for either a *specific* or a *non-specific* interpretation of the Goal NP *Ek-jon chatro-ke* 'a student':

(16) ami ei boi-Ta Ek-jon chatro-ke dite cai
I this book-Cl one-Cl student-Obj give.inf want
'I want to give this book to a (specific) student.' (Her name is Mini).
'I want to give this book to some student or other.' (Any student will do.)

⁶ Specifically, *-ke* can be dropped on a Theme which precedes a Recipient Goal, as projected by verbs such as *dEwa* 'give', but not on a Theme preceding a Locative Goal, as occurs with verbs such as *paThano* 'to send'.

⁷ Note that the combination of *dEwa* 'to give' with two animate arguments in Bangla is sometimes felt to be awkward or unnatural. Such examples sound acceptable when further context is explicitly provided, as in the following contrastive example:

(i) ami robi-ke beRal dilam, ar mini-ke chagol.
I Robi-Obj cat gave.1 and Mini-Obj goat
'I gave Robi a cat and Mini a goat.'

Finally, it should be noted that wherever Goal arguments are inanimate locations, these are marked with the suffix $-(t)e$ rather than $-ke$ (17). As shown in (18), animate Goals cannot be marked with $-(t)e$.

- (17) a. ami mini-ke ram-er baRi-te/*-ke paThalam
 I Mini-Obj Ram-Gen house-Loc/*Obj sent
 'I sent Mini to Ram's house.'
- b. ami paThagar-e/*-ke Ek-Ta boi paThalam
 I library-Loc/*Obj one-Cl book sent
 'I sent a book to the library.'
- (18) ami Singho-Ta-ke/*-te murgi-r maNSo chuRe dilam
 I lion-Cl-Obj/-Loc chicken-Gen meat throw gave
 'I threw chicken meat to the lion.'

With regard to word order patterns that are perceived to be 'neutral' in DOCs in Bangla, a frequent ditransitive pattern involves the combination of a verb of transfer such as 'give', or 'send' with a referentially definite human Goal and an indefinite inanimate theme. In stylistically neutral contexts in Bangla this is realized as in (19):

- (19) Subject > Goal > Theme > V
 mini ramu-ke Ek-Ta-boi dilo.
 mini ramu-Obj 1-Cl-book gave
 'Mini gave Ramu a book.'

Due to the common occurrence of such combinations, the impression may arise that the neutral word order of DOCs in Bangla is Goal > Theme. However, once the parameters of animacy and referential familiarity are manipulated further with Goal and Theme, other word orders emerge as neutral in the context under consideration. For example, where the Goal is inanimate and the Theme human (and both are balanced in referential familiarity), the neutral ordering becomes Theme > Goal, hence animate > inanimate:

- (20) ami [mini]-ke [ram-er baRi]-te paThalam
 I Mini-Obj Ram-Gen house-Loc sent
 'I sent Mini to Ram's house.'⁸

Where both Goal and Theme are inanimate, differences in definiteness regularly determine the neutral relative ordering of Theme and Goal, causing the sequencing: definite > indefinite. For example, if the Goal is referentially definite and the Theme indefinite, the former will naturally precede the latter:

- (21) ami [paThagar]-e [Ek-Ta boi] paThalam
 I library-Loc one-Cl book sent
 'I sent a book to the library.'

Where the factors of definiteness and animacy are in competition with each other, it is definiteness which seems to be more important in determining the neutral ordering of elements. Hence, when a definite inanimate Goal is combined with an indefinite human Theme, the neutral sequencing is Goal_[+Def, -Animate] > Theme_[-Def, +Animate]:

- (22) ami [ram-er baRi]-te [Ek-jon kaj-er lok] paThalam
 I Ram-Gen house 1.Cl work-Gen person sent
 'I sent a domestic servant to Ram's house.'

Other orders are possible, but are not felt to be neutral and instead result in emphasis and interpretations of contrastive focus.

Factors such as relative animacy and definiteness thus clearly play a role in shaping the surface sequencing of Goals and Themes, and result in the observation that there is no single fixed ordering of Goal and Theme which is neutral in all contexts. Reference to neutral word order is therefore not particularly informative or helpful in understanding the underlying

⁸ Note that even if another postposition such as *kache* 'at, with, to, near (a human NP) occurs', the same result obtains. The neutral order is Theme > Goal, as illustrated in (i), and the other possible order [NP-Gen *kache*] > [NP-Obj], corresponding to Goal > Theme, is marked.

- (i) ami mini-ke Doktor-er kache paThalam.
 I Mini-Obj doctor-Gen near sent.1
 'I sent Mini to the doctor.'

structure of DOCs, and more nuanced tests are called for to determine what kinds of structures may underlie ditransitive clauses. This is now investigated with various phenomena in section 4.

4. Testing for base structures in Bangla ditransitive clauses

The purpose of this section is to consider how to probe the issue of basic underlying word order in ditransitives, and whether it is possible to identify a single base structure which can be converted into different surface sequences, or whether there may be more than one structural base available in ditransitives. We begin with a consideration of binding and reconstruction in DOCs in section 4.1, move on to examine patterns with floating quantifiers in section 4.2, and then focus on relative scope phenomena and two goal structures respectively in sections 4.3 and 4.4.

4.1. Binding relations and the linear order of Goal and Theme arguments

One way to (try to) investigate the underlying structure of linear sequences of NP elements is to examine the licensing of anaphoric elements contained within these NPs, and whether any 'inverse' licensing patterns may be tolerated suggesting reconstruction of the surface sequence to a different underlying order. In Bangla, unlike various other South Asian languages, it is found that reciprocals are not exclusively subject-oriented and may be bound by non-subject NPs such as Themes and Goals.⁹ Example (23) shows that a reciprocal contained within a Theme may be bound by a Goal argument which precedes it:

- (23) bhul-kore, kerani-babu [hori ar mala]_i-ke [Eke Onner_i kuSThi] paThalo
 by-mistake clerk Hori and Mala-Obj each other-Gen horoscope sent
 'By mistake, the clerk sent Hori and Mala each other's horoscopes.'

The legitimacy of such a linear sequencing appears to support the assumption that a Goal > Theme is a possible base order for ditransitives in Bangla. Significantly, now, it is found that it is also possible for the same Goal and Theme to occur in an inverse sequencing and still allow for the reciprocal in the Theme to be bound by Goal, as shown in (24):

- (24) bhul-kore, kerani-babu [Eke Onner_i kuSThi] [hori ar mala]_i-ke paThalo
 by-mistake clerk each other-Gen horoscope Hori and Mala-Obj sent
 'By mistake, the clerk sent Hori and Mala each other's horoscopes.'

A parallel patterning is repeated in (25) and (26), this time with the verb *dEkha* 'show'. As with *paThano* 'send', a reciprocal can occur in a Theme and be bound by the Goal argument, both when this precedes the Theme and also when the Theme precedes the Goal:

- (25) jonaki [hori ebong mala]_i-ke [Eke Onner bondhuder] dEkhalo
 Jonaki Hori and Mala-Obj each other-Gen friend.Obj.PI showed
 'Jonaki showed Hori and Mala to each others' friends.'
- (26) Jonaki [Eke Onner bondhoder] [hori ebong mala]_i-ke dEkhalo
 Jonaki each other-Gen friend.Obj.PI Hori and Mala-Obj showed
 'Jonaki showed Hori and Mala to each others' friends.'

The patterns in (24) and (26), combined with (23) and (25) strongly suggest that surface Goal > Theme sequences are legitimate base orders in Bangla, and that surface Theme > Goal sequences may result from A'-movement of the Theme over the Goal, allowing for reconstruction of the Theme to a base position c-commanded by the Goal, prior to the computation of co-reference relations, as schematized in (27):

- (27) (Subject) Theme_k Goal Theme_k (Verb)

Considering now the possibility for a reciprocal or the reduplicated anaphor *nije nije* (see footnote 9) to occur in a Goal argument and be bound by a Theme NP, such a patterning may also occur, and can be licensed both where the Theme precedes the Goal, as in (28–30) and when the Goal precedes the Theme, as seen in (31–33).

- (28) masTar-mOSai [prottek chatro]_k-ke [nijer nijer_k Desk]-e pherot paThalen
 master-teacher each student-Obj self's desk-to return sent
 'The teacher sent back each student to his desk.'

⁹ There are two lexical items which can be used as genitive-marked reciprocals in Bangla: (i) *Eke Onn-er* and (ii) *pOrospOr-er*. The use of either results in the same patterns of grammaticality in the data presented here. As the simplex non-reciprocal anaphor *nije* is obligatorily subject-oriented in Bangla, it cannot be used to test the underlying structure of Goal and Theme in the ways that reciprocals can, via attempted co-reference to one of the Goal/Theme arguments. Interestingly, however, *nije nije*, the reduplicated form of this anaphor, does not have such a restriction, and provides further support for the patterns found with reciprocals here.

- (29) bhul kore, raja [hori ar mala]_i-ke [Eke Onner kache] paThalo
by mistake Raja Hori and Mala-Obj each other-Gen near sent
'By mistake, Raja sent Hori and Mala to each other.'¹⁰
- (30) Daktar [prottek-Ti bacca]_k [nijer nijer_k ma]-ke dEkhalo.
doctor each-Cl child self's mother-Obj showed
'The doctor showed each child to his mother.'
- (31) masTar-mOSai [nijer nijer_k Desk]-e [prottek chatro]_k-ke pherot paThalen
master-teacher self's desk-to each student-Obj return sent
'The teacher sent each student back to his own desk.'
- (32) bhul kore, raja [Eke Onner kache] [hori ar mala]_i-ke paThalo
by mistake Raja each other_i-Gen near Hori and Mala-Obj sent
'By mistake, Raja sent Hori and Mala to each other.'

Such patterns indicate that a Theme > Goal sequencing is a possible base order for ditransitive verbs in Bangla, and that surface Goal > Theme orders may result from movement of the Goal over the Theme. The base order of Theme > Goal allows for an anaphor/reciprocal in the Goal to be bound by the Theme, either in simple underived surface Theme > Goal orders in which the Theme c-commands the Goal, or due to reconstruction of the Goal to an underlying position c-commanded by the Theme when a surface Goal > Theme sequencing is created by overt movement, as schematized in (33):

- (33) (Subject) Goal_k Theme ~~Goal~~_k (Verb)

A consideration of the variety of configurations possible with anaphors and reciprocals in ditransitive constructions therefore leads to the initial conclusion that two hierarchically distinguished base orders of Goal and Theme are indeed possible in Bangla, and that surface Goal > Theme and Theme > Goal sequences may either directly mirror a base-generated form or be derived by movement of the leftmost argument from a more deeply embedded position. This results in the array of forms indicated in (34):

- (34) a. (Subject) Goal Theme (Verb)
b. (Subject) Goal_k Theme ~~Goal~~_k (Verb)
c. (Subject) Theme Goal (Verb)
d. (Subject) Theme_k Goal ~~Theme~~_k (Verb)

We will now consider whether such conclusions are supported by other patterns in the language, and whether (34) actually exhausts the structural patterning potentially projected by Goals and Themes in Bangla.¹¹

¹⁰ A context appropriate for (29) might be a game in which contestants are sent to join up with other contestants by a game co-ordinator (here Raja).

¹¹ This section has shown that the linearly initial argument in both Goal > Theme and Theme > Goal orders can contain a reciprocal/anaphor bound by the argument which follows it, and hence that both such sequences must be able to reconstruct to other underlying orders, Theme > Goal and Goal > Theme, respectively. In Miyagawa (1997) and Miyagawa and Tsujioka (2004) the possibility that both Theme > Goal and Goal > Theme orders must be possible base orders in Japanese is argued for in part because the linearly second argument in both Goal > Theme and Theme > Goal orders can be a bare reciprocal co-referential with the first argument (see examples 1a and 1b). It is argued that if only a single base order were to be possible, one of these patterns should be ungrammatical – if the linearly first argument were to be A'-moved, reconstruction should lead to a Principle C violation, and if the first argument were to be A-moved, a Chain Condition violation would be expected (see footnote 2). The same patterns can be reproduced in Bangla. Example (i), equivalent to Japanese (2), first shows that if scrambling in Bangla may be the result of A-movement as well as A'-movement, it is sensitive to Chain Condition effects:

- (i) *[hori ar mala]_i-ke pOroSpOr_i/Eke Onno, t_i dekhlo
hori and mala-Obj each other/each other saw
'*Hori and Mala, each other saw.'

Examples (ii) and (iii), equivalent to Japanese (1a/1b), show that a bare reciprocal can legitimately occur as the second linear argument in either a Goal > Theme sequence (ii) or a Theme > Goal sequence (iii) and be bound by the argument preceding it. As in Japanese, this is further evidence against the possibility that there is a single underlying base order of Goal/Theme. Were this to be so, either (ii) or (iii) would be expected to be unacceptable, ruled out either by the necessary reconstruction of a scrambled order resulting from A'-movement, or a Chain Condition violation if scrambling of one argument over the other from a single base order were to result from A-movement. However, both (ii) and (iii) are acceptable, like their equivalents in Japanese.

- (ii) bhul kore, raja [hori ar mala]_i-r kache Eke Onno_i-ke paThalo
by mistake Raja Hori and Mala-Gen near each other-Obj sent
'By mistake, Raja sent Hori and Mala to each other.'
- (iii) bhul kore, raja [hori ar mala]_i-ke [Eke Onner kache] paThalo
by mistake Raja Hori and Mala-Obj each other near sent
'By mistake, Raja sent Hori and Mala to each other.'

4.2. Patterns with floating quantifiers

Bangla is one of the relatively few South Asian languages that make use of classifiers.¹² Given such a property, it is possible to attempt to reproduce the kind of quantifier float phenomena that have been used in Japanese to test the underlying structure of ditransitives, separating an NP from its associated numeral plus classifier pair as in example (2). When applied in Bangla, a similar result is obtained. In ditransitive sentences, it is found that a numeral-classifier pair can be separated from the NP it quantifies over when the NP is a Theme, discontinuously stranding the numeral-classifier to the right of a Goal when the Theme occurs to the left of the Goal, as illustrated in (36). (35a/b) show the two available non-floated versions of (36) for comparison.

- (35) a. jonaki [mini]-ke [du-To pen] dilo Goal > Theme
 Jonaki Mini-Obj 2-Cl pen gave
 'Jonaki gave two pens to Mini.'
- b. jonaki [du-To pen] [mini]-ke dilo Theme > Goal
 Jonaki 2-Cl pen Mini-Obj gave
 'Jonaki gave two pens to Mini.'
- (36) jonaki [pen] [mini]-ke [du-To] dilo NP_{[Theme]-i} Goal [Num.Cl t_i]
 Jonaki pen Mini-Obj 2-Cl gave
 'Jonaki gave two pens to Mini.'

This patterning supports the assumption that a surface Theme > Goal order may be derived from an underlying Goal > Theme sequence via movement of the Theme NP, stranding the numeral and classifier in the base position of the Theme. A further example of this patterning is added in (37). In this example the numeral-classifier pair refers to the pre-Goal Theme 'book(s)' and not the adjacent Goal 'students'.

- (37) jonaki [boi]_i [chatro-der] Sudhu du-To_i dEkhalo
 Jonaki book student-Pl only 2-Cl showed
 'Jonaki showed only two books to the students.'

Turning to consider whether Q-float patterns might provide support for an additional Theme > Goal base, as in Japanese, it is found that this second test cannot be administered in Bangla, and NPs which represent Goals may never be separated from their associated numeral-classifier pairs. Consider example (38) below. The regular sequencing of numeral-classifier and NP elements is [[Num-CL] NP]. In (38) the attempt is made to position the Goal's numeral-classifier pair following the Goal, hence floating it in a position adjacent to the Goal NP. The result is that the numeral-classifier pair can only be interpreted as modifying the Theme NP which follows the Goal, hence even Goal-adjacent stranding of a numeral-classifier pair is unacceptable.

- (38) jonaki [chatro-Ti]-ke [du-To] [pEkeT] paThieche.
 Jonaki student-Cl-Obj 2-Cl packet sent
 Only: 'Jonaki sent two packets to the student.'
 Not: 'Jonaki sent packets to (the) two students.'

Attempts to strand a Goal-related numeral-classifier pair in a position following a Theme in a Goal > Theme sequence are similarly ill-formed, hence in Bangla the patterning [$*\text{NP}_{[\text{Goal}]_i}$ Theme [Num.Cl]_i] is never grammatical, as in Japanese (Miyagawa, 1997). In Bangla, the relevant generalization appears to be that no argument marked with *-ke* allows quantifier floating, whether the argument is a Goal or a Theme, and as Goals must always be marked with *-ke* (unlike Themes – section 3), Q-float with Goals is never licit. In this property, *-ke*-marked NPs behave just like all other PPs in Bangla in disallowing

¹² Those languages in South Asia which do have classifiers are mostly clustered in the northeastern part of India, and may have developed such elements as the result of contact with languages further east in Southeast Asia, where classifiers are much more widespread (for example, it is thought that the migration of Tai language speakers into the area of Assam introduced classifiers into languages of this region). Bangla itself makes very wide use of a single general classifier *Ta*, and much more restricted use of a small set of additional classifiers (e.g. *jon*, *khana*, *Ti*). See Bhattacharya (1999) for extended discussion of classifiers in Bangla and their use in specific and non-specific DPs.

quantifier float (39), and numeral-classifier pairs can only be repositioned *within* PPs, following the head noun but preceding the postposition (Bhattacharya, 1999):

- (39) *lok-gulo [_{PP} SOhor theke] [Sudhu-matro du-To] eSeche
 person-Pl city from only 2-Cl came
 Intended: 'The people came from only two cities.'
- (40) lok-gulo [SOhor_i du-To t_i theke] eSeche.
 person-Pl city 2.Cl from came
 'The people came from the two cities.'

The ban against Q-float in Bangla thus mirrors the impossibility of Q-float from genuine PPs in Japanese. Where Goal arguments in Japanese exceptionally do permit Q-float to occur, it is claimed that the post-nominal affix *-ni* is actually a case-marker and not a postposition (Miyagawa, 1997; Miyagawa and Tsujioka, 2004).¹³

With regard to the investigation of underlying structures available in ditransitive sentences in Bangla, it can be concluded that Q-float patterns support the assumption that surface Theme > Goal orders may be derived from Goal > Theme base structures, but are simply uninformative about the occurrence of a second Theme > Goal base, as the kind of stranding necessary to provide evidence for (or against) the availability of such a base is in this instance ruled out for independent reasons.

4.3. Relative scope phenomena

Moving on to consider other patterns bearing on the occurrence of underlying structure in ditransitive clauses, when both the Theme and Goal argument are quantificational elements/QPs which can potentially interact with each other in terms of relative scope, a striking and persistent asymmetry is found to occur in Goal > Theme and Theme > Goal orders.

First, it can be noted that Goal > Theme orders appear to be unambiguous in terms of relative scope between the Goal and Theme. In such a sequencing, a QP-Goal is regularly found to take scope over a QP-Theme, as schematized below, and the reverse scope relation QP-Theme > QP-Goal is not possible:

Word order: Goal > Theme

Relative scope only: Goal > Theme

Examples (41–44) illustrate this with *dEkhano* 'to show' and *dEwa* 'to give' and vary the distribution of universal and existential quantifiers to control for potential interference from the occurrence of a particular quantifier type in a certain argument relation. All data consistently indicate the same conclusion, that only a Goal > Theme scope relation is possible in the Goal > Theme order of arguments:

- (41) hori [prottek-SikkhOk]-ke [kono Ek-Ta chatr-er khata] dEkhalo.
 Hori each-teacher-Obj some 1-Cl student-Gen copy showed
 'Hori showed some student's notebook to every professor.'
 → every > some ✓linear
 *some > every *non-linear
- (42) hori [kono Ek-jon SikkhOk]-ke [prottek-Ti chatr-er khata] dEkhalo
 Hori some one-Cl teacher-Obj each-Cl student-Gen copy] showed
 'Hori showed every student's notebook to some professor.'
 → some > every ✓linear
 *every > some *non-linear
- (43) hori [kono Ek-jon SikkhOk]-ke [prottek-Ta-boi] dilo
 hori some one-Cl teacher-Obj each-Cl book gave
 'Hori gave every book to some professor.'
 → some > every ✓linear
 *every > some *non-linear

¹³ Japanese and Bangla thus appear to differ in the categorical status of (certain) Goal arguments. In Japanese, recipient-possessor Goals marked with *-ni* show the syntactic properties of DPs, whereas in Bangla, parallel recipient-possessor Goals pattern as if they are PPs.

- (44) hori [prottek SikkhOk]-ke [kono Ek-Ta boi] dilo
 Hori each teacher-Obj some one-Cl book gave
 'Hori gave some book to every professor.'
 → every > some ✓linear
 *some > every *non-linear

This correspondence of linear order to relative scope relation might arguably be quite expected, as relative scope corresponds to surface linear sequencing with other argument combinations in Bangla such as subject > object. In such a sequencing, the positioning of subjects before objects similarly results in a unique scopal interpretation:

Word order: subject > object

Relative scope only: subject > object

- (45) [kono Ek-jon nars] [prottek-Ta rugi]-ke Sahajjo korlo.
 some one-Cl nurse each-Cl atient-Obj help did.3
 'Some nurse helped every patient.'
 → some > every ✓linear
 *every > some *non-linear

However, what now turns out to be unexpected is that the second linear sequencing in ditransitives, in which a Theme-QP precedes a Goal-QP, regularly is ambiguous, and allows for either 'linear scope' (i.e. Theme > Goal) or inverse, non-linear scope: Goal > Theme, as illustrated in (47–50), again carefully varying the occurrence of universal and existential quantifiers in Theme/Goal positions:

- (46) hori [kono Ek-Ta chatr-er khata] [prottek SikkhOk]-ke dEkhalo.
 Hori some 1-Cl student-Gen copy each teacher-Obj showed
 'Hori showed some student's notebook to every professor.' (cf ex.41)
 → some > every ✓linear
 every > some ✓non-linear
- (47) Hori [prottek-Ti chatr-er khata] [kono Ek-jon SikkhOk]-ke dEkhalo
 Hori every-Cl student-Gen copy some one-Cl teacher-Obj showed
 'Hori showed every student's notebook to some professor.' (cf ex.42)
 → either: every > some ✓linear
 or: some > every ✓non-linear
- (48) hori [prottek-Ta-boi] [kono Ek-jon SikkhOk]-ke dilo
 Hori each-Cl book some one-Cl teacher-Obj gave
 'Hori gave every book to some professor.' (cf ex.43)
 → either: every > some ✓linear
 or: some > every ✓non-linear
- (49) Hori [kono Ek-Ta boi] [prottek SikkhOk]-ke dilo
 hori some one-Cl book each teacher-Obj gave
 'Hori gave some book to every professor.' (cf ex. 44)
 → either: some > every ✓linear
 or: every > some ✓non-linear

In contrast to the conclusions drawn from anaphoric binding in section 4.1, the evidence from relative scope in Goal/Theme alternations seen here might consistently seem to suggest the existence of an unambiguous single base structure [Goal > Theme], optionally allowing for conversion into surface [Theme_i Goal t_i] sequences. Such Theme > Goal sequences could naturally be analyzed as quantificationally ambiguous due to the scope of the Theme being computable from either the surface position of the Theme (*c*-commanding the Goal) or from an underlying position lower in the structure (*c*-commanded by the Goal). Surface Goal > Theme sequences, by way of contrast, would in turn be expected to be unambiguous if only a Goal > Theme base were to occur in the underlying structure, and not result

from any movement of the Goal - not having the option of occupying a base position c-commanded by the Theme, the Goal would only be able to establish its scope from a structurally higher position, resulting in necessary scope over a lower Theme. Patterns of relative scope and their analysis thus seem to be in quite clear conflict with the results of anaphoric licensing in terms of what is suggested about the base structure of ditransitives. Section 4.4 will now present further relevant evidence bearing on these issues from two Goal structures and show how the tension emerging here can ultimately be satisfactorily resolved, leading to a unitary account of the fine structure(s) projected in ditransitive clauses.

4.4. Overt two Goal structures

In Bangla it is possible and not unnatural for two Goals to occur overtly, as in Japanese. One Goal represents a Location to which the Theme is transferred. This purely Locative Goal is marked with *-(t)e* and is inanimate. The other Goal encodes the Recipient and Possessor of the Theme as the result of the process of transfer of the Theme, is marked with *-ke*, and is regularly animate. As in Japanese (Miyagawa and Tsujioka (2004)), there is a natural ordering of Recipient Goal before Locative Goal, as illustrated in (50):

- (50) jonaki hori-ke kolkata-te pEkeT-Ta paThieche.
 Jonaki Hori-Obj Calcutta-to packet-Cl sent.has
 'Jonaki has sent the packet to Hori in Calcutta.'

The Theme which occurs in two Goal structures may appear with neutral intonation either following both Goals, as in (50), or preceding the Locative Goal, as in (51), but is less easily positioned preceding both Recipient and Locative Goals (52).

- Recipient Goal > Theme > Locative Goal
 (51) jonaki hori-ke [pEkeT-Ta] kolkata-te paThieche.
 Jonaki Hori-Obj packet-Cl Calcutta-to sent.has
 'Jonaki has sent the packet to Hori in Calcutta.'

- ?Theme > Recipient Goal > Locative Goal
 (52) ?jonaki [pEkeT-Ta] hori-ke kolkata-te paThieche
 Jonaki packet-Cl Hori-Obj Calcutta-to sent.has

Now considering relative scope interactions in two Goal structures, where both Recipient and Locative Goals are quantificational/QPs, it is found that the relative scope of the two Goals is fixed and unambiguous: the high Recipient Goal takes unambiguous scope over the low Locative Goal, as in Japanese:

- Recipient Goal Locative Goal Theme
 (53) jonaki [kaw]-ke [prottek-Ta SOhor]-e [Ek-Ta pEkeT] paThieche
 Jonaki someone-Ob each city-to 1.Cl packet sent.has
 '(?)Jonaki has sent someone a packet to every city.'
 → some > every ✓linear
 *every > some *non-linear

Additionally, the high Recipient Goal takes obligatory scope over the Theme:

- Recipient Goal Locative Goal Theme
 (54) jonaki [kaw]-ke [kolkata]-te [prottek-Ta pEkeT] paThieche.
 Jonaki someone-Obj Calcutta-to each-Cl packet sent.has
 '(?)Jonaki has sent someone a packet to Calcutta.'
 → some > every ✓linear
 *every > some *non-linear

The unambiguous relative scope which occurs between a high Recipient Goal and a Theme in the Goal > Theme order illustrated above is not at all unexpected. Previous data presented in (41–44) have shown that a Goal > Theme order of QP arguments is regularly unambiguous with regard to relative scope. However, what now turns out to be quite unexpected and highly revealing is the observation that scopal ambiguity regularly occurs between a low Locative Goal and a Theme in two

Goal structures. Interestingly, it is found that the scope of the Locative Goal and the Theme is ambiguous in both Goal > Theme and in Theme > Goal orders:

- Recipient Goal Locative Goal Theme
- (55) jonaki [mala]-ke [kono du-To Thikana]-y [prottek-Ta pEkeT] paThieche
 Jonaki Mala-Obj some two-Cl address-to each-Cl packet sent.has
 'Jonaki has sent Mala each packet to two addresses.'
 → either: two > every ✓linear
 or: every > two ✓non-linear
- Recipient Goal Theme Locative Goal
- (56) jonaki [Mala]-ke [prottek-Ta pEkeT] [kono du-To Thikana]-y paThieche
 Jonaki Mala-Obj each-Cl packet some/any two-Cl address-to sent.has
 'Jonaki has sent Mala each packet to two addresses.'
 → either: every > two ✓linear
 or: two > every ✓non-linear¹⁴

This scopal ambiguity of Locative Goal and Theme in both linear word orders clearly requires some explanation. A natural analysis of such patterns in line with the characterization of ambiguity in earlier Theme > Goal orders in (41–44) and (46–49) is to attribute this ambiguity to the occurrence of two different Locative Goal/Theme base structures, both of which would allow conversion into linearly-inverse surface sequences. Hence both (57a) and (57b) below can be suggested to be available as underlying base structures, and allow for sequences (57c) and (57d) to be produced through movement of the lower argument leftwards to a higher surface position:

- (57) Putative base structures for Locative Goal and Theme
- (a) Locative Goal > Theme
- (b) Theme > Locative Goal
- Possible surface outputs from (a) and (b):
- (c) Theme_k > Locative Goal > t_k
- (d) Locative Goal_k > Theme > t_k

The derivations schematized in (57c) and (57d) will potentially allow for the scope of the Theme in (57c) and the Goal in (57d) to be computed either from their surface positions, resulting in wide scope interpretations, or from their underlying positions, allowing for low scope relative to the other argument present. The ambiguity present in sentences such as (55) and (56) can therefore be systematically accounted for if Theme and Locative Goal may be projected in two different base structures and scopally interact with each other via reference to higher (moved) or lower (underlying) positions.

Relative scope phenomena in two Goal structures consequently give compelling further support for the dual base hypothesis that Goals and Themes may be mapped to two different underlying structures. Combined with the patterns observed in section 4.3, we are also able to arrive at a reconciliation of the apparent conflict between the results of section 4.3 and those of section 4.1 (the licensing of anaphors in Goal/Theme sequences). The latter section presented reconstruction-type evidence suggesting that both a Goal > Theme and a Theme > Goal base may be projected in ditransitive clauses, while relative scope patterns in section 4.3 led to the conclusion that only a Goal > Theme base is available. What the present section with its focus on two Goal forms indicates is that the nature of the Goal needs to be carefully monitored in the application and interpretation of tests probing for underlying structure in DOCs. The patterns reviewed show that two kinds of Goal may indeed be available and occur in different structural positions in Bangla, as in Japanese, and that these hierarchically distinguished positions may be directly responsible for different interpretative effects in the interactions of Goals with the Theme. Quite generally, there is evidence indicating that a lower 'Locative' Goal may (optionally) be able to be inserted in a base position c-commanded by the Theme, and there is also evidence indicating that a higher Recipient Goal can only be merged in a position higher than that of Theme. The apparent conflict in conclusions which may arise from exploratory studies of reconstruction and relative scope in DOCs can thus be made sense of in a principled and consistent way once the sub-type of Goal is controlled for in investigations of ditransitive clauses in Bangla. Those patterns which point towards an unambiguous Goal > Theme base correctly identify a Goal which may only occur in a base structure higher than the Theme – the high 'Recipient' Goal, while data indicating that a Theme > Goal and Goal > Theme alternation in the base is possible confirm the options open to a second type of Goal – low 'Locative' Goals. The broad picture that consequently

¹⁴ A reviewer of the paper suggests that the non-linear scope readings of (55) and (56) may be facilitated either by the use of focus intonation on the Theme or the insertion of a distributive particle *kore*. However, it can be noted that the distributive particle is actually not available for use if the quantifier *kono* is used in the DP, and the example sentences are still regularly found to be ambiguous.

emerges from a careful consideration of ditransitive patterns in Bangla is that the structuring of Goal and Theme arguments in the base is partially but not fully pre-determined – the base position of the Recipient Goal is uniquely fixed, and higher than both Theme and Locative Goal arguments, while the latter two elements may be base-generated with either Theme or Goal structurally higher than the other argument. In this general conclusion, the present study of Bangla converges neatly with Japanese as analyzed in Miyagawa (1997) and Miyagawa and Tsujioka (2004), adding further support to the variable-base hypothesis developed in these works.¹⁵

Reflecting on the types of verbs which prototypically induce high and low Goals in ditransitive clauses, cross-linguistically verbs such as 'give' and 'send' may be naturally expected to project Recipient and Locative Goals, given the inherent 'transfer of possession' meaning of these verbs. A final question which now arises is how other ditransitive verbs may be expected to pattern in syntactic terms when the meaning associated with their Goal argument does not correspond in any fully direct way with the prototypical Recipient and Locative semantics of the high and low Goal positions. Specifically, where the Goal argument of a ditransitive verb is not automatically interpreted as either a Recipient or a Location, how might such a Goal regularly get mapped to a syntactic Goal position within a language? Good examples of such verbs, frequent in discussions of DOCs are 'introduce' and 'show'.¹⁶ With such verbs, it is not a priori obvious whether the Goal argument would show the syntactic patterning of a high or a low Goal, as the Goal with 'introduce' and 'show' is not obviously a Recipient or a Location. In such instances, it is possible that a choice simply has to be made and the Goal is semantically approximated in a broad or even arbitrary way either to a Recipient or a Locative type Goal so that some kind of mapping to a syntactic position can be achieved. Interestingly, examining Bangla and Japanese with regard to the patterning of these verbs in ditransitive clauses, one finds that there is actually a marked difference in behavior in the two languages. In Japanese, with 'introduce' there is scopal ambiguity between the Goal and Theme in both Goal > Theme and Theme > Goal orders, indicating that the Goal of 'introduce' in Japanese is projected as a low Locative Goal (and can be base-generated in either of the two structures available to Locative Goals, resulting in relative scope ambiguity between Theme and Goal). This was earlier shown in example (3) repeated below:

- (3) a Hanako-ga daremo-ni dareka-o shookai-shita.
Hanako-Nom everyone-Dat someone-Acc introduced
'Hanako introduced someone to everyone.'
everyone > someone (different person introduced to each person)
someone > everyone (one particular person is introduced to everyone present)
- b. Hanako-ga dareka-o daremo-ni shookai-shita.
Hanako-Nom someone-Acc everyone-Dat introduced
'Hanako introduced someone to everyone.'
everyone > someone (different person introduced to each person)
someone > everyone (one particular person is introduced to everyone present)

In Bangla, by way of contrast, with the verb 'show' there is no scopal ambiguity when a Goal QP precedes a Theme QP, as illustrated earlier in (41) and (42). This patterning indicates that the Goal of 'show' in Bangla is mapped to a fixed high Recipient Goal position, and surface Goal > Theme orders cannot result from movement of the Goal from a position below the Theme (which should allow for the non-linear scope reading absent from (42) and (43)).

- (41) hori [prottek-SikkhOk]-ke [kono Ek-Ta chattrer khata] dEkhalo.
Hori each-teacher-Obj some 1-Cl student's copy showed
'Hori showed some student's notebook every professor.'
→ every > some ✓linear
*some > every *non-linear

¹⁵ We would like to note that while the range of patterns reported in section 4 all seem to converge on the analysis presented in a very consistent way, one intriguing puzzle remains from the current investigation of Bangla. With regard to the scopal ambiguity noted in two Goal structures such as (55), rather surprisingly, when a high Recipient Goal is not overtly present, the low Locative Goal/Theme relative scope ambiguity seems to disappear:

- (i) jonaki [kono-SOhor]-e [prottek-Ta citthi] paThieche
Jonaki some town-to each-Cl letter sent
'Jonaki sent each letter to some town.'
→ ✓some > every linear
*every > some non-linear

At this point, it is not clear to us what to conclude from the patterning found in (i), and further testing of data is most probably needed. One interesting possibility is that, in the absence of an overt high Goal, a low Goal assumes a different syntactic status in ditransitive structures. However, more comparison of two goal and single goal patterns will be needed before a stronger generalization can be made.

¹⁶ The verb 'introduce' is often used to probe reconstruction effects and binding, having a Theme and Goal which are both human, hence potentially allowing for possibilities of anaphoric co-reference to be checked between Theme and Goal.

- (42) hori [kono Ek-jon SikkhOk]-ke [prottek-Ti chattrer khata] dEkhalo
 Hori some one-Cl teacher-Obj each-Cl student's copy] showed
 'Hori showed every student's notebook to some professor.'
 → some > every ✓linear
 *every > some *non-linear

This patterning suggests that the Goal argument of ditransitive verbs such as 'introduce' and 'show' which do not have the prototypical semantics of either Recipient or Locative Goals may be classified in different ways. Japanese apparently treats the Goal of 'introduce' in a locative way, perhaps focusing on an element of physical movement in the process of introduction, while Bangla groups the Goal of 'show' with other high Recipient Goals, perhaps due to the +human property of high Recipient Goals which is also a property of the Goal of 'show' (also in cases *dEkha* 'show' is used in the sense 'introduce' in Bangla, as in examples (25) and (26)).

A focused comparative consideration of ditransitive patterns in Bangla and Japanese thus leads to a further conclusion and a caution – namely, it cannot be assumed in advance of careful investigation that ditransitive predicates will necessarily pattern in fully parallel syntactic ways when there is a lack of strong correspondence to prototypical ditransitive meaning and distinctions between Recipient and Locative Goals. Not only do language-internal studies need to be cautious that certain ditransitive verbs may project different underlying Goal-Theme structures within a single language (hence 'give' and 'send' may allow for different patterns with various syntactic phenomena, and conclusions drawn from patterns with 'give' may not necessarily be equally valid for 'send'), but cross-linguistic studies also need to bear in mind that semantically similar non-prototypical ditransitive verbs may sometimes be associated with different underlying base structures in different languages.

5. Conclusion

The primary objective of the present study of ditransitive verbs in Bangla was to establish whether the interesting and complex paradigm of patterns reported for Japanese by Miyagawa (1997) and Miyagawa and Tsujioka (2004) might appear in another genetically unrelated but typologically similar SOV scrambling language. Quite strikingly, it was found that there is indeed a remarkable parallelism in the two languages with regard to the fine distribution and interpretation of Theme and Goal arguments, indicating that the patterning found in Japanese and the conclusions drawn from this should not be viewed as a singular, isolated property of Japanese but is a paradigm with a clearly wider robust significance and importance for the study of DOCs and ditransitive verbs. The consequences of the study, confirming proposals in Miyagawa (1997) and Miyagawa and Tsujioka (2004), are clearly that *certain* languages at least, allow for variation in the underlying projection of Themes and Locative Goals and there is no fully fixed, single structuring of the lower arguments of ditransitive verbs, though higher Recipient Goals do appear to occur in a fixed structural position (at least in Bangla and Japanese). In turn, such conclusions about the base forms of DOCs have potentially broader implications bearing on the Universal Base Hypothesis/UBH (Cinque, 1999; Kayne, 1994) – the expectation that there is a fully universal hierarchical structuring of lexical and functional projections.¹⁷ We would like to suggest that in the very strictest interpretation of the UBH, the existence of alternative base structures for Theme and Locative Goal in ditransitive clauses may seem to constitute evidence against the UBH as a single, fully inflexible template of syntactic architecture. However, viewed from a slightly different perspective, we believe that the UBH is actually not falsified by the kind of underlying variation identified in Bangla and Japanese DOCs, and arguably a 'universal' claim about ditransitive predicates may still be maintained, of the following general kind, that: 'If a language projects a single structure with a ditransitive verb of type X, the hierarchical organization of its Goal and Theme arguments will follow a single, cross-linguistic template pre-determined for verbs of type X.' For example, supposing one were to consider the verb 'send' cross-linguistically, the conclusion might be that if a language permits only one hierarchical arrangement of a Locative Goal and a Theme in the base, this would have to be Goal > Theme. However, where there occur languages in which more than one base form is legitimately permitted, the force of the UBH would be to impose that the Goal > Theme structuring necessarily must occur as one of the variant forms, and a genuine counter-example to the UBH would only be a language in which a single base form is permitted and it is not the 'universally available' base (hence, in the case under discussion, only Theme > Goal). Such a view of the UBH permitting limited cross-linguistic variation which necessarily includes but is not fully limited to a universal core might be applied to account for other cases of variation found in underlying structure and apparent violations of the UBH, where the strictest interpretation of the UBH may face difficulties. This is most certainly a question for further research and will not be speculated on further here,¹⁸ but it is precisely data of the kind reviewed here in ditransitive structures which leads to the need to confront this issue, and which may increasingly raise this question in the future as more detailed information is gathered on the underlying structure of multiple argument predicates.

¹⁷ The variability of the base in Bangla and Japanese DOCs would also seem to impact on Baker's (1988:46) Uniformity of Theta Assignment Hypothesis/UTAH: 'Identical thematic relationships between items is represented by identical structural relationships between these items at the level of D-structure'.

¹⁸ In this connection, see Georgala (2010) for interesting discussion of the UBH and ditransitives in German.

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