Double Object and Ditransitive Constructions in Bangla/Bengali

Tanmoy Bhattacharya (Delhi) and Andrew Simpson (USC)

GENERAL BACKGROUND ON BANGLA

Bangla is an Indo-Aryan language with a neutral SOV word order but considerable free positioning of grammatical constituents.

(1) a. mini ei boi-Ta kinlo.   S O V
         Mini this book-Cl bought.3
         'Mini bought this book today.'

In addition to free permutation of arguments and adjuncts in pre-verbal positions, subjects and objects can also be positioned after the verb, with greater apparent freedom than in other SOV languages such Japanese and Turkish:

Other possible word orders: O S V   S V O   O V S

    b. bhat mini kheyeche   O S V
        rice Mini eaten
        'Mini has eaten rice.'

    c. mini hocchen montri   S V O
        Mini becoming minister
        'Mini is a minister.'

    d. sinema dekheche Mini   O V S
        cinema seen   Mini
        'Mini has seen a film.'

As with other well-known scrambling languages, the 'marked' word orders generally add nuances of meaning which are absent from the 'unmarked' orders.

Case-marking and verbal agreement

Verbs agree with their subjects in **person**, but not number. **Nominative** case is often not marked in any overt way on full noun phrases (2), but plural marking of nouns is different for subject and non-subjects (3a/b):

(2)   ei meye-Ti   dilli-te   thake
         Dem girl-Cl Delhi-Loc live.3
         'This girl lives in Delhi.'

(3)   a. ei SOb meye-ra   dilli theke eSeche
           Dem all girl-Pl.Sub Delhi from have-come.3
           'All these girls have come from Delhi.'

        b. ami ajke ei meye-der(ke) kOtha dilam
           I   today Dem girl-Pl.Ob   talk gave
           'I made a promise to these girls today.'

Many predicates combine with **genitive**-case-marked arguments in environments where a dative-case-marked noun would occur in Hindi – with verbs of possession, mental state, sickness, general obligation:

(4) a. amar   ei boi   khub bhalo lage
        1s.Gen Dem book very good strikes
        'I like this book very much.' (Lit. That book strikes me (my) very good.'

     b. tar   Ek-Ta gaRi acche
        3s.Gen 1.Cl car   is
        'He has a car.' (Lit. 'A car is his.')

Objective case 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 and in various instances also –ke: N-der(-ke).

(5)   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 boy/book.'

Nouns marked with –ke are interpreted as definite in the absence of numerals:

(6) 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.'

Where numerals and classifiers occur combined with nouns marked with –ke, these nouns are interpreted as specific indefinites (Bhattacharya 1999):

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

Where –ke does not occur on a numerically-specified NP, this is interpreted as non-specific indefinite:

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

Case-marking in ditransitive constructions

The most frequently occurring, 'prototypical' double object/ditransitive configuration involves the combination of a verb of transfer such as 'give', or 'send' with a definite human goal and an indefinite inanimate theme. In Bangla, in stylistically neutral contexts this is realized as in (9):

(9)   Subject > Goal > Theme > V
        ami mini-ke ek-Ta-boi dilam.
        I   Mini-Ob 1.Cl.book gave.1
        'I gave Mini a book.'

When both the Goal and then Theme are animate and definite, BOTH commonly occur with the same objective case marker –ke:[1]

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

If the Theme is definite-animate and adjacent to the verb, -ke can be optionally omitted, more easily so with non-human animates:

(11)   ami mini-ke   beRal-Ta(-ke) dilam
        I   Mini-Obj cat-Cl(-Obj)   gave
        'I gave Mini the cat.'

Wherever Goal arguments are inanimate locations, they are marked with the suffix –(t)e rather than –ke:

(12) 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.'

Animate Goals cannot be marked with –(t)e.

(13)   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.'

The use of -ke with Goals differs from –ke-marking with Themes in its correspondence with specificity. Non-specific (animate) themes are not marked with –ke, whereas specific indefinite themes are suffixed with –ke. Indefinite animate goals occur marked with –ke whether these are specific or non-specific, hence (14) below allows for either a specific or a non-specific interpretation of the goal NP 'a student':

(14)   ami ei boi-Ta   ek-jon chatro-ke   dite cai
        I   this book-Cl one-Cl student-Obj give.inf want.1
        '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.)

---

[1] If the theme is non-specific indefinite, it occurs without –ke:
(i) ei matro   ami raja-ke du-jon Soinik paThalam
       this moment I   king-Obj two-Cl sentry sent
       'Just now I sent two sentries to the king.'

There is also a difference between Goal and Theme arguments with regard to the obligatory occurrence of –ke. The marker –ke can be omitted from the Theme either in a verb-adjacent position (15a), or in a pre-Goal position in various instances (15b). Goals cannot appear without –ke, however, unless they are marked with the plural non-subject marker –der. Because of this difference, (15a) and (15b) are unambiguous in their interpretation – in both instances the NP without –ke is interpreted as the Theme, and the –ke-marked NP is the Goal:

(15) a. ami ram-ke   mini dilam   b. ami mini ram-ke dilam.
        I   Ram-Obj Mini gave.1   I   Mini Ram-Obj gave.1
        'I gave Mini to Ram.'   'I gave Mini to Ram.'

Other patterns with ditransitives

[1] RELATIVIZATION

Both Goal and Theme arguments can undergo relativization:

(16) a. je chele-Ti-ke ami boi-Ta diechi, se amar bhai
        Rel boy-Cl-Obj I book-Cl gave   3 my   brother
        'The boy I gave the book to is my brother.'

    b. je kolom-Ta ami mini-ke diechi, se-Ta lal
        Rel pen-Cl   I   Mini-Obj gave   3.Cl red
        'The pen I gave to Mini is red.'

[2] WH-QUESTIONS

Goal and Theme arguments can both occur as *wh*-phrases in questions:

(17)   tumi kake   ki   dile?
        you whom what gave.2
        'Who did you give what to?'

[3] PASSIVE

In passive structures in Bangla, the copula occurs as an auxiliary verb combined with the uninflected form of the main verb. Objective case-marking is not suppressed on either Goals or Themes:

(18)   mini-ke   bacca-Ta-ke dEwa hoyeche
        Mini-Obj child-Cl-Obj give was.3
        'Mini was given the child/The child was given to Mini.'

The verb in passive structures regularly occurs in a default 3rd person form. Note that in (19) the Theme is 1st person and the Agent 2nd person, hence the verb is not agreeing with either of its arguments:

(19)   apna-r dara ama-r alocona kOra hoyeche
        you-Gen by I-Gen criticism do   have.been.3
        'I was criticized by you.'

[4] ANAPHORS and CO-REFERENCE relations

Both Themes and Goals can occur as (or contain) anaphors co-referential with the subject or some other argument:

(20) a. mini nije-ke ram-ke dilo
Mini self-Obj Ram-Obj gave.3
'Mini gave herself to Ram.'

   b. mini nij-er meye-ke paThagar-e paThalo
Mini self-Gen daughter-Obj libray-Loc sent.3
'Mini sent her own (Lit. self's) daughter to the library.'

(21) a. mini nije-ke Ek-Ta boi paThalo
Mini self-Obj 1-Cl book sent.3
'Mini sent herself a book.'
   b. mini nij-er meye-ke Ek-Ta pizza dilo
Mini self-Gen daughter-Obj 1-Cl pizza gave.3
'Mini gave a pizza to her own daughter.'

Though anaphors tend to favor co-reference with subjects, they can also be co-referential with either Goals or Themes, this generally requiring the use of a complex pronoun+anaphor combination (which occurs optionally in instances of subject-anaphor co-reference):

(22) ami mini-ke tar nij-er baliS-Ta paThalam
I Mini-Obj her self-Gen pillow-Cl sent.3
'I sent Mini her own pillow.'

(23) ami mini-ke tar nije-r baRi-te paThalam
I Mini-Obj her self's house-Loc sent
'I sent Mini to her-own house.'

[5] BENEFICIARIES and other ditransitive structures

Beneficiaries are commonly encoded in two ways: (a) with a postposition 'for' (24a), or (b) with Objective –ke + 'give' in auxiliary function (24b):

(24) a. ami ram-er jonne ek-Ta boi kinlam.
I Ram-Gen for 1-Cl book bought
'I bought a book for Ram.'

   b. ami ram-ke Ek-Ta-boi kine diyechi
I Ram-Obj 1-Cl book buying gave.1
'I bought a book for Ram.'

Further examples with 'build for':

(25) a. ram mini-r jonne Ek-Ta baRi koreche
Ram Mini-Gen for 1-Cl house did.3
'Ram built a house for Mini.'

b. ram mini-ke   Ek-Ta baRi kore   dieche
    Ram Mini-Obj 1-Cl house doing gave.3
    'Ram built a house for Mini.'

With 'selling', alternation between the postposition 'for' and the Objective marker '-ke' on the Goal signals the difference between 'selling for' and 'selling to':

(26) a. ram mini-r jonne   EkTa baRi bikri koreche
        Ram Mini-Gen for 1-Cl house sell did.3
        'Ram sold a house for Mini.'

     b. ramu mini-ke EkTa baRi   bikri koreche
        Ram Mini-Obj 1-Cl house sell did
        'Ram sold a house to Mini.'

The predicate 'tell a story to' results in –ke marking the Goal, as does 'lending' and 'teaching':

(27)   ram mini-ke Ek-Ta golpo boleche
        Ram Mini-Obj 1-Cl story told.3
        'Ramu told a story to Mini.'

(28)   ram mini-ke   Ek-Ta boi dhar dieche
        Ram Mini-Obj 1-Cl book loan gave
        'Ram lent a book to Mini.'

(29)   ram mini-ke   hindi Sikhieche
        Ram Mini-Obj hindi taught.3
        'Ram taught Hindi to Mini.'

WORD ORDER PERMUTATIONS with distransitives

In addition to the occurrence of different orders of Agent, Theme and Goal in the pre-verbal portion of a clause, these elements can occur in various orders following the verb.

Pre-verbal orders of Goal and Theme:
Agent Goal Theme V   Goal Agent Theme V
Agent Theme Goal V   Theme Agent Goal V
Goal Theme Agent V   Theme Goal Agent V

Post-verbal orders of Goal and Theme:
Agent Theme V Goal
Agent Goal V Theme
Agent V Goal Theme
Agent V Theme Goal

Accounting for different word orders in distransitives

Is there any way to determine what the **neutral**, **basic** and **preferred** ordering of constituents in ditransitive constructions is? Certainly, factors such as **animacy** and **referential familiarity** play a role in shaping neutral and preferred word orders.

For example, where the Goal is inanimate and the Theme human, the neutral ordering is Theme > Goal, hence animate > inanimate:

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

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

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

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

(32)   ami [ram-er baRi]-te [Ek-Ta 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.

In what follows, we now consider how to further probe the issue of **basic word order** in ditransitives, and whether it is possible to identify a single, underlying base structure which can be converted into different surface sequences, or whether there may be more than one structural base available in ditransitives.

Recent theoretical insights into the structure of ditransitives from Japanese: Hoji (1985), Miyagawa (1997), Miyagawa and Tsujioka (2004)

The key issue: how to analyze alternate/variant word order possibilities in ditransitive constructions in verb-final Japanese.

Hoji (1985)

There is a single underlying base structure in ditransitives in Japanese:

      (Subject) $Goal_{[indirect\ object]} > Theme_{[direct\ object]}$ V

'Surface/overt' orders of: Theme > Goal result from displacement/fronting of the Theme from an underlying position following the Goal:

      $Theme_i > Goal > t_i$

This is revealed in differences in the relative scope interpretations of Goal and Theme arguments in the two linear orders:

(33) Taroo-ga   dareka-ni   dono-nimotsu-mo   okutta.
      Taroo-Nom someone-Dat every-package-even sent
      'Taroo sent every package to someone.'

The Goal > Theme order in (33) allows for only one interpretation – 'linear scope' of the Goal over the Theme:

$\exists x$ (x a person) > $\forall y$ (y a package)
'There is a single person to whom all the packages were sent.'

(34) Taroo-ga   dono-nimotsu-mo   dareka-ni   okutta.
      Taroo-Nom every-package-even someone-Dat sent
      'Taroo sent every package to someone.'

The Theme > Goal order in (34) is ambiguous. Both a linear scope interpretation of Theme > Goal is possible, and an inverted linear scope interpretation of Goal > Theme:

$\forall y$ (y a package) > $\exists x$ (x a person)
'Each package was sent to a different person.'

$\exists x$ (x a person) $\forall y$ (y a package)
'There is a single person to whom all the packages were sent.'

Hoji suggests that this asymmetry in interpretation can be accounted for in a principled way if it is assumed that:

a) the Theme > Goal order results from movement of the Theme from a position below (and to the right of) the Goal

b) the relative scopal interpretation of Goal and Theme can make reference to either the surface position of a Goal/Theme or a different underlying position

c) the Goal > Theme order does not result from any movement of the Goal from a different position (hence this order is unambiguous)

CONSEQUENCE: There is a single underlying order of Goal > Theme

Miyagawa (1997)

Key claims:

a) In Japanese, BOTH Goal > Theme AND Theme > Goal surface orders can be base-generated underlying orders.

b) Surface Goal > Theme and Theme > Goal orders can ALSO arise from movement applying to either possible base structure:

(i) Goal$_i$ > Theme$_i$ > t$_i$

(ii) Theme$_i$ > Goal > t$_i$

8

The principal patterns which are argued to support such an analysis relate to:

a) the interpretation of reciprocal anaphors

b) the distribution of floating numeral quantifiers/NQs

c) a finer consideration of relative scope phenomena

● *reciprocals and binding*

When a Theme/Direct Object is repositioned in front of a reciprocal in Subject position, the Object patterns as if it occupied an underlying position following the Subject (it is 'reconstructed' to its base object position for interpretation):

(35) a. *[John-to Mary] $_i$-o   otagai$_i$-ga t$_i$ mita
       John and Mary-Acc each other-Nom saw
       Intended: 'John and Mary saw each other.'

   b. *otagai$_i$-ga   [John-to Mary]$_i$-o   mita
      each other-Nom John and Mary-Acc   saw

In ditransitive constructions, the antecedent of a reciprocal can occur as either the Goal (in Goal > Theme orders) or the Theme (in Theme > Goal orders):

(36) a. John-ga   [Hanako-to Mary]$_i$-ni (paatii-de) otagai$_i$-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$_i$-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.'

If only a Goal > Theme base were to be possible, one might expect that the Theme in the Theme > Goal order would reconstruct to its base position for interpretation (in a similar way to (35)), and that this would not allow for co-reference between the Theme reciprocal and the Goal antecedent.

CONCLUSION: both Goal > Theme and Theme > Goal base orders are possible.

● *floating numeral quantifiers/NQs*

The occurrence of a NQ in a position separated from an associated NP is taken to indicate the base position of the NP (in many instances). In the Theme > Goal order, a NQ associated with the Theme can occur in a position following the Goal:

   Theme-NP$_i$ > Goal > NQ$_i$

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

Miyagawa suggests that data such as (37) indicate that the Theme can be base-generated in a position to the right of the Goal and moved to its surface position, stranding the NQ.

Floating quantifier and reciprocal-binding patterns interact with each other. If a NQ associated with the Theme occurs stranded/floating to the right of the Goal in a Theme > Goal order, this seems to force the Theme to reconstruct to the position of the NQ, and co-reference with the reciprocal is disallowed:

Theme-NP_i > $Goal_{[reciprocal]}$ > NQ_i

(38) *John-ga gakusei-tachi$_i$-o otagai$_i$-ni t_i futari$_i$ shookai-shita.
John-Nom student-Pl-Acc each other 2.Cl   introduced
Intended: 'John introduced two students to each other.'

CONCLUSION: a Theme > Goal base order is possible in addition to a Goal > Theme order

● *relative scope of Goal and Theme*

Re-examininng Hoji's relative scope phenomena, Miyagawa suggests that BOTH linear orders of Theme > Goal AND Goal > Theme are ambiguous:

Goal > Theme
(39) 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)

Theme > Goal
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)

CONCLUSION: assuming that both Goal > Theme and Theme > Goal are possible base orders will account for the ambiguity observed. For example, the surface Goal > Theme order can be assumed to arise from fronting of the Goal from a Theme > Goal base, allowing for scope of the Goal to be computed from either its surface or base position).

Miyagawa and Tsujioka (2004)

Main claim: There are TWO distinct Goal types and positions:

a) A 'High' Goal, which is human/animate and interpreted as coming to possess the Theme.

b) A 'Low' Goal which is either human or inanimate and interpreted as being simply the location to which the Theme is transferred/the action of the verb is directed.

Further properties:

- c) In Japanese, a (human) NP which functions as either High or Low Goal can be marked in the same way, with –ni.

- d) High Goals are DPs and allow the floating of NQs. Low Goals are PPs and disallow floating NQs. The marker –ni is structurally *ambiguous* and is a postposition when attached to a Low Goal (resulting in a PP), but a case-suffix when attached to a High Goal (resulting in a simple NP/DP).

- e) Inanimate Goals are always Low Goals and can be marked with –ni or –e (resulting in a PP).

Summary representation: the possible base positions of Goals and Theme:

$Goal_{[High, DP, animate, possession, FQs]} > Goal_{[Low, PP, location, no FQs]} > Theme_{[DP, FQs]} > Goal_{[Low, PP, ...]}$

Both High and Low Goals present: $Goal_{HIGH} > Goal_{LOW} > Theme$

(40)   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.'

Both High and Low Goals present: $Goal_{HIGH} > Theme > Goal_{LOW}$

(41)   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.'

Ordering restriction: a Low Goal cannot precede a High Goal:

(42)   *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.'

Post-nominal FQs can occur with High Goals, but not with Low Goals:[2]

(43)   Taroo-ga   **gakusei-ni futari** nimotsu-o   okutta.
        Taroo-Nom student-Dat 2.Cl   package-Acc sent
        'Taroo sent packages to two students.'

(44)   *Daitooryoo-ga **kokkyoo-ni futatsu** heitai-o   okutta.
         president-Nom border-to   2.Cl   soldier-Acc sent
         'The president sent soldiers to two frontiers.'

An animate Goal which follows a Theme is a Low Goal. It does not allow FQs, in contrast to an animate High Goal:

---

[2] Note that inanimate NPs do allow for quantifier floating when they occur in the Theme role – example 34.

11

(45) a. Mary-ga   **tomodachi-ni futari** CD-o okutta.
        Mary-Nom friend-Dat   2.Cl   CD-Acc sent
        'Mary sent CDs to two friends.'

   b. (???)Mary-ga   CD-o   **tomodachi-ni futari** okutta.
            Mary-Nom CD-Acc friend-to   2.Cl   sent
        Intended: 'Mary sent CDs to two friends.'

Contrasts between relative scope patterns in Hoji (1985) and Miyagawa (1997) explained

Hoji's patterns involve the use of a High Goal (animate possessor of transferred Theme). High Goals, it is suggested, can never take scope under a following Theme. Hence High Goal > Theme sequences are unambiguous. Low Goals (end-point location) CAN take scope under Themes, as they can relate to a possible base position below (to the right of) Themes. Consequently, Low Goal > Theme sequences are ambiguous.

If a clear High animate-possessor Goal is placed with a Low, inanimate, non-possessor location Goal in Hoji's examples involving the verb 'send', these examples appear to become ambiguous (compare ex. (33)):[3]

(46)   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)

Bangla

Patterns with RECIPROCALS and ANAPHORS

A **reciprocal** in a Theme can be positioned before its antecedent in the Goal (44b):

(47) a. bhul-kore, kerani-babu [hori ar mala]$_i$-ke [Eke Onner$_i$ jOnmo-potrika] paThalo
        by-mistake Mr. Kerani   Hori and Mala-Obj each other-Gen birth certificate sent
        'By mistake, Mr. Kerani sent Hori and Mala each other's birth certificates.'

   b. bhul-kore, kerani-babu [Eke Onner$_i$ jOnmo-potrika] [hori ar mala]$_i$-ke   paThalo
        by-mistake Mr. Kerani   each other-Gen birth certificate Hori and Mala-Obj sent
        'By mistake, Mr. Kerani sent Hori and Mala each other's birth certificates.'

(48) shows a similar pattern. Note that (48b) is only acceptable if –ke does not occur on the Theme. If –ke occurs on the Theme, this seems to interfere significantly with its ability to be referentially dependent on the following Goal:

(48) a. jonaki [hori ebong mala$_i$]-ke [Eke Onner bondhoder]   dEkhalo
        Jonaki   Hori and Mala-Obj   each other-Gen friend.Obj.Pl showed
        'Jonaki introduced Hori and Mala to each others' friends.'

---

[3] Note that as ambiguity is observed in Miyagawa (1997)'s examples (39a/b), it should be concluded that the verb 'introduce' combines with a non-possessor, locative Low Goal.

b. Jonaki [Eke Onner bondhoder]   [hori ebong mala]-ke dEkhalo
   Jonaki each other-Gen friend.Obj.Pl Hori and Mala-Obj   showed
   'Jonaki introduced Hori and Mala to each others' friends.'

An anaphor may also seem to be able to occur as the Theme in a position preceding the Goal which is its antecedent (49b):

(49) a. ram (ayna bEbohar kore) jonaki$_i$-ke nije$_i$-ke dEkhalo
          Ram   mirror use   doing Jonaki-Obj self-Obj showed
          'Using a mirror, Ram showed Jonaki$_i$ himself$_i$.'

    b.   ram (ayna bEbohar kore) nije$_i$-ke   jonaki$_i$-ke   dEkhalo
          Ram   mirror use   doing self-Obj Jonaki-Obj showed
          'Using a mirror, Ram showed Jonaki$_i$ himself$_i$.'

These patterns provide support for the hypothesis that a Theme can originate in a position below a Goal and be 'reconstructed' to this position for the computation of co-reference relations.

   Theme$_i$ Goal   t$_i$

Example (50) suggests that it may also be possible for a Goal to originate in a position below a Theme and reconstruct to this position for binding/the establishment of co-reference relations:

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

   Goal$_i$ Theme   t$_i$

It should be noted that the Goal here is marked with a complex postposition '-kache' 'near'[4], and not –ke. It is not possible for an anaphor/reciprocal to occur in a –ke-marked Goal preceding a Theme which functions as the antecedent of the anaphor/reciprocal. Hence the [Goal$_i$ Theme t$_i$] underlying structure only seems to be supported with clearly locative Goals marked with spatial postpositions, not Goals marked with –ke.

Testing of a wide range of data also indicated that it is also sometimes NOT possible for an anaphor or reciprocal in a Goal or Theme to be referentially dependent on an NP in a following Goal/Theme. At the present point, it is not fully clear why these data do not show the patterning observed in (47) – (50).

(51) is an example of a Theme/Goal sequence not supporting the hypothesis of reconstruction and an inverse underlying order. (52) shows that the inverse linear sequencing to that in (51) is fully acceptable.

---

[4] '-kache' is actually the combination of a noun 'nearby' and the locative postposition '–e' 'to'. The Goal in (46) therefore has the literal form 'to each other's vicinity'.

(51)   *jonaki [Eke Onno$_i$]-ke (parTi-te) [hori ebong mala]-ke dEkhalo.
          Jonaki each other-Obj party-at   Hori and Mala-Obj   introduced
          'Jonaki introduced Hori and Mala to each other at the party.'

(52)   jonaki (parTi-te) [hori ebong mala]-ke [Eke Onno$_i$]-ke dEkhalo.
          Jonaki party-at   Hori and Mala-Obj   each other-Obj introduced
          'Jonaki introduced Hori and Mala to each other at the party.'

Concerning the difficulty in reconstruction of a reciprocal to a position to the right of its intended antecedent, pre-subject topicalization of a reciprocal seems to permit such reconstruction fairly easily:

(53)   [Eke Onno]$_i$-ke [hori ebong mala]$_i$ t$_i$ dekhlo
          each other-Obj Hori and Mala   saw.3
          'Hori and Mala saw each other.'

Patterns with BOUND VARIABLES

Various data tested suggest that a pronoun in a Theme/Goal can be interpreted as a bound variable which is dependent on an expression in a following Theme/Goal. This supports the hypothesis that the surface linear order of Theme and Goal is derived from an underlying structure with a reverse ordering (or hierarchical structuring) of these elements.

(54)   Mala [tar$_i$-offis] [prottek-SikkhOk$_i$]-ke dEkhalo.
          Mala his/her office each teacher-Obj   showed
          'Mala showed each teacher his/her office.'

Supports: Theme$_i$ Goal t$_i$

Further, similar example:

(55)   ?puliS [tar$_i$ chuRi] [prottek khuni$_i$]-ke pherot dilo.
           police his knife   each murderer-Obj return gave
          The police returned his knife to every murderer.

Sentences such as (56) and (57) with a Goal > Theme order where the Goal contains a pronoun intended to be co-referential with the following QP-Theme are not acceptable. This patterning constitutes evidence against the assumption that surface Goal > Theme orders can be derived from an underlying Theme > Goal base. If a Theme > Base were to be possible, one might expect that the Goals in (56) and (57) would be able to reconstruct to a position c-commanded by the Theme, allowing for the pronoun in the Goal to be bound by the Theme.

(56)   *kasTom inspekTar [tar$_i$ odhikari]-ke   [prottek passport$_i$] pherot dilo
           customs inspector   its owner-Obj   each passport   return gave
          'The customs inspector returned each passport to its owner.'

(57)   *ami [tar$_i$ lekhok]-ke [prottek-Ta gObeSona pOtro]$_i$ pherot paThalam
           I   his/her writer-Obj each-Cl   research paper   return sent
          'I returned each abstract to its author.'

Patterns with FLOATING QUANTIFIERS

A numeral + classifier pair can be separated from the NP it quantifies if the NP is a Theme. This patterning supports the hypothesis that a surface Theme > Goal order may be derived from an underlying Goal > Theme sequence via movement of the NP, stranding the numeral and classifier in the base position:

(58)   jonaki pen$_i$ mini-ke du-To$_i$ dilo
         Jonaki pen Mini-Obj 2.Cl   gave
         'Jonaki gave two pens to Mini.'

         NP$_{[Theme]-i}$ Goal [Num.Cl t$_i$]

(59)   jonaki chatro$_i$ [Eke Onner$_i$ SikkhOk-der]-ke sudhu-du-To   dEkhalo
         Jonaki student each other-Gen teacher-Obj.Pl-Obj only 2.Cl introduced
         'Jonaki introduced only two students to each others' teachers.

However, NPs which represent Goals CANNOT be separated from numeral-classifier pairs. In (60), the numeral-classifier 'du-To' can only be interpreted as modifying the following noun 'packet', not 'floated' and quantifying the preceding noun 'student'

(60)   jonaki chattro-ke du-To pEket paThieche.
         Jonaki student-Obj 2.Cl packet sent
         Only: 'Jonaki sent two packets to the student.'
         Not: 'Jonaki sent packets to (the) two students.'

Similarly, a numeral-classifier pair separated from a Goal cannot occur in a position following a Theme in a Goal > Theme order:

         *NP$_{[Goal]i}$ Theme [Num.Cl]$_i$

The relevant generalization seems to be that NO argument marked with –ke allows quantifier floating, whether the argument is a Theme or Goal. In this property, -ke-marked NPs behave just like all other PPs in disallowing quantifier float:

(61)   *lok-gulo [$_{PP}$ Sohor theke] Sudhu-matro du-To eSeche
           person-Pl   city from   only   2.Cl   came.3
         Intended: 'The people came from only two cities.'

Numeral-classifier pairs can only be repositioned *within* PPs, following the head noun but preceding the postposition (Bhattacharya 1999):

(62)   lok-gulo [Sohor$_i$ du-To t$_i$ theke] eSeche.
         person-Pl city   2.Cl   from   came
         'The people came from the two cities.'

Goals are always marked with –ke and do not permit deletion of –ke. FQ patterns consequently support the assumption that Theme > Goal orders may be derived from Goal > Theme structures, but are uninformative with regard to the possibility that Goal > Theme sequences can be derived from underlying Theme > Goal structures.

Patterns with QUANTIFERS and RELATIVE SCOPE

When both Theme and Goal are quantificational elements/QPs which can potentially interact with each other in terms of relative scope, a striking and persistent asymmetry occurs in Goal>Theme and Theme>Goal orders.

Goal>Theme orders are unambiguous. The QP-Goal takes scope over the QP-Theme, and reverse scope QP-Theme > QP-Goal is not possible.

        word order: Goal > Theme
        relative scope only: Goal > Theme

(63-66) use both 'introduce' and '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 indicate the same conclusions.

(63)   hori [prottek-SikkhOk]-ke [kono/Ek-jOn chatro] dEkhalo.
        Hori each-teacher-Obj   some/1.Cl student   introduced
        'Hori introduced some student to every professor.'
        → every > some   ✓linear
           *some > every   *non-linear

(64)   hori [kono SikkhOk]-ke [prottek-Ti chattro] dEkhalo
        Hori some teacher-Obj   each-Cl student] introduced
        'Hori introduced every student to some professor.'
     →   some > every   ✓linear
       *every > some   *non-linear

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

(66)   hori [prottek SikkhOk]-ke [kono boi] dilo
        Hori each teacher-Obj   some 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 be what one would expect, given the observation that relative scope corresponds to surface linear sequencing with other argument combinations in Bangla: the relative positioning of subjects before objects results in a unique scopal interpretation:

        word order: subject > object

        relative scope only: subject > object

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

What is now unexpected, however, is that a linear sequencing of Theme > Goal is AMBIGUOUS, and allows for either 'linear scope' (i.e. Theme > Goal) or inverse, non-linear scope: Goal > Theme:

(67)   hori [kono/Ek-jOn chatro] [prottek-SikkhOk]-ke dEkhalo.
       Hori some/1.Cl student   each-teacher-Obj   introduced
       'Hori introduced some/a student to every professor.' (cf ex.63)
       → some > every   ✓linear
          every > some   ✓non-linear

(68)   Hori [prottek-Ti chattro] [kono SikkhOk]-ke dEkhalo
       Hori every-Cl student   some teacher-Obj introduced
       'Hori introduced every student to some professor.' (cf ex.64)
       → either: every > some   ✓linear
          or: some > every   ✓non-linear

(69)   hori [prottek-Ta-boi] [kono-SikkhOk]-ke dilo
       Hori each-Cl book   some teacher-Obj gave
       'Hori gave every book to some professor.' (cf ex.65)
       → either: every > some ✓linear
          or: some > every   ✓non-linear

(70)   Hori [kono boi] [prottek SikkhOk]-ke dilo
       hori some book each teacher-Obj   gave
       'Hori gave some book to every professor.'
       → either: some > every ✓linear
          or: every > some ✓non-linear

CONCLUSIONS: explanation of the relative scope asymmetries in Goal/Theme orders

These patterns consistently suggest the existence of an unambiguous single base structure [Goal > Theme] which can be converted into surface [Theme$_i$ Goal t$_i$] sequences.

[Theme$_i$ Goal t$_i$] sequences are quantificationally ambiguous because the scope of the Theme can be computed either from its surface position or from an underlying position lower in the structure (where it is 'moved' from).

[Goal Theme] sequences are unambiguous because the scope of the Goal cannot be established through any structurally lower position.

Overt 'TWO GOAL' structures

It is possible and not unnatural for two Goals to occur overtly in Bangla (unlike English, where two Goal structures are often quite awkward ?'John sent Mary the packet to Fresno.'). 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 transfer process. The Recipient/Possessor Goal is marked with –ke, and is animate.

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

As in Japanese, there is a fairly rigid, fixed order of Recipient Goal > Locative Goal which cannot be easily inverted with any scrambling:

(72)   *jonaki kolkata-te   hori-ke   pEket-Ta paThieche
         Jonaki Calcutta-to Hori-Obj packet-Cl sent

We will now refer to these Goal as the High Goal (Recipient-Possessor) and Low Goal (Locative end point of transfer of Theme).

It is also quite difficult for the Theme to be (re-)positioned before the High Goal when both Goals are overtly present:

                    Theme > High Goal > Low Goal
(73)   ??jonaki [pEket-Ta] hori-ke   kolkata-te paThieche
         Jonaki packet-Cl   Hori-Obj Calcutta-to sent

However, the theme can easily be (re-)positioned between the two Goals:

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

Relative scope interactions with two overt goals

Where both High and Low Goals are quantificational/QPs, it is found that the relative scope of High and Low Goals is fixed and unambiguous: the High Goal scopes over the Low Goal, (just as in Japanese):

                 High Goal   Low Goal   Theme
(75)   jonaki [kaw]-ke [prottek-Ta jayga]-e [Ek-Ta pEkeT] paThieche
        Jonaki someone-Ob each place-to   1.Cl packet   sent
        '(?)Jonaki sent someone a packet to every place.'
        → some > every   ✓linear
          *every > some   *non-linear

Additionally, the High Goal takes obligatory scope over the Theme:

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

The unambiguous relative scope between a High Recipient-Possessor Goal and Theme in Goal > Theme order is expected. Previous data have shown that a Goal > Theme order is unambiguous (examples 63-66).

The patterning which is quite unexpected, revealing and also challenging is the occurrence of scopal ambiguity between Low Goal and Theme. The scope of the Low Goal and the Theme is ambiguous in both Goal > Theme and Theme > Goal orders:

                    High Goal   Low Goal   Theme
(77)   jonaki [mala]-ke [kono-jayga]-e [prottek-Ta pEket] paThieche
        Jonaki Mala-Obj some place-to each-Cl packet   sent
        '?Jonaki sent Mala each packet to some place.'
        → either: some > every   ✓linear
            or: every > some   ✓non-linear

                    High Goal   Theme   Low Goal
 (78)   jonaki [Mala]-ke [prottek-Ta pEket] [kono-jayga]-e paThieche
        Jonaki Mala-Obj each-Cl packet   some place-to   sent
        'Jonaki sent Mala each packet to some place.'
        → either: every > some   ✓linear
            or: some > every   ✓non-linear

Explaining the scopal ambiguity of Low Goal and Theme

An analysis of the relative scope ambiguity of Low Goal and Theme in line with the account of ambiguity in earlier Theme > Goal orders would attribute the interpretations of (77) and (78) to the occurrence of two different Low Goal/Theme base structures which can both be converted into linearly-inverse surface sequences:

BASE STRUCTURE I: Low Goal > Theme

can be converted into surface order I': $Theme_i$ > Low Goal > t_i

Scope of the Theme relative to the Goal in I' can be computed from its surface position (high scope over the Goal), or its underlying, lower position (low scope relative to the Goal).

BASE STRUCTURE II: Theme > Low Goal

can be converted into surface order II': $Low Goal_i$ > Theme > t_i

Scope of the Goal relative to the Theme in II'' can be computed from its surface position (high scope over the Theme), or its underlying, lower position (low scope relative to the Theme).

→ support for two base structures with Low Goals and Themes

QUESTION: How do the patterns in (77) and (78) compare with earlier observations relating to Goal/Theme pairs and relative scope?

GENERALIZATIONS/CONCLUSIONS:

- The patterns in (63-70) suggested the existence of just a single base structure: Goal > Theme.

- The single base hypothesis resulting (63-70) would not conflict with the two-base hypothesis from (77-78) if the former referred to High Goal + Theme combinations, and the latter to Low Goal + Theme structures. The High Goal might be fixed, but the Low Goal unfixed relative to the Theme: High Goal > Low Goal/Theme

- The verbs used in (63-70) were 'give' and 'introduce'. 'Give' is expected to induce a High Goal (Possessor-Recipient). What about 'introduce'? The Goal with 'introduce' is not interpreted as coming to possess the Theme, and has no literal meaning of receiving. However, the Goal with 'introduce' also no literal meaning of end-point location. It is therefore unlike either prototypical High or Low Goals.

- Japanese ditransitive data with 'introduce' is ambiguous in both Goal/Theme and Theme/Goal orders (39a/b, and fn.3), leading to the conclusion that 'introduce' has a Low Goal in Japanese. Perhaps verbs such as 'introduce' may be classified in different ways in different languages, not having the prototypical semantics of either High or Low Goals. Bangla may group 'introduce' with 'give' as having a High Goal. High Goals are typically human, hence the human property of the Goal with 'introduce' may lead to its treatment as a High Goal in Bangla.

SUMMARY OF PATTERNS

pattern type	supports base type:
anaphors and reciprocals	Goal-$_{HIGH}$ > Theme Theme > Goal-$_{LOW}$
bound-variable pronouns	Goal-$_{HIGH}$ > Theme not: *Theme > Goal-$_{HIGH}$
floating quantifiers	Goal-$_{HIGH}$ > Theme
QP relative scope	Goal-$_{HIGH}$ > Theme not: *Theme > Goal-$_{HIGH}$
2 Goal QP structures	Goal-$_{HIGH}$ > Goal-$_{LOW}$/Theme

Language-internal variation in encoding of High/Low Goals

The ability for a ditransitive verb to occur in the frame associated with a High Goal structure may not always be predictable from its meaning. The verb 'donate' would seem to combine with a Possessor/Recipient Goal in the same way that 'give' does. However, the High Goal structure associated with Possessor Goals is not available with 'donate', unlike 'give' and 'send':

(79) a. John donated $5,000 to the charity.
    b. *John donated the charity $5,000.

Similarly, 'show' and 'introduce' in English do not both allow for the same argument realization frames. 'Show'

(80) a. John showed the picture to me.   b. John showed me the picture.
(81) a. John introduced his friend to Mary.
    b. *John introduced Mary his friend.
introduced

A remaining puzzle

Quite surprisingly, when a High Goal is not overtly present, the Low Goal/Theme relative scope ambiguity observed in structures such as (77) seems to disappear:

(79)   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 what to conclude from the patterning found in (79), and further testing is 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. More comparison of two goal and single goal patterns will be needed before a stronger generalization can be made.

References
Bhattacharya, Tanmoy. (1999), The Structure of the Bangla DP. Doctoral dissertation, University of London.
Hoji, Hajime. (1985), *Logical Form Constraints and Configurational Structures in Japanese,* PhD Dissertation, University of Washington.
Miyagawa, Shigeru. (1997), Against Optional Scrambling. *Linguistic Inquiry,* 28:1-26.
Miyagawa, Shigeru and Takae Tsujioka. (2004), Argument Structure and Ditransitive Verbs in Japanese. *Journal of East Asian Linguistics* 13:1:1-38.