

LONG-DISTANCE AGREEMENT, SECONDARY PREDICATES, AND COMPLEX PREDICATION: THE  
EVIDENCE FROM HINDI

Long-Distance Agreement (LDA) in Hindi-Urdu has been the subject of intense research in minimalist analyses (Boeckx 2004, Bhatt 2005, a.). Starting from canonical examples which follow the pattern in (1), the most important questions have been revolving around: a) the nature of the projection initiating the LDA; b) the specific formal motivation behind a projection entering into an agreement relation with an argument which is not (at least initially) merged in its domain; c) establishing formal properties of those instances in which LDA is possible/blocked (Mahajan 1989); d) whether this is an intrinsic property of the ergative-absolutive pattern; e) the root of the characteristic ‘specificity’ readings:

- (1) Vivek-ne [kitaab parh-nii] chaah-ii]]  
 Vivek.M.ERG book.F. read-INF.F. want-PFV.F.  
 ‘Vivek wanted to read the book.’

However, one LDA instance that has received less attention in the literature is the one seen with secondary predicates, as illustrated in (2) with the intensional predicate *sooch-i* (‘think):

- (2) Vivek-ne bili choot-i sooch-i.  
 Vivek.M.-ERG. cat.F. small-F. think-PFV.F.  
 ‘Vivek considered the cat/a specific cat small.’  
 # ‘Vivek considered some cat or other small.’

Sentences like (2) appear to be constrained by the same type of restrictions when it comes to the implementation of multiple agreement: a) parasitic agreement on the secondary predicate is obligatory (3a, b); b) the obligatoriness of specificity readings: the intuition of native speakers as well as the indication of grammars is that the shared argument in (2) can only be interpreted as referring to a specific cat, salient in the discourse, or identifiable contextually.

- (3) a) \*Vivek-ne bili choot-i sooch-aa.  
 Vivek.M.-ERG. cat.F. small-F. think-PFV.M.SG./D.SG  
 INTENDED: ‘Vivek considered the cat small.’  
 b) \*Vivek-ne bili choot-aa sooch-ii.  
 Vivek.M.-ERG. cat.F. small-M. think-PFV.F.SG.  
 INTENDED: ‘Vivek considered the cat small.’

Moreover, LDA secondary predicates also pass canonical tests, which are generally taken to indicate the restructuring character of LDA configurations. For example, a polarity sensitive item (PSI) in the subject position of the matrix predicate in (4) can be bound by the negative marker *nahī* placed in the domain of the secondary predicate:

- (4) ek-bhii laṛke-ne bili nahī: choot-ii sooch-ii.  
 one-PSI. boy-ERG. cat.F. NEG. small-F. think-PFV.F.SG.  
 ‘Not even a single boy considered the cat small.’

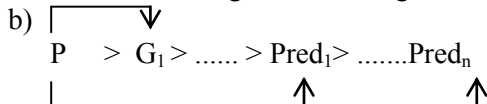
Given these observations, the further questions are: a) what do LDA instances with secondary predicates tell us about the process of long-distance agreement with non-finite embeddings; b) what are the interactions between restructuring, secondary predicates, and LDA; c) what do data like (2) indicate about the structure of secondary predicates, more specifically about the debate between a small-clause structure (GB literature following Chomsky 1981, Stowell 1981, 1983, etc.) and a complex predicate configuration (Chomsky 1957, Chomsky 1986, etc.).

This paper proposes an analysis whose main ingredients are the following: i) the process of long distance agreement with secondary predicates is initiated by *v* flagging complex predicate configurations; ii) the shared argument is introduced *above* the matrix predicate by a functional projection with specificity/evidential semantics which is necessary for the construction of intensional predicates like *consider/seem/appear*. This straightforwardly explains the ‘wide-scope’/ ‘specificity’ readings (Williams 1983); iii) secondary predicates do not project small-clause configurations, but rather form complex predicates with the matrix predicate (Chomsky 1957, Williams 1983, a.o.). The current account follows

an enriched implementation of Multiple Agree (Hiraiwa 2005), by assuming that secondary predicates are integrated into the domain of the matrix predicate by a process of complex predicate formation (5a):

(5) PRINCIPLE OF COMPLEX PREDICATE FORMATION

a) [uPredicate] features of more than one predicate in the same phase are checked derivationally simultaneously by a probe who has preliminarily established an AGREE relation with a goal containing the relevant interpretable [ $\phi$ ] features.



One salient question obviously pertains to the nature of P. The two main hypotheses proposed in the appear to be problematic when applied to secondary predicates under LDA in Hindi. On the one hand, one source of the Multiple Agree process has been assumed to reside in a clitic projection generated above the matrix and the secondary predicate (as in 6, Boeckx 2004 who builds on insights provided by the clitic – doubling contexts in Romance). But this implementation lacks the empirical motivation in Hindi – specificity readings with secondary predicates under LDA do not permit/require clitic-doubling.

(6) [<sub>CIP</sub> Cl [...[<sub>VP</sub> Part. Obj.<sub>-clitic</sub>]]] LDA (Boeckx 2004)

On the other hand, assuming that the matrix T is the probe would run into problems when it comes to examples like (7), in which the matrix + secondary predicate complex modify a shared argument in a non-finite context. Note that in such configurations, default agreement on the secondary predicate results in unacceptability:

(7) choot-i                      sooch-i                      bili.  
 small-F.SG.                      think-PFV.F.                      cat. F.  
 ‘cat considered small.’

(8) \*choot-a                                      sooch-i                      bili./                      \*choot-i                      sooch-a                      bili.  
 small-DEF.SG.                                      think-PFV.F.                      cat. F.                      small-F.SG.                      think-PFV.DEF.                      cat. F.  
 ‘cat considered small.’

The proposal in this paper addresses the nature of the functional projection initiating the Multiple Agree process from a different perspective. The source of LDA is assumed to be a  $\nu$  that flags complex predicate configurations. For the secondary predicates, the analysis builds on many recent observations according to which shared arguments with secondary predicates are normally felicitous if found under the scope of direct evidence (9) (Matushansky 2002, Asudeh And Toivonen 2008, etc.). The precise assumption is that the so-called intensional predicates are obtained by merging a verbal root with a functional projection indicating the nature of the (direct/indirect) evidence (just like a predicate like *see* has as its lexical property the specification of visual evidence). This functional projection introduces the shared argument, which being found structurally above the matrix predicate, will receive an (direct/indirect) evidential, wide-scope reading (10). As the argument must be introduced by the evidential functional projection above the matrix predicate, the embedded predicate will not have a clausal structure, hence its agreement will end up being dependent on the matrix predicate (Rothstein 1983, 2005, etc.).

(9) *I walked into the squire’s room when he wasn’t there. I saw medicine bottles, Kleenexes, and smelled a foul, sickly stench.*

a. The squire seemed to be sick.      b. # The squire seemed sick.

(10) .....  $\nu$  [shared argument [ $\nu_{evidence}$  + intensional predicate] [secondary predicate]]

The LDA is initiated by the  $\nu$  merged above the evidential projection which introduces the shared argument. After this head establishes an agreement relation with the shared argument, it will simultaneously value the uninterpretable  $\phi$  features of the two predicate. This account will not only explain the Hindi LDA data with secondary predicates, in which the shared argument can only be interpreted as *strong* (as opposed to other LDA environments where narrow-scope readings might be found, see Bhatt 2005), but will also put the configuration into a unitary cross-linguistic picture, together with the languages in which the evidential marking is overt in such instances (Japanese, Turkish).

## Verb Movement and Wh in Malayalam

Although the issue of the position of the verb in a clause has been a widely discussed point at least since Pollock (1989), head final languages posed some difficulties due to the string vacuous nature of the verb movement to higher functional positions. Koizumi (2000) has argued that a prototypical head final language like Japanese exhibits overt movement of the verb to C.

This paper shows that the verb overtly moves to C in Malayalam as well, a South Indian language traditionally described as an SOV head final language. This raises concern about the argument in the literature that Malayalam instantiates a Focus position immediately before the verb (Jayaseelan 2001) to which the question words in Malayalam obligatorily move. It is shown in the paper that contra Jayaseelan, a bare Wh in Malayalam is indeed in situ; it is rather the movement of other elements that creates the illusion that the Wh moves to an immediately preverbal position.

The verb in Malayalam always appears at the end of the sentence, deviation from this results in ungrammaticality which makes it difficult to pin-point the position of the verb:

1. priyaye rajan kandu  
priya-Acc rajan saw  
Rajan saw Priya
2. \*rajan kandu priyaye

Assuming that co-ordination is possible only of constituents, (3) shows the Subject and the Object forming a constituent with the exclusion of the verb.

3. [rajane priyay-um] [meeraye aniyam-um] kandu  
rajan-Acc priya-Conj meera-Acc aniyam-Conj saw  
Lit: [Priya Rajan] and [Meera Aniyam] saw  
'Priya saw Rajan and Aniyam saw Meera'

This constituent is impossible to form if the verb stays in its base position, suggesting that the verb has moved out of the vP.

A gapping analysis is immediately ruled out because of the SOV character of Malayalam. A conjunction reduction analysis also is not possible because finite clauses cannot be conjoined in the language:

4. \*[rajane priya kand-um] [meeraye aniyam kand-um]  
rajan-Acc priya saw-Conj meera-Acc aniyam saw-Conj  
Priya saw Rajan and Aniyam saw Meera

So any analysis that takes (4) as a base with the verb inside the VP is bound to run into trouble. The point is further substantiated by the *do* support facts in Malayalam. In (5), the Tense and Finiteness information appears on the *do* support and the the verb 'see' appears in a nonfinite form, lending itself amenable to co-ordination.

5. [priya rajane kan-uka-um]  
priya rajan-Acc see-nonfinite-Conj  
[aniyam meeraye kan-uka-um] ceythu  
aniyam meera-Acc see-nonfinite-Conj did  
'Priya saw Rajan and Aniyam saw Meera'

The ungrammaticality of conjunction reduction is evident here:

6. \*[priya rajan-e -um] [aniyam meeraye kanuka-um ceythu  
priya rajan-Acc Ø-Conj aniyam meera-Acc see-Conj did  
'Priya saw Rajan and Aniyam saw Meera'

Adopting Cinque's hierarchy of adverbs and using it as a diagnostic measure, it can be shown that the verb moves to the C domain.

7. [rajane bha:gyathinu priyay-um]  
rajan-Acc fortunately priya-Conj  
[meeraye daurbha:gyathinu aniyam-um] kandu  
meera-Acc unfortunately aniyam-Conj saw  
Lit: Rajan fortunately Priya and Meera unfortunately Aniyam saw

'Fortunately Priya saw Rajan and unfortunately Aniyam saw Meera'

Since the topicalised phrase precedes the adverb, the verb should be above Mood<sub>evaluative</sub> for the constituent to be formed. And if we take Finiteness to be at the C level, then this means that the verb, when in a Finite form, is in the C domain. Furthermore, note that the do-support option becomes very degenerated with clauses that have a Topicalised object phrase:

8. \* $\left[ \begin{array}{l} \text{rajane} \quad \text{priya} \quad \text{kanuka-um} \\ \text{rajan-Acc} \quad \text{priya} \quad \text{see-Conj} \\ \left[ \text{meeraye} \quad \text{aniyan kanuka-um} \right] \quad \text{ceythu} \\ \text{meera-Acc} \quad \text{aniyan see-Conj} \quad \text{did} \end{array} \right]$

The ungrammaticality of (8) can be used to argue that the topicalised element merged above TP disrupts the constituency relations with a non-finite non-tensed verb still below TP, making the sentence ungrammatical since T is manifested on *do*.

The argument that the verb moves to C has direct consequences for the analysis of Wh in the language. Malayalam has been conventionally argued to be a Wh in situ language (e.g.9).

9.  $\left[ \begin{array}{l} \text{rajan} \quad \text{a:r-e} \quad \text{kandu?} \\ \text{rajan} \quad \text{who-Acc} \quad \text{saw?} \\ \text{Who did Rajan see?} \end{array} \right]$

However, the inability of a Subject Wh to appear at the clause initial position (e.g. 10,11) has prompted Jayaseelan (2001 et.seq.) to argue that the Wh in Malayalam undergoes obligatory movement to a Focus position immediately before the verb which he characterises as a vP peripheral Focus position.

10. \* $\left[ \begin{array}{l} \text{a:ru} \quad \text{rajan-e} \quad \text{kandu?} \\ \text{who} \quad \text{rajan-Acc} \quad \text{saw?} \\ \text{Who saw Rajan?} \end{array} \right]$
11.  $\left[ \begin{array}{l} \text{rajan-e} \quad \text{a:ru} \quad \text{kandu?} \\ \text{rajan-Acc} \quad \text{who} \quad \text{saw?} \\ \text{Who saw Rajan?} \end{array} \right]$

However, once it is shown that the verb moves to C, the immediately-preverbal focus position is called into question. It will be shown in the presentation that the requirement is not that a Wh be moved to a preverbal focus position, but that a [- Specific] element cannot occupy the sentence initial Topic position that makes (10) ungrammatical. It will be argued that the V to C movement in effect extends the phase boundaries (see Gallego and Uriagereka 2006, Den Dikken 2005, Baker 1988 for similar arguments), bringing the Wh within the search domain of a Wh probe in C, and thus making the corresponding feature on a Wh word accessible. This renders the Wh as in situ. This argument is substantiated by data drawn from island effects and intervention effects. For example, like most of the well studied Wh in situ languages, Malayalam also allows for a Wh inside a Relative Clause or a complex NP to receive a question interpretation. In fact, adjuncts also are open for Wh interpretation. However, *because* clauses act as islands (e.g.12). Subscribing to proposals that merge *because* clauses at the C domain, this piece of datum is used to demonstrate that a Wh phrase merged above the projection that the verb moves to is not available for the Wh probe on C and hence the ungrammaticality.

12. \* $\left[ \text{a:runirbandhiccathu} \text{kondu} \right]$  police avane arrest ceythu?  
who force.Sg.N because police him arrest did  
≈Who is X such that the police arrested him because X forced them to do so?

#### References:

- Den Dikken, Marcel (2006) : *Realtors and Linkers. The Syntax of Predication, Predicate Inversion and Copulas*, Cambridge:MIT Press
- Gallego, Angel and Uriagereka, Juan (2006) : "Sub-Extraction from Subjects", Ms. UAB/UMD
- Gamut, L. T. F. (1991) : *Logic, Language and Meaning*. University Press of Chicago: Chicago
- Jayaseelan, K. A. (2001) : "IP-internal Topic and Focus Phrases". *Studia Linguistica* 55.
- Koizumi (2000): "String Vacuous Overt Verb Raising", *Journal of East Asian Linguistics* 9, 227-285.
- Tsai, Wei-Tien Dylan (2008) : "Left periphery and how-why alternations". *Journal of East Asia Linguistics* 17:83-115.

## Double object fronting in Bangla

### 1. Background

Bangla is a SOV Nom-Acc Indo-Aryan language. A nominative subject in Bangla obligatorily triggers agreement on the finite verb. Furthermore, in finite clauses, the inflectional morphemes appear as suffixes on the verb root. As far as word order is concerned, Bangla allows considerable freedom in the positioning of verbal arguments. As with other scrambling languages, any departure from the canonical word order bears information structural import.

### 2. The problem

Bangla allows both objects in a Double Object Construction (DOC) to be optionally fronted, which marks the subject as the constituent bearing contrastive focus. The discourse neutral word order is given in (1a), and sentence in (1b) exemplifies double object fronting. The aim of this paper is to provide a syntactic derivation for the string in (1b), along with an account of its information structural significance.

- |                                      |               |                                      |               |
|--------------------------------------|---------------|--------------------------------------|---------------|
|                                      | [SUB IO DO V] |                                      | [IO DO SUB V] |
| (1) a. Apu Raja-ke ek-ta boi diyechi |               | b. Na, Raja-ke ek-ta boi AMI diyechi |               |
| Apu Raja-DAT one-CL book gave        |               | No, Raja-DAT one-CL book I gave      |               |
| ‘Apu gave Raja a book’               |               | ‘No, I gave Raja a book’             |               |

### 3. The syntax

There are two possible derivations for the string in (1b). Firstly, it could have resulted via movement of individual arguments to a position hierarchically superior to the derived position of the subject, as schematically illustrated in (2a). Alternatively, (1b) may be the output of beheaded VP movement. In this scenario, the verb would vacate the VP first, landing in a position below the subject. Next, the remnant VP moves to a position higher than the subject, as shown in (2b).

- |   |  |
|---|--|
| (2) a. IO DO S                            | [ <sub>VP</sub> t <sub>IO</sub> t <sub>DO</sub> V] |
| b. [ <sub>VP</sub> IO DO t <sub>V</sub> ] | S V t <sub>VP</sub>                                |

The interpretation of indefinites provides a piece of evidence in support of the beheaded VP movement analysis. Consider the sentence in (3a), which may be naturally continued with the sentence provided in the brackets. This shows that an indefinite DO in its base position may be interpreted as a non-specific indefinite. However, a fronted indefinite DO, as in (3b), is necessarily interpreted as specific. This is because the bracketed sentence is utterly impossible as a continuation for the sentence given in (3b).

- |  |
|--|
| (3) a. Ami to-ke ek-ta boi dite chai...                                    |
| I you-DAT one-CL book give.INF want  |
| (kintu kon boi-ta debo ekhono thik kori ni)                                |
| but which book-CL will.give yet decide NEG                                 |
| ‘I want to give a book, but I haven’t yet decided which one’               |
| b. Ek-ta boi ami to-ke dite chai...  |
| one-CL book I you-DAT give.INF want  |
| (#kintu kon boi-ta debo ekhono thik kori ni)                               |
| but which book-CL will.give yet decide NEG                                 |
| ‘There is a book that I want to give you, but I haven’t decided which one’ |

We know that a weak determiner may remain in the domain of existential closure ( $vP$ ) and lend itself to a cardinal/non-specific interpretation, as in (3a). Alternatively, it may be outside of the domain of existential closure, in which case it receives a specific interpretation (Diesing 1992). If double object fronting were derived via the movement of individual arguments, we would expect an indefinite to be necessarily interpreted as specific. However, the example in (4) shows, this is not the case. In (4), the DO is not in its base position, yet it retains the non-specific interpretation. This suggests that the indefinite DO, though moved, it still within the domain of existential closure.

(4) Raja-ke ek-ta boi Anu diyeche, kintu kon boi-ta je diyeche ami jani na  
 Raja-DAT one-CL book A gave but which book-CL REL gave I know not  
 'It's Anu who gave Raja a book, but I don't know which book she gave him'

As mentioned earlier, in the Bangla finite clause, the verb is adorned with inflectional *suffixes*. One could assume that a fully inflected verb is created in the syntax, as the verb undergoes head movement through the inflectional layer of the clause.<sup>1</sup> This, then, provides a motivation for the first step of the beheaded VP movement analysis, namely V movement. Furthermore, verbal idioms provide a strong empirical evidence for the existence beheaded VP movement in Bangla. An example of a verbal idiom is provided in (5).

(5) shaak diye mach dhaka  
 spinach with fish cover

Lit: 'To cover the fish with spinach' Idiomatic interpretation: 'To hide something'

When the verbal constituents undergo fronting, as shown in (6a), the idiomatic interpretation is not only preserved, but it is also the more salient reading of the sentence. However, when only one of the verbal constituents is fronted, as in (6b), the idiomatic reading is no longer available. The fact that idiomaticity is preserved in (6b) suggests that the fronted category is a VP, which contains a copy of the verb.

(6) a. Shaak diye mach ami kokkhono dhaki na  
 spinach with fish I ever cover NEG  
 'I have never hid anything'

b. Shak diye ami mach dhaki ni, (mangsho dekhechi)  
 spinach with I fish cover NEG meat covered  
 'I did not cover the fish with the spinach, I covered the meat' \*Idiomatic reading

#### 4. Information structural consequence

When both objects are fronted, as in (1b), the subject naturally becomes the locus of contrastive focus. It should be noted here that double object fronting is felicitous only when both objects are discourse anaphoric. I assume an architecture of the grammar that allows for an interface between syntax and information structure (cf. Eilam 2011). At the end of the syntactic derivation, the IS component marks the discourse anaphoric items as such; subsequently, when the string is shipped off to the PF wing, main stress is assigned to discourse new material only. In other words, in my analysis, contrastive focus is result of syntactic movement of discourse anaphoric items. This position differs from the one defended in Jayaseelan 2004, for instance, where he argues that a focused constituent obligatorily undergoes focus-driven movement into the Spec position of a dedicated functional projection that immediately dominates vP. However, if the nominative subject is assumed to raise to [Spec, TP] due to the EPP feature of T, it is not clear how the EPP feature can be checked if the subject were to remain in a low FocP in sentences such as (1b).

#### 5. Conclusion

A study of the alternation illustrated in (1) shows that beheaded VP movement is permissible in Bangla. Furthermore, the information structural fact discussed here could be accounted for without appealing to focus-driven movement.

**Reference:** Eilam, Aviad. 2011. Explorations in Informational Component. Doctoral dissertation, UPenn.

Jayaseelan, K.A. 2008. Topic, focus and adverb position in clause structure. *Nanzan Linguistics* 4: 43 – 68.

---

<sup>1</sup> Following standard practice in the study of South Asian languages, I assume Bangla is head final. Thus, trees are right branching, with both complements and specifiers appearing on the left of the head.

## **Information structure and prosodic focus in Bangla: Comparing production and perception**

This paper investigates the prosodic distinctions available in Bangla/Bengali to differentiate between focus-types and tests whether the availability of prosodic cues interacts with syntactic position. Bangla has canonical SOV order and sentence-initial elements tend to be topics. The immediately preverbal position is the *default focus position* for both new-information and contrastive focus, though focused constituents can also occur elsewhere. Contrastive focus can also be marked morphologically with *-i*. To broaden our understanding of the relationship between information-structure/prosody/syntax, we investigated production and perception of new-information focus and contrastive/corrective focus in Bangla. We conducted an **elicitation study** (N=5) followed by a **perception study** (N=12) to investigate (i) whether Bangla speakers distinguish new-information vs. contrastive focus prosodically and (ii) whether the position of the focused constituent matters. Since Bangla has a default focus position, we wanted to see whether prosodic distinctions between focus-types would be amplified in that position.

In both studies, we manipulated (i) *focus type* (new-information focus/contrastive focus) and (ii) the *grammatical role of the focused constituent* (subject/object). In the **elicitation phase**, new-information focus and contrastive-focus sentences were elicited from speakers using a question-answer paradigm (ex.1). *Wh-questions* were used to elicit responses with new-information focus (1a,b); *yes/no questions* to elicit contrastive focus (1c,d).

**Perception study:** Speakers' responses from the elicitation phase were used as stimuli for this study. For each grammatical role (subject/object), the listeners saw a wh-question and a yes-no question on the screen and heard a sound file that had been elicited either by a wh-question or a yes/no question of the same grammatical role (ex.2a,2b). Listeners were instructed to choose the question that the auditorily-presented file would be the most appropriate answer for. This allowed us to use human ears as our 'tool' to test whether the speakers were making a distinction between new-information focus and corrective focus. *If listeners make a distinction between the two focus types, we can attribute this to differences in the intonation/prosody produced by the speakers*, as the sentences were otherwise identical (ex.1).

**Perception results:** Listeners showed an overall preference for wh-questions ( $p's < 0.05$ ). However, in *object conditions*, this preference was lower with sound-files elicited as yes/no-questions than wh-questions ( $p's < 0.05$ ). In contrast, *subject conditions* showed no significant differences, triggering mostly wh-choices. Thus, *listeners are prosodically distinguishing between focus-types only when the focused constituent is an object, in the default focus position*.

We also conducted **acoustic analyses** to see what dimension encodes the difference in focus type. Prior work has shown that, crosslinguistically, pitch and duration are used to signal focus (Ladd 1996, Watson et al 2008), so we focused on these dimensions. (Due to the presence of an initial low tone (see Hayes & Lahiri 1991), mean F0 analyses were conducted on 10 time-normalized segments centered at the offset of the noun, using Yi Xu's *Prosody Pro* praat script). The results show that *new-information objects have lower mean F0 than contrastively-focused objects* ( $p's < .05$ ). Furthermore, focused objects overall have higher mean F0 than unaccented objects (replication of Hayes & Lahiri 1991). Like objects, *new-information subjects have significantly lower mean F0 than contrastively-focused subjects* ( $p's < .05$ ). Crucially, unaccented subjects do not differ significantly from contrastively-focused or new-information subjects: All subjects have relatively high F0s, unlike to objects, presumably due to initial prominence and F0 declination. (There were no significant differences in excursion or duration for subjects or objects.) Thus, we suggest that the asymmetrical behavior of subjects vs. objects – the fact that the difference between focus types is not reliably perceptible on subjects but is perceptible on objects – can be attributed to 'crowding': F0 height on a subject is not a reliable cue to focus type since unfocused subjects also have high F0.

**As a whole**, our findings indicate that Bangla, which has positional as well as morphological focus marking, also uses prosodic cues to differentiate new-information vs. contrastive focus, but that the availability of prosodic cues interacts with syntactic position such that prosodic differences between the focus-types are most apparent when the focused constituent is located in the default focus position.

1) Elicitation phase (Question and answers were presented to the speakers in writing)

**Sample questions:**

**Sample answer (target sentence)**

(a) Subject wh question (new-information focus)

gaRi ke kinlo?  
Who bought a car?

**baba** gaRi kinlo                    SOV  
'Father bought a car'

(b) Object wh question (new-information focus)

baba ki kinlo?  
What did father buy?

baba **gaRi** kinlo                    SOV  
'Father bought a car'

(c) Subject yes/no question (corrective focus)

protibeshi gaRi kinlo ki?  
Did neighbor buy a car?

**baba** gaRi kinlo                    SOV  
'Father bought a car'

(d) Object yes/no question (corrective focus)

baba kOmpyuter kinlo ki?  
Did father buy a computer?

baba **gaRi** kinlo                    SOV  
'Father bought a car'

(2a) **Perception study, Object conditions:** [L/R position of questions counterbalanced]

Screen showed: baba ki kinlo?  
What did father buy?

baba computer kinlo ki?  
Did father buy a computer?

Participants heard: **baba gaRi kinlo**  
Father bought a car (elicited by object wh-question or object yes/no question)

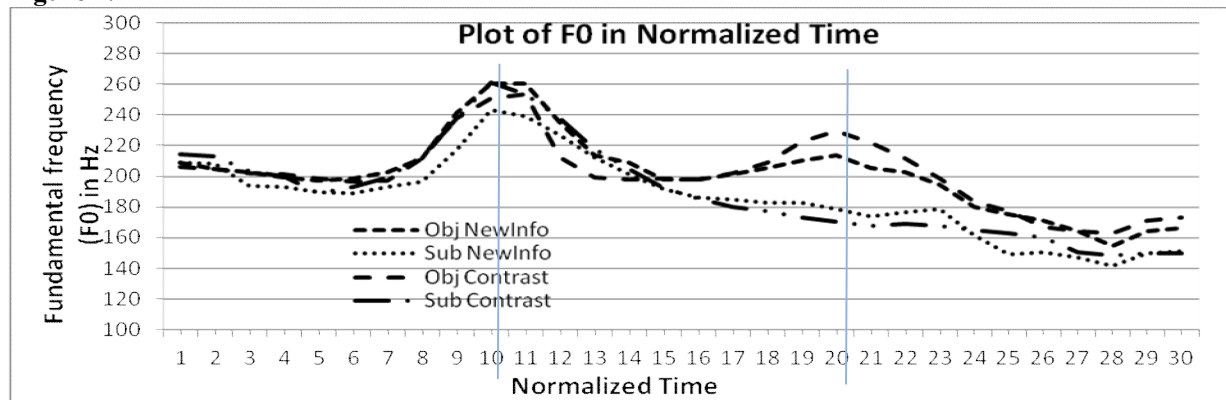
(2b) **Perception study, Subject conditions:** [L/R position of questions counterbalanced]

Screen showed: gaRi ke kinlo?  
Who bought a car?

protibeshi gaRi kinlo ki?  
Did neighbor buy a car?

Participants heard: **baba gaRi kinlo**  
Father bought a car (elicited by subject wh-question or subject yes/no question)

**Figure 1.**



[Normalized time: Time segments 1-10: *subject*, segments 10-20: *object*, segments 20-30: *verb*]

**Selected References** • Hayes & Lahiri (1991). Bengali intonational phonology. *Natural Language and Linguistic Theory* 9, 47-96 • Watson, D.G, Tanenhaus, M.K. and Gunlogson, C.A. (2008). Interpreting Pitch Accents in Online Comprehension: H\* vs. L+H\*. *Cognitive Science* 32:1232–1244. • Xu, Y. (2005-2011). ProsodyPro.praat. Available from: <http://www.phon.ucl.ac.uk/home/yi/ProsodyPro/>





realization might be the lowest copy in a wh-chain (Groat and O’Neil 1996; Reintges, Lesourd, & Chung 2006; Reintges 2007; *i.a.*). Further, we will follow Franks (1998) (see also e.g. Bošković and Nunes 2007, Bošković 2011) in assuming that in a given language the pronunciation of a particular copy in a wh-chain at PF is a matter of preference, which can be overridden if pronunciation in the preferred position leads to a PF violation.

A sluicing structure in Hindi-Urdu is a marked instance in which the lower copy cannot be pronounced, as it resides in a TP marked for non-pronunciation (due to the [E] feature on C). For this reason, the top copy must be pronounced or else the sluiced structure will violate RECOVERABILITY (“A syntactic unit with semantic content must be pronounced unless it has a sufficiently local antecedent (Pesetsky 1998:342)”). (6a) schematizes the PF deletion of the sluiced TP, as well as the preferential deletion of the top copy of the wh-movement dependency, violating recoverability of the wh-phrase. (6b) is the favored output, as the preference for non-pronunciation of the top copy in Hindi-Urdu is overridden by the need to pronounce the syntactic unit with semantic content.

(6) I saw someone there, but I don’t know...

- |  |              |
|--|--------------|
| a. ...kis-ko — main-ne yahaan kis-ko — dekh-aa | *RECOVERABLE |
| b. ...kis-ko main-ne yahaan kis-ko — dekh-aa   | SLUICE       |
| who-ACC ISG-ERG there who-ACC see-PFV          |              |
| ‘... who I saw there’.                         |              |

This analysis then correctly predicts that Hindi-Urdu sluiced structures have properties quite similar to genuine sluices in languages like English (unlike wh-in-situ languages which employ other strategies to derive sluicing-like strings – see e.g. Gribanova 2011 for the use of the RCC strategy in Uzbek). Case connectivity, post-position pied-piping, some degree of island repair (Malhotra 2009), and the elision of material in the Tense head, among other properties, find clear explanation in this analysis. This paper pursues a continued refinement in the implementation of copy theory in wh-in-situ languages and importantly, contributes to the current line of work investigating intra-linguistic variation among types of wh-in-situ languages and the ways in which certain constellations of properties of wh-dependencies and ellipsis processes in these languages are best understood.

**Selected References:** Bošković, Ž. 2011. Rescue by PF Deletion, Traces as (Non)interveners, and the *That*-Trace Effect. *Linguistic Inquiry* 42:1. Bošković, Ž., and J. Nunes. 2007. The copy theory of movement: A view from PF. in N. Corver and J. Nunes (eds) *The copy theory of movement*, 13-74. Amsterdam: John Benjamins. Bhatt, R. 2005. Long Distance Agreement in Hindi-Urdu. *Natural Language and Linguistic Theory* 23: 757-807. Chomsky, N. and Lasnik, H. 1993. The theory of principles and parameters. In *Syntax: an international handbook of contemporary research*. von Stechow, J. Jacobs A., Sternefeld, W. & Vennemann, T. (eds.). Berlin: De Gruyter. Franks, S. 1998. Clitics in Slavic. Position paper for Comparative Slavic Morphosyntax workshop, held at McCormick’s Creek State Park, 5–7 June. Gribanova, V. 2010. Two types of reduced copular constructions in Uzbek nominalized clauses. Presented at the *7th Workshop on Altaic Formal Linguistics*, USC. Manetta, E. 2011. *Peripheries in Kashmiri and Hindi-Urdu: The Syntax of Discourse-Driven Movement*. John Benjamins. Malhotra, S. 2009. Sluicing in Hindi-Urdu. Presented at South Asian Languages Analysis Roundtable; University of North Texas, October, 2009. Toosarvandani, M. 2008. Wh-movement and the syntax of sluicing. *Journal of Linguistics* 44:677–722. Merchant, J. 2001. *The syntax of silence: Sluicing, islands, and the theory of ellipsis*. Oxford: Oxford University Press. Pesetsky, D. 1998. Some Optimality Principles of Sentence Pronunciation. In *Is the Best Good Enough?* Barbosa, Fox, Hagstrom, McGinnis & Pesetsky (eds) , Cambridge: MIT Press. 337–383. Reintges C., P. LeSourd, & S. Chung. 2006. Movement, Wh-Agreement, and Apparent Wh-in-situ. *Wh-Movement Moving On*. L. L.-Sh. Cheng et N. Corver (eds.), Cambridge MA: MIT Press, 165-194. Reintges, C. 2007. Variable Pronunciation Sites and Types of Wh-in-Situ. *The Copy Theory of Movement*. J. Nunes et N. Corver (eds) Amsterdam: John Benjamins, 249-287. Ross, J. 1969. GUESS WHO? In R. Binnick, A. Davidson, G. Green, and J. Morgan (Eds.), *Papers from the 5th Regional Meeting of the Chicago Linguistic Society*, 252–286, Chicago, IL. Chicago Linguistic Society.

## Wh-scope in Finite CP Clauses in Bengali

This paper explains the differing scope of *wh* elements in Bengali preverbal and postverbal finite CP clauses. I argue on the basis of extraction, VP-ellipsis and verb linearization that preverbal CP clauses are complements of the verb. Under this analysis postverbal finite CP clauses are extraposed adjuncts, with the adjunction resulting in islandhood for scope. I also demonstrate that extraction and binding theoretic arguments can refute criticisms of the extraposition account.

The basic word order of Bengali is SOV, but constituents can scramble to a certain extent to yield pragmatically marked word orders. In particular, CP clauses without an overt complementizer can occur on either side of the verb (1):

1. *kalam* ([*jolil khete geche*]) *bollo* ([*jolil khete geche*)  
Kalam [<sub>CP</sub> Jolil eat.Inf go.Past] said [<sub>CP</sub> Jolil eat.Inf go.Past]  
Kalam said that Jolil has left to eat.

However, the scope of *wh*-phrases varies depending on the position of the CP clause with respect to the verb. A *wh*-element in an embedded CP clause that precedes the verb has both matrix and embedded scope, whereas a *wh*-element in a postverbal CP clause has only an embedded scope (Simpson and Bhattacharya 2003).

Preverbal CP: Sub [<sub>CP</sub> ..*wh*..] V

2. *ora* [<sub>CP</sub> *ke ashbe*] *shuneche*  
they who come.Fut hear.Past.3  
i) Who have they heard will come?  
ii) They have heard who will come.  
(examples from Bayer 1996)

Postverbal CP: Sub V [<sub>CP</sub> ..*wh*..]

3. *ora shuneche* [<sub>CP</sub> *ke ashbe*]  
they hear.Past.3 who come.Fut  
i) \*Who have they heard will come?  
ii) They have heard who will come.

Since Bengali is a *wh*-in-situ language and covert movement would allow *wh*-elements in postverbal CP clauses to take matrix scope, such scopal freezing is unexpected.

Previous analyses have proposed different mechanisms to account for the lack of matrix *wh*-scope in postverbal CPs (Mahajan 1990, Srivastav 1991, Bayer, 1996, Lahiri 2002, Simpson and Bhattacharya 2003, Bhatt and Dayal 2007, Manetta, In press). In this paper I concentrate on distinguishing between two of them: the antisymmetric account (Simpson and Bhattacharya 2003) and the extraposition analysis (Mahajan 1990, Srivastav 1991). The antisymmetric account claims that Bengali is underlyingly SVO, and that the postverbal CP is in its base position; the preverbal CP raises to a non-subject *wh*-licensing position, resulting in overt *wh*-movement and matrix scope. As Bhatt and Dayal (2007) argue, an antisymmetric approach is not necessary to account for CP clauses in Bengali, and it is implausible given that Bengali behaves as a head-final SOV language in every other respect. I revive the extraposition account, which base-generates CP clauses in the canonical preverbal complement position and extraposes them as adjuncts to a higher postverbal position, where they are islands for extraction.

I support the extraposition account with evidence from extraction, VP-ellipsis and verb linearization. The analysis predicts that preverbal CPs should allow extraction (4), and postverbal CPs, being adjuncts to a higher position, should disallow extraction (5). My data, based on elicited judgments, shows this to be the case, contrary to what Simpson and Bhattacharya (2003) claim.

4. *malariate<sub>i</sub> krishno* [*ram t<sub>i</sub> mara geche*] *bhablo*  
malaria.Loc Krishna [Ram die go.Past] think.Past  
Krishna thought that Ram died of malaria.
5. *malariate<sub>i</sub> krishno bhablo* [*ram t<sub>i</sub> mara geche*]  
malaria.Loc Krishna think.Past [Ram die go.Past]  
\*Krishna thought that Ram died of malaria.

The ellipsis test is a *v*-stranding VP ellipsis (Toosarvandani 2009) based on eliding the CP and the matrix verb of a complex predicate, while stranding the light verb (*v*). The second preverbal CP is elided along with the matrix verb and the elided constituents mirror the antecedent (6). In (7) the postverbal CP and the matrix verb in the antecedent are on either side of the light verb, and if the eliding constituents mirror the antecedent then two disjoint constituents are eliding. If instead we consider the ellipsis in the postverbal case to take place before extraposition then we can claim one constituent to be eliding. These data indicate that CP complements are initially merged preverbally and subsequently extraposed.

6. *Sima [ke ashbe] fash koreche kintu Mina <[ke ashbe] fash> koreni.*  
 Sima [who come.Fut] loose.Inf do.Perf.3 but Mina do.3.Neg  
 Sima disclosed who will come but Mina did not.

7. *Sima fash koreche [ke ashbe] kintu Mina <fash> koreni <[ke ashbe]>.*  
 Sima loose.Inf do.Perf.3 [who come.Fut] but Mina do.3.Neg  
 Sima disclosed who will come but Mina did not.

Finally, the inability of the CP to occur between the matrix verb and the light verb (8) once again shows us that the postverbal CP cannot be a complement of the selecting verb.

8. \**Sima fash [ke ashbe] koreche*  
 Sima loose.Inf [who come.Fut] do.Perf.3  
 Sima has disclosed who will come.

Furthermore, one of the main arguments against the extraposition account is that it is possible for a matrix-clause indirect object to bind a pronoun in the post-verbal CP clause (Bayer 1996). Such a bound-variable interpretation should not be available if the CP clause is extraposed and adjoined to a position higher than the indirect object (9).

9. *tumi prottekta cheleke<sub>i</sub> bolecho [<sub>CP</sub> ke take<sub>i</sub> durgo pujo-y notun jama kapor debe]*  
 you each.DEF boy.Acc say.Past.2 who he.Acc Durga Puja.Loc new shirt cloth give.Fut.3  
 You have told each boy<sub>i</sub> who will give him<sub>i</sub> new clothes in Durga Puja.

A similar argument is posited by Mahajan (1997) for Hindi against his own extraposition analysis (Mahajan 1990), which ports over to Bengali. He notes that an R-expression in the post-verbal CP appears to be bound by an indirect object in the matrix clause. I invoke the rightward scrambling approach of Mahajan (1988), elaborated upon by Bhatt and Dayal (2007) and Manetta (In press), which accounts for the correlation between scope and linear order of Hindi-Urdu DPs, and extend it to Bengali CPs. I show that, under such an analysis the binding arguments against the extraposition account do not hold and in fact, the binding data is consistent with an extraposition analysis.

#### References:

- Bhatt, Rajesh and Veneeta Dayal. 2007. Rightward Scrambling as Rightward Remnant Movement. *Linguistic Inquiry* 38:287-30.
- Lahiri, Utpal. 2002. On the proper treatment of “expletive wh” in Hindi. *Lingua* 112: 501-540.
- Mahajan, Anoop. 1997a. Against a Rightward Movement Analysis of Extraposition and Rightward Scrambling. In *Scrambling*. Ed. by S. Tonoike, Tokyo: Kurocio Publishers, 93–124.
- Mahajan, Anoop. 1997b. Rightward scrambling. In *Rightward movement*, ed. by D. Beerman et al, 185-213. Amsterdam: John Benjamins.
- Manetta, Emily. 2011. Reconsidering rightward scrambling: Postverbal constituents in Hindi-Urdu. In Press.
- Simpson, Andrew, and Tanmoy Bhattacharya. 2003. Obligatory overt wh-movement in a wh-in-situ language. *Linguistic Inquiry* 34:127-142.
- Srivastav (Dayal), Veneeta. 1991. Wh-dependencies in Hindi and the theory of grammar. Doctoral dissertation, Cornell University, Ithaca, N.Y.

## Empty nominal categories in Bangla, Hindi and Malayalam

Takahashi (to appear), building on work in Takahashi (2008a/b), and Şener and Takahashi (2009), re-examines the syntactic status of null argument NPs in languages traditionally referred to as *pro*-drop, and argues that null arguments are in some instances null pronominals (i.e. *pro*), but in other instances the result of a process of argument ellipsis/AE. The difference between the two types of null argument is suggested to be manifested in the ability of the latter, but not the former, to permit interpretations of sloppy identity. For example, null subjects and objects in Japanese do permit sloppy interpretations, as illustrated in (1), and so are analyzed as instances of AE, but null subjects in Spanish do not, as shown in (2), and are taken to be occurrences of *pro*, restricted in their interpretation in the same ways that overt pronouns are:

- (1) a. John-wa [zibun-no tegami-o] suteta.  
John-Top self-Gen letter-Acc discarded  
'John<sub>i</sub> threw out his<sub>i</sub> own letters.'  
b. Mary-mo [e] suteta.  
Mary-too discarded  
'Mary did too.'
- = Mary also threw out John's letters (strict)  
= Mary also threw out her own letters (sloppy)
- (2) a. Maria cree que su propuesta sera aceptada.  
Maria believes that her proposal will.be accepted  
'Maria believes that her proposal will be accepted.'  
b. Juan también cree que *e* sera aceptada.  
Juan also believes that will.be accepted  
'Juan also believes that it will be accepted.'  
⇒ only strict: *e* = Maria's proposal

The interpretation of null quantificational subjects and objects (e.g. equivalents to: 'John bought three books. Mary also bought \_.') shows a similar patterning, in Japanese allowing for strict and sloppy readings where either the same set of elements or a different quantified set of elements is available as an interpretation, but only a strict, same-set interpretation in Spanish.

Takahashi examines two different theories of what may generally permit (or prohibit) the phenomenon of argument ellipsis across languages. The first is an analysis developed in Oku (1998), that the key determinant factor is the availability of SCRAMBLING within a language: following Bosković and Takahashi (1998), it is suggested that those languages which permit scrambling allow for the base-generation of nominals in scrambled positions and genuinely empty nominal arguments (i.e. instances of AE) in theta positions, the interpretative link between such positions being constructed at LF. Japanese, a scrambling language therefore allows for AE, while Spanish, a non-scrambling language does not license AE. The second idea Takahashi considers is the analysis advanced in Saito (2004) that it is crucially the presence/absence of AGREEMENT which determines whether a language permits AE or *pro*: languages without agreement such as Japanese are taken to license AE, but languages which do have agreement, such as Spanish, do not and only license *pro* – an 'anti-agreement' effect.

Takahashi correctly points out that in order to assess the two hypotheses against each other, one needs to consider (a) languages which have both scrambling and agreement, and (b) languages which have neither scrambling nor agreement, rather than languages which possess just one of these two properties. Investigating Turkish as a

language of type (a), it is shown that the (anti-)agreement-based hypothesis of AE is very clearly supported, rather than the scrambling-based hypothesis: in those clause types where agreement occurs in Turkish, only strict interpretations are available for empty nominals, whereas in clauses where no agreement occurs, both strict and sloppy interpretations appear to be licensed. A scrambling-based analysis incorrectly predicts uniformity of strict+sloppy interpretations in all clause types. Turning to Chinese as an instance of a language of type (b), a surprising result is reported. Null subjects in Chinese pattern as null pronominals rather than instances of AE, despite the absence of overt agreement in the language. Given such a patterning, it is suggested that Chinese actually does have *covert* agreement blocking AE, and that such an assumption is independently supported by blocking effects with long-distance anaphors in the language.

The preliminary conclusions drawn from Takahashi's study of Turkish and Chinese are interesting, but in clear need of further empirical support from other languages with similar scrambling and agreement-type properties. In this regard, languages from South Asia are ideally positioned to potentially confirm or disconfirm, or call for modification of the direction of the AE analysis put forward by Takahashi. South Asian languages regularly permit scrambling, and show an interesting array of verbal agreement phenomena. The present paper will report on a broad ongoing study of null argument elements in three South Asian languages which crucially exhibit differing properties of agreement: Bangla, which has verbal agreement in all finite clauses, Malayalam, which does not exhibit any verbal agreement, unlike other Dravidian languages, and Hindi, which shows mixed subject/object agreement patterns depending on the tense value of a clause and ergative/objective case-marking. A full range of null argument data in main and embedded contexts will be reported on focusing on the availability of strict/sloppy interpretations and the presence/absence of agreement marking, allowing for a rigorous testing of the anti-agreement hypothesis of AE. The study will also establish a much broader characterization of the general availability of null arguments in Bangla/Hindi/Malayalam than is currently present in the literature, which is surprisingly lacking in clear descriptions of pro-drop phenomena in South Asian languages.

- Bosković, Željko and Daiko Takahashi. 1998. Scrambling and last resort. *Linguistic Inquiry* 29: 347-66.
- Oku, Satoshi. 1998. A theory of selection and reconstruction in the minimalist perspective. Doctoral dissertation, University of Connecticut.
- Şener, Serkan and Daiko Takahashi. 2009. Argument ellipsis in Japanese and Turkish. Ms, University of Connecticut and Tohoku University.
- Takahashi, Daiko. 2008a. Noun phrase ellipsis. In *The Oxford Handbook of Japanese Linguistics* edited by Shigeru Miyagawa and Mamoru Saito, Oxford: Oxford University Press, 394-422.
- Takahashi, Daiko. 2008b. Quantificational null objects and argument ellipsis. *Linguistic Inquiry* 39: 307-26.
- Takahashi, Daiko. (to appear) Argument ellipsis, anti-agreement, and scrambling. To appear in Mamoru Saito (ed.) *Japanese Syntax in Comparative perspective*, Oxford: Oxford University Press.
- Saito, Mamoru. 2004. Notes on East Asian argument ellipsis. *Language Research* 43: 203-27.

## Passives or Anti-Causatives?

The literature on passives in South Asian languages/SAL recognizes an impersonal passive type with ‘hona’/‘become’ light verbs (1)-(2) that obligatorily suppresses its agent (Sridhar 1990, Pardeshi 2007). Taking lead from cross-linguistic studies (eg. Greek), this paper presents an alternative whereby such constructions (including certain ‘gayaa’/’go’ passives) are reanalyzed as anti-causatives surfacing with passive morphology, while retaining their structural uniqueness. Evidence is presented at two levels – (i) their differences from prototypical SAL passives, and (ii) the active/passive morphological make-up of SAL anti-causatives. I also suggest that though agent-less, these constructions have causers introduced as modifiers at the voiceP level.

It is widely accepted (Mahajan 1994, Bhatt 2003, Richa 2007, Sahoo in progress) that SAL passives differ from their English counterparts in retaining their agentive by-phrases as the grammatical subjects and logical objects as their grammatical objects. In contrast, as I illustrate here, ‘become’ passives never host their agents as by-phrases (1). The logical object is always case-marked null-nominative, A-binds reflexives (3), fails to bind possessive pronominals/shows anti-subject orientation (4) and controls into conjunctive participle clauses (5), thereby depicting all prototypical subject properties. I use these and related facts to lay the initial ground to reject any analysis of these constructions as passives.

I then go on to present evidence that SAL anti-causatives surface with both active and passive morphology. While avoiding anti-causatives with verbs like ‘murder’, ‘assassinate’ whose core verbal meanings are agentive, SALs host anti-causatives with deadjectival (‘dry’), ‘internally caused’ (‘grow’), ‘cause unspecified’ (‘break’) as well ‘externally caused’ (‘destroy’) verbs. Interestingly, alternation between active and passive morphology is quite free for most of these verb-types (6)-(8). The passive is however only a pseudo passive as it obligatorily rules out agentive by-phrases.

SALs therefore conform to Alexiadou’s (2006) typological distribution of languages with anti-causatives. They pattern closely with Greek-type languages (contra English-type languages) where all but agentive types can alternate between transitive and intransitive/anti-causative variants, but most crucially, externally caused roots surface with non-active morphology for the intransitives. SALs, as attested by the above examples oscillate between active and passive morphology for all verb (minus agentive) types, though externally caused verbs occur only with passives (9).

I suggest, following Doron (2003), that agent suppression in these constructions follows from selecting the middle voice that reclassifies the root with respect to its requirements of an external argument. In structural terms, this amounts to projecting a voice projection without a specifier for an external argument. This together, with Embick’s (1998) correlation between the non-projection of an external argument and the overt passive-like realization of the voice head can explain the morphological overlap between passives and anti-causatives.

Importantly, ruling out an agentive phrase does not necessarily suppress a causer for these constructions. Their instrumental se-marked DPs (10) which could also be event nominals (11), should, I contend, be analyzed as causing events introduced as modifiers to the voiceP (on lines proposed by Solstad 2007 for event passives). This analysis helps keep the notions of agent and causer different at the syntax-semantics interface, with the latter signifying a relation between two events rather than that between entities and events.

- (1) (\*Pulis dwaaraa) chhe log giraftaar hue  
(\*police by) six persons arrested become  
'Six people were arrested' (Hindi)
- (2) anil arrest ayyaDu  
Anil arrest became.sg.  
'Anil was arrested' (Telugu)
- (3) anil-i apne-i ghar-ke saamne giraftaar hua  
Anil self's house front arrest become  
'Anil was arrested in front of his house' (Hindi)
- (4) Anil-i uske-\*/i/j ghar-ke saamne giraftaar hua  
Anil his house front arrest become
- (5) Anil-i [PRO-i rokar] giraftaar hua  
Anil crying arrest become  
'Anil was arrested while he was crying'
- (6) KapRe sukhe/kapRe sukh gaye (deadjectival)  
Clothes dried/clothes dry go-pass.
- (7) Bacce baRhe/baRe hue (internally caused)  
Children grew/grow become
- (8) (\*john dwara) khiRkii TuTii/TuT gayii (unspecified caused verb)  
John by windows break/break go-pass.
- (9) \*Khaanaa barbaada/Khaanaa barbaad huua (ext. force required)  
Food destroyed /food destroy become
- (10) (john-se) khaanaa barbaad huua  
John-instr. food destroy become
- (11) bomb bishphot-se logo-ki maut huii  
bomb explosion-instr. people-gen. death become  
'People died in the bomb explosion'

Reference:

- Alexiadou, A. 2006. 'On the morpho-syntax of (anti)-causative verbs. URL: ifla.uni-stuttgart.de/institute/.../Alexiadou%20to%20appear.pdf
- Bhatt, R. 2003. 'Topics in the Syntax of the Modern Indo-Aryan Languages. Passivization'. Handout. URL: <http://web.mit.edu/rbhatt/www/24.956>
- Doron, E. 2003. Agency and Voice: The semantics of the semitic templates. NLS 11(1).
- Embick, D. 1998. 'Voice Systems and the Syntax/Morphology Interface'. *MIT Working Papers in Linguistics* 32.
- Mahajan, A. 1994. 'Active Passives' In Proceedings of the 13th WCCFL. CSLI Publications. Standford University.
- Pardeshi, P. 'No smoke without fire: Invisible Agent Constructions in South Asian Languages'. *Kobe Papers in Linguistics* 5.
- Richa. 2007. 'Unaccusativity, Unergativity and the Causative Alternation in Hindi: A Minimalist Analysis'. PhD Dissertation. JNU, India.
- Sahoo, A. in progress. 'Passives in some Indian Languages: A Comparative Study.' PhD Disseration, IIT Delhi.
- Solstad, T. 2007. 'On the Implicitness of Arguments in Event Passives, *Proceedings of Nels* 38. University of Ottawa.
- Sridhar, N. 1990. *Kannada*. London. Routledge.







## Temporal Adverbials, Negation, and the Bangla Perfect

We establish that the perfect in Bangla has an unusual restriction: it does not allow adverbs to modify the reference time. We propose a syntactic account and we further suggest that another puzzling fact about the perfect in Bangla – that it cannot be negated (Ramchand 2005) – stems from the prohibition against reference time modification.

**Adverbial Modification.** The past perfect in several languages is ambiguous when modified by so-called ‘positional’ temporal adverbials, i.e., adverbials that make reference to specific time intervals (e.g., McCoard 1978, Giorgi and Pianesi 1998, Musan 2001). In (1) the adverbial can restrict either the time interval at which the event holds – the event time (ET), or the time interval from the perspective of which the event is described – the reference time (RT), (ignoring the issue of how the two readings correlate with word order). Similar ambiguities obtain with the present perfect, see (2). In contrast, the Bangla perfect does not allow RT modification: (3) and (4) only have an ET modification reading – the submission happened *on Sunday/today*.

- |     |  |   |    |  |   |    |
|-----|--|---|----|--|---|----|
| (1) | ( <i>On Sunday</i> ) Rick had submitted the homework ( <i>on Sunday</i> ).   | √ | ET |  | √ | RT |
| (2) | ( <i>Today</i> ) Rick has submitted the homework ( <i>today</i> ).   | √ | ET |  | √ | RT |
| (3) | <i>robibare</i> rik homwark jOma kor- <b>e-ch</b> -il-o<br>Sunday-loc Rick homework submission do- <b>e-ch</b> -past-3<br>‘Rick had submitted the homework on Sunday.’ | √ | ET |  | * | RT |
| (4) | <i>aj(-ke)</i> rik homwark jOma kor- <b>e-ch</b> -e<br>today Rick homework submission do- <b>e-ch</b> -3<br>‘Rick has submitted the homework today.’                   | √ | ET |  | * | RT |

**The -e-ch forms are perfects.** Could the -e-ch forms in Bangla, as in (3) and (4), be simple tenses rather than perfects, thus accounting for the absence of ambiguity of adverbial modification? Several facts reveal that this is not so: **(i)** the present perfect allows modification by *now*, while the past progressive and the simple past do not, suggesting that the present perfect is not simply another past tense form (see (5)); **(ii)** in embedded clauses, the present perfect requires the ET to precede a past RT introduced by the matrix tense, as in (6) and (7), suggesting that it does not behave as a present tense (it could still, of course, be like a simple past, in a language without sequence of tense); **(iii)** person marking varies with tense; the present perfect inflects as a present tense and the past perfect inflects as a past tense (cf. the 3 person *kor-e-ch-e* ‘has done’, *kor-ch-e* ‘is doing’, *kOr-e* ‘does’; vs. *kor-e-ch-il-o* ‘had done’, *kor-ch-il-o* ‘was doing’, *kor-l-o* ‘did’). Finally, the -e-ch forms are considered perfects in Chatterji (1926), Chattopadhyay (1988), and Ramchand (2004). Thus, the puzzle of adverbial modification is real.

- |     |   |  |  |  |  |
|-----|---|--|--|--|--|
| (5) | <i>ekhon</i> rik homwark jOma { kor- <b>e-ch</b> -e / *kor-ch-il-o / *kor-l-o }<br>now Rick homework submission do- <b>e-ch</b> -3 do- <b>ch</b> -past-3 do-past-3<br>‘Rick {has submitted / * was submitting / *submitted} the homework now’ |  |  |  |  |
| (6) | ami baRi eS- <b>e</b> jan-l-am je Se eS- <b>e-ch</b> -il-o<br>I home come- <b>e</b> know-past-1 that he come- <b>e-ch</b> -past-3<br>‘Having come home, I knew that he had come.’ (Chattopadhyay 1988: 22)                                    |  |  |  |  |
| (7) | ami bol-l-am o LA-te thek- <b>e-ch</b> -e<br>I say-past-1 he LA-loc stay- <b>e-ch</b> -3<br>‘I said he lived in LA.’ (only precedence, no simultaneous reading)   |  |  |  |  |

**Analysis.** The affix *-ch*, a remnant of the auxiliary verb *ach-* ‘be’ (Lahiri 2000, Butt and Lahiri 2002) spells out a semantically vacuous functional item that embeds PERFECT (and also IMPERFECTIVE, as in *kor-ch-il-o* ‘was doing’, but we put this aside). See (8) for a hierarchical representation (ignoring word order).

(8) [TENSE [-*ch* [PERFECT [VIEWPOINT ASPECT [<sub>VP</sub> ]]]]]

The lexical semantics of PERFECT is as in (9), which follows Pancheva and von Stechow (2004) in treating the PERFECT as a weak relative past: it introduces an interval no part of which may follow the reference time introduced by TENSE.

(9) [[PERFECT]] =  $\lambda p_{\langle i, t \rangle} \lambda t_i \exists t'_i [t' \leq t \ \& \ p(t')] \quad (t' \leq t \text{ iff there is no } t'' \subset t', \text{ s.t. } t'' > t)$

The affix *-e*, both on its own, e.g., *baRi eS-e* ‘having come’ in (6), and in combination with *-ch* in the perfect, marks RESULTATIVE viewpoint; see (10) for its semantics. The composition of PERFECT and RESULTATIVE yields the needed semantics for Bangla perfects, which lack universal readings (see also Ramchand 2005).

(10) [[RESULTATIVE]] =  $\lambda P_{\langle v, t \rangle} \lambda t_i \exists s \exists e [t \subset \tau(s) \ \& \ s \text{ is a target state of } e \ \& \ P(e)]$

The PERFECT moves to the affix *-ch* and then to TENSE; this syntax precludes adverbs from being merged and interpreted higher than PERFECT. Accordingly, the LF in (11a) is not possible; only the one in (11b) is. (11a) derives RT modification (see (12a), and it is not available in the Bangla perfect. (11b) is the LF behind ET modification (see (12b), and it is the only structure available in the Bangla perfect. Thus, we account for the restriction on temporal modification in (3)-(4).

(11) a. \* [TENSE - *ch* [*adverbial* [PERFECT [RESULTATIVE → *-e* [<sub>VP</sub> ]]]]]  
 b. [TENSE - *ch* - PERFECT [*adverbial* [RESULTATIVE → *-e* [<sub>VP</sub> ]]]]]

(12) a. \*  $\exists t [t < t_c \ \& \ t \subseteq \textit{Sunday} \ \& \ \exists t' [t' \leq t \ \& \ \exists s \exists e [t' \subset \tau(s) \ \& \ s \text{ is a target state of } e \ \& \ P(e)]]]$   
 b.  $\exists t [t < t_c \ \& \ \exists t' [t' \leq t \ \& \ t' \subseteq \textit{Sunday} \ \& \ \exists s \exists e [t' \subset \tau(s) \ \& \ s \text{ is a target state of } e \ \& \ P(e)]]]$

**Negation and the perfect.** We further suggest that the prohibition against RT modification in the perfect is responsible for the fact that the perfect cannot be negated. The negative marker *na* combines freely with the simple past and present, the past and present progressive, and the past habitual – all tense-aspect forms except for the perfects (Ramchand 2005), see (13) for some representative examples from the non-perfect tense forms. However, the perfect cannot appear with *na*. Instead of the ungrammatical (14a) we get (14b), where the verb is not explicitly marked for tense and aspect, but is interpreted as past.

(13) ami am-Ta { khe-l-am / kha-cch-i / kha-cch-il-am } (*na*)  
 I mango-cl eat-*pst*-1 eat-*ch*-1 eat-*ch-pst*-1 NEG  
 ‘I {did (not) eat / am (not) eating / was (not) eating} the mango.’

(14) a. \* ami am-Ta { khe-*ye-ch*-i / khe-*ye-ch*-il-am } *na*  
 I mango-class eat-*e-ch*-1 eat-*e-ch-pst*-1 NEG  
 ‘I {have / had} not eaten the mango.’  
 b. ami am-Ta kha-i-*ni*  
 I mango-class eat -1 -NEG  
 ‘I didn’t eat the mango.’

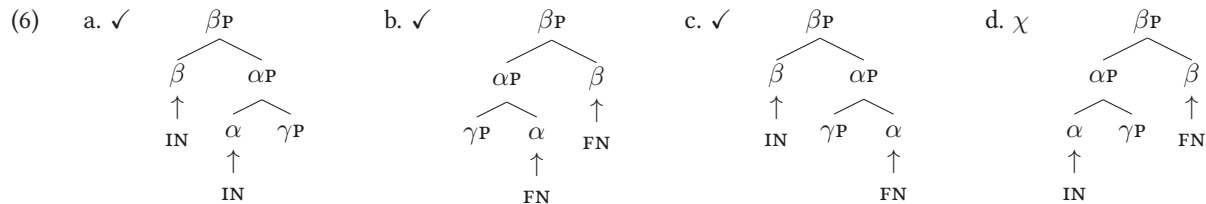
The proposal that the *na* negation in Bangla is a reference time modifier is consistent with the semantics proposed by Ramchand (2005). It is a negative existential quantifier over events asserting that no event of the relevant kind occurs within a specified time interval, i.e., the RT.



	CLAUSAL DOMAIN= <i>category C</i>	SUBCLAUSAL DOMAIN= <i>categories below C</i>
(5)	{C}	{T, V, N, A}
INITIAL	+	
FINAL/NON-INITIAL		+

Assuming a feature inheritance in coordination, whereby a coordinator inherits the (categorical, formal, etc.) features of its coordinand(s), the differences in linearisation of coordinate complexes in Vedic can therefore be analysed as resulting from different c-selectional properties of two different  $\&^0$ s: *utá*-type  $\&^0$ s c-select for (head-initial) clausal elements, while *ca*-type  $\&^0$ s c-select for (head-final) sub-clausal elements, as per (5).<sup>1</sup> This finding also invalidates the phonological/prosodic accounts of coordinate linearisation and places this phenomenon in narrow syntax: since the linear position of non-medial coordinators (*ca/vā/tu*) is sensitive to categories they coordinate, c-selection is clearly at work and a phonological account of coordination (Hale 1987, *et seq.*) cannot be maintained. Another argument in favour of a syntactic analysis of (the double system of) coordination in Vedic comes from the syntactic constraints that apply to coordinate complexes.

The observation that the head-final phrases (generally subclausal elements belonging to categories T, V, N, A, etc.) are coordinated by a head-final (or in complex phrases, head-non-initial/2P) coordinator, and the observation that head initial phrases (generally clausal C-elements) are coordinated by a head-initial  $\&^0$ , is consistent with the prediction of the Final-over-Final Constraint (FOFC), which as an invariant syntactic principle rules out the possibility of a head-final (FN) phrase dominating a categorially alike head-initial (IN) phrase (6) in the same extended projection (EP). (See Biberauer et al. 2010, 63, *inter al.*) FOFC thus predicts that higher a  $X^0$  is (in the EP), the likelier the  $X^0$  is to be initial/on the left.<sup>2</sup>



The synchronic analysis of coordination in Sanskrit also facilitates an elegant model of the syntactic mechanism of diachronic change, the locus of which lies in the loss of the ( $[\mu]$ ) features (cf. Roberts and Roussou 2003) that manifests in the change of linear configuration from a disharmonic to a harmonically head-initial. The explanation for this change lies with FOFC, which predicts that the change from a head-final to a head-initial system must proceed top-down (within an EP). The diachronic competition between the two configurations is resolved with a unified C-like configurational system of coordination.

## References

Biberauer, T., Holmberg, A. and Roberts, I. (2010), A Syntactic Universal and its Consequences. Ms. University of Cambridge.

Hale, M. (1987), Notes on Wackernagel's Law in the language of the Rigveda, in C. Watkins, ed., 'Studies in memory of Warren Cowgill (1929–1985)', New York: De Gruyter, pp. 38–50.

Kayne, R. (1994), *The Antisymmetry of Syntax*, Cambridge, MA: MIT Press.

Klein, J. S. (1985a), *Toward a Discourse Grammar of the Rigveda. Part 1.*, Vol. I, Heidelberg: Carl Winter Universitätsverlag.

Klein, J. S. (1985b), *Toward a Discourse Grammar of the Rigveda. Part 2.*, Vol. II, Heidelberg: Carl Winter Universitätsverlag.

Roberts, I. and Roussou, A. (2003), *Syntactic Change: A Minimalist Approach to Grammaticalization*, Cambridge: Cambridge University Press.

Zhang, N. N. (2010), *Coordination in Syntax*, Cambridge Studies in Linguistics, Cambridge: Cambridge University Press.

<sup>1</sup>See Klein 1985a; 1985b for statistical and evidentiary support for this fact.

<sup>2</sup>This also explains why final Cs are typologically rarer than OV order.

## Did Vedic Sanskrit have anaphors? The case of *svá-*

The aim of this paper is to determine the anaphoric status of the Sanskrit possessive adjective *svá-* ‘one’s own; SELF’s’ (cognate with Lat. *suus*, Russ. *svoj*, Icelandic *sinn*, etc.), and to explain its distribution in R̥gvedic Sanskrit.

The literature is divided on whether or not *svá-* is a genuine reflexive possessive as in its related languages or an emphatic adjective meaning ‘own’. Furthermore, it has been variously described as topic (Pinault (2001)), rheme (Vine (1997)) or agent (Hock (2006)) oriented. As for its distribution, *svá-* can take first, second and third person antecedents. However, Sanskrit also has designated pronominal forms for first and second person possessors, namely the genitive of the personal pronoun paradigm. These forms are usually used when the possessor and the subject of the clause are not identical, and it seems at first glance that the distribution between these forms and *svá-* can be predicted by the traditional principles A and B of the Binding Theory.

However, there are additional factors complicating this picture. For example, when the subject of the clause and the possessor are identical, no special possessive form is used (both for alienable and inalienable possession):

(1) RV 10,95,12a:

*kadā sūnúḥ pitāraṃ ... ichāc*  
When son-N.sg. father-A.sg. search-3.sg.subj.

‘When will the son look for [his] father?’

Arguing that *svá-* suppletes the paradigm of the possessive pronoun for the third person cannot explain why it is missing in cases like (1) or the fact that it can take 1. & 2. person antecedents.

Based on the data from the oldest Sanskrit text, the R̥gveda, I will argue in this paper that the distribution of *svá-* can be better understood by distinguishing at least three synchronic uses, 1) ‘emphatic’, 2) adjective ‘own’ and 3) possessive anaphor. Furthermore, I will argue that in the latter case, *svá-* needs to be locally bound by a c-commanding antecedent. That ‘agent’- or ‘subject-orientation’ alone is not an adequate characterization is clear from cases like (2):

(2) RV 6,20,11:

*mahé pitré dadātha sváṃ nāpātam*  
great-D.sg. father-D.sg. give-2.sg.pf. SVÁ-A.sg. nephew-A.sg.

‘You have given the grandfather<sub>i</sub> his<sub>i</sub> nephew.’

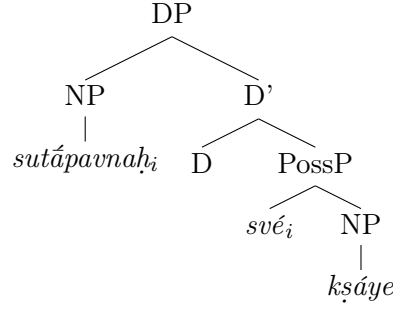
I will furthermore show that constructions that had previously been problematic for ‘subject-oriented’ approaches, constructions with genitive antecedents and participial constructions, can be explained in this approach assuming that it is the genitive possessor that binds *svá-* in the former:

(3) a. 8,2,7:

*... sómāḥ sutásah santu devasya své<sub>i</sub> kśáye*  
Soma-N.pl. pressed-N.pl. be-3.pl.ipv. god-G.sg. SVÁ-L.sg. home-L.sg.  
*sutapávnah<sub>i</sub>*  
soma.drinker-G.sg.

‘Let the Somas of the god be pressed in the soma-drinker’s<sub>i</sub> own<sub>i</sub> house.’

b. (before movement)



As for the latter participial constructions, the antecedent is the PRO of the participial phrase:

(4) RV 1,1,7/8:

*emasi*                      *rājantam<sub>i</sub>* ... [PRO<sub>i</sub> *vardhamānaṃ*                      *své<sub>i</sub>*                      *dāme*]  
 approach-1.pl.pres. ruler-A.sg.                      growing.up-A.sg.mid.ptcp. SVÁ-L.sg. house-L.sg.

‘We are approaching the ruler<sub>i</sub> (...) [PRO<sub>i</sub> growing up [in his<sub>i</sub> (own) house]]’

Based on this, I will argue that Vedic *svá-* behaves as a possessive locally bounded anaphor in the Rigveda. However, this is only one of its uses. I will show that hierarchy-based approaches like Kiparsky (2002) and (2011) and Safir (2004) which hierarchically order referentially dependent material are more adequate for predicting the synchronic distribution of Vedic *svá-* than classical approaches to Binding Theory like Reinhart and Reuland (1993). Based on these approaches, I will end with briefly sketching out a dependency hierarchy for encoding reflexivity in early Sanskrit, especially with respect to the status of two other potential anaphors in Vedic, grammaticalized *tanú-* ‘body’ and *ātmán-* ‘soul’.

## References

- Hock, Hans Henrich. 2006. Reflexivization in the Rig-Veda (and beyond). In *Themes and tasks in Old and Middle Indo-Aryan linguistics*, ed. E. Pirart, 19–44.
- Kiparsky, Paul. 2002. Disjoint reference and the typology of pronouns. In *More than words. Studia grammatica 53*, ed. I. Kaufmann and B. Stiebels, 179–226. Berlin: Akademie Verlag.
- Kiparsky, Paul. 2011. Did Indo-European have reflexive pronouns? Paper presented at the 23<sup>rd</sup> annual UCLA Indo-European conference, Los Angeles, Oct. 28-29 2011 .
- Pinault, Georges-Jean. 2001. Védique *tanú-* et la notion de personne en indo-iranien. *Bulletin de la Société de Linguistique de Paris* 96/1:181–206.
- Reinhart, Tanya, and Eric Reuland. 1993. Reflexivity. *Linguistic Inquiry* 24/4:657–720.
- Safir, Ken. 2004. *The syntax of anaphora*. Oxford University Press.
- Vine, Brent. 1997. On the expression of reflexive possession in the Rig-Veda: RV *svá-*. In *Syntaxe des langues indo-iraniennes anciennes*, ed. E. Pirart, 203–14. Barcelona: Editorial AUSA.



## Binding and Deixis in Dravidian and Indo-aryan Languages

**Data and problems.** In many South Asian languages the pronominal system carries deictic features (in the 3rd person) that derive directly from demonstratives. These systems have a pair of 3rd person pronouns that contain a morphologically overt marker indicating closeness or distance to the speaker. The former is labelled proximal (PX) and the second distal DX. Among those languages, Bangla is exceptional: not only it has markers for proximal and distal features, but it also has a third marker, usually labelled *sequent*, which is non-deictic and has the role of anaphoric marker.

Interestingly, the distribution of distals and proximals in bound variable reading (BVR) contexts is different: in all the languages in my sample, proximal pronouns are never bound. In addition to that, Bangla does not allow a distal pronoun to be bound; here only the sequent pronoun can be variable bound. The situation is exemplified in (1) for Hindi:

- (1) [Saare students]<sub>i</sub> apne<sub>i</sub>/ onna<sub>i</sub>/ enna\*<sub>i</sub> de teacher nu pyaar karde ne [Hindi]  
 all students SELF/ DX.PL/ PX.PL GEN teacher.SG ACC love do be  
*[All the students]<sub>i</sub> love their<sub>i</sub> teacher*

A proximal pronoun can be coreferent with a DP or a proper name if they are accompanied by gesture or if the antecedent contains a proximal demonstrative (which is morphologically related to the pronominal deictic marker).

- (2) [yah ladki]<sub>i</sub> classroom mein thi. mai-ne isko<sub>i</sub>/ usko<sub>i</sub> dekhaa. [Hindi]  
 this girl classroom in was I PX.SG.ACC DX.SG.ACC saw  
*[This girl]<sub>i</sub> was in the classroom. I saw her<sub>i</sub>.*

This means that proximal pronouns might not be available for BVR for feature matching reasons. However, if a quantified expression contains a proximal demonstrative, the effect does not change: only a collective reading is obtained, not a distributive one. Only distals (and the sequent in Bangla) allow a distributivity reading and hence variable binding:

- (3) **yehe** sab chaTra **uske**/ **\*iske** adheapac ka samman karte he [Hindi]  
 PL.PX all students DX.SG.GEN PX.SG.GEN teacher of respect make are  
*[All these students]<sub>i</sub> respect their<sub>i</sub> teacher*

BVR is not available for proximal pronouns also in different scenarios: with a Wh antecedent or in sloppy elliptical contexts, as I will show during the discussion.

**Analysis** I propose, starting from a suggestion made by Kayne (2010), that a proximal item, like the English *this*, might contain an element akin to a 1st person feature. Kayne's main goal is to account for the unavailability of *this* as a relative pronoun, but his proposal can be adapted to the cases in exam in the following way:

- a proximal element incorporates a 1st person feature in its semantic value because of its “strong” link to the context of utterance (in Kaplan’s (1989) sense) realized by the context feature Place of Utterance. The deictic value of this feature is not “1st person”, but it is dependent on it, since it expresses the proximity to the speaker. Data from indexical shifting languages, like Amharic, Tamil and Punjabi show that Place of Utterance and Speaker are not the same feature, as I will explain.
- The contextual dependency is optional for distal items in two-ways demonstrative systems, but it is not for proximals: a proximal item needs to be specified for Speaker’s location, while a distal does not (i.e: distals are underspecified). I will argue that the dependency of proximals from the context is the key element to explain their status as non-variable bound items. Crucially, this approach makes two predictions that are borne out by the data: a) whenever a distal is used ostensively, a context dependency is established and it cannot be variable bound; b) in a system like Bangla, where the sequent demonstrative is already underspecified for Place of Utterance, the distal is deictic and resists BVR. Bangla data will be provided in support of this proposal.

I will conclude by showing that the contextual dependency of proximal pronouns can be resolved in technical terms using Mayer’s (2009) proposal. His semantic model implements two crucial mechanisms:

- Higher-Order Unification, which assigns the correct values to indexicals when they give rise to a sloppy (bound) interpretation; the over-generation of such a treatment is amended by
- a pragmatic blocking rule, which prevents the bound variable interpretation of “heavy” referents, like proper names and definite descriptions when a “lighter” referent (like a pronoun) is available, like in the pair *Only John did John’s homework* vs *Only John did his homework*.

Following this logic, a treatment of proximal pronouns as heavy referents and distal pronouns as light referents will be provided during the talk. The analysis will be supported by data from three Indo-aryan languages (Bangla, Hindi and Punjabi) and three Dravidian languages (Malayalam, Tamil and Telugu).

## References

- Déchaine, R. and Wiltschko, M. (2002). Decomposing pronouns. *Linguistic Inquiry*, 33(3):409–442.
- Kaplan, D. (1989). Demonstratives: An essay on the semantics, logic, metaphysics, and epistemology of demonstratives and other indexicals. In Almog, J., Perry, J., Wettstein, H., and Kaplan, D., editors, *Themes from Kaplan*, pages 481–566. Oxford University Press, New York, Oxford.
- Kayne, R. (2010). *Comparisons and contrasts*. Oxford University Press.
- Kratzer, A. (2009). Making a pronoun: Fake indexicals as windows into the properties of pronouns. *Linguistic Inquiry*, 40(2):187–237.
- Maier, E. (2009). Proper names and indexicals trigger rigid presuppositions. *Journal of Semantics*, 26(3):253.

### Linearity-Based Reference Restrictions in Hindi

**The problem** As illustrated in (1), Hindi disallows coreference between an R-expression and a pronoun even if the latter does not c-command the former. This restriction is surprising because, due to the lack of c-command, no binding principle is violated. Thus, nothing should block accidental coreference between *sher* ‘lion’ and *us-ke* ‘his’ (Heim & Kratzer 1998), contrary to fact.

- (1) Raam-ne [us-ke<sub>1</sub> baccō-ko] sher<sub>2/\*1</sub> dikhaayaa  
 Ram-ERG he-GEN children-DAT lion show  
 ‘Ram showed his<sub>1</sub> children a lion<sub>2/\*1</sub>.’

The structure becomes grammatical if the positions of the R-expression and the pronoun are reversed, as in (2), or if the R-expression is moved over the pronoun, as in (3).

- (2) Raam-ne sher<sub>1/2</sub> [us-ke<sub>1</sub> baccō-ko] t dikhaayaa  
 Ram-ERG lion he-GEN children-DAT show  
 ‘Ram showed its<sub>1</sub> children a lion<sub>1/2</sub>.’
- (3) Raam-ne [sher-ke<sub>1</sub> baccō-ko] us-ko<sub>1/2</sub> dikhaayaa  
 Ram-ERG lion lion-GEN children-DAT him show  
 ‘Ram showed a lion’s<sub>1</sub> children to him<sub>1/2</sub>.’

For ease of reference, I will call these disjointness effects *extended disjoint reference (EDR) effects* as they obtain in configurations that the standard binding principles do not apply to. EDR effects are systematic in that they arise in an entirely parallel manner between subjects and objects as well. They likewise occur if the lower element is a proper name rather than a referential common noun.

**The role of locality** EDR effects are not plausibly reduced to standard Principle C violations. While Principle C effects are global, EDR effects are strictly local. In particular, if the two elements are separated by an island boundary, EDR effects disappear while standard Principle C effects remain:

- (4) a. EDR effects between an R-expression and a pronoun disappear if either of the two is properly embedded in an island that the other is outside of.  
 b. Principle C effects persist in this configuration.

This generalization can be demonstrated by means of possessors. Possessors in Hindi demonstrably disallow subextraction and are hence islands. Interestingly, if either of the two nominals is embedded in a possessor, no EDR effects occur. (5) contains a proper name embedded within the possessor of the direct object. The indirect object *us-ke baccō-ko* contains a pronoun. Coreference is possible, in stark contrast to (1). What sets the two cases apart is the fact that the R-expression is inside an island in (5) but not in (1).

- (5) māī us-ke<sub>1</sub> baccō-ko [[Raam-ke<sub>1</sub> bacpan-kii] tasviirē] dikhaanaa caahtaa hū  
 I he-GEN children-DAT Ram-GEN childhood-GEN pictures show.INF want be.1SG  
 ‘I want to show his<sub>1</sub> children pictures of Ram’s<sub>1</sub> childhood.’

Crucially, Principle C effects differ from EDR effects in that they are not affected by islands. The sentence in (6) is parallel to the one in (5) except for the fact that the pronoun c-commands the R-expression rather than being embedded in a c-commanding noun phrase. Coreference is ruled out. That there are environments where Principle C effects persist while EDR effects do not strongly suggests that the latter cannot be reduced to the former. The same pattern is observed for other islands, e.g., subject clauses or gerunds.

- (6) \*māī us-ko<sub>1</sub> [[Raam-ke<sub>1</sub> bacpan-kii] tasviirē] dikhaanaa caahtaa hū  
 I he-DAT Ram-GEN childhood-GEN pictures show.INF want be.1SG  
 ‘I want to show him<sub>1</sub> pictures of Ram’s<sub>1</sub> childhood.’

EDR effects also disappear if the pronoun, rather than the R-expression, is embedded in a possessor. Contrast (7a), where coreference is ruled out, with (7b), where no disjoint reference effects obtains, due to the possessor

island the pronoun is embedded in.

- (7) a. [us-kii<sub>1</sub> mää] Raam-ko\*<sub>1/2</sub> pasand kartii hai  
 he-GEN mother Ram-ACC love do be.3SG  
 ‘His<sub>1</sub> mother loves Ram\*<sub>1/2</sub>.’  
 b. [[us-kii<sub>1</sub> mää] -kii behen] Raam-ko<sub>1/2</sub> pasand kartii hai  
 he-GEN mother -GEN sister Ram-ACC love do be.3SG  
 ‘His<sub>1</sub> mother’s sister likes Ram<sub>1/2</sub>.’

This set of data is captured by the descriptive generalization in (4).

**Proposal: Linearity-based reference restrictions** To account for this constellation of facts I propose that the relevant principle operates on linear precedence rather than hierarchical structures. This explains without further ado why c-command does not seem to play a role and why movement of the R-expression (in (3)) allows coreference. In particular, I suggest that there is restriction on linear strings demanding linear precedence relations to correspond to the obviate hierarchy in (8). This principle is stated more precisely in (9), where ‘>’ designates linear precedence and ‘LIN’ the linearization algorithm. (9) is a well-formedness requirement on the output of the linearization procedure.

- (8) *Obviate Hierarchy* (Safir 2004)  
 R-expression ≫ pronoun ≫ anaphor  
 (9) *Obviate Alignment*  
 Given a syntactic structure  $\Sigma$ , such that  $LIN(\Sigma) = \langle \dots > x_i > \dots > x_j > \dots \rangle$ :  
 If  $x_i$  and  $x_j$  are coindexed then  $x_i \gg x_j$ .

To see how (9) applies to a concrete example, consider the sentence in (7a). Linearization of the hierarchical syntactic structure yields the string in (10a). I assume, contra much literature on linearization, that referential indices are part of the linearized representation. In (10a), obviate alignment (9) is violated because the R-expression *Raam* follows the coreferential pronoun *us-kii* but is more obviate than it. Coreference is thus excluded. If the linear position between the two elements is reversed (as in (2) or (3)) obviate alignment is adhered to and coreference becomes possible. This accounts for the contrast between (1) vs. (2) and (3).

- (10) a.  $\langle \text{us-kii}_1 > \text{mää} > \text{Raam-ko}_1 > \text{pasand} > \text{kartii} > \text{hai} \rangle$   
 b. (i)  $\text{us-kii}_1 > \text{Raam-ki}_1$   
 (ii)  $\text{us-kii}_1 \not> \text{Raam-ki}_1$   $\leadsto$  violates (9)

**The locality of EDR effects** The fact that coreference across island boundaries is allowed follows under a concept of *Cyclic Linearization*, according to which islands are linearization domains (Uriagereka 1999, Chomsky 2000, Stjepanović & Takahashi 2001, Johnson 2004, Bošković 2007). The idea underlying these proposals is that linearization renders a syntactic structure simplex, hence preventing subsequent extraction out of it. This concept of islandhood, coupled with (9) as a filter on the output of individual instances of the linearization algorithm, derives the grammaticality of (5) and (7b) as follows. Since the possessor is an island, it is linearized separately from the rest of the clause. The output of linearizing the island is given in (11a). The second cycle linearizes the entire clause. Importantly, the possessor, having already undergone linearization, is a syntactically simplex element at this point. It’s individual parts are not subject to renewed linearization. The output is provided in (11b). Both outputs in (11) conform to (9) and coreference is hence possible. This derives the fact that EDR effects only show up if no island boundary intervenes between the two elements.

- (11) *Linearization domains of (5)*  
 a.  $LIN_1 = \langle \text{Raam-ke}_1 > \text{bacpan-kii} \rangle$   
 b.  $LIN_2 = \langle \text{mää} > \text{us-ko}_1 > [LIN_1] > \text{tasviirē} > \text{dikhaanaa} > \text{caahtaa} > \text{hū} \rangle$

## Case Copying and Case Percolation in Polymorphemic Reciprocals in Dravidian: Some Unique Phenomena (Revised draft)

Reciprocals in Kannada, Tamil and Telugu (Dravidian) have a bipartite (polymorphemic) structure and the occurrence of the verbal reciprocal (VREC) is obligatory in Telugu while it is optional in Kannada and Tamil when a nominal reciprocal occurs in a *subcategorized position*. The verbal reciprocal however does not occur (i) in the non-nominative subject construction and (ii) with a non-subject antecedent (indirect object, for example) in Dravidian, except in Malayalam. This paper aims to present a detailed description of *Case Copying* and *Case Percolation* (to be discussed below) found in Dravidian reciprocals. *Case Copying* is a phenomenon in which the case marker of the *antecedent* is *copied* on one of the parts of a bipartite reciprocal (apart from Dravidian, the mechanism is also found in, for instance, Icelandic, Greek, Tsakhur). In Dravidian the case is copied on to the second part of the polymorphemic reciprocal while the first part carries *structural Case* assigned by the predicate as in sentence (1) (Subbarao in press).

It seems to be a unique feature of the Dravidian reciprocal that the constituents of the polymorphemic reciprocal can be *swapped: optionally* with a *non-subject antecedent* (sentences (2) and (3)). Swapping is prohibited with a nominative case-marked *subject antecedent* (sentence (4)), except in case of cognitive predicates. In case of *cognitive predicates* with subject as antecedent *swapping* of the constituents of the reciprocal is *obligatory* (sentences (5) & (6)).

We shall demonstrate that such prohibition on swapping with subject as antecedent and the obligatory swapping with cognitive predicates is due to a restriction in Dravidian that a nominative case-marked reciprocal cannot occur as the first part of the polymorphemic anaphor. We label such restriction as the '*Nominative First*' restriction and show that such restriction is due to Case-theoretic reasons (sentences (5) & (6)).

We shall also show that when a reciprocal occurs in a gerundival construction with a *nominative verb* with PRO as its subject and the matrix predicate is non-nominative (dative, for example), the inherent dative case marker of the antecedent *transmits* its inherent Case to the second part of the polymorphemic reciprocal via PRO (sentence (7)). Hence, we glossed PRO in (7) as 'dat' (dative case-marked). Such occurrence of the dative case marker on PRO is unexpected as the predicate *virucukoni.paḍaḍam* 'showing displeasure' is a predicate which takes a nominative subject and *not* a dative subject. Thus, the expected case marker on the second part of the reciprocal is *nominative*. However, the second part of the reciprocal *okaḷḷu* 'one' is *dative case marked* in (7). To account for the unexpected occurrence of the dative case marker *ki* we propose that the dative case marker of the matrix subject '*percolates*' to PRO and hence, the second part of the reciprocal gets its *dative case copy* from the subject. We label it as '*Case Percolation*', another unique phenomenon found only in Dravidian.

To account for the distribution of these case markers which are the result of *Case Percolation* and then, *Case Copying* in (7) we suggest two approaches. Under the first approach, the two uninterpretable case markers need to be valued and they require multiple case checking. We show that *Multiple Agree* (Hiraiwa 2001) can explain such case marking adequately. Thus, though the case marker that is percolated is a Case Copy of the antecedent which is inherently case-marked and, thus, is coindexed, it is an uninterpretable feature and hence, needs to be valued with a matching probe. Since the gerundival clause is *tenseless* and no matching probe is available in the gerundival clause for 'valuation', it needs to move to the matrix clause for a matching probe for Agree to take place in the matrix clause.

An alternative approach is to hypothesize that the phenomenon of Case Copying and Case Percolation in Dravidian is purely a *PF artifact* and it is similar to 'meaningless case agreement

of PRO' in Icelandic or tense agreement which 'operates with a non-syntactic feature' in some languages (Sigurdsson 2011:8). This approach gains support from the fact that the case marker that is copied on to the second part of the reciprocal - either in a simplex sentence or in a gerundival clause in Dravidian - is neither a structural case marker nor is it an inherent case marker. We find that the Sigurdssonian approach has more support from language-specific data. Data from only Telugu (Dravidian) is provided here. The properties of the Telugu data are also found in Kannada and Tamil (Dravidian).

Telugu (Dravidian)

**With a Dative Subject as antecedent: Unmarked – No swapping**

1. mamata.<sub>i</sub>ki<sub>i</sub> tana.mīda-tana.ki<sub>i</sub> kōpam vaccindi  
 Mamata.dat self.on-self.dat anger came  
 'Mamata got angry at/with herself.'

**With a Non-Subject (Indirect Object) antecedent: Unmarked – No swapping**

2. abbāyilu<sub>i</sub> ammāyili.ki<sub>j</sub> [oka||a.ni-oka||a.ki]<sub>j</sub> paricayam cēsēru  
 boys girls.dat one.acc-one.dat introduction did  
 'The boys<sub>i</sub> introduced the girls<sub>j</sub> to [each other]<sub>j</sub> (= the girls).'

**With a Non-Subject (Indirect Object) antecedent: Marked – Swapping permitted**

3. abbāyilu<sub>i</sub> ammāyili.ki<sub>j</sub> [oka||a.ki-oka||a.ni]<sub>j</sub> paricayam cēsēru  
 boys girls.dat one.dat-one.acc introduction did  
 'The boys introduced the girls to [each other]<sub>j</sub> (= the girls).'

**With a Subject antecedent in the nominative case: No Swapping – grammatical; Swapping – ungrammatical (swapped reciprocal starred in (4))**

4. abbāyilu<sub>i</sub> [oka||a.ni-oka||u]<sub>i</sub> / \*[oka||u-oka||a.ni]<sub>i</sub> poguḍukonnāru  
 boys.nom onl.acc-one.nom one.nom-one.acc praised  
 'The boys praised each other.'

**Obligatory Swapping with cognitive predicates: NOM-DAT Unmarked order in the Reciprocal-not permitted. (No Swapping in (5))**

5. [\*vā||a.ki]<sub>i</sub> [oka||u-oka||a.ki]<sub>i</sub> telusu  
 they.dat one.nom-one.dat known  
 'They know each other.'

**Obligatory Swapping with cognitive predicates: DAT-NOM Marked order in the Reciprocal-permitted. (Swapping obligatory in (6))**

6. [vā||a.ki]<sub>i</sub> [oka||a.ki-oka||u]<sub>i</sub> telusu  
 they.dat one.dat-one.nom known  
 'They know each other.'

**Dative Case Percolation with PRO as embedded subject with an embedded nominative (non-dative) verb and dative verb in the matrix clause**

7. vā||a.ki<sub>i</sub> [PRO oka||a.mīda-oka||a.ki]<sub>i</sub> virucu.koni- paḍaḍam] alavāṭu  
 they.dat dat one.on-one.dat- break- falling habit  
 'They have the habit of showing (their) displeasure with/at each other.'

**Abbreviations:** acc-accusative; dat-dative; nom-nominative; pst-past

**References**

- Hiraiwa, K. 2001. Multiple Agree and the Defective Intervention Constraint in Japanese. In: *MIT Working Papers in Linguistics* 40, 67-80. Cambridge: MIT.  
 Sigurdsson, H. 2011. On I-language and Externalization. Paper presented at the conference on *The Past and Future of Universal Grammar (UG: The Minimalist Workshop)* in December 2011.  
 Subbarao, K.V. (in press). *South Asian Languages: A Syntactic Typology*. Cambridge:CUP.

## The syntactic encoding of I- and M-possessors in Bangla

This paper considers possessor-constructions in Bangla, which have not been much discussed in the literature, and argues for a syntactic distinction between two types of possessors in the language, with potential broader consequences for the analysis of genitive constructions in other languages such as English.

Morphologically, possessors are constructed in Bangla through the addition of an –r clitic to nominal elements, as illustrated in (1-4), in which –r is cliticized to a pronoun (1), a proper name (2), a noun followed by a classifier (3), and a bare noun (4):

- |    |   |    |   |
|----|---|----|---|
| 1. | ama-r bhai<br>I-r brother<br>'my brother'             | 2. | Ruma-r juto<br>Ruma-r shoes<br>'Ruma's shoes' |
| 3. | chele-ta-r juto<br>boy-ta-r shoe<br>'the boy's shoes' | 4. | goru-r khabar<br>cow-r food<br>'cow food'     |

In terms of interpretation, a distinction has sometimes been made across languages with regard to 'individual genitives' (I-genitives from now on), and modificational-genitives (M-genitives) (e.g. Munn (To appear: *Proceedings of WECOL. V. Samiian, (ed.)*). In I-genitives, the nominal 'possessor' refers to a particular individual. Hence, examples (1-3) are all instances of I-genitives. In M-genitives, the nominal possessor does not refer to a specific individual, and the meaning of the possessor + noun is generic. An example of an M-genitive in Bangla would be (5) below:

5. chele-de-r juto  
boy-de-r shoes  
'men's shoes'

In English, there is no explicit morphological difference between the I-genitives, and the M-genitives. Consider *a man's shoe*. This can have an I-genitive reading, where it refers to a particular man, and his shoe; it can also have an M-genitive reading, where it refers to a shoe meant for men. English I- and M-genitives do not seem to be distinguished in terms of morphology or syntax, but the question is clearly raised as to whether the difference in interpretation should be assumed to relate to some underlying difference in syntactic structure. Considering Bangla, this paper will show that I- and M-genitives do have a different syntactic encoding in the DP. It will be shown that the head and the non-head of these possessive constructions behave differently with regard to a range of syntactic tests, namely in terms of pronominal reference, allowing numerals, and possibility of being modified. With regard to the linear order of elements in the DP, it is shown that I- and M-genitives occupy different positions, this becoming manifest when further elements such as the universal quantifier *sOb* are introduced. In (6) and (7) below, it is seen that I-genitives necessarily precede, but M-genitives follow the universal quantifier:

- |       |  |    |   |
|-------|--|----|---|
| 6. a. | chele-Ta-r sOb juto<br>boy-ta-r all shoe<br>'all the shoes of the boy' | b. | *sOb chele-Ta-r juto<br>all boy-ta-r shoe |
| 7. a. | sOb chele-de-r tupi<br>all boy-de-r shoe<br>'all men's shoes'          | b. | *chele-de-r sOb tupi<br>boy-de-r all hat  |

The paper shows that the distinctive patterns with I- and M-genitives have various consequences for the general analysis of DPs in Bangla (and other languages), and will also discuss the genitive encoding of nominal arguments in the language.

References:

- Abney, S. (1987) *The Noun Phrase in its Sentential Aspect*, Doctoral diss., MIT.
- Barker, C. (1991) *Possessive Descriptions*, Doctoral diss., University of California, Santa Cruz.
- Bhattacharya, Tanmoy. Specificity in Bangla DP. In *Yearbook on South Asian Languages and Linguistics*, vol 2, ed. Rajendra. Singh, SAGE Publications, 1999.
- Bhattacharya, Tanmoy. DP-internal NP Movement. UCL Working Papers in Linguistics, vol 10, 1998.
- Munn, A. (To appear). *The possessor that stayed close to home. Proceedings of WECOL. V.* Samiian, (ed.)
- Szabolcsi, A. (1983) The possessor that ran away from home, *The Linguistic Review* 3.
- Szabolcsi, A. (1994) The Noun Phrase, in *The Syntactic Structure of Hungarian (Syntax and Semantics 27)* (to appear).



## BANGLA DEFAULT CLASSIFIER REVISITED

**The data.** The Bangla (Bengali) default classifier *-Ta* has a puzzling behavior. First, it appears with both count (1a) and mass (1b) nouns. Second, its position relative to NPs correlates with (in)definiteness. Pre-nominal occurrence of *-Ta* results in an indefinite reading (1c). Definiteness is achieved through NP-fronting, as in (1a,b,d).

- |     |   |   |
|-----|---|---|
| (1) | a. pakhi-*(Ta) ghOre Dhuklo<br>bird-Ta room.at entered<br>‘The bird entered a room.’          | b. jOl-*(Ta) poRe gElo<br>water-Ta drop-ppl went<br>‘The water fell down (the hand).’   |
|     | c. chO-*(Ta) pakhi ghOre Dhuklo<br>six-Ta bird room.at entered<br>‘Six birds entered a room.’ | d. pakhi <sub>i</sub> chO-*(Ta) t <sub>i</sub> ghOre Dhuklo<br>bird six-Ta room.at entered<br>‘The six birds entered a room.’ |

Third, in the presence of a quantifier, the mass/count interpretation of the NP depends on the combination of the quantifier and *-Ta*. Quantifiers unspecified for mass/count (e.g., *a lot, much/many, some, most*) can occur without *-Ta* (2a). However, in the presence of *-Ta*, the NP receives a mandatory mass interpretation (2b). On the other hand, with quantifiers marked for count nouns (e.g., *every, few, each* etc.), *-Ta* is obligatory (3a) and the combination only allows for a count interpretation (3b).

- |     |  |  |
|-----|--|--|
| (2) | a. rik [ <i>Onek</i> pakhi / jOl] dekh-lo<br>Rick much/many bird / water saw<br>‘Rick saw many birds.’<br>‘Rick saw much water.’ | b. rik [ <i>Onek-Ta</i> *pakhi / jOl] dekh-lo<br>Rick much/many-Ta *bird / water saw<br>‘Rick saw much water.’ |
| (3) | a. *rik [ <i>kOyek</i> pakhi / jOl] dekh-lo<br>Rick few bird / water saw’  | b. rik [ <i>kOyek-Ta</i> pakhi / *jOl] dekh-lo<br>Rick few-Ta bird / *water saw<br>‘Rick saw some birds.’      |

**Questions.** If *-Ta* is a prototypical classifier, (I) what explains its occurrence with prototypical mass nouns (1a-b)? (II) what role does the placement of *-Ta* play in achieving (in)definiteness reading (1c-d)? (III) If *-Ta* is compatible with both count and mass nouns, as in (I), how is the obligatory mass/count interpretation with quantifiers determined (2b, 3b)?

**Background.** Borer (2005) proposes that nouns are not lexically specified for the count/mass distinction. Count NPs are the result of the functional projections of classifiers that individuate the lexical noun. The presence of such projections, namely CIP (=her DivP), results in count readings; mass reading is obtained in the absence thereof. The theory has considerable cross-linguistic support. The data presented above, however, challenges such an account. Specifically, it is problematic for the theory that *-Ta* co-occurs with mass nouns without any change of mass to count interpretation (1b) [I]. It is challenging for the account to explain (III) where in the presence of *-Ta*, the quantifier co-occurs only with mass nouns (2b) or count nouns (3b). Does the quantifier [specified count vs. unspecified] restrict such an option of co-occurrence (3a-b)? Furthermore, *-Ta* has been claimed previously to license NP-movement to [Spec, QP] for

specificity (Bhattacharya 1999). But here I argue, for established reasons, that it is a definite reading that (1b&d) obtains. How is this reading licensed under the given assumption?

**Proposal.** I propose that a functional head  $n^0$  categorizes roots. An  $n^0_{\text{count}}$  maps the denotation of the root to one of a predicate of atomic individuals. The root is interpreted as a mass nominal when embedded under nominal structure, if no  $n^0$  is present. I propose that *-Ta* is a degree determiner and not a classifier. Assuming both count and mass nouns to be predicates of type  $\langle e,t \rangle$ , I propose that *-Ta* turns predicates of individuals into expressions of type  $\langle d, \langle e,t \rangle \rangle$ , whose measure along a particular scale is the degree (following Hackl 2001 for the meaning of *many*, a component of the meaning of *more*). A count noun is measured on a cardinality scale, while a mass noun is measured on a non-cardinality scale. With numeral quantifiers present, the scale will be one of cardinality. On the other hand, in the absence of a numeral quantifier, the degree variable is bound by an amount quantifier. In other words, it is ambiguous between two entities similar to English *more* which could be *-er-much* or *-er-many*. For the execution, I propose a Measure Phrase (MP) projected between nP and QP.

I show that Bangla has two types of quantifiers. One is a degree quantifier, as in (2a-b), which can occur both as adnominal and adverbial quantifiers and are underspecified for count/mass (Doetjes 1997). The other one is a quantifier that embeds a numeral (3a-b). Despite apparent similarity in the forms, the elements of the *unspecified* group (e.g., (2)) are non-compositional, while the *count-specified* group (e.g., (3)) is compositional. The latter can be divided into a degree quantifier and the numeral *ek* ‘one’ (4a), while the former isn’t (4b).

- (4) a. *kOyek* ‘few’ = *kOy* ‘how many’ + *ek* ‘one’.  
 b. *Onek* ‘much/many’ ≠ *On* + *ek* ‘one’

The degree quantifier, as in (2a), can appear regardless of *-Ta*, while the other one requires obligatory presence of *-Ta* for the expression of measure. The cardinality scale due to the embedded ‘one’, as in (3b), is compatible only with count nouns. In absence of ‘one’, the measure scale is only compatible with the mass nouns (2b). The availability of both prototypical count and mass nouns with post-nominal *-Ta* (1a-b) follows from this account. In the absence of any quantifiers, existential closure binds the degree variable; a null definite determiner binds the individual variable. The null definite determiner requires the NP to move to Spec, DP for licensing of the definiteness feature and hence we obtain definite readings in (1). This also explains the unavailability of (5a-b).

- (5) a. \**-Ta jOl*  
       *-Ta water*  
 b. \**-Ta chele*  
       *-Ta boy*

Reference:

- Bhattacharya, Tanmoy. 1999b. Specificity in the Bangla DP. In R. Singh, (ed.), *Yearbook of South Asian Languages and Linguistics 2*, 71–99.  
 Dasgupta, Probal. 1983. On the Bangla classifier *Ta*, its penumbra, and definiteness. *Indian Linguistics* 44:10–26.  
 Borer, Hagit. 2005. *Structuring Sense: In Name Only*. Vol. I. Oxford University Press.  
 Doetjes, Jenny. 1997. *Quantifiers and Selection: On the Distribution of Quantifying Expressions in French, Dutch and English*. Dissertation Leiden University, HAG, The Hague.