

Decomposing *Definiteness*: Arguments for a Split D-domain in Bangla

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1. Introduction

“Can we make a choice between identifiability and inclusiveness,” asks Lyons (1999), while talking about what might be the right way of characterizing definiteness; he further asks, “is one of them right and the other wrong, or are there two kinds of definiteness”. In this paper, I suggest that breaking down the idea of *definiteness* into two separate concepts, *identifiability* and *inclusiveness*, is key to understanding a puzzle involving definiteness and demonstratives in Bangla; I also suggest that these concepts, along with *deixis*, are manifested in the syntax as functional projections, i.e what has been labelled as the DP (Abney 1987, among many others) has a finer structure in the form of $[_{\text{DeixP}} [_{\text{IdentP}} [_{\text{IncP}}]]]$.

1.1. The Puzzle

A canonical sequence of numeral-classifier-adjective-noun in Bangla gets an indefinite interpretation (see 1); a non-canonical sequence of adjective-noun to the left of the numeral-classifier (see 2) gets what has been argued as a *definite* interpretation.

(1) du To lal boi (indefinite)
two Cl red book
'two red books'

(2) lal boi du To (definite)
red book two Cl
'the two red books'

The non-canonical order in (2) associated with the so-called definite reading has been analyzed in terms of a phrasal movement of the adjective-noun across the numeral-classifier motivated by the need to achieve definiteness (Bhattacharya 1999, Chacón 2012, Dayal 2012). However, when a Demonstrative is present, the interpretation of the nominal expression is definite regardless of such a phrasal movement. This is shown in a non-moved order in (3), and a moved order in (4).

(3) oi du To lal boi (definite)
that two Cl red book
'those two red books'

(4) oi lal boi du To (definite)
that red book two Cl
'those two red books'

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The puzzle is if the relevant phrasal movement was to achieve definiteness, what drives such a movement in the presence of a Demonstrative, where the expression already appears to be definite in virtue of the Demonstrative?

The rest of the paper is outlined as follows - in Section II, I sketch an analysis in terms of *inclusiveness* that provides an answer to the puzzle; in II.1 and II.2 I discuss why it cannot be analyzed in terms of *anaphoricity* or *specificity* respectively; in Section III, I provide indirect support in favour of *inclusiveness*; in Section IV, I explain the mechanism of the movement proposed; in Section V, I give my motivation for positing IncP, IdentP and DeixP as separate functional projections; and in Section VI, I summarize the key points of the squib and its contribution towards understanding *definiteness* and the nominal architecture of Bangla.

2. Analysis

I suggest that the concept of definiteness should be broken down into sub-concepts of *identifiability*, and *inclusiveness*; in syntactic terms I model this by splitting the traditional DP into a three-layered extended projection¹, having Deix(is)P, Ident(ifiability)P, and Incl(usiveness)P in the following order:

(5) [_{DeixP} [_{IdentP} [_{IncP} ...

I suggest that the phrasal movement that has been previously argued to be motivated for definiteness takes place to the specifier of the IncP in order that an interpretation of *inclusiveness* arises. That is, I argue that a more precise way of understanding the meaning of (2) is *all the red books when there are two books* rather than *the two red books*; the task then becomes to show that in (3), there is no *inclusiveness* reading, whereas in (4) there is, and this forces the movement in (4), but not in (3).

Before I present my arguments that it is indeed *inclusiveness* at play here, let me briefly discuss what I mean by *inclusiveness*. The term *inclusiveness* goes all the way back to Hawkins (1974). He uses the term in relation to a generalization that the referent of a definite noun phrase must be part of a ‘shared set’, where *shared set* means *entities known by speaker and hearer to constitute either the previous discourse, the immediate or the larger situation, or an association set*. The definite article (or the relevant phrasal movement in the case of Bangla) instructs the hearer to infer which shared set is intended and *locate* the referent in it. But the fact that a noun phrase can be associated with a shared set does not by itself makes definiteness obligatory, and that is where the term *inclusiveness* becomes necessary. For definites, the reference is to the **only entity** or **all the entities** in the shared set. Otherwise, it will be an indefinite expression. That is, *inclusiveness* is necessary for getting a definite interpretation. I am going to adopt this ‘either only or all’ definition of *inclusiveness* for this paper².

To illustrate that a contrast exists between a moved order and a non-moved order in the presence of a demonstrative, I first show that in the context given in (6), the moved order in (6a) is felicitous, while the non-moved order in (6b) is not.

(6) *Context*: the speaker bought four shoes yesterday, and the hearer knows about the four shoes.

a. oi **juto char Te** ferot diye diyechi
that shoe four CL have returned

b. # oi **char Te juto** ferot diye diyechi
that four Cl shoe have returned

¹ Also see Simpson and Wu (2002), for the idea of a DP-shell.

² Note that the definition that I am using for *inclusiveness* is in a way similar to the notion of *maximality* (cf. Rullman 1995, among many others). When *maximality* is involved in an expression/construction, it is argued that it involves reference to the maximal element of a certain set, and the way it manifests itself depends on the algebraic structure of that set. As an example, *degrees* are ordered linearly and hence the maximal element of a set of degrees is the highest degree in the set. In other non-linear cases, the maximal element is the sum of all elements in the set. This definition of *maximality* can be applied to get the ‘either only or all’ interpretation; that is, what I want to get out of *inclusiveness* can be technically achieved by using *maximality*. However to keep the discussion simpler and more intuitive, I choose to use *inclusiveness*.

That it is *inclusiveness* playing a role in the phrasal movement becomes clear from the fact that in the context in (7), the non-moved order in (7a) can mean there could be more shoes that I returned, but the moved order in (7b) ensures it is the case those are the **only** shoes that are returned.

(7) *Context*: hearer knows speaker bought some shoes yesterday, but has not seen the shoes.

- a. kalke je juto gulo kinechilam,
yesterday comp shoe Cl had bought
- ta-r modhye **oi** **du To juto** ferot diye diyechi
that-gen within Dem two Cl shoe have returned

‘among the shoes that I had bought, I have returned those two shoes’

- b. kalke je juto gulo kinechilam,
yesterday comp shoe Cl had bought
- ta-r modhye **oi** **juto** **du To** ferot diye diyechi
that-gen within Dem shoe two Cl have returned

‘among the shoes that I had bought, I have returned those two shoes’

The role of *inclusiveness* becomes even clearer in (8), where I show the moved order is infelicitous because it violates *inclusiveness* (8a), whereas the non-moved order is allowed (8b).

(8) *Context*: Ram has bought four shoes. And then he returned all of them. Next day, while walking past the shoe store with Shyam, he notices three of the shoes that he returned on the showcase. He points to them, and tells Shyam:

- a. #ami oi **juto 3 Te** ferot diye diyechi (moved order)
I Dem shoe Num Cl have returned
- b. ami oi **3 Te juto** ferot diye diyechi (non-moved order)
I Dem Num Cl shoe have returned

Now that I have shown that the phrasal movement happens to obtain *inclusiveness*, I can give an answer to the answer to the puzzle asked in Section I. In the order DEM NUM CL NP, there is no movement because there is no intended interpretation of *inclusiveness*, whereas in the order DEM NP NUM CL, the phrasal movement occurs in order to focus the interpretation of *inclusiveness*; the overt presence of the Demonstrative in both the cases contributes *deixis*, which is responsible for the seemingly similar *definiteness* flavor in both orders.

2.1. *Why inclusiveness? And not anaphoricity?*

There has been a great attempt at distinguishing two types of *definiteness* in Bangla in Biswas (2012)³, i) one type of *definiteness* by phrasal movement (a sequence of noun-numeral-classifier on the surface), and ii) another type of *definiteness* expressed by bare nouns on the surface. There is a cross-linguistic observation that many languages make a distinction between two types of *definiteness* by virtue of using either a strong article or a weak article. It is noted that the strong article is associated with *anaphoric* contexts, and the weak article is associated with *uniqueness* contexts. Bangla does not have determiners, strong or weak. However, Biswas suggests that in Bangla the strong and weak article definiteness is expressed by employing a phrasal movement of the sort that we have seen in (2) and by using a bare noun respectively. That is, the moved order (or the ‘NP-raised order, in Biswas’

³ Also see Simpson and Biswas 2015.

terms) represents strong article definiteness while bare nouns express weak article definiteness because (she suggests) the moved order is used exclusively in *anaphoric* contexts, whereas bare nouns express *uniqueness*-based definites.

*Anaphoricity*⁴ cannot distinguish between the moved order (noun-numeral-classifier on the surface) and the non-moved order (numeral-classifier-noun on the surface), which is what I try to tease apart in this paper. This is clear from (8a), where we see a non-moved order but which is still anaphoric. Another example to show that it's not anaphoricity is Biswas's own example given in (9). In (9) there is situational uniqueness, which is non-anaphoric, but a moved order is used.

- (9) sabdhan! Kukur-Ta kamrate pare (moved order)
 Beware! Dog- Cl bite-ppl can
 'Beware! The dog might bite you!'

That is, (8a) shows us that a non-moved order can be anaphoric and (9) shows us that a moved order can be used in a non-anaphoric context. This clearly shows that *anaphoricity* is not what is making the moved order different from the non-moved order; inclusiveness is.

2.2. Why not specificity?

While discussing my idea of trying to capture the distinction between the moved and the non-moved order in terms of *inclusiveness*, one question that came up was if the same distinction can be captured in terms of *specificity*, and hence it might be worth clarifying that it cannot. *Specificity* is defined as an identity known to someone but not to the hearer; it is used in the literature to make a distinction between two types of indefinites- specific indefinites and non-specific indefinites. If it were *specificity* that is making the moved order different from the non-moved order, one would expect an indefinite reading from the moved order, which is never the case. In other words, the fact that one can never get any indefinite reading in (2) shows that it cannot be *specificity* that is playing the relevant role here.

3. Indirect evidence for inclusiveness: the role of –i

Let's look at the contrast between (6a) and (6b) again, repeated as (10a) and (10b) below. (6a) is felicitous with the moved order, whereas (6b) with the non-moved order is not. However, the infelicitous (6b) becomes felicitous in the same context of (10) with the addition of the marker –i (see 11).

(10) *Context*: the speaker bought four shoes yesterday, and the hearer knows about the four shoes.

a. oi **juto char Te** ferot diye diyechi
 that shoe four CL have returned

b. # oi **char Te juto** ferot diye diyechi
 that four Cl shoe have returned

(11) oi char Te juto **i** ferot diye diyechi
 that four Cl shoe **i** have returned

The data in (10)-(11) show that to make the infelicitous (10b) felicitous, one either needs to employ phrasal movement of the adjective-noun sequence (as in 10a), or the addition of –i (as in 11). I take this to suggest that the employment of these two strategies, the addition of –i and the phrasal movement, provides the same function to make the infelicitous utterance into a felicitous one. And I

⁴ Anaphoricity is defined as what requires the description to refer back to a linguistic expression that is mentioned in a previous discourse (Christophersen 1939, Heim 1982).

argue that the semantic contribution of *-i* is to provide *inclusiveness*, and therefore the contribution of the moved-order should also be that. It is true that it is possible that these two mechanisms fix two different things to make it felicitous, but then one has to assume that there are two things wrong with the infelicitous utterance. And if one mechanism is fixing one of them, then the other wrong remains unfixed, and the utterance is predicted to not become felicitous, contrary to the empirical fact.

That the phrasal movement and *-i* have the same function gets further support from the fact that they cannot co-occur, as shown in (12)⁵.

- (12) *amar juto char Te i chai
I-gen shoe four CI i want

The translation in (13) clearly shows that the role of *-i* is to provide an *inclusiveness* reading.

- (13) oi char Te juto i chai (inclusive)
that four CI shoe i want
'I want all of those four shoes'

Note that this *inclusive* reading of (13) is with a neutral intonation, or with a phonetic stress on the numeral *char*, as shown below in (14).

- (14) oi CHAR Te juto i chai
that FOUR CI shoe i want
'I want all of those four shoes'

However, if there is a strong phonetic stress on the Demonstrative *oi* instead of the numeral *char*, the interpretation of (13) becomes one of *uniqueness*, as shown in (15).

- (15) OI char Te juto i chai (uniqueness)
THOSE four CI shoe i want
'I want those four shoes, no other shoes will do'

The data in (13)-(15) show that the non-moved order with the addition of *-i* can be explained in terms of *inclusiveness* or *uniqueness*. But *uniqueness* can be explained in terms of *inclusivity*; as Lyons (1999) puts it, "uniqueness can be assimilated to inclusiveness. When the noun phrase is singular, inclusiveness turns out to be the same as uniqueness." The reason why the interpretation fluctuates between *inclusiveness* and *uniqueness* by varying the emphasis on the numeral (in 14) and on the Demonstrative (in 15) is because the role of the Demonstrative could be either of *deixis* or *identifiability* or both, but a Dem is not associated with *inclusiveness*. Now that I have demonstrated the function of *-i* is to give an *inclusiveness* reading, it is reasonable to think that the phrasal movement happens for the same reason.

4. Mechanism of the movement

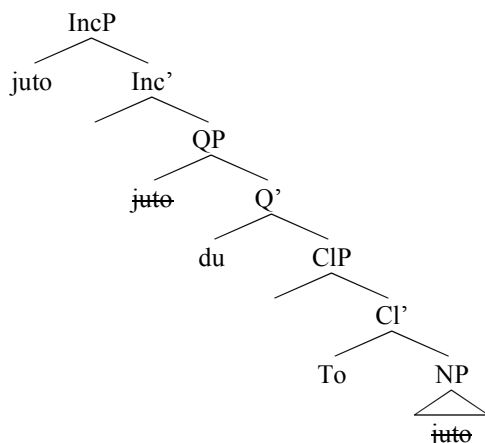
I have suggested that the phrasal movement of the adjective-noun sequence across the numeral-classifier sequence occurs for *inclusiveness* reasons; in this section I discuss the theoretical framework that I adopt to explain such movement. I propose an IncP, which is above the QP⁶. QP hosts the numerals; the syntax and the relevant phrasal movement are shown in the tree below (16). This internal syntax of the Bangla nominal domain is adopted from Syed (2014) and Simpson and Syed (submitted); I am not going to present any of the arguments on the syntax here in the interest of space. What is

⁵ Note that (12) is bad under an *inclusiveness* reading. It is allowed with a 'this and not the other' reading, where there are two candidates, and the speaker wants the *juto char te* and not the other candidate. I will not go into the details of this role of *-i* in this squib, but for the relevant purpose of our discussion, the crucial point that I want to make is that (12) is bad under the *inclusiveness* reading because we already have a moved-order which has the function of *inclusiveness*, and hence the attempt to add *-i* for the same function is redundant, and unacceptable.

⁶ Not necessarily immediately above.

crucial for this paper is that the NP *juto* undergoes phrasal movement and needs to land in the specifier of the IncP to obtain an *inclusiveness* reading.

(16)



There are various theoretical ways of explaining the mechanism of the phrasal movement of the NP to the Spec,IncP- for example, one could adopt the early model of minimalism (Chomsky 1995), with a mechanism of feature-checking that needs to happen in a Spec-head configuration. I will adopt the minimalism model in Chomsky (2000), which involves a probe-goal approach. To analyze the phrasal movement in terms of a probe and a goal, I will assume that the NP *juto* is marked with *inclusiveness* feature. The Inc head Inc⁰ has unvalued *inclusiveness* feature and is the probe which searches for a goal with features corresponding with the feature type of itself. It finds a goal in the NP *juto*, so the unvalued feature gets valued by feature-copying. In addition, Inc⁰ has an EPP feature, which requires *juto* to move up to the Specifier of the IncP, to satisfy the EPP requirement⁷.

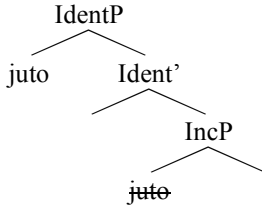
5. IdentP and DeixP

So far, I have proposed that the phrasal movement of an adjective-noun sequence in (2) and (4) lands in the specifier of the IncP to get an *inclusiveness* reading; however note that when we get the *inclusive* reading of the two shoes in (4), it has to be the case that the hearer can also *identify* the shoes that are being referred to. This brings into discussion the notion of *identifiability*, another notion that has been used in the literature in attempt to characterize *definiteness*. *Identifiability* is usually defined as a way of successfully identifying a referent by the hearer⁸. The hearer does it by successfully matching ‘the referent of the definite noun phrase with some real-world entity he knows to exist because he can see it, has heard of it, or infers its existence from something else he has heard’ (Lyons 1999). To explain how an *inclusiveness* interpretation also has a referent *identifiable* to the hearer in terms of the analysis I have sketched, I suggest that there is IdentP dominating the IncP. After the NP *juto* in (16) moves to the Spec,IncP the head of the IdentP acts as the probe to find a goal to value its *identifiability* features and finds *juto* as the goal as *juto* has the relevant features. The EPP requirement results in the movement of *juto* further up to the Spec,IdentP, as shown in (17).

⁷ This movement, as shown (16), has to go via Spec, QP. This is to satisfy PIC (Phase Impenetrability Condition) because QP is a mid-level phase within the nominal domain (cf. Syed 2014, Simpson and Syed (submitted)).

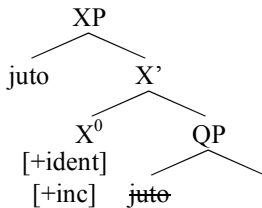
⁸ It is pertinent to note here that *familiarity* is also a notion that has surfaced in the literature of definiteness. However, as Lyons notes, *familiarity* can be explained in terms of *identifiability*, as familiarity is just one way of successfully identifying a referent. For more detailed discussion on this, please see Lyons (1999).

(17)



One might wonder why one needs to posit both *inclusiveness* and *identifiability* as separate functional projections; given that the interpretation in (4) is both *inclusive* and *identifiable*, an alternative idea is to have only one functional projection, the head of which has both unvalued *inclusive* and *identifiable* features. This head looks for a goal and finds *juto* which has both the relevant features; the features match by *AGREE* and the EPP requirement makes *juto* move up. The alternative idea is shown in (18).

(18)



The reason why I would want these notions to be separate is while it's true that anything that is inclusive is also identifiable, but it is not vice versa. It is possible for something to be identifiable, but not inclusive. This is shown in (19)⁹. The moved order in (19a) cannot be explained by *inclusiveness* because not all the doors referred are included, but *identifiability* can account for it because the hearer is still assumed to be able to identify which doors are being referred to. Some factor in the sentence or the situation makes it clear which objects, between several satisfying the description, are intended and this seems to be enough¹⁰.

(19) *Context*: in a room with three doors, two of which are open

- a. dorja du To bondho kore dao
door two Cl close
'close the two doors'
- b. #du To dorja bondho kore dao
two Cl door close

5.1. *DeixP?*

The notion of *identifiability*, which I posit to be a property of the IdentP, has also been associated with a demonstrative, in the sense that demonstratives make entities identifiable (Lyons 1999). However, this *identifiability* function is not the only semantic content of a Dem; it also performs a *deictic* function. Bangla demonstratives can carry out both semantic functions, *identifiability* and *deixis*; however, they may also just focus *identifiability* of a referent without performing any overtly

⁹ The data is inspired from similar English examples in Lyons (1999) to illustrate cases that *identifiability* can explain but *inclusiveness* cannot.

¹⁰ An objection to such examples like (19) is that 'the door' might be shorthand for 'the door which is open' (Hawkins 1999), but see Larson and Segal (1995: Chapter 9) for a detailed discussion on why such an ellipsis treatment cannot be on the right track.

deictic function, as shown below in (20), where the speaker is talking about shoes that he has bought yesterday, and he is not pointing at any of them. The speaker assumes that the hearer will be able to identify which shoes he is talking about. This can be easily accounted for, if one takes IdentP and DeixP as separate functional heads.

- (20) *Context*: the speaker bought four shoes yesterday, and the hearer knows about the shoes.
- a. oi juto char Te ferot diye diyechi
that shoe four CL have returned

6. Conclusion

In conclusion, in this paper I have argued for a split D-domain, with functional projections DeixP dominating IdentP which dominates IncP. I have shown that such a split D-domain can explain a puzzle with definiteness and demonstrative in Bangla, and that the definiteness flavour that has caused the long-standing confusion can be teased apart as the presence of an inclusiveness reading or the lack thereof. The paper also provides valuable insight about the nominal architecture of Bangla, with the novel proposal of new functional heads and their hierarchical relation with other existing functional structures.

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