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# Bengali Determiner Phrase Revisited: A Response to Dasgupta and Ghosh

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22 23 Dasgupta and Ghosh (henceforth DG) published in this journal in 2007, is, to some extent, the continuation of the classical generative study of the structure of B(engali) D(eterminer) P(hrase), inaugurated in the pioneering work by Dasgupta (1983) and then followed by works like Bhattacharya (1999) among others. In this intervention we intend to focus, rather selectively, on those claims of theirs which attempt to answer the following two questions which are, in our view, the most pertinent ones in the study of BDP structure:

- 1. Why does (3a) have an indefinite reading whereas (3b), (3c) and (3d) have a definite one?
  - 2. Why does the NP move in (3c) despite the presence of an overt Dem whereas in (3d) it does not?
    - 3a. /tin-TA boi/ (three-Cl-book) 'Three books' (Indefinite)
    - 3b. /boi tin-TA/ (book-three-Cl) 'The three books' (Definite/Specific)
    - 3c. /ei boi tin-TA/ (Dem-book-three-Cl) 'These three books' (Definite)
    - 3d. /ei tin-TA boi/ (Dem-three-Cl-book) 'These three books' (Definite)

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Bhattacharya (1999) claims, along the line of Chomsky (1995), that in (3b) a NP carrying a feature [+specific] moves, in order to check the feature, to Spec Q(uantifier) P(hrase), a fused head combining both Q(uantifier)/Num(eral) (henceforth Q) and Cl(assifier).

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4.  $_{DP}[Spec D' D_{OP}[NP_i Q' Q t_i]]$ 

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However, DG point out the following facts which are not compatible with Bhattacharya's account:

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5. With some classifiers some NPs are not allowed to move, as illustrated in (6) and (7) below:

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6. */chelejon/ (boy-Cl) 'The boy' or
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- 7. \*/chele-du-jon/ (boy-two-Cl) 'The two boys' (but note that /upacarjo-du-jon/ (Vice-chancellor-two-Cl) is acceptable) (see Dasgupta in the present volume)
- 8. The NP movement beyond Q depends on the content of the quantifier, as exemplified in (9) below:
  - 9. \*/boi egaroTA/ (book-eleven-Cl) 'The eleven books'

In order to analyze BDP structure DG adopt what it refers to as the Substantivist theory (elaborated in Dasgupta et al. (2000) and Dagupta (2005)). Unlike the majority of works on DP structure this apprach does not consider the classifiers and demonstratives as distinct morphosyntactic entities. It involves W(ord) E(xtension) S(trategies) like (11) which are extentions of W(ord) F(ormation) S(trategies) like (10) of the Whole Word Morphological model of word formation elaborated in Ford et al. (1997). According to Dasgupta (2005: 61) a WES "maps words onto extended words by attaching a clitic." DG do not formally define either the term 'clitic' or the term 'extended word'. However, in the context of Bengali, we can see the former as an entity concatenated to the input of a WES and the latter as phrases or syntactic sub-trees that merge at particular sites in a syntactic structure. This said, we will avoid the term 'clitic' in this text and will designate the cliticised entities like /tin-Ta/ in (11) as 'constants' of WES.<sup>2</sup>

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10. /X/_{Unclassified Q} \leftrightarrow /XTA/_{Classified Q}

/tin/ 'three' \leftrightarrow /tinTA/ 'three-Cl'

/koyek/ 'a few' \leftrightarrow /koyekTA/ 'a few-Cl'
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11.  $/X/_{N(oun), Indefinite, Unquantified} \rightarrow /XtinTa/_{NP, Definite, Quantified, Plural}^{3}$ /boi/ 'book'  $\rightarrow$  /boi-tin-TA/ (book-three-Cl) 'the three books'

According to DG we can handle (3b) with (10) and (11). The righthand outputs of (10) appear as constant in (11) and if /boi/ 'book' is mapped onto this WES, it outputs (3b). In absence of an overt Dem, the outputs of (11) merge at Q and then Q moves to SpecDemP. Subsequently, the null Dem moves to D in order to check the [+definite] feature, because, as (13)

shows, Dem alone cannot yield definiteness in a good number of cases. DG assume that head-movement is allowed for functional heads like Dem and Q.

- 12. <sub>DP</sub>[Spec D' D <sub>DemP</sub>[Spec Dem' Dem <sub>OP</sub>[Spec Q' Q]]]
- 13. \*/ei bhalo nOv/ (this-good-not) 'this is not good'

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DG claim that (3d) can be handled with two WES: (14) and (15). The output of (14), a DemQ sequence, appears as constant in (15) which outputs a quantified, definite and plural NP. This NP merges at Q and then, Q moves to Spec DemP in order to check the [+definite] feature, and consequently, its left most element, Dem /ei/ 'this' is niched in D.

- 14.  $/XTa/_{Q, Classified} \rightarrow /eiXTa/_{Q, Classified, Definite, Plural}$ /tin-TA/ (three-Cl) 'the three' → /ei-tin-TA/ (Dem-three-Cl) 'these three'
- 15.  $/X/_{N, Indefinite, Unquantified} \rightarrow /ei-tin-TaX/_{NP, Quantified, Definite, Plural}$ /boi/ 'book' → /ei-tin-Ta-boi/ (Dem-three-Cl-book) 'these three books'

DG attempt to answer (1) and (2) and try to account for (5) and (8). However, some of the examples which are problematic for Bhattacharya (1999) are also problematic for DG. The present intervention aims to draw our attention to those examples. Subsequently, in order to account for (3c) on the one hand, and to handle some different data on the other, we propose some modifications in the WES structure and also in the syntactic structure of BDP à la DG.

According to DG (5) and (8) can be handled (13) "by constraining the Strategies." The formation of (6) can indeed be avoided by claiming that there exists no strategy like (16). We can form (7) with (17) although some speakers may find it less acceptable than other outputs of this WES. Sequences like (9) can be formed with (18) or (19) but as we can see below, speakers are far from being unanimous about the acceptability of their outputs. The general rule in this respect seems to be the following: Ns denoting objects of comparatively smaller size are allowed to precede a bigger Num. However, the acceptability of the sequences in which the N precedes Q depends, as (18) and (19) show, both on the size of the Num and the nature of the N. Therefore, if we want to constrain these WES, we must make a list of the Ns that are not allowed to be mapped onto them, but this is

indeed a very difficult task. In our view, idiosyncratic examples like (7) and (9) are difficult to handle both in the classical generative approach and in the substantivist one. This said, as idiosyncrasies are rather unusual in syntax these examples should in principle be better handled in approaches like DG.

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16. /X/_{N, Human, Indefinite, Singular} \leftrightarrow /Xjon/_{N, Human, Definite, Plural} /chele/ 'boy' \leftrightarrow */chelejon/ (boy-Cl) 'the boy' /shikkhok/ 'teacher' \leftrightarrow */shikkhokjon/ (teacher-CL) 'the teacher'
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17. /X/N, Unquantified, Indefinite, Singular  $\rightarrow$  /Xdujon/NP, Quantified, Definite, Plural /chele/ 'boy'  $\rightarrow$  ?/chele-dujon/ (boy-two-Cl) 'the two boys' /Dakat/ 'bandit'  $\rightarrow$  /Dakat-dujon/ (bandit-two-Cl) 'the two bandits'

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18. /X/_{N, Indefinite, Unquantified, Singular} \rightarrow /XegaroTa/_{NP, Definite, Quantified, Plural} /boi/ 'book' <math>\rightarrow ?/boi-egaro-Ta/ (book-eleven-Cl) 'the eleven books' /Taka/ 'money' \rightarrow /Taka-egaro-Ta/ (money-eleven-Cl) 'the eleven rupees'
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19.  $/X/_{N, Indefinite, Unquantified, Singular} \rightarrow /XpOncashTa/_{NP, Definite, Quantified, Plural} /licu/ 'lichi' <math>\rightarrow$  /licu-pOncash-TA/ (lichi-fifty-Cl) 'the fifty lichis' /desh/ 'country'  $\rightarrow$  ?/desh-pOncash-Ta/ (country-fifty-Cl) 'the fifty countries'

It seems that (3c) cannot be formed with a WES  $\grave{a}$  la DG because the input of a WES must be a word. We cannot input Dem because DG prefer to treat categories like Dem as constants in WES rather than as inputs because there are fewer Dems than members of other categories like Q and N. If we decide to input N, then, (3c) will involve two 'circumfixal' constants: Dem and Q. We can however overcome this problem if we are allowed to map 'extended words' like the outputs of (11) onto a WES like (21), or activate P(hrase) F(ormation) S(trategies) like (22) or (23).<sup>4</sup>

A PFS involves several variables and can perhaps be better formulated as:

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20. /X/_{\alpha} \rightarrow /X'/_{\beta} where \alpha is a lexical or phrasal category and \beta is a phrasal category.
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- 21.  $/XTa/_{NP, Non-deictic definite} \rightarrow /ei/XTa/_{NP, Deictic definite, Plural}^5$  /boi-tin-Ta/ (book-three-Cl) 'the three books'  $\rightarrow$  /ei-boi-tin-TA/ (this-book-three-Cl) 'these three books'
- 22. //X/<sub>N</sub>/Y/<sub>Q</sub>/Z/<sub>Cl</sub>/<sub>NP, Non-deictic definite</sub> → //W/<sub>Dem</sub>/X/<sub>N</sub>/Y/<sub>Q</sub>/Z/<sub>Cl</sub>/<sub>NP, Deictic definite, Plural /boi-tin-Ta/ (book-three-Cl) 'the three books' → /ei-boi-tin-TA/ (this-book-three-Cl) 'these three books' /ciThi-shat-khana/ (letter-seven-Cl) 'the seven letters' → /shei-ciThi-shat-khana/ (that-letter-seven-Cl) 'those seven letters'</sub>
- 23.  $/X/_N \rightarrow /\!/W/_{Dem}/X/_N/Y/_Q/Z/_{Cl}/_{NP, Deictic definite, Plural}$  /boi/ 'book'  $\rightarrow$  /ei-boi-tin-TA/ (this-book-three-Cl) 'these three books' /ciThi/ 'letter'  $\rightarrow$  /shei-ciThi-shat-khana/ (that-letter-seven-Cl) 'those seven letters'

Following Bhattacharya (1999) DG consider Q as a fused head. However, examples like (24–25) make us suspect such a decision. If we compare (24) with (3a), it becomes clear that when Q follows Cl the NP lacks number specification. We can note in (26–27) that M(easure) W(ord)s also behave like Cl in this respect.<sup>6</sup>

- 24. /goTa tin boi/ (Cl-three-book) 'more of less three books'
- 25. /goTa koyek boi/ (Cl-a few-book) 'a few books'<sup>7</sup>

- 26. /bOsta dui cal/ (MW-two-rice) 'about two bags of rice'
- 27. /dui bOsta cal/ (two-MW-rice) 'two bags of rice'

DG seem to consent to the claim by Bhattacharya (1999) that (3b) has a specific meaning. In our view, (3b) cannot have a specific reading because, in this sequence, N precedes Q and such an order, as we can see below (28–31), is unacceptable in a context of specificity but acceptable in a context of definiteness. We consider (29–30) as contexts of specificity and (31) as a context of definiteness because in (29–30), the BDP substitutes its antecedent (28) partially whereas in (31), it substitutes it completely. We assume with Enç 1991 and Campbell 1996 that a specific NP must substitute its antecedent partially, and the definite one, completely.

28. /Tebile [shatTa boi] ache/ (on the table-seven-Cl-book-are) 'there are seven books on the table'

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29. \*/er moddhe [boi tinTa] ami cai/ (of this-among-book-three-Cl-I-want)

'I want three books among them' (Definite Specific) (see endnote-5)

30. /er moddhe [tinTa boi] ami cai/ (of this-among-three-Cl-book-I-want)

'I want three books among them' (Indefinite Specific)

31. /[boi shatTa] ami cai/ (book-seven-Cl-I-want) 'I want those seven books' (Definite)

Bhattacharya (1999) considers Dem as an XP adjoined to QP because for him examples like (32–33) are unacceptable. As he (77) argues, "If the Dem is a head, then it is difficult to see how it can act as a barrier to XP movement." In our view, (32–33) are acceptable and therefore, Dem is a barrier to no head or XP other than Q and Cl.<sup>8</sup>

- 32. /boi ei tin-Ta/ (book-this-three-Cl) 'These three books'9
- 33. /nutan ei tin-TA boi/ (new-Dem-three-Cl-book) 'These three new books'

If the objection against Dem heading a projection is overruled, then, we can propose (34) as the structure for BDP which has, as we can see, a D(emonstrative) P(hrase) between DP and ClP.

34. DP[Spec D' D DemP[Spec Dem' Dem CIP[Spec Cl' Cl QP[Spec Q' Q NP[Spec N' N]]]]]

DG propose to merge the outputs of WES at Q. In our view, they can also merge as the complement of Q and then move to particular sites in order to check their features. In (3a) the output of (35) moves to Spec ClP in order to check number specification and then /tinTa/ (three-Cl) is niched in Cl and /boi/ 'book' in N. In (3b) an output of (11) moves to Spec DP (via Spec DemP) to check the non-deictic definite feature and then /tinTa/ (three-Cl) is niched in Cl. In (3c) and (3d) the outputs of (22) and (15) respectively move to Spec DemP to check the deictic definite feature and then /ei/ 'this' is niched in D and /tinTa/ in Cl. The difference between (3c) and (3d) is that in the former N is niched in Spec DemP whereas in the latter, it is niched in N (via Dem, Cl and Q). We note that in our approach i) no extra movement is required for checking

[+definite] feature and ii) the head movement constraint does not need to be

violated.

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35. /X/<sub>N, Indefinite, Unquantified</sub> → /tinTaX/<sub>NP, Quantified, Definite, Plural</sub> /boi/ 'book' → /tin-Ta boi/ (three-Cl-book) 'the three books'
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(3c) and (32) are problematic for the classical generative approach because in these examples N moves overtly when it does not have to. In presence of an overt Dem [+ definite] feature should be checked lexically and/or covertly through *Probe-Goal* (cf. Epstein and Seely 2006). Now, it is not impossible that some speakers find these examples 'more definite' than (3d) and we can account for this fact by claiming that it is so because unlike in (3d), in (3c) and (32) the N is niched in Spec DemP and Spec DP respectively – the two sites that are responsible for clecking definiteness.

(33) is also problematic for the classical generative approach because the motivation behind AP movement is not clear. If we compare (36) with (37), then it become clear that if AP precedes Q the NP has a definte reading. Now, the question we may ask is whether it is possible for the NP in (33) and (37) to check its [+definite] feature by sending one of its adjuncts to Spec DP. (33) and (37) are problematic for the Substantive approach as well because it is not yet clear whether we can handle instances of adjunction and complementization with PFSs like (38) and (39) respectively.<sup>10</sup>

- 36. tin-TA nutan boi (three-Cl-new-book) 'Three new books'
- 37. /nutan tin-TA boi/ (new-three-Cl-book) 'The three new books'
- 38. //X/<sub>N</sub>/Y/<sub>Q</sub>/Z/<sub>Cl</sub>/<sub>NP, Non-deictic definite</sub> → //W/<sub>A</sub>/X/<sub>N</sub>/Y/<sub>Q</sub>/Z/<sub>Cl</sub>/<sub>NP, Non-deictic definite, Plural /boi-tin-Ta/ (book-three-Cl) 'the three books' → /nutan-boi-tin-TA/ (new-book-three-Cl) 'the three new books' /ciThi-shat-khana/ (letter-seven-Cl) 'the seven letters' → /purono-ciThi-shat-khana/ (old-letter-seven-Cl) 'the seven old letters'</sub>
- 39. /X/<sub>NP</sub> → //Y/<sub>Pronoun</sub>/X/<sub>NP</sub>/Z/<sub>Inflected verb</sub>/<sub>IP/S</sub><sup>11</sup> /boi-tin-Ta/ (book-three-Cl) 'the three books' → /ami-boi-tin-TA-porechi/ (I-book-three-Cl-have read) 'I have read the three books' /boi-Ta/ (book-Cl) 'the book' → /tumi-boi-TA-porecho/ (you-book-Cl-have read) 'You have read the book'

- Unlike the week lexicalist approaches of the Generative school which put
- Syntax at the service of Morphology, the Substantive approach puts, to
- some extent, Morphology at the service of Syntax. In our view, DG offer a
- better account of the syntax of BDP as compared to previous analysis done
- in light of the classical generative theory. However, some problems like (8)
- 6 persist and they should be taken care of in the future research.

#### **Abbreviations**

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**BDP** 

Bengali Determiner Phrase;

MW Measure Word; Num Numeral:

Cl Classifier;

QP Quantifier Phrase;

ClP Classifier Phrase; Dem Demonstrative;

PFS Phrase Formation Strategy;

DP Determiner Phrase;

Q Quantifier;

DemP Demonstrative Phrase;

WES Word Extention Strategy;

IP Infectional Phrase;

WFS Word Formation Strategy.

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### **Notes**

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- 1. According to Dasgupta (2005: 60) "The substantivist approach operates on the assumption that levels of linguistic characterization must converge on formal objects. Morphology and Syntax co-specify a word. Syntax and pragmatics co-characterize a sentence."
- 2. According to Ford et al. (1997) some words can be analyzed into two subcomponents: i) *variable* and ii) *constant* by mapping it onto a relevant WFS. For example, an English word like *friendly* can be analyzed into the variable (*friend*) and the constant (*ly*) or an Arabic word like /kitab/ 'book' can be analyzed into the constant /i/-/a/ and the variable /k/-/t/-/b/. Constants can be represented by any phonic element: stress, phonemic change, single phoneme, meaningless sound cluster, simple or complex word, discontinuous and inseparable segmental as well as supra-segmental means. Quite coincidentally, when a constant is represented by a continuous sequence of phonemes, it can have phonic resemblance to word parts which some grammatical traditions would label as *affixes* (see Singh and Agnihotri 1997 or Bhattacharja 2007b for details).
- 3. The lexical relatedness between the inputs and the outputs of a WFS is shown by a bidirectional arrow ↔ in order to symbolize its bidirectional implication. In a WES on the other hand, the rather 'syntactic' relatedness between the input and the output is shown with a unidirectional arrow →. Although the

pattern underlying a WFS and a WES must be repeated, we give only one example for each WES to save space, unless required otherwise.

- 4. In Dasgupta et al. (2000: 171), one of the expositions of the Substantive approach (DG 2007 being a different exposition), a PFS has the following form:
  - 40.  $[X]_{properties} \rightarrow [X+f]_{properties'}$

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According to the authors (171) PFSs are expected to underwrite syntagms which are "permitted by the syntax, to which they are accountable – to be tighter than normal syntactic constructions and to exhibit other opacities. The unidirectional arrow of (40) "derives a functor-headed phrase X+f (linear order of f, X immaterial) from a word X and simultaneously maps the set Properties into the set of Properties'. The authors claim (171) that "this mapping and the substantive (phonological and semantic) relation between f and X are continuous with and accountable to morphology. X+f as a formal structure is continuous with and accountable to syntax."

- 5. Following Bhattacharja (2007a) we claim that both definiteness and specificity are based on the familiarity which can be: i) Deictic, or ii) Non-deictic (anaphoric, relational, pragmatic, etc.). We also claim that specificity can be i) Definite and ii) Indefinite.
- 6. One of the differences between the syntactic behavior of Cls and MWs is that unlike the former, the latter are not generally concatenated to N: /chele-Ta/ (boy-Cl) 'the boy', /boi-khana/ (book-Cl) 'the book', but not \*/gom-bOsta/ (wheat-bag) 'a bag of wheat' or \*/ca-kap/ (tea-cup) 'a cup of tea'. This said, as we have seen in example (6), not all Cls are allowed to be concatenated to N either. Ns are allowed to move beyond Q-MW sequence (41–42), and this movement yields, as with the QCl sequence (3b), definiteness to the NP:
  - 41. cal dui-bOsta (rice-two-bag) 'the two bags of rice'
  - 42. ca tin-kap (tea-thre-MW) 'the three cups of tea'
- 7. The semantic difference between (25) in which Q follows Cl and (43) in which Q precedes Cl is not reflected in their common English gloss.
  - 43. /koyekTa boi/ (Q-Cl-book) 'a few books'
- 8. We can propose the following syntactical constraints for the structure of BDP:
  - i. Q-Cl (or Cl-Q) sequence must not be interrupted;
  - ii. Q must not precede Dem;
  - iii. Cl must not precede Dem.
- 9. We are aware of the fact that (3b) and (32) can be pronounced with a pause (represented with '-' in (44–45)) after the N and also probably with some variation in the stress pattern. We agree with DG that in examples like (44–45) /boi/ is not a constituent but a DP which (22) "begins its career as a DP

adjoined to a DP and then moves from that site to a non-argument position in the clause ..." We assume that the semantic reading of (3b) and (32) is different from the semantic reading of (44) and (45) respectively.

- 44. /boi ami ei tin-TA porechi/ (book I-Dem-three-Cl-have read) 'As for books, I have read these three'
- 45. /boi ami tin-Ta porechi/ (book I-three-Cl-have read) 'As for books, I have read three of them'
- 8 10. The PFSs we propose here are compatible with the minimalist approaches like Epstein and Seely (2006) in the sense that they can be used as tools for derivational operations untill spellout. Epstein and Seely claim, consonant with the 10 Minimalist program, that the operations merge and move each takes two ob-11 jects, join them together (as a set) and then project one or the other, hereby 12 creating a label for the resulting object. Hence, if X and Y are merged creating 13 C, then C is necessarily the input to both LF and PF, which interpret as 14 much of C as possible, while C may serve as input to subsequent derivational 15 operations.
  - 11. It is concievable that an output of (39) can be mapped onto the syntactic tree of IP (46) and then, the subject pronoun (/ami/ 'I') is niched in Spec IP, and the inflected verb (/porechi/ 'I have read') in I.
    - 46.  $_{IP}[Spec\ (ami)\ I'\ _{VP}[Spec\ V'\ V_{DP}[Spec\ D'\ D\ _{DemP}[Spec\ Dem'\ Dem'\ Dem\ CIP}[Spec\ Cl'\ Cl\ _{QP}[Spec\ Q'\ Q\ _{NP}[Spec\ N\ N]]]]]]\ I\ (porechi)]$

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