

Head Movement in the Bangla DP

DUSTIN ALFONSO CHACÓN, *University of Maryland, College Park*

Received MARCH 2010; Revised MARCH 2011

ABSTRACT

Bengali/Bangla is unusual among South Asian languages in that it uses numerical classifiers. In this paper, I propose a new analysis of the DP structure in Bangla motivated by data previously unaccounted for and typological concerns. Specifically, I propose that Bangla has DP-internal NP movement to Spec,DP to mark definiteness, that the numeral and classifier form separate heads in the syntax, and that there is noun to classifier movement when there is no overt classifier. I propose a feature for each of these phenomena, and attempt to explain the ungrammatical examples using principled reasons derived from this structure. Also, I give an analysis for the quantificationally approximate construction, in which the classifier appears on the left of the numeral. I claim that the model presented in this paper can account for these constructions, and that the differences found between “classifier-compatible” nouns and “classifier-less” nouns with regard to the quantificationally approximate structures follows naturally from my analysis.

1 Introduction

One goal of linguistic theory is to identify properties present in all languages and to discover how languages may differ and why. Identifying universal properties helps us understand better the underlying architecture of grammar and its constraints. Similarly, identifying how languages vary illustrates the flexibility of the language faculty. The internal structuring of noun phrases is one area in which languages vary widely. However, since many well studied languages have a fairly rigid nominal structure, thus far it has been difficult to make generalizations about the universal and language-specific properties of noun phrases.

Bangla is a language with a fairly flexible nominal structure. It is interesting from a typological standpoint, since it is a classifier language in the Indo-Aryan family, comprised predominantly of languages with no numerical classifiers. Previous analyses of the Bangla DP (representatively, Bhattacharya 1999b) have accounted for DP-internal alternations of the position of the NP and the distinction between nouns that combine with classifiers versus nouns that do not. The model pursued by Bhattacharya (1999a,b, 2001) requires that the numeral and classifier form a fused head to derive the other properties of Bangla DPs. However, this approach does not account for a construction that is used to express quantificational approximateness, a “vague” reading on the quantity of a nominal expression. In these constructions, the numeral and classifier invert positions. This phenomenon is difficult to account for in a theory in which the numeral and classifier morphemes form a composite head. Additionally, an approach that relies on a fused head consisting of the numeral and classifier does not generalize to other classifier languages (Simpson 2005). To make stronger generalizations about the structure of DPs in classifier languages and in languages universally, it is important to try

to reconcile data between disparate languages that show similar phenomena, such as Bangla and the classifier languages of Southeast Asia, in order to construct a stronger theory of universal grammar. Additionally, a theory of UG in which two classifier languages differ in minute and opaque ways presents a potentially unnecessarily complicated learning problem for the child.

This paper introduces a model that accounts for the quantificational approximate constructions and expands structural similarities between Bangla and other classifier languages. I will posit that there is DP-internal NP movement to Spec,DP to mark definiteness. In order to explain the differences between nouns that generally are found with classifiers and those that are not, I will posit that there is N^0 -to- Cl^0 movement for the nouns that do not appear with classifiers. I will formalize this by claiming that some nominal roots do not merge with a nominalizer n , and thus move to adjoin to a null Cl^0 for interface reasons. I will explain the ungrammaticality of NP movement marking definiteness in cases where no overt classifier appears by suggesting that n is required to license NP movement to Spec,DP. Establishing this, I will propose a feature [VAGUE] on D^0 that enters into an AGREE relation with Cl^0 , triggering left-adjoining head movement to generate the quantificationally approximate DP structure. I will also show that the resulting word orders provide independent evidence for an analysis in which Num^0 and Cl^0 are separate heads, as has been claimed to be the case in other classifier languages.

2 Structures

In this section, I briefly describe the forms of the morphemes that constitute the Bangla classifier system. Then, I introduce the syntactic phenomena under discussion that hinge on the distribution of the classifier. Afterwards, I describe the phenomena for the two classes of nouns that exist in Bangla: those that are commonly seen in a DP that contains a classifier (“classifier-compatible”) and those that are frequently seen in a DP that does not contain a classifier (“classifier-less”).

2.1 Classifiers in Bangla

Bangla utilizes a relatively small set of classifiers.¹ The most common classifier is *(go)ta*, which surfaces as the clitic =*ta* in certain configurations. The cliticized form additionally has the diminutive =*ti* and allomorphs =*to* and =*te* in some dialects. The allomorph =*to* surfaces when *(go)ta* is cliticized onto *du* ‘two’, and =*te* surfaces after *tin* ‘three’ and *car* ‘four’. Additionally, *(go)ta* has a plural variant *gulo* and a plural diminutive *guli*. The forms of *(go)ta* are shown below.²

- (1) a. *kɔek=ta bɔsta*
 few=CL sack
 ‘a few sacks’
- b. *goʈa=kɔek bɔsta*
 CL=few sack
 ‘a few sacks’³
- c. *kɔtok=gulo bɔsta*
 few=CL sack
 ‘some sacks’
- d. *du=to kɔlom*
 two=CL pen
 ‘two pens’

¹Much of this description is dependent on Dasgupta (1983).

²Contrasting with closely-related languages, it seems that the forms of *(go)ta* need to be cliticized onto something — either a Num or NP on its left, or material on its right for the quantificationally approximate constructions. Thus, forms like **goʈa kham* ‘CL envelope’ are not attested. Sahoo (1999) provides data that, to me, seems to suggest that this constraint does not apply in Oriya, however.

³In Dasgupta (1983), this is translated as ‘a couple of sacks’.

- e. *tin=te kɔlom*
 three=CL pen
 ‘three pens’

Additionally, Bangla uses *khan(a)*, for flat square objects, and *jon(a)*, for human-denoting nouns. The classifier *khana* surfaces as *khana* after a numeral, and as *khan* before a numeral. Similarly, *jana* appears as *jon* after a numeral, and *jana* before a numeral. These are shown in (2).

- (2) a. *pāc=jon kormi*
 five=CL employee
 ‘five employees’
 b. *jana=pāc=ek kormi*
 CL=five=EK employee
 ‘five employees or so’
 c. *kɔek=khana biskuṭ*
 several=CL cookie
 ‘several cookies’
 d. *khan=kɔek biskuṭ*
 CL=several cookie
 ‘several cookies’⁴

2.2 Classifier-Compatible Nouns

In the next two sections, I sketch the syntactic patterns under discussion. First, I introduce the DP structures that contain an overt classifier. These are shown in (3), with partial structures in (4).⁵

- (3) a. *du=to (lɔmba) kham*
 two=CL long envelope
 ‘two (long) envelopes’
 b. *(lɔmba) kham du=to*
 long envelope two=CL
 ‘the two (long) envelopes’
 c. *goṭa du=ek (lɔmba) kham*
 CL two=EK (long) envelope
 ‘two (long) envelopes or so’

- (4) a. *du=to lɔmba kham*
-
- ```

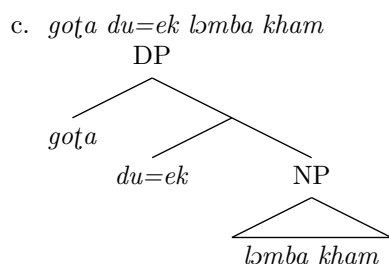
graph TD
 DP1[DP] --- du1[du=to]
 DP1 --- NP1[NP]
 NP1 --- l1[lɔmba]
 NP1 --- k1[kham]

```
- b. *lɔmba kham du=to*
- 
- ```

graph TD
  DP2[DP] --- NP2[NP]
  DP2 --- du2[du=to]
  NP2 --- l2[lɔmba]
  NP2 --- k2[kham]
  
```

⁴Examples adapted from Dasgupta (1997).

⁵In these structures, the numeral and classifier are represented on one node. I reject this later.



In (3a), the DP not marked for definiteness or quantificational approximateness has the word order NUM-CL-(ADJ)-N, numeral-classifier-adjective-noun. For the moment, we assume that the adjective and noun form some intermediate structure, the NP. For DPs marked for definiteness and not marked for quantificational approximateness, the word order is NP-NUM-CL, shown in (3b). Once more, the potential to place an adjective *lɔmba* ‘long’ left of the noun suggests that an entire NP appears to the left of the numeral and classifier. Finally, for DPs marked for quantificationally approximateness and unmarked for definiteness, the order of the elements is CL-NUM-NP with a morpheme *ek* cliticized to the numeral, shown in (3c). Definite, quantificationally approximate structures are discussed in section 7.⁶

2.3 Classifier-less Nouns

Now, I direct my attention to nouns that do not normally occur in nominals that contain a classifier. First, it is important to establish what comprises this category. In Dasgupta (1983), the author mentions that “measure words” do not *normally* take classifiers, except to achieve certain referential or contextual effects.

- (5) a. i. *John amar sathe du din thaklo*
 John my with two day stayed
 ‘John stayed two days with me.’
 ii. *tin mas*
 three month
 ‘three months’
 b. i. *du=ʈo bɔchor kharap gælo — 1966 ar 1976.*
 two=CL year bad went — 1966 and 1976
 ‘Two bad years occurred — 1966 and 1976’⁷
 ii. *du=ʈo mas-er nam-er feṣ-e “ari” – januari ar phebruari.*
 two=CL month-GEN name-GEN end-LOC “ari” – January and February
 ‘Two months have names ending in *ari* – January and February’

The forms with the unmarked interpretations are shown in (5a). These refer to spans of time and not entities. Examples of the marked referential usages occur in (5b). Here, the noun phrases do refer to entities. The DPs with the marked interpretation for these sets of nouns will behave as other classifier-compatible nouns.

Additionally, Bhattacharya (1999a) gives the forms of nominals without a span-of-time denoting noun in (6). None of these surface with an overt classifier.

- (6) a. *du def-er moitri*
 two country-GEN friendship
 ‘friendship between two countries’

⁶Examples (3) and (7) adapted from Bhattacharya (1999a) and Dasgupta (1983). Parentheses mark optionality in the gloss and in the Bangla forms.

⁷This is slightly reworded from the original paper.

- b. *tin caka-r garī*
 three wheel-GEN vehicle
 ‘three-wheeled vehicle’
- c. *car paf*
 four side
 ‘four sides’
- d. *tin dik*
 three direction
 ‘three directions’
- e. *ora car bon tin bhai*
 they four sister three brother
 ‘They are four sisters and three brothers.’

Dasgupta’s examples show that for time span denoting nouns there is a referential distinction associated with the classifier — reference to entities is associated with a classifier, and reference to spans of time is associated with the absence of a classifier. However, the examples in (6) show that for other nouns, classifiers may be absent as well. In other words, these are not all “measure words”, per the description in Dasgupta (1983). It is unclear whether there is a semantic property all the nouns in (6) share that could motivate this behavior or whether it is an arbitrary lexically specified feature. The absence or presence of a classifier in DPs with a time span denoting noun are accounted for in the model put forth in this paper. However, the cases in (6) still remain a problem. Interestingly, Simpson (2005) finds similar classes of bare nouns in other classifier languages. A unified analysis from a cross-linguistic or diachronic perspective could potentially explain this phenomena better than any speculation I could offer in this paper. I leave this for further research.

The word orders given in (3) are not the same for classifier-less nouns. The paradigm for classifier-less nouns is given in (7).

- (7) a. *tin saptaho*
 three week
 ‘three weeks’⁸
- b. **saptaho tin*
 week three
 intended: ‘the three weeks’
- c. *saptaho tin(=ek)*
 week three(=EK)
 ‘three weeks or so’

For the indefinite quantificationally unmarked DPs shown in (7a), the obvious difference from the classifier-compatible analogs is the absence of a classifier. Additionally, for definite DPs, there is no analog to (3b) for classifier-less nouns — the example in (7b) is ungrammatical. Finally, for quantificationally approximate indefinite interpretations, the classifier-less DPs surface as N-NUM, with the optional morpheme *ek* after NUM, shown in (7c). This is quite different from the order CL-NUM-N seen with the classifier-compatible analogs in (3c).

Interestingly, the semantic asymmetry triggered by the presence or absence of an overt classifier and the word order in the quantificationally approximate structures, exemplified in (5) and (7c) respectively, do not occur as such for nouns like *def* ‘country’ or *caka* ‘wheel’. That is, for nouns that are not “measure words” or that denote spans of time, the paradigm diverges. This is demonstrated in (8) for *caka* ‘wheel’. The question of whether this means we should see the data as crossing across

⁸This construction may be allowed to have a definite reading in addition to the indefinite reading represented by the gloss. This is discussed briefly later.

three paradigms or two are not be considered here. The model pursued in this paper is only able to account for the nouns like *din* or *mas*, that do have a CL-NUM-EK-type of quantificationally approximate structures.⁹

- (8) a. *tin caka*
 three wheel
 ‘three wheels’
- b. (?) *tin-te caka*
 three=CL wheel
 ‘three wheels’
- c. * *caka tin=ek*
 wheel three=EK
 intended: ‘three wheels or so’
- d. *goṭa tin=ek caka*
 CL three=EK wheel
 ‘three wheels or so’

These patterns are summarized in the table in (9), with +DEF representing a specification for definiteness, and +QA representing a specification for quantificational approximateness. In this table, +CL represents nouns that normally appear with a classifier, and –CL represents nouns that generally do not.¹⁰

(9)

	–DEF, –QA	+DEF, –QA	–DEF, +QA
+CL	NUM-CL-NP	NP-NUM-CL	CL-NUM-EK-N
–CL	NUM-NP	*NP-NUM	N-NUM-EK

The data in (3) and (7) drives the analysis presented in the next sections.

3 Previous Analyses

The most articulated model of Bangla DPs within the generative tradition has been advanced by Tanmoy Bhattacharya, primarily in Bhattacharya (1999a, 1999b, 2001), though referenced in other work.¹¹

3.1 Bhattacharya’s (1999) Analysis

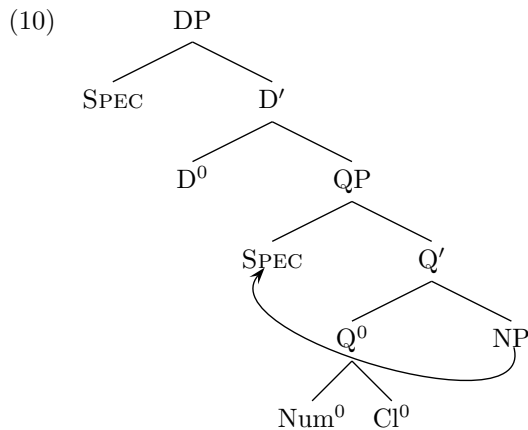
An adapted tree representing the analysis of Bangla DPs in Bhattacharya (1999b) is given in (10).¹²

⁹Rajesh Bhatt (p.c.) suggested that this class of nouns may only seem to appear without a classifier on the surface, and that there may be a surface-deletion rule in the context of these kinds of nouns. This is an interesting proposal that I leave to future research. This kind of analysis is wholly consistent with the analysis offered in this paper.

¹⁰These are not syntactic features that play a role in the model pursued here. For the moment, they are just convenient abbreviations.

¹¹For alternative analyses and dissenting views within the generative tradition, see Bhattacharja (2008), Dirdal (2004) and Ghosh (2006). In other theoretical models, see Bhattacharja (2007).

¹²It is also worth noting that Bhattacharya posits further structure within the NP, including a nP between the QP and NP shells. He uses these to account for further phenomena not under analysis here. I do not comment on this aspect of his theory; I only discuss the QP and the structures that it is directly involved with in this section. I continue to refer to all items below the QP as NP, and later I offer an analysis in which the NP is constructed out of a nominalizer *n* and $\sqrt{\quad}$, for different empirical reasons than Bhattacharya’s (1999) nP.



In this model, there is only one additional head between the higher DP layer and the lower NP layer, Q^0 for quantifier. The Q^0 is a complex head consisting of Num^0 , the syntactic position for numerals and quantifiers, and Cl^0 , the position for classifiers.

To account for the alternation in (3a) and (3b), repeated in (11), Bhattacharya (1999b) proposes an optionally strong feature [SPECIFIC] on N^0 . This feature causes the NP to move to Spec,QP.

- (11) a. *du=to (lamba) kham*
 two=CL long envelope
 ‘(the) two (long) envelopes’
 b. *[(lamba) kham]_i du=to t_i*
 long envelope two=CL
 ‘the two (long) envelopes’

To explain the ungrammaticality of (7b), repeated in (12), Bhattacharya proposes that the classifier is required in Q^0 to license the [SPECIFIC] feature. In other words, NP movement for specificity optionally occurs, but only when a classifier has merged in Q^0 . Since there is no classifier in Q^0 in example (12), NP movement is illicit.

- (12) * *saptaho tin*
 week three
 intended: ‘the three weeks’

The presence of the classifier does seem to be the difference between the forms in (3b) and (7b), now in (11b) and (12). However, although the classifier is the catalyst for NP movement, the NP’s target is to the left of the numeral, not to the left of the classifier. A fused Q^0 captures the correct word order. Having a separate Num^0 and Cl^0 would require having [SPECIFIC] checked by the Num^0 in order to explain the NP’s position, contrary to the observation that the presence of the classifier is required for NP movement. Otherwise, an analysis with separate Num^0 and Cl^0 heads would require an additional movement to have the NP checking [SPECIFIC] surface to the left of the numeral, assuming Bhattacharya’s mechanisms. The fused head ensures that the classifier element in Q^0 motivates NP movement, without positing a separate step to get the correct word order. This is a strong advantage of Bhattacharya’s model. Later, we will try to capture this intuition by tying the licensing of the classifier and of the movement for definiteness to a distinct, third property of the DP, namely, whether a nominalizer n merges.

3.2 The Classifier as a Marker of Specificity

Bhattacharya (1999b) hypothesizes that the feature motivating NP movement to Spec,QP is an optionally strong [SPECIFIC] feature. This is consistent with Dasgupta (1983) and Junghare (1983), who refer to the classifier as marking specificity.

Why analyze the presence of the classifier or NP movement as marking specificity? There does not seem to be a clear argument one way or another for a definiteness or a specificity-marking analysis, nor is it clear what syntactic reflexes are contributing to this reading. As the idiomatic translations for the examples with a moved NP in (3b) and (7b) would have the reader believe, NP movement seems to mark definiteness pretheoretically. If we were to analyze the classifier as a marker of “just” specificity, we can explain why we can get a classifier in indefinite configurations, shown earlier in (3), repeated in (13), and (14). Here, the classifier is compatible with an indefinite interpretation if it appears before the noun in (13). Additionally, the classifier can cliticize to *ek* with both the indefinite ‘one boy’ and ‘a boy’ readings in (14), meaning we can not suggest that the appearance of the classifier itself is what triggers a definiteness reading.

- (13) a. *du=ʈo (ʌmba) kham*
 two=CL long envelope
 ‘(the) two (long) envelopes’
 b. *(ʌmba) kham du=ʈo*
 long envelope two=CL
 ‘the two (long) envelopes’
 c. *goʈa du(=ek) kham*
 CL two(=EK) envelope
 ‘two envelopes or so’
- (14) a. *chele*
 boy
 ‘(a) boy’
 b. *ek(=ʈi) chele*
 one=(CL) boy
 ‘one boy’ or ‘a boy’

An analysis in which the classifier marks definiteness alone, separate from NP movement, would be too strong in light of these data.

One potential challenge to the definiteness analysis of NP movement is the appearance of the classifier in forms expressing “anti-definiteness.”¹³ An example of the anti-definiteness phenomenon is given in (15), taken from Dasgupta (1997). In this example, there are two DPs: *lebu=ʈa* ‘lemon=CL’ and *ʌɳka=ʈa* ‘chili=CL’. These two DPs do not refer to either lemon or chili. Instead, they refer to a superset containing both lemon and chili, glossed as ‘vegetables.’¹⁴

- (15) *poʈʃir kache lebu=ʈa ʌɳka=ʈa cee newa*
 neighbor from lemon=CL chili=CL wanting take
 ‘Borrowing (some vegetables) from a neighbor.’

In this section, I presented the current perspective on the data. In the next sections, I critically evaluate these standing claims. Using the original arguments as a springboard, I explore a new analysis of these data. I argue that this new analysis accounts for the quantificationally approximate readings, left unaccounted for in previous models. The implications of the definiteness/specificity distinction regarding the structural configurations of Bangla DPs is explored in the next section. I ultimately make explicit an analysis in which NP movement does indeed mark definiteness.

4 NP-Movement as a Marker of Definiteness

In this section, I specifically assess the claim that specificity is the motivation for NP movement in Bangla. I first show that there are separate motivations for the appearance of the classifier and for NP

¹³Originally in Dasgupta (1997), *antidéfinitude*.

¹⁴The fact that lemon is a fruit notwithstanding.

movement, and that the NP movement facts are incompatible with an analysis relying uniquely on specificity. I then argue that anti-definiteness is not evidence against an analysis in which definiteness motivates NP movement. Finally, I propose that definiteness, formalized as [DEF], motivates NP movement to Spec,DP.

4.1 Definiteness and NP Movement

In section 3.2, I presented arguments that the classifier marks specificity. However, is specificity an appropriate motivation for NP movement? One thing is certain — we cannot have both the NP-movement and the appearance of the classifier triggered by specificity strictly. If specificity were the feature triggering NP movement as well as the feature triggering appearance of a classifier, then there should be no meaning difference between a moved NP and an *in-situ* NP appearing with a classifier. For any DP with a specific interpretation, a classifier would appear to signal specificity, and the NP would optionally move to the left of the classifier to redundantly check [SPECIFIC], or optionally remain *in-situ*. If the DP were non-specific, there would be neither a classifier nor motivation for NP movement. In other words, if the appearance of the classifier and NP movement share a motivation, moving the NP would only redundantly mark specificity, and there should be no change in interpretation. This is contrary to the observations presented thus far. Therefore, the two phenomena require distinct triggers. I propose definiteness, formalized as a [DEF] feature on D^0 , motivates NP movement. If this is correct, we can maintain the observation that NP movement signals the observed semantic effect.

Further evidence against an analysis in which specificity motivates NP movement is shown in (16).¹⁵ If specificity were indeed the relevant property motivating NP movement, and definiteness an irrelevant feature, we should find examples of the string NP-NUM-CL or NP-CL with a specific indefinite reading. As shown below, however, such a configuration is actually infelicitous with an intended specific indefinite reading. That is, a moved NP must receive a definite interpretation, and specificity does not suffice as a trigger for NP movement.

- (16) a. *jəkhon amar bacca-r bəes tin chilo, təkhn amra ek bondhu-r / (#*
 when my child-GEN age three was then we one friend-GEN
bondhu=ʈa)-r baʈi-te chilam, ar se ama=ke boleche je ...
 friend=CL-GEN house-LOC were and he 1SG=ACC told that ...
 ‘When my child was three years old, we were at a friend’s house, and he told me that ...’
- b. *ami ək=ʈa kukur kinte cai*
 I one=CL dog to.buy want
 ‘I want to buy a dog (any dog will do).’ or ‘I want to buy a dog (and I have one in mind).’
- c. # *ami kukur=ʈa kinte cai*
 I dog=CL to.buy want
 intended: ‘I want to buy a dog (any dog will do).’ or ‘I want to buy a dog (and I have one in mind).’
- d. *ami kukur=ʈa kinte cai*
 I dog=CL to.buy want
 ‘I want to buy the dog.’

I do not at this time make any explicit claim about any additional referential effects contributed by the classifier.¹⁶ However, as Rajesh Bhatt (p.c.) suggested, if there is any additional referential

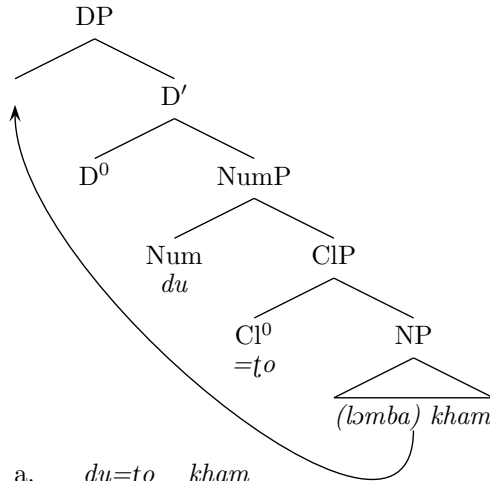
¹⁵The order of the genitive -r as following the clitic ʈa in (16a) is somewhat surprising and points to the need for further investigation into the interplay between case marking and classifiers in Bangla.

¹⁶However, for a particularly promising suggestion as to why classifiers appear, see Dasgupta (1985), in which Dasgupta offers an analysis in which classifiers are used to give a value to an otherwise unspecified aggregate feature on the noun.

effects that are contributed by the classifier alone and classifiers are required for counting, we would expect all quantified NPs to have the same referential status, which seems to be wrong.

I assume that if definiteness is indeed the motivation for NP movement, then [DEF] must be checked at Spec,DP. This move seems plausible, since D^0 is the generally accepted position for definiteness markers. If the NP moves to Spec,DP, there is no issue with resulting word orders since the NP still appears to the left of the numeral. This is shown in (17), with the assumption that Num^0 and Cl^0 form separate heads as argued later. However, this leaves us with a problem. As mentioned earlier, there is a link between the presence of a classifier and overt NP movement, exemplified in (18). How do we account for this apparent relation, if we divorce the two phenomena from each other? I address this in section 5.

(17) *lamba kham du=to*



- (18) a. *du=to kham*
two=CL envelope
'two envelopes'
- b. *kham du=to*
envelope two=CL
'the two envelopes'
- c. *dui saptaho*
two week
'two weeks'
- d. **saptaho dui*
week two
intended: 'the two weeks'

One further note. Definiteness is often associated with bare classifiers in classifier languages, per Cheng and Sybesma (2005), Simpson (2005), and Aikhenvald (2000). An analysis in which definiteness sensitive to the presence of a classifier motivates NP movement dovetails nicely with this observation. In other words, the model presented in this paper may generalize to other classifier languages. This is compatible with our secondary goal of proposing a model that would not require the learner to consider a larger class of grammars than is necessary.

4.2 Anti-Definiteness

Before we accept that the NP movement is a reflex of definiteness, we must address whether anti-definiteness à la Dasgupta (1997) is a fatal phenomenon. I do not believe that it is. I entertain two possible explanations that tease out the definiteness from these anti-definiteness constructions without losing Dasgupta's intuitions. The relevant constructions are shown in (15), repeated in (19).

- (19) *porʃur kace lebu=ʃa loŋka=ʃa cee newa*
 neighbor from lemon=CL chili=CL wanting take
 ‘Borrowing (some vegetables) from a neighbor.’

Gundel et al. (2001) note cases of definite DPs referring to classes, shown in (20). Here, no particular entity is being referred to. Instead, the speaker refers to entire classes — the class of religious tourists, the class of night life tourists, and so on. One could suggest that these apparently definite examples in (20) are parallel (pragmatically, if not also syntactically) to the forms in (19).

- (20) Montreal has something to offer *the religious tourist* and *the night life tourist*, *the art connoisseur*, *the sports fan*, *the intrepid walker*, and *the avid consumer*.

If this is the case, then the syntactic configuration of the DP in (19) does not necessarily preclude an analysis in which NP movement serves to mark definiteness. In fact, since English marks these class references with the definite determiner *the*, the apparent structural definiteness in (19) and (20) may serve as indirect evidence in our favor.

5 N⁰-to-Cl⁰ Movement

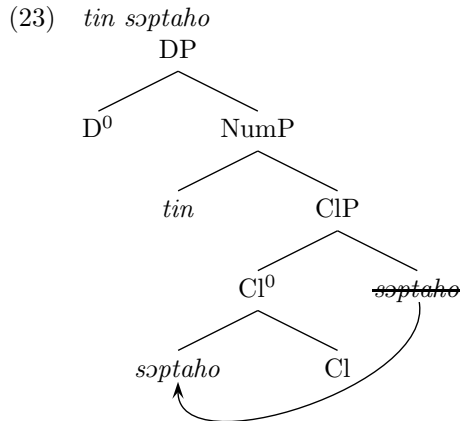
I now turn my attention to classifier-less nouns. In Bhattacharya (1999b), the explanation for the ungrammaticality of forms like **sɔptaho tin* ‘week three’ ‘the three weeks’ is straightforward — NP movement occurs only when a classifier is present, because the classifier licenses [SPECIFIC]. However, following the proposal outlined thus far, NPs do not move to Spec,QP or any position in the domain of the classifier. Thus, we cannot make a similar move. In this section, I posit that Bangla undergoes a N⁰-to-Cl⁰ movement for classifier-less nouns. This is triggered by the failure to merge a nominalizer element *n* above the root lexical item, triggering the root to move to Cl⁰ for interface purposes. I then derive the ungrammaticality of NP movement for classifier-less nouns from this approach.

First, I follow Simpson (2005) in claiming that if a classifier language contains a construction with no overt classifier, the apparent lack of a classifier is due to N⁰-to-Cl⁰ movement.¹⁷ One piece of evidence in favor of such a theory is that in some languages the same morpheme may appear in both the N⁰ and Cl⁰ positions. Simpson (2005) suggests that in these cases the lower trace or the lower copy of the N⁰ as well as the higher copy are pronounced. Examples of this are shown below: Thai in (21) and Burmese in (22). Presumably, *hoong* ‘room’ and *cun* ‘island’ appear in both the N⁰ and Cl⁰ positions, and hence are pronounced twice.

- (21) *hoong* [_{NumP} *saam hoong*]
 room three room
 ‘three rooms’ (Thai)
- (22) *cun* [_{NumP} *ta cun*]
 island one island
 ‘one island’ (Burmese)

Do we have evidence for this movement in Bangla? Note that in *tin sɔptaho* ‘three week’ ‘three weeks’, N⁰-to-Cl⁰ movement would not change the word order, since the Cl⁰ and N⁰ positions are adjacent. The movement would be string-vacuous with these kinds of constructions. This is shown in (23).

¹⁷Simpson argues that these cases cannot arise due to a lack of a noun with the apparent noun undergoing a lexical operation that changes it into a Cl⁰. There would be no predicate nominal for the classifier to individuate if such a lexical rule existed. In other words, a structure with a Cl⁰ and no N⁰ has an unsaturated Cl⁰.



I propose that this movement operation does occur, however, and that it is specifically an instance of head movement, as shown above. As we will see shortly, intervening material, including adjectives, block this movement. If this were a phrasal movement, we might not expect intervening heads to block movement.¹⁸

In (3c) and (7c), repeated in (24) and (25), the classifier-less noun *sɔptaho* ‘week’ occurs in the same position as the classifier in the nominal headed by the classifier-compatible noun *kham* ‘envelope’. A theory in which N⁰-to-Cl⁰ movement occurs before the operations that derive the quantificational approximateness forms, in (3c) and (7c), predicts these forms. Thus, we have some language-internal evidence for this kind of movement.

(24) *goʔa du=ek kham*
 CL two=EK envelope
 ‘two envelopes or so’

(25) *sɔptaho tin=ek*
 week three=EK
 ‘three weeks or so’

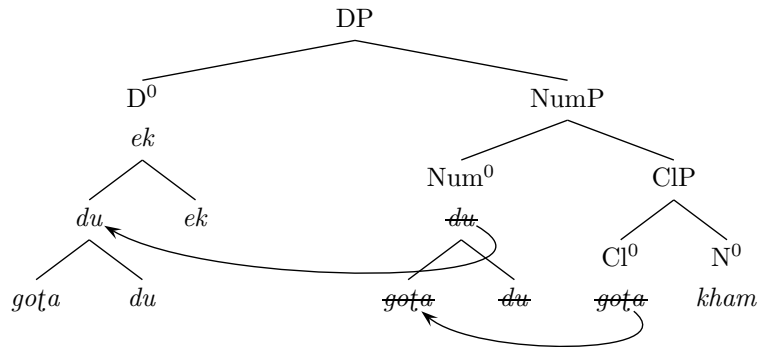
The structures for (24) and (25) are shown in (26). Here, the head movement of Cl⁰ to Num⁰, then Num⁰ to D⁰ represents the head movement used to express quantificational approximateness. This is formulated more specifically later. For now, notice that the appropriate word orders are predicted.

What drives N⁰-to-Cl⁰ movement? For nouns that do not denote spans of time, given in (6) and repeated in (27), I can at the moment only claim that it is a lexically specified feature. That is, some nouns may simply be marked in the lexicon as not combining with an overt classifier, but only a null classifier. Thus, we could claim that these nouns move to a phonetically null Cl⁰, which then projects as a CIP.

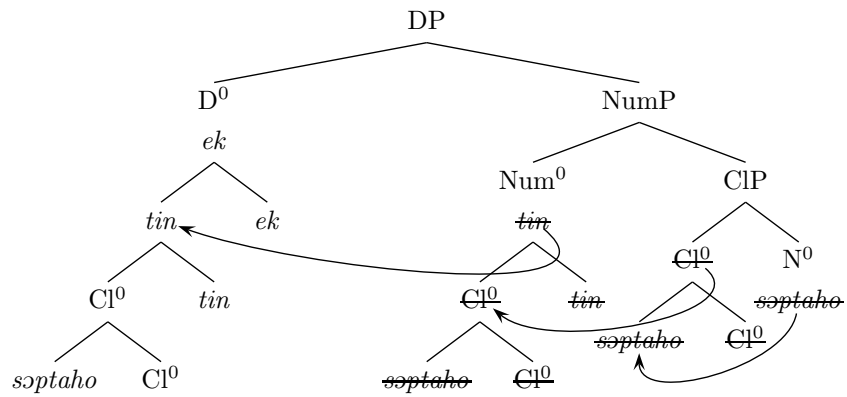
However, an account that relies solely on lexical specification does not capture all the data. Recall the referential distinction that Dasgupta (1983) describes for time-span denoting nouns. Essentially, a DP containing a noun of this category with no classifier refers only to the time span, whereas with a classifier the DP can refer to entities. This distinction is repeated in (28) from the original in (5).

¹⁸However, we also might not expect head movement to be blocked by an adjective either, if we take adjectives to be adjuncts. The kind of claim that I make explains why the adjunct adjective also blocks this movement, by suggesting that an adjective is only licensed when an optional *n* merges, and that N⁰-to-Cl⁰ movement only occurs when the nominalizer is not merged. Alternatively, we could also specify that the head-movement operation under discussion is actually one of Local Dislocation, a subspecies of a head-movement-like PF operation that is sensitive to adjuncts and heads alike (Embick and Noyer 2001).

(26) a. *goṭa du=ek kham*



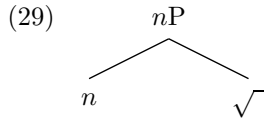
b. *səptaho tin=ek*



- (27) a. *du def-er moitri*
 two country-GEN friendship
 ‘friendship between two countries’
 b. *tin caka-r gaṛi*
 three wheel-GEN vehicle
 ‘three-wheeled vehicle’
 c. *car paś*
 four side
 ‘four sides’
 d. *tin dik*
 three direction
 ‘three directions’
 e. *ora car bon tin bhai*
 they four sister three brother
 ‘They are four sisters and three brothers.’
- (28) a. i. *John amar sathe du din thaklo*
 John my with two day stayed
 ‘John stayed two days with me.’

- ii. *tin maf*
 three month
 ‘three months’
- b. i. *du=to bəchor kharap gælo — 1966 ar 1976.*
 two=CL year bad went — 1966 and 1976
 ‘Two bad years occurred — 1966 and 1976.’¹⁹
- ii. *du=to maf-er nam-er fef-e “ari” — januari ar phebruari.*
 two=CL month-GEN name-GEN end-LOC “ari” — January and February
 ‘Two months have names ending in *ari* — January and February’

How can this be explained? I propose that, following work in Distributed Morphology (Halle and Marantz 1993, Marantz 1997, Siddiqi 2009), lexical items are not inherently specified for a syntactic category. Instead, they gain their syntactic properties from functional heads that select the root. Thus, the structure of a noun is shown in (29), where *n* is the nominalizer, and $\sqrt{\quad}$ represents the lexical root.



I propose that for classifier-less nouns the lexical root and a null classifier element are selected, and then the lexical root adjoins to Cl^0 . I propose this adjunction occurs because lexical roots can only be phonologically realized if assigned a lexical category. Thus, movement to Cl^0 satisfies a PF requirement. Such an analysis stipulates that there is no “real” noun in these kinds of DPs. The implications of this will be clear shortly.

How does this explain the ungrammaticality of NP movement in forms like (30)?

- (30) **səptaho tin*
 week three
 intended: ‘the three weeks’

Lexical roots are not inherently definite or indefinite. Only nouns and their projections can be used to refer to entities and have a definite or indefinite value. Thus, the *nP* — and no structure lower than the *nP* — must move to Spec,DP, since this is the lowest layer at which it is meaningful to describe a structure as definite or indefinite. Thus, the ungrammaticality of (30) is due to the fact that the NP cannot move to Spec,DP to check [DEF], as there is no NP to check the feature by virtue of the fact that the root *səptaho* has adjoined to the null Cl^0 .²⁰

Note that this puts two heads in a non-local relation. However, I do not think that there is anything that *a priori* rules out this kind of relation. That is, if we take the Bare Phrase Structure approach seriously, relations between phrases and individual lexical items are necessarily the same ilk. That is, if relating T^0 and D^0 (and thus DP) to check Case in English is an available option, subject to locality constraints, then the D^0 -to- Cl^0 AGREE operation that I propose here should also be theoretically viable. However, note that this means we need to state locality constraints on head movement on *movement* as such and not on possible head-to-head relations, or else we will lose the ability to have T^0 and a subject DP enter in the appropriate relationship in English. Additionally, we will need to say something about why particular operations are instantiated by head movement, and why other operations are instantiated by phrasal movement. At this point, I suggest that is

¹⁹In Dasgupta’s paper, the translation was ‘There were two bad years — 1966 and 1976.’

²⁰A more formal way of wording this is that D^0 must utilize the operation AGREE to probe its c-command domain for *n* and check the feature [DEF]. Upon checking [DEF], D^0 checks the EPP feature [*n*] by moving *nP* to Spec,DP. In (30), there is no *n* to satisfy the [DEF] feature.

purely by stipulation, and is encoded in the generalized [EPP] feature that cues movement — that is, just as some AGREE operations are instantiated by overt movement and idiosyncratically others are not, so is the distinction between phrasal and head movement.

There are a few ways around this constraint, all with some level of markedness. For one, some speakers allow a coerced reading in which the bare nominal can be construed as definite. Additionally, we have observed that nouns like *din* ‘day’ in fact can be used to refer to entities with a definite interpretation as long as they appear with a classifier. This is achieved by merging *n* with the lexical root, giving rise to a structure in which an overt classifier appears by bleeding the movement to a null Cl^0 . Afterwards, [DEF] on D^0 moves *nP* to Spec,DP as usual. This is shown in (32). This makes sense, since for a linguistic expression to be definite, the structure must be able to refer to something that can have definite status. Thus, an *n* is required to form a “real” noun. Alternatively, the grammar may merge a dummy demonstrative in D^0 (or, plausibly, higher in the structure) to check [DEF], shown in (33), presumably as a last resort.²¹

(31) *fat din*
seven day
‘(the) seven days’

(32) *din fat=ta*
day seven=CL
‘the seven days’

(33) ? *sei fat din*
that seven day
‘those/the seven days’

The placement of adjectives corroborates this analysis. Let’s turn our attention to the data below.

- (34) a. *tin din*
three day
‘three days’
- b. i. * *tin din* [_{NP} *kharap ~~din~~*]
three day bad
intended: ‘three bad days’
- ii. *tin=te kharap din*
three=CL bad day
‘three bad days’
- c. i. * *din tin=ek* [_{NP} *kharap ~~din~~*]
day three(=EK) bad
intended: ‘three bad days or so’
- ii. *goṭa tin=ek kharap din*
CL three(=EK) bad day
‘three bad days or so’

Consider what an analysis in which N^0 alone moves out of NP would predict. The null Cl^0 selects an NP, whose head N^0 moves and adjoins to Cl^0 . If an adjective were to adjoin to NP, we would expect the adjective to be stranded. This does not occur, as shown above. No N^0 -to- Cl^0 movement occurs when an adjective appears. This is easy to account for in the model at hand. By hypothesis, adjectives are adjuncts to structures headed by nouns. There must be a phrase headed by a noun for the adjective to adjoin to. Thus, forming a *nP* is a prerequisite for licensing an adjective. If

²¹This latter strategy seemed marked for at least one informant, so it is shown with a ?.

there is an adjective, then there is a *n* to form structure to support the adjective. As stated earlier, movement to Cl^0 occurs to give the lexical root phonological support. However, the lexical root is already licensed by *n* in these structures. Because the grammar has no need to perform a movement to Cl^0 , the root remains *in-situ* as the complement of *n*. This makes the prediction that adjectives with nouns like *sɔptaho* require the appearance of a classifier, shown in (34b-ii).²²

6 Num⁰ and Cl⁰ as Separate Heads

Next, I turn my attention to the headedness of the numeral and the classifier. Are they a complex head like the Q^0 proposed by Bhattacharya (1999b), or are they represented as separate heads? Before directly addressing the issue in Bangla, I examine evidence for separate heads cross-linguistically. Note that, as shown in Simpson (2005), the numeral and classifier do not necessarily appear adjacent to one another across languages. For example, in Mandarin Chinese, an adjective may appear between the numeral and the classifier, demonstrated in (35).

- (35) *yī xiǎo běn shū*
 one small CL book
 ‘one small book’ (T’ung and Pollard (1982); Mandarin Chinese)

Likewise, in Nung, the numeral and classifier may appear on opposite sides of the head noun, shown in (36).

- (36) *an ahn tahng nuhng ma*
 take CL chair one come
 ‘Bring a chair.’ (Saul and Wilson (1980); Nung)

Additionally, as Simpson (2005) argues, the numeral and classifier serve different grammatical purposes. The numeral is used to convey the quantity of the noun, whereas the classifier serves to individuate the noun. In other words, the classifier serves a mechanical function in the grammar, and the numeral contributes to the truth conditions of the DP. Furthermore, if Dasgupta (1983) is correct in hypothesizing that classifiers define a value for an aggregate property, another grammatical function is associated with Cl^0 , distinct from Num⁰. Because of these differences, let’s assume that Num⁰ and Cl^0 are separate heads, potentially with a (crucially) postsyntactic morphological merger that cliticizes the classifier onto the numeral.

Do these generalizations hold for Bangla? Bhattacharya (1999b) claims that Q^0 is a complex head by citing the constituency tests below, shown in (37). These tests establish that the numeral and classifier cannot be separated. However, the tests only prove that the numeral and classifier are subsumed under a syntactic constituent — they do not provide evidence for the phrasal level. In fact, the tests are even compatible with a model in which the numeral and classifier are separate heads. Suppose the NumP contains ClP and ClP contains *n*P. If this is the case, then *tin* and *=te* still fall within NumP, and thus form a constituent. We still predict the constituency tests below.

- (37) a. *ei [tin=te [NP lal boi]]*
 this three=CL red book
 b. *ei [[NP lal boi] tin=te]*
 this red book three=CL
 c. *?tin=te ei [NP lal boi]*
 three=CL this red book

²²These facts may be restricted to a few adjectives that merge low enough in the structure to modify the nominal root alone. For adjectives like *goto* ‘last’, as in *goto tin sɔptaho* ‘(the) last three weeks’ which appear on the left of the numeral, there is no interference.

- d. **tin-ei=te* [_{NP} *lal boi*]
 three-this=CL red book
 ‘these three red books’

In the next section, I offer an analysis for quantificationally approximate DPs. This account is compatible with an analysis in which the numeral and classifier form separate heads.²³

7 Quantificationally Approximate Reading

In this section I revisit the quantificationally approximate DPs from (3c) and (7c), repeated in (38) and (39) respectively.

- (38) *goṭa du=ek kham*
 CL two=(EK) envelope
 ‘two envelopes or so’

- (39) *sopṭaho tin=ek*
 week three=(EK)
 ‘three weeks or so’

To account for these data, I propose that D⁰ may take a feature [VAGUE] to express a quantificationally approximate (or “vague”) reading. Suppose that [VAGUE] requires a Cl⁰ to adjoin to it in order to check the feature. I suggest that this occurs because Cl⁰ is responsible for appropriately dividing the space of referable entities, à la Borer (2005). That is, I propose that the quantificationally approximate reading is a function of vagueness or approximateness over the individuation and division of the reference of the noun. Thus, D⁰ engages in an AGREE relation with the Cl⁰, and Cl⁰ continuously goes through a left-adjoining head-movement operation towards the probe D⁰, as formulated in Chomsky (2000).

This approach runs into an empirical difficulty with data like (40), in which we get left dislocation of the classifier, but no *ek*. Instead, we get doubling of the numerals.

- (40) a. *goṭa du tin kham*
 CL two three envelope
 ‘two envelopes or so’
 b. *sopṭaho du tin*
 week two three
 ‘two weeks or so’

However, if we assume a Late Insertion-type model, in which phonological shape of a morpheme only takes form after SPELLOUT, we may still be safe. Suppose that the [VAGUE] D⁰ has no phonological information stored in its lexical entry. Instead, it may either occur as the form *ek*, or may parasitically gain its form in relation to the numeral that head-adjoins to it. Upon adjoining the Num⁰ head, D⁰ spells out as the next adjacent numeral. Thus, the pre-insertion form is given in (41), and the two phonological options are in (42). Of course, this then gives the grammar a non-deterministic flavor, which may not be desirable.

- (41) [_D *goṭa tin* [VAGUE]] *kham*
 CL three VAGUE envelope

²³In pursuing this approach, if we want to have the numeral-classifier complex form a morphological unit, we will need to rely on post-syntactic rules to cliticize the classifier onto the numeral (or the NP with no distinct numeral). Note that we will most likely need to utilize some post-syntactic tinkering with the functional morphemes under discussion either way, as later I suggest that elements that fall under D⁰ in quantificationally approximate constructions are not a morphological word. In other words, I am not requiring that morphological words map onto syntactic heads. This disassociation seems to be needed in some approaches to morphology, such as Embick and Noyer (2001).

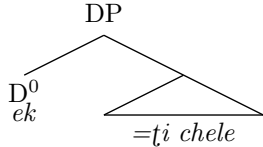
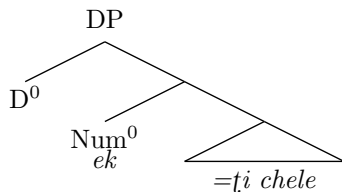
- (42) a. *goʃa tin car kham*
 CL three four envelope
 ‘three or four envelopes’
 b. *goʃa tin=ek kham*
 CL three=EK envelope
 ‘three or four envelopes’

Why is D^0 the position for checking [VAGUE]? Nothing too crucial relies on this part of the analysis. All that matters is that the probe for Cl^0 is higher than Num^0 in order to derive the correct word orders for the quantificationally approximate structures, and I continue to assume that it is D^0 in the discussion for concreteness. However, there are some tentative arguments that D^0 should indeed be this probe, and that we may be able to avoid having to posit an additional head solely to act as the target for Cl^0 -movement.

First, we find *ek* appearing with indefinites that are not quantificationally approximate.

- (43) a. *chele*
 boy
 ‘(a) boy’
 b. *ek(=ti) chele*
 one=CL boy
 ‘one boy’ or ‘a boy’

It is likely no accident that this morpheme is (largely) homophonous with the numeral *æk/ek*, making the form in (43b) ambiguous between two interpretations: ‘one boy’ and ‘a boy’. For either interpretation, a classifier *=ti* may appear after *ek*. Because of the two interpretations, I posit there are two morphemes *ek*: one being a numeral ‘one’, the other an indefinite determiner, with structures shown below.²⁴

- (44) a. 
 b. 

For simplicity, I assume that *ek* in (3c) and (7c), repeated in (45), merge in D^0 . Presumably, it does not merge at Num^0 , since there is already a numeral. This precludes an analysis in which *ek* merges at Num^0 and moves to D^0 , for these structures at least.

- (45) a. *goʃa du=ek kham*
 CL two=(EK) envelope
 ‘two envelopes or so’
 b. *sɔptaho tin=ek*
 week three=(EK)
 ‘three weeks or so’

²⁴This is obviously a common phenomenon, and can be seen across many languages and language families. Whether all of these languages truly have an ambiguity between ‘one’ and ‘a’ structurally is not relevant here.

There is another strategy for expressing quantificational approximateness that seems to be disjoint from the one under discussion, although it does show some similarity to the structures originally shown in (40). This alternate strategy is shown in (46).

- (46) *tin car=ti kukur*
 three four=CL dog
 ‘three or four dogs’

In this strategy, two adjacent integers appear together, with a classifier on the last numeral. In other words, for a numeral n , the expression $n, n+1=CL-NP$ can mean ‘ n NPs or so’. One could argue that *ek* in (47) may be one of the two numerals used this way. In other words, this *ek* is *ek* ‘one’.

- (47) *jon car=ek sromik*
 CL four(=EK) laborer
 ‘four laborers or so’ (Dasgupta 1983)

However, this seems unlikely. First, *ek* in (7c) and (47) is a clitic, signalled by the equal sign in the gloss. Secondly, the difference between the two numerals is larger than one, contrary to the pattern in (46). Additionally, the classifier has distinct positions in (46) and (47). Thus, I maintain that *ek* in (47) remains a distinct morpheme from the numeral, by hypothesis, in D^0 .²⁵

Thus, let’s assume that *ek* appears in D^0 . Otherwise, if *ek* is interpreted as a numeral, then it merges in Num^0 . It is possible that the *ek* in quantificational approximate structures is a separate, third morpheme in a distinct position. However, for parsimony and concreteness, I assume that in quantificationally approximate DPs it is located in D^0 .²⁶

A curious fact that may be indirect support for the hypothesis that [VAGUE] merges at D^0 is that given below in the paradigm in (48). If we assume that [VAGUE] D^0 and [DEF] D^0 are separate lexical items that must be in complementary distribution, we can explain the unacceptability of the form in (48b). In order to get NP movement, we need to have [DEF] merging at D^0 , precluding the D^0 that checks the [VAGUE]. The reverse case is also true if the quantificationally approximate D^0 merges.

- (48) a. *goṭa du=ek kham*
 CL two=EK envelope
 ‘two envelopes or so’
 b. **kham goṭa du=ek*
 envelope CL two=EK
 intended: ‘the two envelopes or so’

²⁵Both Dasgupta (1983) and Bhattacharya (2001) note *ek* seems to be cliticized on quantifiers, shown in (1). An obvious exception is *sob* ‘all’.

- (1) a. *onek* ‘a lot’
 b. *kōek* ‘a few’ (c.f. *kōe* ‘few’)
 c. *khanik* ‘a bit’
 d. *olpek* ‘a little’ (c.f. *olpo* ‘little’)
 e. *prottek* ‘each one’ (c.f. *proti* ‘every’)
 f. *kōtok* ‘a few’ (c.f. *kōto* ‘some, few’)

Bhattacharya (2001) calls this *ek* ‘Vague-one’. As I develop the model in this paper, I make no claim about this morpheme *ek*. Since I am not proposing a position for quantifiers in the DP apart from numerals, I have nothing to say about this morpheme. Though, it is not obvious to me that the *-k* needs to be analyzed as a morpheme at all. Etymology aside, it may just be that quantifiers generally end in *-k* — similar to question words in English beginning with *wh-* for the most part.

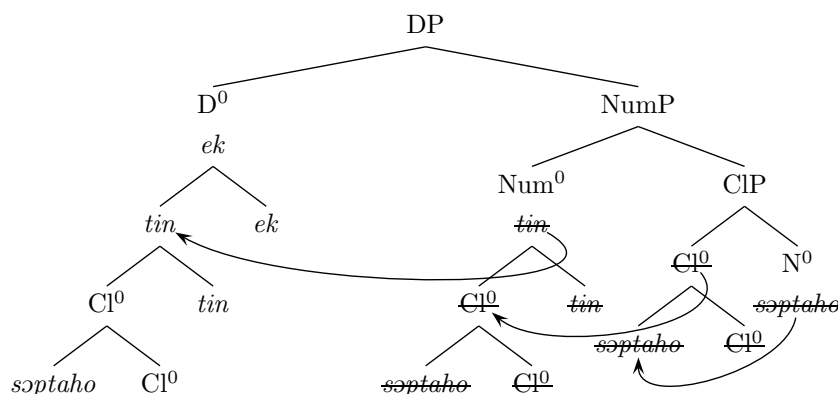
²⁶If *ek* merges as D^0 , then we might expect other numerals to merge. This would predict forms like **ek tin=te chele* ‘a three boys’, which does not occur. However, we can sidestep this issue by suggesting that the vague *ek* and the indefinite singular *ek* are two separate D^0 ’s.

If Num⁰ and Cl⁰ are separate heads, as I propose, there is an intervening NumP shell between DP and ClP. If this is the case, then Cl⁰ must adjoin to Num⁰, which then must adjoin to D⁰. The roundaboutness of this movement is due to the Head Movement Constraint (HMC), defined in (49). A more updated version of the HMC that also includes XP-level locality constraints is the notion of Relativized Minimality, defined in (50).

- (49) **Head Movement Constraint:** Head movement may not skip intermediate heads (Travis 1984)
- (50) **Relativized Minimality:** A movement operation cannot involve X and Y over a Z which is relevantly identical to Y in this configuration ... X... Z... Y... if Z c-commands Y. (Rizzi 1990, 2001, Hornstein 2006)

Suppose that this cyclical head movement is left-adjoining.²⁷ If this is the case, then the word order CL-NUM-EK-N would arise, as in (48a). Let's see how. First, Cl⁰ adjoins to Num⁰, then Num⁰ adjoins to D⁰. Additionally, if this movement were to occur after N⁰-to-Cl⁰ movement, the null hypothesis, then the N⁰ would still arise in the Cl⁰ position, correctly producing the word order N-NUM-EK for "classifier-less" nouns in the quantificationally approximate construction. These derivations are schematicized in (26), with the derivation of *səptaho tin=ek* repeated below in (51).

- (51) *səptaho tin=ek*



8 Further Work

One problem still remains with this analysis. I have assumed that *ek* can merge in D⁰ with structures that contain numerals, since it appears in the quantificationally approximate constructions. However, taking this at face value is incompatible with (52).

- (52) (**ek*) *car-tə boi*
 EK four=CL book
 'four books'

If *ek* can merge freely at D⁰, then we would incorrectly predict it to be possible here as well. One could posit that *ek* has a conflict in a semantic/syntactic number feature, since the corresponding **a four books* in English is presumably ungrammatical for a similar reason. However, if that were so, then we would also predict *ek* to be illicit in quantificationally approximate structures, since these also contain numerals, supposing [VAGUE] merges as D⁰. This brings us back to the non-trivial assumption that *ek* 'a' and =*ek* in the quantificational approximate constructions are the same syntactically. One method of dealing with this issue is to suppose that we have two *ek*'s that can merge in D⁰ — the indefinite singular and the quantificationally approximate.

²⁷See Bobaljik and Brown (1997) for a discussion of head movement and the Extension Requirement.

There is another set of provocative data. In (53), we see that the morpheme *=ek* can appear without triggering head-movement of the classifier. Instead, it seems to appear to the right of the numeral. One could suppose that this is the same operation driven by [VAGUE], except probing Num⁰ instead of Cl⁰, and triggering a more local head movement operation. Thus, the structure would look like (54). If this were the case, then it may not be so critical that D⁰ probes Cl⁰ *per se*, but requires some quantifying head. Sorting out whether there is a subtle semantic distinction between this form and the quantificational approximateness constructions that were the focus of this paper remains to be seen.

- (53) *pāc=ek=tā (lamba) kham*
 five=EK=CL (long) envelope
 ‘five envelopes or so’

- (54) [_{DP} [_D *pāc ek*] [_{NumP} ~~*pāc*~~ [_{ClP} *gōtā* [_{NP} *kham*]]]]

This might suggest that we need to factor out the two steps in the Cl⁰-to-D⁰ operation. There could be a separate Cl⁰-to-Num⁰ movement that occurs, followed by a Num⁰-to-D⁰ operation. This would then give a potentially more modular answer to why here we are only seeing Num⁰-to-D⁰ movement. However, I am not aware of what kind of evidence could tease out these two analyses.²⁸

There are still many distributional questions left to address, as well. For instance, it is still unclear whether both numerals and quantifiers can fall under the same head. This does not seem to be the case, given forms like that in (55). Thus, quantifiers must have a distinct structural position. How this position would figure into the analysis presented here is unclear.

- (55) *kon sat=tā boi*
 any seven=CL book
 ‘any seven books’

It remains to be seen how possessors and demonstratives figure into the structure. If NP moves to Spec,DP, then in what position do possessors appear? Demonstratives occurring in D⁰ seem to form separate heads in the syntax. This is consistent with the evidence found in the quantificational approximateness configurations and in other classifier languages.

Ultimately, this presents a model in which both the Bangla data and other Southeast Asian languages can fit comfortably. This provides us with a stronger theory of Universal Grammar that does not require the learner to choose between Bangla-type and, say, Chinese-type classifier languages. Instead, the child is pre-equipped with the structural frame that can accommodate a variety of constructions cross-linguistically, with the features and their methods of instantiation varying. This ultimately should be the goal of comparative syntax — reducing superficially different phenomena across a variety of languages to an appropriately flexible base that does not force the child to choose between two options that would only give rise to minimal differences.

Acknowledgments

Thanks to Priyanka Biswas, Syed Saurov, Samira Choudhury, Aniqua Hasan, Nandita Rahman, and Atif Safi for their help in providing data and judgments. Thanks to Jeanette Gundel, Brian Reese, Howard Lasnik, and Colin Phillips for their comments. Special gratitude is due to Hooi Ling Soh for her guidance and supervision. Finally, thanks to Kaitlin Johnson, Andrew Borne, Alissa Hoyme, James Imes, Kevin Myers, and the UCLA–UC Berkeley Joint Conference on the Languages of Southeast Asia for their comments and suggestions. All remaining errors are my own.

²⁸Curiously, the NP seems to be able to be left dislocated in these examples without the definite interpretation: *(lamba) kham pāc=ek=tā* ‘five envelopes or so’.

References

- Abney, Steven P. 1987. *The English Noun Phrase in its Sentential Aspect*. Ph.D. thesis, MIT.
- Aikhenvald, Alexandra Y. 2000. *Classifiers: A Typology of Noun Categorization Devices*. Oxford: Oxford University Press.
- Bernstein, Judy B. 1993. The syntactic role of word markers in null nominal constructions. *Probus* 5(1):25–38.
- Bernstein, Judy B. 2001. The DP-hypothesis: identifying clausal properties in the nominal domain. In M. Baltin and C. Collins, eds., *The Handbook of Contemporary Syntactic Theory*, pages 563–561. Oxford: Blackwell.
- Bhattacharja, Shishir. 2007. *Word Formation in Bangla: A Whole Word Morphological Description and Its Theoretical Implications*. Lincom Europa.
- Bhattacharja, Shishir. 2008. Bangla namonguler antorgoThon. *The Dhaka University Journal of Linguistics* 1(2):67–89.
- Bhattacharya, Tanmoy. 1999a. Specificity in the Bangla DP. In R. Singh, ed., *Yearbook of South Asian Languages and Linguistics 2*, pages 71–99. New Delhi/London: Sage Publications.
- Bhattacharya, Tanmoy. 1999b. *The Structure of the Bangla DP*. Ph.D. thesis, University College London.
- Bhattacharya, Tanmoy. 2001. Numeral/quantifier-classifier as a complex head. In H. van Riemsdijk and N. Corver, eds., *Semi-Lexical Heads*, pages 191–222. Berlin: Mouton de Gruyter.
- Bobaljik, Jonathan David and Samuel Brown. 1997. Interarboreal operations: Head movement and extension requirement. *Linguistic Inquiry* 28(2):345–356.
- Borer, Hagit. 2005. *In Name Only*, vol. 1 of *Structuring Sense*. Oxford: Oxford University Press.
- Cheng, Lisa L.-S. and Rint Sybesma. 1999. *yi-wan tang, yi-ge Tang*: Classifiers and massifiers. *The Tsing Hua Journal of Chinese Studies* 28(3):385–412.
- Cheng, Lisa L.-S. and Rint Sybesma. 2005. Classifiers in four varieties of Chinese. In G. Cinque and R. S. Kayne, eds., *The Oxford Handbook of Comparative Syntax*, pages 259–292. Oxford: Oxford University Press.
- Chierchia, Gennaro. 1998. Reference to kinds across languages. *Natural Language Semantics* 6:339–405.
- Chomsky, Noam. 1995. *The Minimalist Program*. MIT Press.
- Chomsky, Noam. 2000. Minimalist inquiries: The framework. In R. Martin, D. Michaels, and J. Uriagereka, eds., *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, pages 89–155. Cambridge, MA: The MIT Press.
- Dasgupta, Probal. 1983. On the Bangla classifier *ta*, its penumbra, and definiteness. *Indian Linguistics* 44(1–4):10–26.
- Dasgupta, Probal. 1985. On Bangla Nouns. *Indian Linguistics* pages 37–65.
- Dasgupta, Probal. 1997. La définitude en bengali. *Faits de Langues* 5(10):137–144.
- Dasgupta, Probal. 2003. Bangla. In G. Cardona and D. Jain, eds., *The Indo-Aryan Languages*, pages 351–390. New York: Routledge.
- Dirdal, Hildegunn. 2004. *Second Language acquisition of articles and plural marking by Benagli speakers of English*. Ph.D. thesis, University of Cambridge.
- Embick, David and Rolf Noyer. 2001. Movement operations after syntax. *Linguistic Inquiry* 32(4):555–595.
- Ghosh, Sanjukta. 2006. Honorificity-marking words of Bangla and Hindi: Classifiers or not? *Bhashachintana* 1:21–27.
- Giusti, Giuliana. 1991. The categorial status of quantified nominals. *Linguistische Berichte* 136:438–452.
- Gundel, Jeanette K., Nancy Hedberg, and Ron Zacharski. 2001. Definite descriptions and cognitive status in English: why accomodation is unnecessary. *English Language and Linguistics* 5(2):273–295.
- Halle, Morris and Alec Marantz. 1993. Distributed morphology and the pieces of inflection. In K. Hale and S. J. Keyser, eds., *The View from Building 20*, pages 111–176. Cambridge, MA: The MIT Press.
- Hornstein, Norbert. 2006. Deriving c-command. Unpublished Ms., Universtiy of Maryland, College Park.
- Jackendoff, Ray. 1977. *X-bar-Syntax: A Study of Phrase Structure*. No. 2 in *Linguistic Inquiry*. MIT Press.
- Junghare, Indira. 1983. Markers of definiteness in Indo-Aryan. *Indian Linguistics* 44(1–4).
- Kornai, András and Geoffrey Pullum. 1990. The X-bar theory of phrase structure. *Language* 66:24–50.

- Löbel, Elisabeth. 1989. Q as a functional category. In C. Bhatt, E. Löbel, and C. Schmidt, eds., *Syntactic phrase structure phenomena*, pages 133–57. Amsterdam: John Benjamins.
- Longobardi, Giuseppe. 2003. The structure of DPs: Some principles, parameters, and problems. In M. Batlin and C. Collins, eds., *The Handbook of Contemporary Syntactic Theory*, pages 562–603. Oxford: Blackwell.
- Marantz, Alec. 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. In A. Dimitriadis, L. Siegel, C. Surek-Clark, and A. Williams, eds., *Proceedings of the 21st Annual Penn Linguistics Colloquium: Penn Working Papers in Linguistics*, vol. 4, pages 201–225.
- Nunes, Jairo. 2001. Sideward movement. *Linguistic Inquiry* 32(2):303–344.
- Rizzi, Luigi. 1990. *Relativized Minimality*. Cambridge, MA: The MIT Press.
- Rizzi, Luigi. 2001. Relativized minimality effects. In M. Baltin and C. Collins, eds., *The Handbook of Contemporary Syntactic Theory*, pages 89–110. Oxford: Blackwell.
- Sahoo, Kalyanamalini. 1999. The syntax of definiteness in Oriya. In R. Singh, ed., *Yearbook of South Asian Languages and Linguistics 2*, pages 101–117. New Delhi: Sage Publications.
- Saul, Janice E. and Nancy Freiberger Wilson. 1980. *Nung Grammar*. Summer Institute of Linguistics.
- Siddiqi, Daniel. 2009. *Syntax within the Word: Economy, allomorphy, and argument selection in Distributed Morphology*. No. 138 in *Linguistics Today*. Amsterdam: John Benjamins.
- Simpson, Andrew. 2005. Classifiers and DP structure in southeast Asia. In G. Cinque and R. S. Kayne, eds., *The Oxford Handbook of Comparative Syntax*, pages 1–22. Oxford: Oxford University Press.
- Soh, Hooi Ling. 2001. The syntax and semantics of phonological phrasing in Shanghai and Hokkien. *Journal of East Asian Linguistics* 10:37–80.
- Soh, Hooi Ling and Jenny Yi-Chun Kuo. 2005. Perfective aspect and accomplishment situations in Mandarin Chinese. In H. J. Verkuyl, H. de Swart, and A. van Hout, eds., *Perspectives on Aspect*, pages 199–216. Berlin: Springer.
- Travis, Lisa. 1984. *Parameters and Effects of Word Order Variation*. Ph.D. thesis, MIT.
- T'ung, Ping-Chen and David E. Pollard. 1982. *Colloquial Chinese*. Oxford: Routledge.