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In search of the vague 'One'

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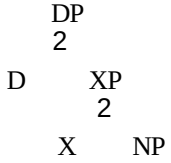
In this paper I propose that the syntactic/ semantic difference between *all* and other non-*all* Qs (NAQ) – independently proposed in the literature (Shlonsky 1991, Giusti 1997) -- can be clearly predicted from the morphology in Bangla (Bengali). In particular, I claim that NAQs contain a "vague" morpheme for *one* which gives rise to these differences. As a larger consequence, I suggest that the Bangla DP structure must be seen as consisting three layers.

1. Introduction

After Abney (1987) subsequent research has concentrated attention on the region between the DP and the NP. These studies, more or less, proposed the following structure for DPs:

(1)


There has been no general consensus about the nature of X. It has been variously identified as NumP, QP, KP ("Klassifier" Phrase), ArtP, BP ("Badge Phrase"), $Agr_{GEN}P$.[1]

2. Is the Bangla DP three layered?

In this paper, I will look in detail at some interesting facts about the nature of the Q

[1] The last three, which are relatively unfashionable are from Santelmann (1993) for Swedish, Bhattacharya (1995), Bhattacharya and Dasgupta (1996) for Bangla and Siloni (1997) for Hebrew respectively.

head and consider the possibility of splitting up the complex Q head into two separate heads. Such a possibility would perhaps enhances the supposed similarity with the clausal structure.[2] However, in what follows, I will show that in the context of the data discussed in this paper, the Bangla DP must be three-layered as in (1).

A preliminary examination of nominal phrases as in (2) exhibit three layers. In particular, note that numeral-classifier and adjective-noun behave as independent units although the word order is relatively free. For the sake of clarity, I will assume that all the phrases below have the same meaning *these three green books*.

(2)a.	[Dem]	[Num-Cla]			[Adj	N]	
	ei	tin-Te			Sobuj	boi[3]	
	this	3-CLA			green	books	
b.	[Dem]	[Adj	N]		[Num-Cla]		
	ei	Sobuj	boi		tin-Te		
c.	[Num-Cla]		[Adj	N]	[Dem]		
	tin-Te		Sobuj	boi	ei		
d.?	[Num-Cla]		[Dem]	[Adj	N]		
	tin-Te		ei	Sobuj	boi		
e.*	Num-*Dem*-Cla			Adj	N		
	tin-ei-Ta			Sobuj	boi		
f.*	Num-Cla	Adj		*Dem*	N		
	tin-Te	Sobuj		ei	boi		

That is, there is enough freedom of movement as long as Dem, Num-Cla, Adj N form three separate units. Bangla may thus also have a general three layered DP structure.

2.1. The middle layer

In this section, I show that the middle layer of the Bangla DP consists of the Q head. Let us begin by considering Zwicky's (1985) tests for headedness. Note that among the five headedness criteria of Zwicky, criteria (iii) derives from (ii) and that (iv) and (v) can be accommodated within the definition of Merge.

(i) *Agreement*: the dependent triggers agreement with the head. I consider the shape of the Cla morpheme as the only remnant of agreement in a language without agreement. In (3) the Cla chosen is determined by some feature of the N form:[4]

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[2]For example, splitting up of the INFL in Pollock (1989) and Chomsky (1991) and others.

[3]The transcription works as follows: T D R = Retroflex ʈ ɖ ɽ; S = Palato-alveolar ʃ; N = Velar ŋ; E O = mid vowels æ ɔ; M = Nasalisation.

[4] *Ta* is the default form of the common classifier which has various allomorphs governed by phonological conditions:
(i) *Te* occurs with 'three' and 'four' as in *tin-Te* 'three-CLA', *car-Te* 'four-CLA' – historically *car* is derived from /*cari*/ with the high vowel at the end which raised *Ta* to *Te*; in free variation with *Ta* in *ei/oi-Ta/Te*, 'this/that-CLA' where the exact transcription for the Dem should be *ey/oy*, *y* denoting a high glide
(ii) *To* occurs only with 'two', again, explained in terms of vowel harmony
(iii) *Ta* occurs with the rest of the numerals and with other Ns.

(3)a. du-To chele/ boi [General Classifier]
two-CLA boy/ book
'two boys/ books'
b. du-jon chele/ *boi [Human Classifier]
two-CLA boy/ book
c. du-khana *chele/ boi [Inanimate Count Classifier]

(ii) *Obligatory constituent*: the Head should be the obligatory constituent in the unit. The data in (4) shows that only the Num/Q and the Cla together can act as a head by this criterion:

(4)a. *du/ *To/ du-To chele
two/ CLA/ two-CLA boy
b. *kO/ *jon/ kO-jon chele
some/ CLA/ some-CLA boy

(iii) *Distributional Equivalence*: Head is the constituent that belongs to a category with roughly the same distribution as the construct as a whole. This derives from (ii) above since if the head is the obligatory constituent it is obvious that it will have "roughly" the same distribution as the construct, and certainly more than the dependent.

(iv) *Subcategorizand*: an element that requires a subcategorisation frame is a head. This requirement is satisfied by the same examples in (3) above if we consider that the NPs are selected by the Num-Cla complex. I show that this requirement, together with the next criterion, falls out of the way Merge operates.

(v) *Governor*: Head is the constituent that governs the grammatical form of its sister constituent. Given that in the Minimalist framework, there is no scope of a rule of lexical insertion based on subcategorisation frames and because of the elimination of government, it is desirable to derive (iv) and (v) from some other source. If (5) is a numeration selected from the Lexicon to construct a DP then a derivation as in (6a) crashes as the inanimate Cla *khana* cannot be merged with a human N; the derivation in (6b) which selects a human complement goes through:

(5) N = {du-khana 'two-CLA', kerani 'clerk', Ofis-er 'office's' }
(6)a. {du-khana, kerani}
{Ofis-er, {du-khana, kerani}}
*<du-khana kerani Ofis-er> or *<Ofis-er du-khana kerani>[5]
b. {du-khana, Ofis-er }
{kerani, {du-khana, Ofis-er}}
<du-khan Ofis-er kerani> or <kerani du-khana Ofis-er>

A matching of features between the Num-Cla and the following N must be established for the derivation to proceed. This redefinition shows the headedness of

[5] Both orders may be produced depending on whether there is Move after the first Merge, I have ignored various details which are not relevant for the point being made.

Num-Cla as well.

2.2. Q-Float

Further evidence that the middle head in the Bangla DP is indeed a quantifier head can be found from investigating the phenomenon of Q-float. The Num-Cla complex shows a Q-float like effect, Q/Num-Cla sequences are, therefore, to be thought of as belonging to the domain of QP. This is evident further from their behaviour as Floating Quantifiers (FQ). Miyagawa (1988) assumes that the Numeral-Quantifier must be in a relation of mutual c-command with the DP it quantifies over at D-structure. He observed that a numeral-quantifier occurring to the right of the DP it modifies could be dislocated from it if the DP is a subject of an unaccusative or a passive verb but that the DO may not intervene between the transitive subject and a Num-Q. This holds for Bangla too:

(7)a. chatro$_i$ aj tin-Te t_i eSechilo
student-to day 3-CLA came
'three students came today'

b.* chatro boi tin-Te enechilo
student book 3-CLA bought
'three students had bought books today'

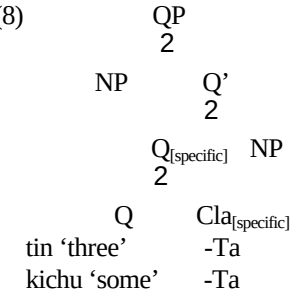
c. gaRi$_i$ cor dara car-Te t_i curi gEche
car thief by 4-CLA theft gone-PASS
'four cars were stolen by thief'

These examples prove beyond doubt that the Num-Cla constituents in Bangla are like FQs and are therefore by definition, Qs.

3. Difference between all and non-all quantifiers (NAQ)

If the Num and the Cla are part of a single complex head then the following is a plausible structure:

(8)



In the rest of the paper, I discuss this structure in detail. First, notice the behaviour of the Q *SOb* 'all' in the following pair:

(9)a. SOb gulo chele aSbe

all CLA boy come-will
'all the boys will come'

b. SOb chele gulo aSbe
all boy CLA come-will
'all the boys will come'

The difference between the two is that in (9b) *SOb* 'all' quantifies over a particular set of boys, a set which has a prior discourse reference. (9a) on the other hand is a quantification over an exhaustive set of boys. Additionally, (9b) shows, for the first time (cf. 2), that an NP can appear between Q and Cla. This would suggest that the complex head too ought to be split up into two heads and that unlike *–Ta* the classifier *gulo* does not cliticise to the Num/Q. Let us look at other, non-*all* quantifiers (NAQs):

(10)a. Onek gulo chele
a lot CLA boy
'a lot of boys'

b.* Onek chele gulo

(11)a. kOtok gulo chele
some CLA boy
'some boys'

b.* kOtok chele gulo

Similar results obtain with other classifiers:

(12)a. Onek-jon chele
a lot-CLA boys
'a lot of boys'

b.* Onek chele-jOn

(13)a. Onek-khani rasta
a lot-CLA road
'a lot of distance'

b.* Onek rasta-khani

Changing the Q gives us same results:

(14)a. kOek-jon chele
a few-CLA boy
'a few boys'

b.* kOek chele-jon

(15)a. kOto-gulo lok
'some people'

b.* kOto lok-gulo
some people-cla

(16)a. kOto-khani doi
so much-CLA yoghurt
'so much yoghurt'!

b.* kOto doi-khani

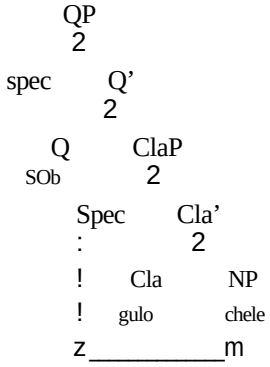
4. Q and Cla as separate heads

The data in (9) in connection with *SOb* cannot be accounted for by a structure, assumed earlier in (8), where the Num/Q-Cla is complex, fused head:

(17) [$_{QP}$ Spec [$_{Q'}$ SOb-gulo [$_{NP}$ chele]]]

One possibility of accommodating the above data is by splitting the Q/Num-Cla into two separate heads Q and Cla:

(18)

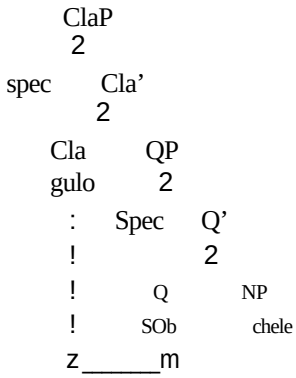


The movement of the NP to [Spec,ClaP] would derive the order in (9b) whereas no movement is necessary for (9a). I will suggest, in the next three sections, that the above derivation is incorrect for at least three reasons.

4.1. The right order is the [ClaP-QP] order

The headedness tests of the Num/Q-Cla complex and the data in (10) to (16) above show that it is likely that a Num/Q-Cla sequence is formed through head adjunction of Q and Cla. If that is the case then the derivation in (18) would give us the wrong order of [Cla-Q]. This is based on the reasoning that adjunction is always to the left. Although there are proposals in the literature in favour of a right adjunction at the word level, I will consider adjunction as always to the left.[6] The revised structure is as follows:

[6] See Barbosa (1996) who has suggested right adjunction to be the case for getting the right order for French clitic placement and neg order where the general claim is that head adjunction in Romance is right adjunction.

(19)


This is the derivation for (9a) achieved through head adjunction of Q to Cla, but what about (9b)?

One possibility is to derive (9b) via head movement of Q to a head higher than Cla and then moving the NP to [Spec,ClaP]. I reject this for obvious reasons since it unnecessarily increases the number of heads without any strong motivation for doing so, especially, since this extra head is needed only to derive this order. The other possibility is to move the whole QP to [Spec,ClaP]. There are two problems with this. Firstly, this will not stop derivation of the unwanted (b) versions of the other Qs in (10-16) by raising the NP as follows:

(20)* $[_{ClaP}\ [_{QP}$ Onek $[_{NP}$ chele]] gulo $t_{QP}]$

Secondly, this would imply that a feature of the Cla is responsible for the movement of the QP to its spec. This is against the evidence given in (10-16). What is the nature of this feature anyway?

4.2 A feature of Q: the vague 'one' morpheme

The structure in (18) cannot explain why the NP does not move in case of NAQs. A closer inspection of the makeup of the Qs in the NAQ group, reveals that all of them contain some indivisible version of the word for *Ek* 'one' sometime morphologically unrecognisable:[7]

(21)a. On**ek** 'a lot'
b. kO**ek** 'a few'
c. khan**ik** 'a bit'
d. Olp**ek** 'a little'
e. prott**ek** 'each one'
f. kOto**k** 'a few'[8]

[7] Notice the English glosses suggest a similar presence of 'one'

[8] In others without a visible *–ek* morpheme, we get either a reduced Wh-word (K -word) as in (ia,b) or a demonstrative particle (ic):
(i)a. **ki**chu 'some' b. **kO**to 'how/so many' c. **O**to 'so many'
It is possible that all these indivisible particles contribute to the featural makeup of the Q head contributing

In addition, (22) below shows another curious use of the *Ek* morpheme/ word. This use of the numeral is restricted to its use with another numeral:

(22)a. du-Ek-Ta chele
two-one-CLA boy
'One or two boys'
b. du-Ek khana ruTi
two-one CLA bread
'One or two bread'

Note that this use of the *–Ek* numeral is restricted to the number two:

(23)a.* tin/ car-Ek-Ta chele
three/ four-one-CLA boy
b.* tin/car-Ek khana ruTi
three/four-one CLA bread

Misi Brody (p.c.) suggested that the expresions with the number two could be idiomatic. My guess is that it is still a syntactic problem because of following possibilities:

(24)a. jona du-Ek/ tin-ek/ car-ek
CLA two-one/ three-one/ four-one
'Two/ three/ four or so'
b. khan du-Ek/ tin-ek/ car-ek
'Two/ three/ four or so'
c. goTa du-Ek/ tin-ek/ car-ek
'Two/ three/ four or so'

That is, if the Cla precedes the Num-*Ek*, Num can be any number. Now compare this with the following set:

(25)a.* jona du/ tin/ car
b.* khan du/ tin/ car
c.* goTa du/ tin/ car

That is, it is possible for the putative Cla *jOn(a)* to precede the Num only if it itself has *-a* and the Num has an *-Ek* clitic attached with it. Based on the reasoning below, I suggest that the classifiers in these examples are different from classifier heads and are Cla-Specs. Thus *jOna* is an XP whereas *jon* is a head.

(26)a. du jon chele
two CLA boy

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towards a general notion of counting or enumeration. However, I have no idea if this connection between the *–ek* set and (i) is a robust one or whether it can be stated formally.

'two boys'
b. jOna dui chele
'two or so boys'

Notice that the order in (26b) gives a sort of vague meaning. Coming back to the issue at hand note that *jOna* may not precede other bare numerals:

(27)a. Ek jon chele
one CLA boy
'one boy'
b.* jOna Ek chele
'one or so boys'
(28)a.* jOna tin chele
'three or so boys'
b.* jOna car chele
'four or so boys'

The data in (24) shows that *-Ek* in the Q makes it possible for the Cla-Specs to precede. Now let us carefully review the difference between the following again:

(29)a. jOna dui chele
CLA two boys
'two or so boys'
b.* jOna du chele

Note in this connection that the following are marginally possible, again with similar restrictions as to their morpho-phonemic shapes:

(30)a.# goTa chOy/ *chO
CLA six
'six or so'
b.? goTa nOy/ *nO
CLA nine
'nine or so'

I claim that *dui* carries a feature similar to Num+*Ek* which is a result of some sub-syntactic complex-head formation process. That is, both *dui* and *duEk* carry a similar feature, *-i* on *dui* being a reflection on the occurrence on a spec.

There is further evidence for Cla-Spec status of *jOna* in (31) which shows that that it cannot occur in the same position as the Cla *jon*:

(31)a* du jOna chele
two CLA boy
b. du jon chele

I suggest, therefore, that *jOna* is generated as a specifier XP and must be merged at [Spec,QP]. By the Generalised Licensing Condition of Bhattacharya (1998,

1999a,b) which states that in order to obtain a particular syntactic effect within a DP both the relevant head and the Spec must be occupied, (32) would imply that we get a specificity effect, which is exactly the effect obtained since [Spec,QP] is the locus of specificity. The phrase in (32) is a specific DP meaning 'the two or so old men':

(32) [$_{QP}$ jOna [$_{Q'}$ du-Ek [$_{NP}$ buRo lok]]]

One more evidence in favour of the fact that a feature of [specificity] is checked and erased in this derivation is the fact that the NP cannot also move up (33).

(33)* jOna buRo lok du-Ek
CLA old man two- 'one'

Consider the fact that the following is out too:

(34)* SOb jOna du-Ek
all CLA two- 'one'

This is because, as we have seen *SOb* is a spec itself. There is no theory yet to show that Merge to a structure with a spec will choose the inner spec. That is, there is no theory equivalent to Richards (1997) at the level of Merge. It is reasonable to assume that similar to *jOna*, both *khan* and *goTa* can also be analysed as Cla-Specs as they show similar restrictions:

(35)a.* khan/ goTa buRo lok du-ek
CLA old man two- 'one'
b.* SOb khan/goTa buRo lok du-ek
all CLA old man two- 'one'

Going back now to (25), it can be reasoned that (25) is out because a Num always needs an enclitic, *Ek* provides the enclitic to make (24) grammatical. There is some evidence from Chittagong Bangla in favour of this. In (36), the historical reanalysis of the morpheme for 'one' *ekk* to the Cla *-gga* is shown:

(36) ekk > -egg > egge > -gga
(37) du-gga chele
two-CLA boys

This shows that the form of Num *-Ek* can conceivably work as a Cla.

Coming back to the vague 'one' morpheme, the following data shows movement of the NP leftward in the case of this numeral. Notice, however, that the meaning obtained is not a specific meaning but rather a dislocated, topicalised meaning. This shows that the analysis is on the right track.

(38)a. chele jOna du-Ek paThiyo
boy CLA two-one send-2

'as for boys, (you may) send two or so'

b. boi khan tin-Ek ante paro
book CLA three-one bring may-2
'as for books, you may bring three or so'

As far as the interpretive component of the grammar is concerned, it does not make sense to be 'specific' about a 'vague' or 'approximate' expression.

In this connection, note that like NAQs, an NP cannot intervene between the Q and the Cla in these cases (and the above where *jona NP Num-Ek* is out):

(39)a.* du-Ek chele jon
two-one son CLA

b.* du-Ek ruTi khana
two-one bread CLA

I call this morpheme as "vague" *one* since it gives a vague meaning of the numeral. The presence of this morpheme in some form bars the possibility of moving an NP between the Q/Num and the Cla. The discussion so far has shown that some feature of the Q decides on the NP movement noticed in (9b) and the lack of it in (10) to (16).

4.3. Difference between all and NAQs revisited

The most serious problem with the derivation in (18) is its inability to distinguish between the two classes of Qs both of which are identified as Q heads in this structure. The difference between *all* and other Qs is well-established in the literature (e.g. Shlonsky 1991 for Hebrew, Giusti 1991 for Italian, among others). [9] In connection with Bangla, one difference in their morphological make-up is immediately clear if we consider the data from the preceding section. *SOb* does not carry either a hidden or visible counterpart of the Vague-one morpheme elaborated in section 4.2. In discussions of Shlonsky and Giusti on the phenomenon, it has been suggested that the QP embeds the DP based on data such as the following:

(40)a. katafti ?et kol/ *kul-am ha-praxim bi-zhirut
(I) picked ACC all/ all-3MPL the-flowers with-care
'I picked all the flowers carefully'

b. katafti ?et ha-praxim *kol/ kul-am bi-zhirut
(I) picked ACC the-flowers all/ all-3MPL with-care
'I picked all the flowers carefully' (Hebrew)

(41)a. tutti *(i) ragazzi/ *i tutti ragazzi
all (the) children/ the all children
'all *(the) children'

[9] In English too, this difference is reflected in the following minimal pairs:
(i)a. All the boys (ii)a.* Many the boys
b.* The all boys b. The many boys
See Abney (1987) and Szabolcsi (1987) for some relevant discussion.

b. molti (*i) ragazzi/ i molti ragazzi
many (the) children/ the many children
'many boys' (Italian)

In (40), the agreement clitic on *kul* 'all' is a reflection of movement of the DP to [Spec,QP] as in (42):

(42) $[_{QP}$ [ha-praxim]$_i$ kul-am $[_{DP}$ $t_i]$]

The categorial status of the Q *kol* 'all' is that of a head selecting a full DP. Similarly for (41a) *tutti* is a Q head selecting the DP [*i ragazzi*]. For (41b), Giusti (1997) proposes that these are Adjs and are located inside the DP as a specifier of an AgrP between D and N. I will now argue that there is no evidence in Bangla to consider Qs being external to the DP.

The Dem or the Poss which have been shown to be inside the DP always precedes *SOb*:

(43)a. ei SOb gulo chele
this all CLA boy
'all these boys'
b.* SOb ei gulo chele
(44)a. amar SOb gulo chele
my all CLA son
'all my sons'
b.* SOb amar gulo chele

The Bangla *all* therefore does not select a DP. On the other hand, there is evidence to show that *SOb* regularly combines with a [Q+Cla] sequence (45a-c) while NAQs do not (45d,e):

(45)a. SOb-kO-jon
all-some-CLA
'all (of them)'
c. SOb-kO-Ta
all-some-CLA
'all (of those)'
d.* Onek-kO-Ta/ jon
a lot-some-CLA/ CLA
e.* kichu-prottek-Ta
some-every one- CLA

This data suggests that *SOb* results in [*SOb*-Q-Cla] sequences but NAQs do not. One plausible hypothesis – given that we have rejected the head analysis of *SOb* earlier in section 4.1 on theoretical grounds – is that this sequence is the result of a structure such as the following:

(46) $[_{DP}$ *SOb* $[_{Q'}$ $[_{Q}$ *kO-jon*] NP]]]

That is, *all* in Bangla is an XP at [Spec,QP]. However, notice that the order [*SOb*-Q-Cla] can be derived with a head to head analysis as well by considering *SOb* as a Q head. I offer the following evidence to argue against such a possibility. This is based on the proposal that Dems are XPs (Bhattacharya 1998, 1999a,b).

(47)a. ei-SOb
this-all
'all this'
b.* ei-kichu/ ei-Olpek/ ei-khanik etc
this-some/ this-a little/ this-a bit

That is, whereas *SOb* can combine with the Dem *ei* easily, the NAQs cannot. I suggest that the data is accounted for if *SOb* is an XP. By the principle of structure preservation, only an XP can adjoin to another XP, like the Dem *ei*, and not to a head Q like *kichu* 'some' and *Olpek* 'a little' etc. I conclude that *SOb* is an XP merged at [Spec,QP].

5. Revisiting the relevant data: Back to Q and Cla as fused head

Armed with the conclusion from the preceding section let us look at the relevant data presented in section 3 again.

(48)a. SOb gulo chele aSbe
all CLA boy come-will
'All the boys will come'
b. SOb chele gulo aSbe
all boy CLA come-will
'all the boys will come'
(49)a. Onek gulo chele
a lot CLA boy
'a lot of boys'
b.* Onek chele gulo

It is clear from this data (and the bigger set in (9-16)) that *SOb* is different from NAQs in allowing the NP to appear between it and the Cla. With the conclusion that *SOb* is indeed different, I claim that the structure of the Bangla DP proposed earlier has a natural way of accommodating the data related to *SOb*. That is, I claim that the Q and Cla should *not* be split into two separate heads. The headedness of the Num/Q-Cla offered earlier, therefore, stands. Derivation for (48) (=(9)) is shown below:

(50)a. $[_{QP}$ *SOb* $[_{Q'}$ *gulo* $[_{NP}$ *chele*]]] (= 48a)
b. $[_{QP}$ *SOb* $[_{Q'}$ *chele* $[_{Q'}$ *gulo* $[_{NP}$ ~~*chele*~~]]] (= 48b)

Apart from the fact that we do not require another head for the Cla, mentioned in the preceding paragraph, this analysis is desirable on three accounts:

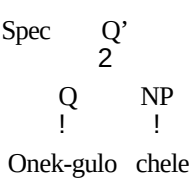
(i) Note that the derivation in (50b) exhibits leftward NP movement inside the DP. This has been claimed to be the consequence of adopting the LCA for head-final languages (Cinque 1996 and Bhattacharya 1999b). The analysis of *SOb* therefore provides an additional evidence towards this claim.

(ii) The derivation in (50b) crucially depends on the availability of multiple specifiers. I claim that this is expected (a) given the minimalist framework adopted for this study and (b) confirms a crucial principle proposed in Richards (1997). [10] Based on multiple WH construction in some Balkan languages Richard showed that the principle predicts that later XP movements land in inner specifiers.

(iii) The analysis in (50b) provides an elegant solution to the puzzle of NAQs. Note that in (50b) (and in (9b) to (16b) for other NAQs) the NAQ *Onek* does not allow the leftward NP movement noticed with *SOb*. Recall that one of the differences between the two types of Qs elaborated in section 4.2. NAQs were shown to embed a special morpheme *–Ek* 'one' which was missing in *SOb*. The analysis in (50b) has a natural way of incorporating the connection between this morphological observation and the lack of NP movement in NAQs as follows.

I have shown that DP-internal NP movement is due to the presence of a feature of [SPECIFICITY] on the Q head (Bhattacharya 1998, 1999a,b,c). Similarly the NP movement shown in (50b) above is also due to such a feature of the Q. The natural proposal then is that in the case of NAQs, the *-Ek* morpheme makes the Q head non-specific. This is not unlikely given that (at least) the Vague-*one* morpheme makes the meaning vague or non-specific. The derivation for NAQs, therefore proceeds as follows:

(51) (Represents (49a))



The NP cannot move up because there is no attractor feature in Q.

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[10] Crucially though LCA does not permit it. However, Cinque observes that a prohibition against more than one specifier is by no means a logically necessary property of X'-theory and that a definition of c-command (as in (ii) below) slightly different (denoted in italics) from the one adopted in Kayne (1994) (as in (i)) could allow multiple specifiers while retaining most other features of antisymmetry:
(i) X c-command Y iff X and Y are categories and X excludes Y and every *category* that dominates X dominates Y
(ii) X c-commands Y iff X and Y are categories and X excludes Y and every *segment* that dominates X dominates Y
This ensures that the higher adjunct/ specifier asymmetrically c-commands the lower one since every segment that dominates X in (iii) dominates Y but not vice-versa:
(iii) [L [X [L Y[L Z W]]]]
However this loses the property that adjunct/ specifiers c-command out of the adjoinee. The analysis of *SOb* offered in the text supports a structure with multiple specifiers. Before anything definitive can be said against such a structure I continue to assume existence multiple specs for the purpose of this study.

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