

The Categorical Status of Quantifiers in Bulgarian: Evidence for DP over QP*

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1. Introduction

In the past decade many attempts have been made to either unify or distinguish between what Abney (1987) calls “non-substantive” categories in the top functional layer of the DP (e.g., determiners, demonstratives, numerals, and quantifiers). This paper is concerned with the categorical status of what was formerly referred to as “determiners” in Bulgarian. We argue that in Bulgarian (i) quantifiers are not determiners and are divided into three major classes (much in line with Giusti 1997), (ii) demonstratives are determiners generated in their own functional projection (DemP) and (iii) the quantifier projection is between DP and NP.

Bowers (1991) defends the unified approach and distinguishes between two groups of collective determiners in English—weak and strong. The former category is licensed in his NmP. The latter are generated in DP and include quantifiers, possessives, and determiners. On the opposite end, Giusti (1997) works on Romance and splits the uniform category into three: articles are heads of DP; demonstratives are inserted into the lower Spec,AgrP and further moved to Spec,DP; quantifiers are divided into two categories—Q proper, which heads the QP projection and selects for the DP, and quantitative adjectives (including numerals), which she puts in the specifier of a lower AgrP.

Arnaudova (1995) proposes an analysis of Bulgarian DP where she argues for the numeral *edin* ‘one’ as an overt realization of the indefinite article, i.e., as a member of the determiner category. She also unifies the analysis of quantifiers (including the universal quantifier) and adjectives

* I would like to thank the audience of FASL 14 and the 2006 Annual meeting of LSA, and in particular Steven Franks, Loren Billings, Toman Jindřich, Asya Pereltsvaig, and Wayles Browne, as well as Stanley Dubinsky and an anonymous reviewer for their insightful comments and discussion. Portions of this research were sponsored by NSF Doctoral Dissertation Improvement Grant: Continuity Hypotheses Revisited: English L2 Acquisition of Bulgarian Noun Phrases, BCS-0446667. As usual, all remaining mistakes are mine.

in Bulgarian proposing that both categories are heads of lower XPs, subject to movement to D^0 . Dimitrova-Vulchanova and Giusti (henceforth D-V & G) (1996) are in line with Giusti's (1997) analysis of quantifiers in Romance and distinguish between Q proper and quantifiers of the numeral type in Bulgarian. The former (the universal quantifier *vsički* 'all') takes scope over the whole DP (thus, is generated above DP and heads its own functional projection); the latter are merged in a lower functional projection NumP (i.e., cardinals are generated in head of NumP, while existential quantifiers such as *mnogo* 'many' are generated in Spec,NumP).

In recent proposals for Romance and Balkan languages we also see the demonstratives generated in a low(er) functional projection (Brugè 2002, Giusti 2002, Longobardi 2001, Bernstein 2001). This way, Brugè accounts for the Romance data where the demonstrative can appear either preminimally without an overt determiner or postnominally in an obligatorily definite environment. In both cases, she argues, the demonstrative brings about the referential properties of the noun phrase which are incompatible with the [-ref] properties of the determiner projection. In addition, Giusti (2002) argues that the so proposed lower insertion point for demonstratives helps us distinguish between syntactic last resort operations, such as article insertion, and insertion of semantic content, such as referential properties.

This said, I will argue here that quantifiers are not determiners and that there is a lack of uniformity in the category as we know it. There are (i) quantifiers proper which are merged in the QP projection, (ii) quantifiers of the numeral type which are inserted in NumP, and (iii) modifying quantifiers which always function as modifiers and thus are generated in the highest specifier position within the extended NP. This third group of quantifiers blocks the projection of a DP. I will also argue that the demonstratives are not generated in a lower functional projection, but in their own projection DemP which immediately dominates DP and shares with it the [\pm ref, \pm def] features of the head. This will let me show that QP is a projection below DP.

2 The Categorical Status of Quantifiers

2.1 *Quantifiers are not determiners*

At first glance, quantifiers in Bulgarian appear to be part of the cumulative determiner category, since they seem to compete for the same node with the definite article (1).

- (1) vsjaka(*ta)/ njakoja(*ta)/ nikoja(*ta) kniga
 each(*the)/ some(*the)/ none(*the) book
 'each/some/no book'

However, there are several challenges to this initial hypothesis. First, as Giusti (2002) points out, articles, unlike quantifiers, are morpho-phonologically dependent on another element in the NP. In a number of languages (Romanian, Albanian, Norwegian, Bulgarian) they are suffixed to another element in the DP. Even in languages in which the articles are free morphemes, they cannot appear without an overt sister projection, i.e., they do not allow N-drop. Quantifiers do not pose such restrictions (2).

- (2) a. *I bought the __.
b. I bought this __.

Second, as (3) shows, there is a group of quantifiers in Bulgarian that co-occur with the enclitic definite article.

- (3) vsički(te) / mnogo(to) / dve(te) / nekolko(to) knigi
all(the) / many(the) / two(the) / several(the) books
'all (the)/(the) many/(the) two/(the) several books'

Third, possessive clitics in Bulgarian can only occur in definite environments (D-v & G 1999a, b, Franks 1998, Embick and Noyer 2001, Tasseva-Kurktchieva 2004); thus we can use the dative clitics as a test for a [+def, +ref] DP. Possessed NPs are allowed only with the second group of quantifiers and only if the definite article is present (4).¹

- (4) a. Četox *vsjaka / *njakoja / *nikoja mu kniga.
I.read each / some / none his book
'I read each/some/none (of) his books.'
b. Četox vsički-te/mnogo-to/ dve-te / nekolko-to mu knigi
I.read all_{DEF} / many_{DEF} / two_{DEF} / several_{DEF} his books
'I read all/many/two/several (of) his books.'
c. Četox *vsički / *mnogo /*dve / *njakolko mu knigi
I.read all / many/ two / several his books
'I read all/many/two/several (of) his books.'

¹ A possible objection to the claim that the quantifiers in (1) do not co-occur with the dative clitic is the existence of sentences like (i).

- (i) Četox mu vsjaka kniga.
I.read his every book
'I read each of his books.', also, irrelevantly, 'I read each book to him.'

Under the relevant reading the dative clitic *mu* 'his' has raised out of an indefinite DP. Steven Franks (p.c.) points out that this raises a very interesting question—why is it that possessor raising can only occur out of indefinite but not definite quantified DPs. This topic goes beyond the scope of this paper and I will leave it open for future research.

Only the nominals in (4c) appear to be definite and the definiteness is due to the article itself and not the quantifier per se. We can conclude that quantifiers are not determiners.

2.2 Two major syntactic classes of quantifiers

The co-occurrence of quantifiers with definite articles or possessive clitics gives us some evidence to posit a distinction between two groups of quantifiers in Bulgarian. Below we see some more syntactic support for this. The quantifiers in (1) are inflected for gender and number (5), while those in (3) have a fixed morpho-phonological form which can only modify a plural head noun (6).² Thus, the modifying Qs in (1) have a closer relation to the head noun than the Q proper/numerals in (3).

- (5) a. vsjaka / njakoja / nikoja žena
 each_{FSG} / some_{FSG} / none_{FSG} woman_{FSG}
 b. vseki / njakoj / nikoj muž
 each_{MSG} / some_{MSG} / none_{MSG} man_{MSG}
 c. vsjako / njakoe / nikoe dete
 each_{NSG} / some_{NSG} / none_{NSG} child_{NSG}
 d. vseki / njakoi / nikoi oči
 each_{PL} / some_{PL} / none_{PL} eyes_{PL}
- (6) vsički(te) / mnogo(to) / njakolko(to) knigi /*kniga
 all_(DEF) / many_(DEF) / several_(DEF) books_{FPL} / book_{FSG}

In addition, the quantifiers from (1) (henceforth MODIFYING QUANTIFIERS) do not allow extraction (7) while those in (3) (hereafter Q PROPER) do. Note that extraction, where allowed, happens out of a QP (8a), and is blocked to outside the extended DP, as signaled by the definite article on the quantifier in (8b). As expected under standard analyses of extraction, a DP with an overtly filled definite projection blocks extraction. The generalization here is that modifying quantifiers are generated very low in the DP structure, possibly on a par with modifying adjectives which also block extraction (8a). Q proper, on the other hand, have a higher

² There are two exceptions to this generalization—the cardinal numerals which can be inflected for gender ('one' can also be inflected for number), and the universal quantifier *vsički* 'all', which can be inflected for both gender and number, but only if it modifies a mass noun. We can dismiss the former exception as numerals are at least a special type of quantifiers, if not a separate syntactic category. The latter is not a problem for the posited distinction either. The universal quantifier can change its morphological form based on the gender and number of the mass noun it modifies only if this noun is a SINGULARIA TANTUM and only in definite environments:

- (i) vsička*(ta) voda / vsički*(jat) oriz / vsičko*(to) mljako
 all_(DEF) water / all_(DEF) rice / all_(DEF) milk

generation position as evident in the fact that they allow extraction of the whole NP.

- (7) *[Kniga za vojnata]₁ (ne) četox [vsjaka/njakoja/nikoja t₁].
 book about war_{DEF} (not) I.read each / some / none
 ‘Book about the war I didn’t read each/some/none.’
- (8) a. [[Knigi za vojnata]₁ četox [mnogo/njakolko/dve/*novi t₁]].
 books about war_{DEF} I.read many/ several/ two/ new
 ‘Books about the war, I read many/several/two/new.’
 b. *[Knigi za vojnata]₁ četox [mnogoto/njakolkoto/dvete /novite t₁].
 books about war_{DEF} I.read many_{DEF} /several_{DEF} /two_{DEF} /new_{DEF}
 ‘Books about the war, I read many/several/two.’

Modifying quantifiers cannot co-occur with demonstratives either, but Q proper can, as evident in (9). This again supports the generalization that the modifying quantifiers from (1) block the projection of an extended DP while the Q proper from (3) do not.

- (9) a. *tazi vsjaka/ njakoja / nikoja kniga
 this every / some / none book
 ‘this every/some/no book’
 b. tezi vsički(te)/ mnogo/njakolko/dve knigi
 those all_(DEF) / many /several / two books
 ‘all those/those many/those several/those two books’

Based on these differences in syntactic distribution we can conclude that quantifiers in Bulgarian are not determiners and that we are dealing with two major types of quantifiers—Q proper and modifying quantifiers. Modifying quantifiers cannot co-occur with definite determiners, demonstratives or the possessive clitics. Similar to modifying adjectives, they can change their morphological form depending on the gender and number of the head noun and they disallow extraction of the NP. Thus, we can conclude that modifying Qs are not only generated lower than the DP node, but also prevent the projection of a full DP.

A question remains as to how low in the structure the modifying Qs are generated. Unlike modifying adjectives, which may or may not obey the hierarchy proposed in Cinque (1994) (compare (10a) and (10b)), or the Q proper, which may be dominated by other DP material (9b), modifying quantifiers are obligatorily in first position in the noun phrase (compare (10c) with (10a) and (10b)).

- (10) a. vsjaka negova nova kniga
 each his new book
 b. vsjaka nova negova kniga
 each new his book

- c. *negova(ta) vsjaka nova kniga
 his_(DEF) each new book

I take the position that only motivated syntactic structures are generated and propose that the modifying type Qs are low quantifiers merged in the highest specifier of the extended noun phrase, namely *SpecnP*, where they maintain their close relation to the head noun. On the other hand, modifying Qs surface in impoverished DPs which lack the top functional layer. This is shown by their inability to co-occur with determiners or demonstratives and the fact that they disallow movement of the NP to the left periphery.

The generalizations so far about Q proper are that they can co-occur with definite determiners, demonstratives, or possessive clitics; they have a unique morphological form, and allow extraction within the extended DP but not outside a definite DP. In other words, they are merged in a separate functional projection.

2.3. *The universal quantifier*

While the syntactic differences between the two major types of quantifiers are clear, this is not the case within the Q proper class. In this section I will show that the universal quantifier is syntactically in a class of its own.

D-v & G (1996) propose that one of the tests for the syntactic status of quantifiers is whether or not they can take a partitive construction as a complement. Based on Giusti (1991), and working with the assumption that QP dominates DP, they propose that English *all* in (11a) selects for a definite DP, while *many* selects for a partitive DP headed by a null head (11b). Both *all* and *many* are generated in the head of the top functional projection, namely QP.

- (11) a. [_{QP} all [_{DP} the [_{NP} children]]] (D-V & G's (16a and b))
 b. [_{QP} many [_{DP} ∅ [_{NP} children]]]

If we put Bulgarian quantifiers to the test, there are two generalizations we can make. First, all but the existential quantifier can head a partitive construction (cf. (12)). Second, partitive constructions are possible in indefinite contexts only (compare (12) and (13)).

- (12) vsjaka/njakoja / dve / njakolko/ mnogo/ *vsički(te) ot knigite
 each / some / two / several / many / all of books_{DEF}
- (13) *dvetе / *njakolkoto / *nikolkoto/ *mnogoto ot knigite
 two_{DEF} / several_{DEF} / none_{DEF} / many_{DEF} of books_{DEF}

Since *vsički* 'all' cannot take a complement (i.e., head a projection), I suggest that the universal quantifier is a maximal projection merged in a

specifier position while the rest of the quantifiers are (or can be) merged as heads of functional projections.³ If the hypothesis is correct, we should find more syntactic distinctions. This, in fact is the case.

Giusti (1995, 1997, 2002), D-V & G (1996), and Brugè (2002) all suggest that demonstratives are merged in or at least move to SpecDP. In (9) we saw that Q proper can appear in demonstrative constructions; in (14) I show that only the existential quantifier can precede the demonstrative in those constructions. Note that the definiteness of the whole noun phrase is irrelevant.

- (14) a. vsički(te) tezi knigi
 all_(DEF) those books
 b. *mnogo(to)/*njakolko(to)/*dve(te) tezi knigi
 many_(DEF) / several_(DEF) / two_(DEF) those books

For now I will work with the assumption that the demonstrative is a functional category projecting a DemP, which crucially depends on the [+ref] properties of the DP. If the assumption is correct, the behavior of the universal Q will be expected only if it is syntactically different from the rest of the Q proper. In my analysis *vsički* is merged in SpecQP and later (optionally) moved to SpecDP for feature checking purposes. It can be further moved to SpecDemP, thus rendering the example in (14). The rest of the Q proper are merged in Q⁰ and the numeral type quantifiers are generated in Num⁰. The only reason for them to move is if they are generated with the definite article. In this case, they move to D⁰ for feature checking purposes.

I suggested in Section 2.2 that Q proper allow extraction. While this is true, the universal quantifier poses more restrictions than the rest of the group. It only allows for extraction of a full definite DP and only with a resumptive pronoun in the trace (15).

- (15) a. Knigi za vojната dve/mnogo/ njakolko/ *vsički četox.
 books about war_{DEF} two/many/ several/ *all I.read
 ‘Books about the war two/many/several/all I read.’

³ A reviewer asks why both the universal Q (argued here to be a maximal projection in SpecQP) and some of the other Q proper (argued here to be heads) can take modifiers of their own as in (i).

- (i) počti vsički(te) / tvârde mnogo(to)/sâvsem novi(te) knigi
 almost all_(DEF) / too many_(DEF)/absolutely new_(DEF) books

I will suggest here that in both cases we do not observe true modification, rather adjunction. *Almost*, *too*, and *absolutely* in (i) above take scope over the Q only and can never take scope over the noun. Also in all three cases, if the DP is definite, the article can only attach to the Q, on a par with adjunction to a modifying adjective.

- b. Knigite za vojната dvete/ mnogoto/ njakolkoto/vsičkite
 books_{DEF} about war_{DEF} two_{DEF} / many_{DEF} / several_{DEF} / all_{DEF}
 gi četox.
 them I.read
 ‘I read two/many/several/all books about the war.’

The universal quantifier is also the only one from the Q proper type that disallows movement of a lower modifier of the noun to SpecDP (16). This is predicted by our analysis, as the lower modifier *novi* ‘new’ starts as a maximal projection in SpecNP and is subject to A–movement to SpecDP. The universal quantifier is generated in SpecQP and blocks this movement, while the rest, being in head positions allow for it.

- (16) a. dve(te) / njakolko(to) / mnogo(to) / vsički(te) novi knigi
 two_(DEF) / several_(DEF) / many_(DEF) / all_(DEF) new books
 b. novite dve / njakolko/?mnogo/ *vsički knigi
 new_{DEF} two / several / many / all books

2.4 NumP vs. QP

There is an additional restriction which separates the larger class of quantifiers into Q proper and numeral type quantifiers. Bulgarian has a form of the masculine plural morpheme which appears on the head noun only if it is part of a DP quantified by a numeral (17). The count plural form is only allowed with cardinals and *njakolko* ‘several’ while the regular plural is only allowed with *vsički* ‘all’, *mnogo* ‘many’, and *nikolko* ‘none’ (18).

- (17) a. krasivi/ golemi stolove
 beautiful/big chairs_(REG. PL)
 b. dva (krasivi / golemi) stola
 two (beautiful/ big) chairs_(COUNT. PL)
 (18) a. dva / njakolko / *nikolko / *mnogo / *vsički stola
 two / several / *none / *many / *all chairs_(COUNT. PL)
 b. *dva / *njakolko / nikolko / mnogo / vsički stolove
 *two / *several / none / many / all chairs_(REG. PL)

We conclude that cardinals and *njakolko* ‘several’ are inserted in a separate functional projection, namely NumP. The rest of Q proper are generated in QP—the universal quantifier in SpecQP, and ‘many’ and ‘none’ in its head position. We note also that there is a further restriction against the overt presence of both Num and Q heads, while there is no such restriction against the coexistence of overt SpecQP and Num⁰ (19). I will leave the reason for this restriction open for further research.

- (19) a. *[_{QP} mnogo [_{NumP} petnaiset/njakolko [_{NP} stola/stolove]]]
 many fifteen / several chairs_(COUNT. PL) / (REG. PL)

- b. [_{QP} vsički [_{QP} ∅ [_{NumP} petnaiset/ njakolko [_{NP} stola]]]]
 all fifteen / several chairs_(COUNT, PL)

2.5 A final note

To summarize the proposal so far, we have suggested that (i) quantifiers are not determiners and (ii) there are three distinct types of quantifiers in Bulgarian—Q proper, numeral type quantifiers, and modifying quantifiers. Members of the former group are the universal quantifier, generated in SpecQP, and *nikolko* ‘none’ and *mnogo* ‘many’, generated in Q⁰. Numeral type Qs (the cardinals and *njakolko* ‘several’) are generated in Num⁰. The modifying Qs are generated in SpecnP. They are small NPs and block the projection of an extended DP (20).

- (20) [_{QP} vsički [_{QP} ∅ [_{NP} knjigi]]]
 [_{QP} nikolko/mnogo [_{NP} knjigi]]
 [_{NumP} dve/njakolko [_{NP} knjigi]]
 [_{nP} vsjaka/njakoja [_{nP} ∅ [_{NP} kniga]]]

Franks and Pereltsvaig (2004) and Pereltsvaig (2005) suggest that small NPs are non-referential in the sense that they disallow an individuated reading of the NP. As they point out, one of the expected consequences is that small NPs and not full DPs are selected as arguments of verbs with cumulative aspectual prefixes. In (21) we see a tripartite distinction due to a difference in the degree of cumulativity of the aspectual prefixes. Crucially, in (21a) we see that the modifying Qs can never serve as complement of a verb with an aspectual prefix. (21b) shows that Q proper can be selected by a verb with an aspectual prefix. The difference in the grammaticality between (21b) and (21c) comes from a different degree of cumulativity of the prefixes. While *na-* has an existential cumulative meaning, *iz-* is a universal cumulative prefix. Thus, the former is compatible with existential quantifiers while the latter is compatible with the universal quantifier only. On the other hand, if both prefixes share the cumulative denotation with the modifying quantifiers in (21b-c), then the ungrammaticality of (21a) should derive from a syntactic restriction. As suggested by Franks and Pereltsvaig (2004), the syntactic restriction is the projection of a small NP, rather than a full DP.

- (21) a. Ivan kupi/*nakupi/*izkupi vsjaka/njakoja kniga po istorija.
 Ivan bought each / some book on history
 ‘Ivan bought each/some history book.’
 b. Ivan kupi/nakupi/izkupi vsički knjigi po istorija.
 Ivan bought all books on history
 ‘Ivan bought all history books.’

- c. Ivan kupi/nakupi/*izkupi njakolko/mnogo/pet knigi po istorija.
 Ivan bought some / many / five books on history
 ‘Ivan bought some/many/five history books.’

3 Demonstratives

3.1 *Demonstratives are determiners in Bulgarian*

So far I have only assumed that demonstratives in Bulgarian are in Dem⁰ at least by Spell out. At a first glance, demonstratives appear to be the same syntactic category as determiners. Demonstratives, as well as determiners, make NPs definite (22).

- (22) a. Tova momče kupi xljab.
 this boy bought bread
 b. Momčeto kupi xljab.
 boy_{DEF} bought bread
 ‘The/this boy bought bread.’

This claim is further supported by the fact that demonstratives, as well as determiners, can license a possessive clitic as in (23). The latter has been shown in a series of papers to only occur in definite environments (cf. D-V & G 1999b, Arnaudova 1995, Tasseva-Kurktchieva 2004).

- (23) a. tova mi momče
 this my boy
 b. momčeto mi
 boy_{DEF} my
 ‘my boy’

Further evidence for the syntactic status of demonstratives comes from their ability to co-occur with the definite article. As (24) shows, the two categories do not compete for the same position.

- (24) tova goljamoto mi momče
 this big_{DEF} my boy

3.2 *Demonstratives are not generated in a low(er) FP.*

Recent proposals by Brugè (2002) and Giusti (2002) support claims that the demonstratives are not determiners and that they are generated in a specifier position in the extended NP and later move to SpecDP. Brugè (2002) and Giusti (2002) work on Romance and show that pronominal demonstratives can only occur in indefinite DPs while postnominal demonstratives merely require a definite context (25). For Brugè this is evidence that demonstratives are generated in SpecAgrP where they can (but need not) be selected for by the overt head of DP.

- (25) a. băiatul acesta (frumos) (Romanian, from Brugè 2002)
 boy_{DEF} this (nice)
 b. acest (frumos) băiat
 this (nice) boy
 c. frumosul (*acesta) băiat
 nice_{DEF} (*this) boy
 ‘this nice boy’

Giusti (2002) discusses Spanish, where the demonstrative is to the right of the whole definite DP, as shown in (26). She suggests that the only viable account of the data is to assume that the demonstrative is a maximal element generated in the lowest functional projection. It is further moved by LF to a higher functional specifier to let its interpretive [\pm deictic] features percolate onto the noun phrase that contains it.

- (26) El chico alto este/ese vive cerca de casa.
 the boy tall this lives near the house
 ‘This/that tall boy lives near my home.’

Much on the same track, Arnaudova (1998) argues for a lower generation of demonstratives in Bulgarian. She points to the examples in (27), where the demonstrative appears to be a complement of DP. She accounts for the data in (27c) by moving the demonstrative from the specifier of the lower FP to SpecDP and moving the adjective from head of AP to D⁰.

- (27) a. cjaloto tova čakane
 whole_{DEF} this waiting
 b. *tova cjaloto čakane
 this whole waiting
 c. tova cjaloto čakane
 this whole_{DEF} waiting
 ‘all this waiting’

I would like to propose here that Bulgarian in fact does not in fact provide evidence for a low(er) generation of demonstratives. In (28) we see that (i) the demonstrative cannot always appear between the DP and NP projections (compare also (27a) and (28a)) and (ii) there is no syntactic restriction, rather a semantic one upon the insertion of the demonstrative (compare (27b-c) and (28b)).

- (28) a. Visokoto (*tova) momče živee nablizo.
 tall_{DEF} (*this) boy lives nearby
 b. Tova visoko(to) momče živee nablizo.
 this tall_(DEF) boy lives nearby
 ‘This/that tall boy lives nearby.’

3.3 Demonstratives are not indefinite in Bulgarian.

A major point in the argument for lower generation of the demonstrative is the incompatibility of semantic features between definite articles and demonstratives. Ionin (2003) shows that English demonstratives, just like the indefinite article, can be non-definite and either referential or non-referential. Bulgarian demonstratives show different semantic properties. Unlike indefinite DPs, they are always referential. Compare the indefinite DPs in (29) with the demonstrative DPs in (30). An indefinite DP can be either nonreferential (29a) or referential (29b) but the only possible reading of the demonstrative DPs in (30) is the [+def, +ref] one.

- (29) a. [(Edin) student]_{*+REF/-REF} v klasa po sintaksis prepisva na izpita.
 (one) student in class in syntax cheated on exam
 ‘A student in the syntax class cheated on the exam.’
- b. [(Edin) student]_{+REF/*-REF} v klasa po sintaksis kojto ima doktorat
 (one) student in class in syntax who has Ph.D.
 po astrofizika prepisva na izpita.
 in astrophysics cheated on exam
 ‘A student in the syntax class who has a Ph.D. in astrophysics cheated on the exam.’
- (30) a. [Tozi student]_{+REF/*-REF} v klasa po sintaksis prepisva na izpita.
 this student in class in syntax cheated on exam
 ‘This student in the syntax class cheated on the exam.’
- b. [Tozi student]_{+REF/*-REF} v klasa po sintaksis kojto ima doktorat
 this student in class in syntax who has Ph.D.
 po astrofizika prepisva na izpita.
 in astrophysics cheated on exam
 ‘A student in the syntax class who has a Ph.D. in astrophysics cheated on the exam.’

The demonstratives, as shown above, are not a semantic match for an indefinite DP as they always bring about a referential reading. This also provides a neat explanation of the ungrammaticality of examples such as (9a). If demonstratives are [+ref] they cannot select for small (unindividuated) DPs.

4 Putting It All Together

I have shown here that demonstratives are definite determiners of a special kind in Bulgarian. They bring about the definiteness of the whole DP and license a possessive clitic. They can co-occur with the definite article either preceding or following it and serve as its reinforcer. However, demonstratives are a dependent type of determiner as their licensing crucially relies on their sharing the [+def/+ref] features of the

definite article. I have also argued against the low(er) generation of the demonstrative.

In the present analysis I assume that in Bulgarian the adjectives start as maximal projections within SpecNP and move to SpecDP for feature checking purposes, that movement within DP is A-movement,⁴ and that projections are only generated if needed. In such a framework the generation position of the demonstrative is in head of DemP, where it selects for DP as its complement, crucially sharing the definiteness and referential features of the DP.

In Section 2 I proposed that the universal quantifier *vsički* ‘all’ is generated as a maximal projection in SpecQP. From this position it can move to SpecDP if it is generated with the definite article and requires feature checking. As suggested by an anonymous reviewer, there is a slight difference in intonation and interpretation between (31a) and (31b). The former represents the default choice while in the latter case the Q is focused, thus moved across the demonstrative from SpecDP to SpecDemP.

- (31) a. [_{DEMP} tezi [_{DP} vsičkite₁ [_{DP} ∅ [_{QP} t₁ [_{QP} ∅ [_{NP} novi [_{NP} knigi]]]]]]]]]
 those all_{DEF} new books
- b. [_{DEMP} vsičkite₁ [_{DEMP} tezi [_{DP} t₁ [_{DP} ∅ [_{QP} t₁ [_{QP} ∅ [_{NP} novi [_{NP} knigi]]]]]]]]]]]
 all_{DEF} those new books
 ‘all those new books’

I also proposed that the rest of Q proper, namely *mного* ‘many’ and *nikolko* ‘none’, are generated in the head of the QP projection. If a definite article is also generated, then the quantifier moves to D⁰. In such configuration the suffixed definite article can check its features against D⁰ (32). The fact that the quantifier can only appear after the demonstrative (recall (9b)) is also expected under the current analysis, since the demonstrative occupies Dem⁰ and thus precedes the Q proper.

- (32) [_{DP} mnogoto₁/nikolkoto₁ [_{QP} t₁ [_{NP} novi [_{NP} knigi]]]]]
 many_{DEF} /none_{DEF} new books
 ‘the many new books’

The numeral type quantifiers—the cardinals and *njakolko* ‘several’—were proposed to be generated in the head of the lower NumP projection. From there they can only move to a higher head position (D⁰) for feature

⁴ See for further discussion Tasseva-Kurktchieva (2005) and, for a different view, Arnaudova (1995) and D-V & G (1998). Note also that the analysis I assume goes against the one in Abney (1987) and Bošković (2005), who both predict that adjectives in a language with definite articles select the noun as a complement. For further discussion see Pereltsvaig (2005, in press).

checking purposes. However, as they are heads, they cannot cross over the demonstrative in Dem⁰.

- (33) [_{DP} njakolkoto₁/pette₁ [_{NUMP} t₁ [_{NP} novi [_N⁰ knigi]]]]
 several_{DEF}/ five_{DEF} new books
 ‘the several/five new books’

Finally, the modifying quantifiers *vseki* ‘each/every’ and *njakoj* ‘some’ are generated as modifiers of the head noun in Spec_{nP}. Their lexical conceptual structure is incompatible with the [+def, +ref] features of a DP head as they can never be referential; thus, they block the projection of an extended DP (an analysis much in line with Franks and Pereltsvaig (2004) and Pereltsvaig (2005, in press)).

- (34) [_{nP} vsjaka/njakoja [_{nP} ∅ [_{NP} nova [_N⁰ kniga]]]
 every/ some new book
 ‘every/some new book’

In conclusion, I have argued in this paper that Bulgarian provides evidence that we cannot treat all quantifiers as members of the same syntactic category, much less as members of a “uniform” class. I have shown that the demonstrative in Bulgarian is a determiner material of a different kind, generated in its own functional projection DemP and not in the specifier of a low(er) functional projection. This leads to the conclusion that quantifiers in Bulgarian are generated below DP and that the linear order of the functional projections is as in (35).

- (35) [DemP [DP [QP [NumP [_{nP} [NP]]]]]]].

I have proposed that Bulgarian shows syntactic evidence for three major classes of quantifiers—Q proper, numerals, and modifying quantifiers. The lexical conceptual structure of the Q proper and numeral classes is compatible with a DP projection, while that of the modifying quantifiers is incompatible; the latter thus block the projection of the extended DP.

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