

# MORE ON THE NO-DP ANALYSIS OF ARTICLE-LESS LANGUAGES<sup>1</sup>

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The goal of this reply is to address the arguments against the no-DP analysis of Bošković (2005), according to which languages without articles do not project DP (see also Bošković 2008), given in Pereltsvaig (2007).<sup>2</sup> The latter work erroneously attributes several properties to the no-DP analysis; it also incorrectly cites Bošković (2005), attributing a statement made regarding English to a statement regarding article-less languages.

## 1. On the structural position of adjectives

First, contrary to what is claimed by Pereltsvaig, the no-DP analysis does not require positing a difference in the structural placement of adjectives in DP and NP languages. The central phenomenon discussed in Bošković (2005) is left-branch extraction (LB), which is disallowed in English, but allowed in Serbo-Croatian (SC). I was concerned with the generalization in (2), also discussed in Uriagereka (1988) and Corver (1992). (Like most of the generalizations in (25)-(33) below, (2) is a one-way correlation; article-less languages do not have to allow LB.)<sup>3</sup>

- (1) a. \*New/That<sub>i</sub> he sold [t<sub>i</sub> car]  
b. Nova/Ta<sub>i</sub> je prodao [t<sub>i</sub> kola]  
new/that is sold car

(2) Only languages without articles may allow LB examples like (1).

Bošković (2005) gives two alternative analyses of the LB generalization in (2), both of which assume that article-less languages lack DP, but only one of which requires positing a difference in the structural placement of adjectives in DP and NP languages. One analysis is based on the claim that both Abney's (1987) A-as-the-head and the traditional NP-over-AP structure are correct, but for different languages: in DP languages like English A takes NP as its complement, while in article-less languages like SC N takes AP as its Spec (NP adjunction would also work; see Bošković 2005 for a way of tying the position of AP to the presence/absence of DP): AP LB is then banned in English since it would extract a non-constituent given that AP is not a constituent to the exclusion of NP in  $[_{DP}D[_{AP}A[_{NP}N]]]$ . The problem does not arise in SC, where the structure is  $[_{NP} AP N]$ .

Under the alternative, phase-based analysis, adjectives are assumed to be NP-adjoined in both DP and NP languages and DP is assumed to be a phase. APs then cannot move out of DP without passing through SpecDP, given Chomsky's (2000) PIC, which says only the Spec of a phase is accessible for phrasal movement outside of the phase (so, XP movement from phase YP must proceed via SpecYP). However, AP cannot move to SpecDP in  $[_{DP} AP_i[_{D'} D[_{NP} t_i[_{NP}]]]$  due to anti-locality, the ban on movement that is too short, which requires movement to cross at least one full phrasal boundary, not just a segment (for various approaches to anti-locality and arguments for it, see Bošković 1994, 1997, Ishii 1999, Saito & Murasugi 1999, Grohmann 2003, Abels 2003, Ticio 2003, Boeckx 2005, 2007, among many others). Anti-locality/PIC thus jointly prevent AP extraction from DP, banning AP LB in English. The problem does not arise in SC, which lacks DP. Notice that under this analysis APs are placed in the same position in English and SC.

The correct conclusion is then that the DP/NP analysis is compatible with a difference in the structural position of adjectives in DP and NP languages, but that it does not require positing such a difference, i.e. the DP/NP analysis can be maintained while keeping the position of adjectives in DP and NP languages constant, as it is done in the phase analysis of LB. (Note also that in Bošković 2008, in press I give no-DP analyses of all the generalizations in (24)-(33) below, none of which requires positing a difference in the position of adjectives in DP and NP languages.)

It is, however, worth noting that in Bošković (2005) I give several independent arguments for the A/N difference in the headedness of the traditional Noun Phrase (TNP) in English and article-less languages, which are not addressed by Pereltsvaig. I will mention here only one argument from that work, extending it to additional languages (for relevant discussion, see also Platzack 2005). Consider (3), which shows pronominal adjectives disrupt case assignment in English (*him* bears default accusative instead of nominative). This is easily captured in Abney's system, where A shields the pronoun from outside case assignment as an intervening head. (4), which gives the only case options, differs from (3), indicating Abney's analysis should not be applied to SC. (Note the case change in an accusative context, which shows that we are not dealing here with a default case.) Note also that Russian, another article-less Slavic language discussed extensively in Pereltsvaig (2007), patterns with SC in the relevant respect.

(3) The real him/\*he will never surface.

(4) a. Pravi on se nikad neće pojaviti.

real he refl never neg+will show.up

'The real him will never show up.'

b. Vidjeli smo pravog njega.

seen are real him

‘We saw the real him.’

(SC)

(5) a. Sil'naja ja smogu ego predolet'.

strong I will-manage him overcome

‘The strong me will be able to overcome him.’

b. On ne smozet predolet' sil'nuju menja.

he neg will-manage overcome strong me

‘He will not be able to overcome the strong me.’

(Russian)

As expected under the NP/DP analysis, in Macedonian, a Slavic language with articles, adjectives disrupt case assignment—pronouns must bear default nominative. (The case does not change in (6).) Interestingly, if the pronoun is fronted, it can bear accusative (7). This is expected, since due to the fronting the adjective no longer intervenes between the verb and the pronoun. This confirms the intervention analysis.<sup>4</sup>

(6) a. Vistinskiot toj nikogas ne ke se pojavi.

the.real he never neg will cl show.up

‘The real him will never show up.’

b. Go vidov vistinskiot toj/\*nego.

cl saw the-real he/him

‘We saw the real him.’

(7) Go vidov nego<sub>i</sub> vistinskiot t<sub>i</sub>.

## 2. Ordering of adjectives

Turning now to adjectival ordering, regardless of which of the two analyses from Bošković (2005) summarized above is adopted, the no-DP analysis does not predict that the relative order of adjectival modifiers should be freer in Russian than in English, contrary to what is claimed in Pereltsvaig (2007) (this is in fact Pereltsvaig's central argument against the no-DP analysis). Pereltsvaig states that the claim is actually made in Bošković (2005) and gives a quote from that work to support this. The quote is (p. 67): "the relative order of adjectives [in article-less languages] is...relatively free". However, [in article-less languages] was inserted by Pereltsvaig; the statement in question was made in the discussion of English (explicitly illustrated by the English data in (8)), not article-less languages (see Bošković 2005:6-7; the statement was merely intended to capture the fact that some adjectives are freely ordered in English, just as in other languages, with English taken as an illustration of a general property of all languages).

(8) tall angry men vs. angry tall men

(Bošković 2005:7)

The quote in question is thus simply a misrepresentation. It is not claimed anywhere in Bošković (2005) that the order of adjectives should be freer in Russian than in English, or that there should be a difference in the freedom of adjective ordering between DP and NP languages. As discussed by Pereltsvaig herself, the order of adjectives in English and Russian is determined by semantic and prosodic, not syntactic factors. Thus, adjectival order is standardly treated in terms of a semantic hierarchy, where semantic properties play a crucial role in defining adjectival groups relevant for adjectival ordering. A partial semantic hierarchy from Scott (2002), which Pereltsvaig examined in her article, is given

below (> indicates precedence in linear order).

(9) size>length>speed>width>weight>temperature>age>color>material

Pereltsvaig notes that prosodic factors, in particular, prosodic length measured in the number of syllables, also matters. She observes that English speakers often prefer shorter adjectives to precede longer adjectives. Thus, *a dry narrow gorge* is preferred to *a narrow dry gorge*, which does not follow from Scott's semantic hierarchy.<sup>5</sup> In other words, semantic and prosodic (not syntactic) properties of adjectives determine their ordering. Since the no-DP analysis does not posit any relevant differences in the semantics and prosody of adjectives in DP and NP languages, it does not predict that there should be a difference in the relative ordering of adjectives between DP and NP languages.

It is, however, worth noting that, without additional assumptions, the analysis of LB from Bošković (2005) is incompatible with a Cinque (1994)-style analysis, where each adjective is located in the Spec of a separate functional projection. Cinque's analysis has already been questioned in the literature on rather serious grounds, see, for example, Despić (2008) regarding Slavic and Ticio (2003) regarding Romance. The proponents of this analysis (see Bašić 2004 for an application of the analysis to SC) usually assume that the analysis derives the order of adjectives, in particular, from phrase structure. However, the analysis does not really explain it since the order simply follows from stipulations regarding the order of merger of projections hosting different adjectives. One could argue that these should ultimately follow from semantics since the restrictions in question are after all stated in semantic terms (see (9)). But then there is really no need for a middle man in terms of phrase structure (which requires stating the same stipulations twice). We can simply assume that adjectival ordering restrictions follow directly

from the rules of semantic composition, which require some adjectives to be composed before others. We can then let the order of adjectives be free in the syntax, the illegitimate orders being filtered out in the semantics. Under this analysis, we would not expect to find any significant differences in the ordering restrictions on adjectives with respect to each other in DP and NP languages.

Recall that Pereltsvaig (2007) shows that prosodic factors (i.e. relative heaviness of adjectives) also affect the order of adjectives. Such ordering restrictions clearly should not be handled in the syntax, since the syntax should not be “aware” of the prosodic factors in question. Rather, the relevant ordering restrictions should be handled via a filtering effect of PF. The suggestion made above is to treat the semantic constraints on adjectival ordering in the same way. What I am suggesting is in fact very much along the lines of Ernst’s (1998, 2002) account of adverbs. Treating the two in the same way seems desirable given the well-known similarities between adjectives and adverbs, which include ordering restrictions. (Cinque also treats the two in essentially the same way, see Cinque 1994 and 1999. See also Bobaljik 2006, Ernst 1998, 2002, and Shaer 1998, among others, for arguments against Cinque’s treatment of adverbs, some of which would also extend to his treatment of adjectives).

### **3. Adjectives and demonstratives**

Another case where a filtering effect of the semantics may be at work involves ordering of adjectives with respect to demonstratives. It is argued in Bošković (2004, 2005) and Zlatić (1997) that traditional DP elements such as demonstratives and possessives are adjectives in SC (see also Corver 1992 for Czech and Polish). Such elements both syntactically and morphologically behave like adjectives in SC. That they are adjectives morphologically is illustrated by the partial paradigm in (10).<sup>6</sup>

- (10) a. *tim*                      *nekim*                      *visokim*                      *djevojkama*  
           *those*<sub>FEM.PL.INST</sub> *some*<sub>FEM.PL.INST</sub> *tall*<sub>FEM.PL.INST</sub> *girls*<sub>FEM.PL.INST</sub>
- b. *tih*                      *nekih*                      *visokih*                      *djevojaka*  
           *those*<sub>FEM.GEN.PL</sub> *some*<sub>FEM.GEN.PL</sub> *tall*<sub>FEM.GEN.PL</sub> *girls*<sub>FEM.GEN.PL</sub>

I also show that with respect to a number of syntactic tests SC “D” elements behave like adjectives. Among other things, they occur in typical adjectival positions like the predicate position of a copula (11), and often fail to induce Specificity effects that English D elements induce (12). They can also stack up (10), just like adjectives, in contrast to English, where such stacking up is not possible since the elements in question compete for the same position within DP.

- (11) a. *Ova knjiga je moja.*

*this book is my*

- b. \**This book is my.*

- (12) a. *O      kojem piscu je pročitao [svaku knjigu/sve knjige/(tu) tvoju knjigu t<sub>i</sub>]*

*about which writer is read      every book/ all books/that your book*

- b. \**About which writer did he read every book/all books/this book of yours?*

They also have some freedom of word order. While English D-items must precede adjectives, SC allows As to precede some “D”-items (see Bošković 2007 for interpretation of (13a)).<sup>7</sup>



- (13) a. Jovanova bivša kuća/bivša Jovanova kuća  
       Jovan's former house
- c. Jovanova skupa slika /skupa Jovanova slika  
       John's expensive picture
- c. Marijina omiljena kola/omiljena Marijina kola  
       Mary's favorite car
- d. \*former John's house
- e. \*expensive John's picture
- f. \*favorite Mary's car

English Ds are thus either missing (cf. articles) or clearly do not behave like Ds in SC. This argues in favor of the no-DP analysis, which provides a principled account of this state of affairs. On the other hand, a uniform DP account faces the question of why languages like SC do not have articles given that they have D, and why all other English DP-items display 'strange' non-DP behavior in SC.

Returning to word order within the TNP, notice that the order of SC adjectives and "D" items is not completely free. Thus, while adjectives can precede possessives, they cannot precede demonstratives. In contrast to English, possessives co-occur with demonstratives (as expected under the no-DP analysis). However, they also have to follow demonstratives.

- (14) a. ova skupa kola/?\*skupa ova kola  
       this expensive car
- b. ova Jovanova slika/?\*Jovanova ova slika

this Jovan's picture

These facts also receive a principled account in terms of a filtering effect of semantics. From a semantic point of view, it makes sense that possessives and adjectives should be able to occur in either order within a TNP. The most plausible semantics for possessives is modificational, see, e.g. Partee & Borschev (1998) and Larson & Cho (1999).<sup>8</sup>

(15) Partee & Borschev (1998) ( $R_i$  is a free variable)

$\llbracket \text{Mary's} \rrbracket = \lambda x. [R_i(\text{Mary})(x)]$

(16) Larson & Cho (1999)

$\llbracket \text{to Mary} \rrbracket = \lambda x. [\text{POSS}(\mathbf{j}, x)]$

Given the standard assumptions that adjectives are also of type  $\langle e, t \rangle$  and that there is a rule of intersective Predicate Modification, compositional semantics imposes no restrictions on the order in which possessives and adjectives may be composed.<sup>9</sup> As a result, in the absence of independent semantic ordering restrictions of the kind discussed above with respect to adjectival ordering (see fn. 9), possessives can be composed either before or after modifying adjectives. On the other hand, the situation is different with demonstratives. In his seminal (1977/1989) paper Kaplan argues that demonstratives are markers of direct reference. In other words, demonstrative noun phrases pick out an individual of type  $e$ . The individual is picked out at least partially as a function of its predicate complement phrase. Thus, a demonstrative element like *that* is a function of type  $\langle \langle e, t \rangle, e \rangle$ .

Once a demonstrative has mapped a nominal element to an individual, further modification by predicates of type  $\langle e, t \rangle$  is not possible. Hence, semantic composition

requires both adjectives and possessives to be composed before demonstrative determiners.<sup>10</sup> In other words, while semantic composition allows possessives to be composed either before or after modifying adjectives, demonstratives must be composed after both adjectives and possessives. This perfectly matches the actual facts regarding the ordering of the elements in question in SC. Given that the obligatory demonstrative-adjective/possessive ordering follows from the semantic requirement that modifiers must be composed before demonstratives, we can let syntax generate all the orders in the SC examples in (13a-c)-(14) and have semantics filter out the unacceptable orders. The SC data in (13)-(14) thus receive a principled account under the no-DP analysis.<sup>11 12</sup>

Significantly, the English counterparts of the unacceptable examples in (14) are significantly worse than the SC examples. Thus, (17a-b) are much worse than the unacceptable SC examples in (14). This can also be accounted for given that the English examples have the semantic violation discussed above with respect to SC as well as a syntactic violation (violations of the requirement that DP must be projected on top of the TNP and whatever is responsible for the incompatibility of articles and possessives in English).

(17) a. \*\*expensive this car

b. \*\*John's this picture

The proponents of the DP analysis, like Bašić (2004), Rappaport (2000), and Pereltsvaig (2007), account for (14) by placing the demonstrative in a DP projection, which is located above the projection where possessives and adjectives are located. Bašić, e.g., assumes the structure in (18). ( $\alpha$ P is a projection where adjectives are generated, with mul-

multiple adjectives requiring multiple  $\alpha$ Ps. Pereltsvaig actually tentatively places both demonstratives and possessives within DP. She places possessives in  $D^0$  and demonstratives in SpecDP. This cannot be right given that possessives can undergo LB, which is a phrasal movement.)

(18) [<sub>DP</sub> Demonstrative [<sub>POSSP</sub> Possessive [ <sub>$\alpha$ P</sub> Adjective [<sub>NP</sub>

While the structure in (18) still has a problem in accommodating the relative freedom of the adjectives/possessives order in SC and leaves the fact that SC differs from English in the relevant respect unaccounted for, it does capture the ordering restrictions between demonstratives and possessives/adjectives. Despić (2008), however, provides very strong evidence that the structure in (18) is incorrect. Despić observes the following contrasts between English and SC and shows that the contrasts can be accounted for if, as argued in Kayne (1994), English possessives are located in the Spec of PossP, which is immediately dominated by DP, the DP preventing the possessive from c-commanding anything outside of the subject. The contrast between English and SC can then be accounted for if the DP is missing in SC (see Despić's work for independent evidence for this analysis).<sup>13</sup>

(19) a. His<sub>i</sub> father considers John<sub>i</sub> highly intelligent.

b. John<sub>i</sub>'s father considers him<sub>i</sub> highly intelligent.

(20) a. \*Njegov<sub>i</sub> otac smatra Marka<sub>i</sub> veoma pametnim.

his father considers Marko very smart

b. \*Markov<sub>i</sub> otac smatra njega<sub>i</sub> veoma pametnim.

Marko's father considers him very smart

Significantly, Despić shows that the SC paradigm does not change even in the presence of a demonstrative or an adjective, which provides strong evidence that demonstratives, possessives, and adjectives, all of which agree with the noun and are treated as adjectives in Bošković (2005), should all be treated as multiple adjuncts or multiple Specs of the same projection in SC. *Ovaj* and *mnogi* then do not prevent the possessive from c-commanding the co-indexed elements in (21).

(21) a. \*<sub>[NP</sub> Ovaj <sub>[N' njegov<sub>i</sub> [N' prijatelj]]]</sub> smatra Marka<sub>i</sub> veoma pametnim.

this<sub>NOM</sub> his<sub>NOM</sub> friend<sub>NOM</sub> considers Marko very smart

'This friend of his considers Marko very smart.'

b. \*<sub>[NP</sub> Mnogi <sub>[N' Dejanovi<sub>i</sub> [N' prijatelji ]]]</sub> su posjetili njega<sub>i</sub>.

many<sub>NOM</sub> Dejan's<sub>NOM</sub> friends<sub>NOM</sub> are visited him

'Many of Dejan's friends visited him.'

#### 4. Genitive of quantification

Returning to Pereltsvaig's arguments against the DP analysis, Pereltsvaig also erroneously claims that numerals like Russian *pjat'*/SC *pet* 'five' in genitive of quantification contexts like (22) must be treated as nouns in the no-DP analysis.

(22) a. On kupuje pet kola (SC)

he is-buying five cars<sub>GEN</sub>

b. Ivan kupil pjat' mašin.

(Russian)

Ivan bought five cars<sub>GEN</sub>

Pereltsvaig's claim is based on an incorrect interpretation of the no-DP analysis according to which the analysis does not allow any functional elements within the TNP, not just DP. In fact, nothing important in the analyses given in Bošković (2008) would change if *pjat'* is introduced as a functional element into the structure (see in this respect Bošković 2008:fn. 9).<sup>14</sup> Such elements (more precisely, non-agreeing numerals in genitive of quantification contexts; agreeing numerals are treated differently) are in fact introduced as QPs within a separate functional projection in Bošković (2006) (the issue is, however, far from being settled; see Zlatić 1997 for a nominal analysis of the elements in question).<sup>15</sup>

In this respect, notice that there is a non-agreeing, non-adjectival form of *mnogi* which behaves just like the numeral *pet* 'five' in SC in that it is a frozen form that assigns the so-called genitive of quantification. As noted above, such forms are introduced in a separate projection above NP in Bošković (2006). Interestingly, Despić observes that as expected under this analysis, such forms do confine the c-command domain of possessives, allowing them to co-refer with other elements without causing a binding violation. The contrast between (21b) (with adjectival *many*) and (23) (with non-adjectival *many*) provides strong evidence that additional phrasal structure is present above the possessive only in (23), involving non-adjectival *many*.

(23) [<sub>QP</sub> Mnogo [<sub>NP</sub> Dejanovih<sub>i</sub> [<sub>N'</sub> prijatelja ]]] je došlo na njegov<sub>i</sub> venčanje

many Dejan's<sub>GEN</sub> friends<sub>GEN</sub> is came to his wedding

‘Many of Dejan’s friends came to his wedding.’

## **5. Remaining issues and NP/DP generalizations**

It is sometimes erroneously assumed that the no-DP analysis cannot account for binding, Case, or selectional properties of SC TNPs. This of course is not true. (Note also that Chierchia 1998 shows that the DP layer is not needed for argumenthood, which removes a potential semantic argument for DP in article-less languages.) All of these can be easily handled without the DP layer, and in fact were handled without the DP layer for all languages before the DP hypothesis. (For some of these, e.g. selection of TNPs, the DP layer is even now standardly ignored even in DP languages.) Notice in this respect that when it comes to demonstratives and possessives the no-DP analysis only changes their categorical status, or to be more precise, takes seriously their adjectival morphology (which is an unexplained accident under the DP treatment of these elements). Nothing else is different. Their semantics remains unchanged. There is then no reason at all to assume, as Pereltsvaig does, that TNPs with possessives should be unable to bear theta-roles and introduce a referent (because this is something adjectives cannot do) in article-less languages under the no-DP analysis. Introducing a referent and functioning as an argument are semantic properties, and the no-DP analysis does not posit any changes in the semantics of these elements (it certainly does not claim that they are adjectives semantically). Moreover, the no-DP analysis does not really require a radically different syntax-to-semantics mapping of the TNP in DP and NP languages, as Pereltsvaig claims. What is important for interpretation is what is merged/composed with what (with semantically vacuous items denoting the identity function being ignored), DP and NP languages do not really differ in this respect. In other words, the changes that the no-DP analysis brings to the TNP of article-less languages are much less radical than the proponents of the uni-

versal DP analysis, like Pereltsvaig (2007), present them to be.

However, the strongest argument for the no-DP analysis is provided by a number of crosslinguistic generalizations where the presence or absence of articles in a language plays a crucial role. These generalizations, which are generally ignored by the proponents of the universal DP analysis, quite conclusively indicate that there is a fundamental difference between TNP in languages with articles like English and article-less languages like SC that cannot be reduced to phonology (overt vs phonologically null articles) since the generalizations in question involve syntactic and semantic, not phonological phenomena. I simply give the relevant generalizations below and refer the reader to Bošković (2008, in press a) for illustration and detailed discussion of these generalizations, which includes precise definitions of the domain of the phenomena noted below.<sup>16</sup>

- (24) Only languages without articles may allow left-branch extraction.
- (25) Only article-less languages may allow adjunct extraction from TNPs.
- (26) Only languages without articles may allow scrambling.
- (27) Languages without articles disallow negative raising (more specifically, strict NPI licensing under negative raising) and those with articles allow it.
- (28) Multiple wh-fronting languages without articles do not show superiority effects.
- (29) Only languages with articles may allow clitic doubling.
- (30) Languages without articles do not allow transitive nominals with two non-lexical genitives.
- (31) Only languages with articles allow the majority superlative reading.
- (32) Head internal relatives are island sensitive in languages without articles, but not in those with articles.
- (33) Polysynthetic languages do not have articles.



Pereltsvaig (2007:85) argues that “the difference between languages with and without articles is purely lexical or morpho-phonological. Crucially, there is no syntactic distinction between languages with and without articles”. The above generalizations quite conclusively argue against Pereltsvaig’s conclusion.

It is often assumed that the TNP should be treated in the same way in article-less languages and languages like English for the sake of uniformity. This argument fails on empirical grounds in light of the above generalizations: it is simply a fact that there are radical syntactic and semantic differences between the two—there’s no uniformity here. Most importantly, Bošković (2008, in press a) shows that these differences (i.e. all the generalizations given in (24)-(33)) can be deduced if there is DP in the TNP of English, but not languages like SC ((31) was left open in Bošković 2008, but an account of it is provided in Bošković in press a based on Bošković & Gajewski in preparation).<sup>17</sup> Moreover, the NP/DP analysis provides a uniform account of these differences, where a single difference between the two types of languages is responsible for all of them. I contend that a universal DP analysis cannot even be seriously entertained until it can be shown that the analysis can also provide a principled, uniform account of the above generalizations.<sup>18</sup>

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## ENDNOTES

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<sup>1</sup> For helpful discussion of some of the issues raised in this paper, I thank John Bailyn and Jon Gajewski.

<sup>2</sup> For no-DP analyses of at least some article-less languages, see also Fukui (1988), Corver (1992), Zlatić (1997), Chierchia (1998), Stjepanović (1998), Lyons (1999), Wil-  
lim (2000), Baker (2003), Bošković (2004, 2008, in press a), Trenkić (2004), and Despić  
(2008), among others. Note that below I will refer to the analysis in question as either the  
no-DP analysis or the NP/DP analysis, with the latter term mostly used during direct  
comparisons of article-less languages and languages with articles.

<sup>3</sup> Pereltsvaig (2007) contains some discussion of LB in Russian, another article-less lan-  
guage. However, the discussion merely indicates that there maybe some differences in  
the conditions under which various kinds of LB are allowed in Russian and SC; it does  
not affect the main point regarding the DP/NP analysis of English vs Russian and SC. (In  
fact, even the central difference in LB between Russian and SC Pereltsvaig is concerned  
with (adjectival LB in the presence of another adjectives, as in *New he bought expensive  
cars*, which was noted to be unacceptable in SC in Bošković 2005) does not seem to exist  
since SC behaves exactly like Russian in that it allows such extraction when the intona-  
tion pattern used by Pereltsvaig for Russian is replicated in SC, which was in fact noted  
in Bošković (2005).

<sup>4</sup> Notice that Pereltsvaig argues against the analysis which treats English and Russian ad-  
jectives differently based on a distinction between light and heavy adjectives, which she  
claims should behave in the same way in both languages only if the languages do not dif-  
fer in adjectival placement. Curiously, Pereltsvaig notes that such adjectives do behave  
differently in English and Russian, with only English disallowing PP-modified adjectives

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in prenominal positions. She argues that this difference should not be tied to the DP/NP difference because Bulgarian, a DP language, does not behave like English. However, she ignores the fact that the adjective is not a constituent with the PP in the relevant configuration in Bulgarian (the adjective precedes the article. Pereltsvaig also mentions Swedish; however Swedish disallows a PP modifier to follow a prenominal adjective); see also footnote 15 for relevant discussion.

<sup>5</sup>Interestingly, as observed by Pereltsvaig, such prosodic effects seem to be lacking in Russian. There are actually other differences between English and Russian with respect to adjectival ordering, but they cannot be used to tease apart the NP/DP and the universal DP analysis for reasons discussed in the text.

<sup>6</sup>The elements in question are also morphologically very similar to adjectives in Russian, though the similarity is in some instances masked by a historical change (see Pereltsvaig 2007).

<sup>7</sup> Another argument given in Bošković (2004, 2005) and discussed by Pereltsvaig concerns the fact that SC prenominal possessives (*susjedov* in (i)) cannot be modified by possessives, or more generally, adjectives. ((i) is acceptable only on the implausible reading where *moj/bogati* modifies *konj*). Assuming an adjective cannot be modified by an adjective, this follows if SC possessives are indeed adjectives.

- (i) \**moj/bogati susjedov konj*  
my/rich neighbor's horse



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Although Russian behaves like SC in this respect (*\*moj/bogatyj sose dov kon'*), Pereltsvaig argues such examples are irrelevant in Russian since they are ruled out independently because a possessor quite generally cannot be modified in Russian even by an adverb. Pereltsvaig's point here does not argue against the DP analysis, it merely strives to make one particular argument for it irrelevant, but only for Russian. The argument still goes through in SC, where Pereltsvaig's simple possessor requirement does not hold. In fact, it does not seem to hold in Russian either, as (ii) shows.

(ii) Etot mjač nemnožko tvoj, nemnožko mamin. Net, etot mjač tol'ko mamin./

this ball a-little yours, a-little mom's no, this ball only mom's

Net, eto tol'ko mamin mjač.

'This ball is a little yours and a little mom's. No, this ball is only mom's.'

<sup>8</sup> Regarding argument 'possessives' with relational nouns and adjectives, like *Bill's brother* and *Sue's favorite movie*, Partee (1997) argues that the possessive in such cases maps a relation to a predicate. This does not affect the result that semantically, possessives and adjectives can in principle invert orders (so long as predicates can be coerced into relations). Note also that Partee and Borschev (1998) argue that Russian pronominal possessives are unambiguously <e,t> and that Russian genitives are argument possessives.

Regarding Larson and Cho (1999), they derive the English Saxon Genitive from a locative PP (hence *to Mary*) whose head incorporates into a covert definite article.

<sup>9</sup> Of course, there may be other restrictions similar to those that regulate the ordering of adjectives (cf. the semantic hierarchy discussed above). We thus would not necessarily

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expect that possessives should be freely ordered with respect to all adjectives, just like adjectives are not completely free regarding their own ordering with respect to each other. The point here is simply that straightforward compositional semantics itself does not require possessives to be composed after adjectives, which is not the case with demonstratives, as discussed directly below.

<sup>10</sup> Challenging the traditional directly referential analysis of demonstratives, King (2001) analyzes demonstratives such as *that* as quantificational determiners. This gives the same result for ordering with intersective modifiers.

<sup>11</sup> Given that the only legitimate derivation is the one in which demonstratives are higher than adjectives, it is not surprising that left branch extraction of adjectives is impossible in the presence of a demonstrative (as discussed in Bošković 2005 and noted in fn. 3, adjectival left branch extraction is generally impossible in the presence of another adjective in SC for reasons discussed in that work. However, there are ways of improving such extraction (see Bošković 2005), which still do not work with demonstratives.

<sup>12</sup> Note that languages in which possessives can precede demonstratives, such as Hungarian and Chinese, must either have a different semantics for possessives (possibly all modifiers) or allow fronting of possessives in front of demonstratives in the syntax (see Partee 2006 for an analysis along the former line for Chinese, where pre-demonstrative possessives are treated differently semantically from other possessives).

<sup>13</sup> The SC possessive, which agrees with the noun, can then be either NP-adjoined (assuming Chomsky's 1993 definition of *checking domain*, where adjuncts can undergo feature checking with the relevant head), or in SpecNP under Kayne's proposal on which XP does not stop the c-command domain of SpecXP.

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<sup>14</sup> Regarding the deductions of the generalizations in (24)-(33), only one of them (namely, the deduction of (26)) would require some adjustments; the deductions of other generalizations in (24)-(33) would be completely unaffected.

<sup>15</sup> Notice that in contrast to SC, where *five* only has a non-agreeing, non-adjectival form, Russian *five* is ambiguous between a non-agreeing, non-adjectival form and an agreeing adjectival form (see Franks 1995 and Bošković 2006). The same holds for *many* in SC, as noted below. The agreeing and the non-agreeing form should be treated differently, as the contrast between (21b) and (23) shows.

Note that Pereltsvaig also argues against Bošković's (2005) analysis of adjectives based on approximative inversion with Russian numeral phrases.

(i) knig pjat'

books five

'about five books'

However, Pereltsvaig's discussion greatly simplifies the phenomenon in question (see, e.g. Franks 1995 and Bošković 2006), it is based on a generalization regarding what kind of adjectives block approximative inversion that is not quite correct (see Franks 1995:168) and at any rate, the relevant data also receive an alternative account in terms of phrasal movement that is consistent with my 2005 analysis of adjectives (see Bošković 2006; the distinction between prenominal and postnominal adjectives Pereltsvaig is concerned with can be treated in terms of SpecNP vs NP adjunction, with postposed adjectives being treated as NP adjoined (see Ticio 2003 for extensive arguments for the distinction in question).

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<sup>16</sup> The latter is particularly important in light of Pereltsvaig's argument against (26), originally noted in Bošković (2004). The term scrambling is used in the literature for widely different operations (in fact, it is often used for ease of exposition to indicate that the author does not want to commit himself/herself to the nature of the movement involved). Pereltsvaig ignores what Bošković (2004) considers to be scrambling, giving as her examples languages that do not have scrambling in the sense of the term used by Bošković (2004). The reader who would like to pursue the generalizations given above should therefore consult Bošković (2008, in press a).

<sup>17</sup>Note that Progovac (1998) argues that SC pronouns are Ds. The analyses given in Bošković (2008, in press a) would not change if pronouns are the only Ds in SC. See, however, Bošković (2008) and Despić (in preparation) for evidence that SC pronouns differ from English pronouns in their categorical status, i.e. that even SC pronouns are not Ds (Despić directly addresses Progovac's arguments for pronouns as Ds in SC, offering a no-DP reanalysis of Progovac's data.)

<sup>18</sup> I do not rule out the possibility that at least some of the differences could be captured in a uniform DP analysis. The analysis would obviously have to posit radical differences in the syntax and semantics of DP in English and languages like SC. However, it is hard to see how a DP analysis could provide a uniform account of the above generalizations. Given how different the relevant phenomena are, a uniform DP account would likely rest on a number of separate stipulations regarding the nature of D in English/SC, each tailored for a separate generalization. To illustrate, while it might be possible to account for (24) by stipulating that DP is a phase in English but not SC, as shown in Bašić (2007), it is hard to see how the stipulation could explain other generalizations, e.g. (26), (27), (28), and (31). On other hand, as demonstrated in Bošković (2008, in press a), under the

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NP/DP analysis all the generalizations noted above follow from a single difference between the two language types: the presence vs absence of DP.

It is worth noting that in work in preparation I give a number of additional generalizations where the presence or absence of articles in a language also plays a crucial role, which also receive a principled, uniform account under the NP/DP analysis. The generalizations in question involve the morphological make-up of negative constituents, negative concord, inverse scope, radical pro-drop, and number morphology. The reader is referred to Boeckx (2003) and Bošković (in press b) for another generalization concerning locality effects under resumption (where, surprisingly, the lack of DP induces a locality problem with respect to extraction in NP languages which otherwise does not arise in DP languages, contrary to what we have observed above, where the lack of DP makes extraction easier, as is the case with left-branch extraction, extraction of adjuncts out of NPs, and specificity effects).