More on the NP/DP analysis

Based on the generalizations in (1) Bošković (2008) argues that there is a fundamental syntactic and semantic difference in the traditional Noun Phrase (TNP) of article languages like English and article-less languages like Serbo-Croatian (SC), which he argues can be captured if DP is not present in the TNPs of article-less languages.

(1)a. Only article-less languages may allow left-branch extraction (more precisely, AP extraction).
b. Only article-less languages may allow adjunct extraction out of TNPs.
c. Only article-less languages may allow scrambling (i.e. long-distance scrambling out of finite clauses)
d. Negative raising (i.e. licensing of strict NPIs under negative raising) is disallowed in article-less languages.
e. Multiple wh-fronting languages without articles do not display superiority effects
f. Only languages with articles may allow clitic doubling.
g. Only languages with articles allow the majority superlative reading.
h. Head-internal relatives display island-sensitivity in article-less languages, but not in languages with articles.
j. Polysynthetic languages do not have articles.

In this paper I will provide additional evidence for the DP/NP analysis based on additional generalizations along the lines of (1). I will also discuss ordering restrictions on traditional D-items in SC.

In some languages, negative constituents have overt focus morphology. Such morphology is often realized through the presence of focal elements like *even*, as in SC (SC has two series of negative constituents, a negative concord series and an NPI series, both of which contain *even*), and sometimes it is realized through obligatory emphatic (i.e. focus) stress, as in Modern Greek.

(2) n+i+ko i+ko
neg+even+who even+who 'noone/anyone'

In DP languages negative constituents may but don't have to be marked for focus, in NP languages they are focus marked. This holds for SC, Russian, Polish, Lithuanian, Hindi, Chinese, Japanese, Korean, Finnish, Yakut, Lezgian, Kannada, Quechua, Mansi, Latin, Persian, Turkish and Kazakh. ((Bošković (in press a) argues that in languages that have both negative concord and NPI series, the two are derived from the same underlying items, which means it suffices for one of these to have a focus marker to meet (3).)

(3) Negative constituents must be marked for focus in NP languages.

DP languages differ with respect to whether the double negation reading is forced in examples like Italian (4c). It is forced in Italian, Spanish, West Flemish, and French, but not in Brazilian Portuguese, Hebrew, and Romanian. NP negative concord languages SC, Russian, Polish, Japanese, Korean, and Turkish all allow the negative concord reading in examples like (4c). This leads to the generalization in (5).

(4) a. Non ho visto nessuno/nessuno studente.
NEG have seen nobody/no student
'I didn't see anybody/any students.' (negative concord only)
b. Nessuno ha letto niente.
nobody has read nothing (negative concord or double negation)
c. Nessuno studente ha letto nessun libro/niente.
no student has read no book/nothing (double negation only)

(5) The negative concord reading may be absent with multiple complex negative constituents only in DP negative concord languages

I now turn to radical pro-drop, which I define as productive argumental pro-drop of both subjects and objects in the absence of rich verbal agreement. This type of pro-drop differs from pro-drop in languages like Spanish, where pro-drop is licensed by rich verbal morphology. Radical pro-drop is allowed in Japanese, Chinese, Korean, Kokota, Turkish, Hindi, Wichita, Malayalam, Thai, Burmese, Khmer, and Indonesian, all NP languages, which leads to the generalization in (6) (see also Tomioka 2003).

(6) Radical pro-drop is possible only in NP languages.

Gill (1987), who considers only a few languages, suggests a potential correlation between obligatory number morphology and the availability of articles. The phenomenon I am looking at here is the possibility of having examples like Japanese (7), where the N can be interpreted as plural in the absence of plural morphology. (8) divides languages into two groups, where one group has languages that at least optionally can lack number morphology with at least some Ns (i.e. where some or all countable Ns can receive plural interpretation without the presence of number morphology), and the other group contains languages that have

obligatory plural morphology (on either D or N). Only NP languages are found in the first group.

(7) Susumu-ga hon-o yonda.
Susumu-nom book-acc bought
'Susumu bought a/the book/books.'

(8) *No obligatory number morphology*: Japanese, Korean, Chinese, Dyirbal, Warlpiri, Warrgamay, Kuku-Yalanji, Indonesian, Turkish. *Obligatory number morphology*: Russian, SC, Hebrew, Portuguese,German, Bulgarian, Polish, Hungarian, Spanish, Romanian, French, Slovenian, Finnish, Bulgarian, Swahili, Greek, Dutch, Italian,Latin, Ossetic,Kannada, Macedonian, Somali, Estonian

(9) Number morphology may not be obligatory only in NP languages.

Bošković (2008) treats most traditional D-items as adjectives in SC, placing them in the same projection (they can be treated either as multiple adjuncts or multiple Specs). There are, however, some ordering restrictions on such items. Thus, while possessives and adjectives are in principle freely ordered, demonstratives must precede possessors and adjectives.

(10) a. bivša Jovanova kuća b. Jovanova bivša kuća
former Jovan's house
c. Marijina omiljena kola d. omiljena Marijina kola
Mary's favorite car

(11) a. ova skupa kola/?*skupa ova kola b. ova Jovanova slika/?*Jovanova ova slika
this expensive car this Jovan's picture

I argue that these ordering restrictions are best captured in semantic terms. The most plausible semantics for possessives is modificational (Partee & Borschev 1998; Larson & Cho 1999). Given the standard assumptions that adjectives are also of type <e,t> 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. On the other hand, 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 <<e,t>,e>. Once a demonstrative has mapped a nominal element to an individual, further modification by predicates of type <e,t> is impossible. Hence, semantic composition requires both adjectives and possessives to be composed before demonstrative determiners. In short, semantic composition allows possessives to be composed either before or after modifying adjectives, while 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.

The proponents of the DP analysis (Bašić (2004), Pereltsvaig (2007)) account for (11) by placing the demonstrative in a DP projection, which is located above the projection where possessives and adjectives are located. (αP is a projection where APs are generated, with multiple APs requiring multiple αPs.)

(12) [$_{DP}$ Demonstrative [$_{PossP}$ Possessive [$_{\alpha P}$ Adjective [$_{NP}$ (Bašić 2004)

Despić (2008) argues against (12) based on the following SC/English contrasts.

(13) a. His$_i$ father considers John$_i$ highly intelligent.
b. John$_i$'s father considers him$_i$ highly intelligent.

(14) a. *Njegov$_i$ otac smatra Marka$_i$ veoma pametnim.
his father considers Marko very smart
b. *****Markov$_i$ otac smatra njega$_i$ veoma pametnim.
Marko's father considers him very smart

(13) can be accounted for if, as 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 then follows if the DP is missing in SC. Crucially, Despić shows the SC paradigm does not change in the presence of a demonstrative or an adjective, which provides strong evidence that demonstratives, possessives, and adjectives should all be treated as multiple adjuncts or multiple Specs of the same projection in SC. *Ovaj* and *brojni* then do not prevent the possessive from c-commanding the co-indexed elements in (15).

(15) a. *[$_{NP}$ Ovaj [$_{N'}$ njegov$_i$ [$_{N'}$ prijatelj]]] smatra Marka$_i$ veoma pametnim.
this$_{NOM}$ his$_{NOM}$ friend$_{NOM}$ considers Marko very smart
'This friend of his considers Marko very smart.'

b. *[$_{NP}$ Brojni [$_{N'}$ Dejanovi$_i$ [$_{N'}$prijatelji]]] su posjetili njega$_i$.
numerous$_{NOM}$ Dejan's$_{NOM}$ friends$_{NOM}$ are visited him
'Numerous friends of Dejan visited him.'