

Slavic Noun Phrases are NPs not DPs*

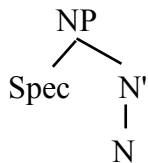
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1. An NP vs. DP Analysis of Noun Phrases

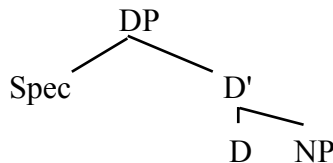
In the recent linguistic literature, the issue of headedness of noun phrases, and consequently, noun phrase structure is a matter of controversy (e.g., Zwicky 1985, Hellan 1986, Hudson 1987, 1996, Abney 1987, Bowers 1987, Radford 1993, Payne 1993, Meyers 1995, Allegranza 1999). The main question is whether the noun phrase is headed by a N(oun) or by a functional category D(eterminer).

Traditionally, noun phrases have been analyzed as NPs, i.e., as single-headed constructions, having the structure depicted in (1a). This traditional approach was succeeded by the Extended X-bar theory which introduced functional categories as heads of clauses (I), sentences (C), as well as noun phrases (D). Researchers, such as Reuland (1986), Hellan (1986), Abney (1987) and Bowers (1987), proposed a functional category Determiner (D) as the head of the noun phrase, making the noun phrase a doubly-headed construction, having the general structure shown in (1b).

(1) a. NP-Analysis



b. DP-Analysis



In this volume, Rappaport also adopts the DP-analysis of noun phrases in Slavic. However, I argue here that noun phrases in articleless Slavic languages are NPs, having the structure as in (1a) rather than (1b). Theory independent evidence is provided that supports this claim. I also show that Rappaport's treatment of possessives as specifiers of the Determiner appears to be problematic, in cases when the possessive and the determiner co-occur.

* I thank all the people who participated in the survey conducted via several linguistic discussion groups on the Internet.

The paper is organized as follows. In section 2, I provide evidence for the claim that Slavic noun phrases are NPs rather than DPs. In section 3, I propose an internal structure of the Slavic noun phrase which accounts for its word order patterns without resorting to movement or to the functional-lexical category distinction. Section 4 concludes the paper by hypothesizing that headedness of the noun phrase is related to the presence/absence of definite/indefinite articles in a given language.

2. Slavic Noun Phrases as NPs: Evidence

2.1. ‘Determinerless’ NPs Allowed

Slavic languages that lack definite and indefinite articles allow noun phrases to appear without any determiners (e.g. demonstratives, indefinite determiners corresponding to English words *some* and *one*). In order to differentiate definite from indefinite noun phrases, various means are used, such as, word order, case distinction, definite vs. indefinite markings on the modifying adjectives. The Polish sentences in (2) illustrate how the word order of NPs in a sentence determines the (in)definiteness status of such NPs.¹

- (2) a. Student lubi Marie
 student-N likes Mary-A
 ‘**The** student likes Mary.’
- b. Marie lubi student.
 Mary-A likes student-N
 ‘**A** student likes Mary.’

Like other Slavic languages, Polish has a subject-verb-object (SVO) word order in a neutral context, as depicted in (2a). A theme-rheme structure is reflected in this basic word order. Namely, the subject is the theme, i.e. given information, which in English is indicated by the definite article preceding the noun. The predicate, i.e. VO corresponds to rheme. If the determinerless NP-subject is indefinite, however, it must occur post verbally, as shown in (2b). A similar pattern is found with intransitive verbs.

Besides word order, in some Slavic languages, definiteness of the noun phrase can be expressed by definite and indefinite markings on the modifying descriptive adjectives. This distinction is reflected through different morphological endings or through different stress patterns on the adjective. For example, in Serbo-Croatian, when modifying nominative masculine singular nouns, indefinite adjectives have a zero ending, as in (3a), while definite adjectives have the long vowel –i:, as in (3b).

¹ The following abbreviations are used throughout the paper: F=feminine, M=masculine, NT=neuter, SG=singular, PL=plural, N=nominative, G(en)=genitive, A=accusative, D=dative, I=instrumental, CL=clitic, AUX=auxiliary, SE=‘reflexive’ clitic, ∀= universal quantifiers, D(et) = determiner, Adj = adjective, Poss=possessive, INDEF= indefinite, DEF=definite, INF=infinitive.

- (3) a. lep grad beautiful-INDEF town-N.M.SG 'a beautiful town'
 b. lep- i: grad beautiful-DEF town-N.M.SG 'the beautiful town'

Since the adjective in (3a) has an indefinite form (zero ending), the whole noun phrase is interpreted as indefinite, as indicated in the English translation. The opposite pattern is found in (3b).

It is important to note that noun phrases with determiners are also allowed, although they are optional elements, as illustrated by the Serbo-Croatian example in (4).

- (4) (Ovaj) student voli Mariju.
 this student likes Mary
 'This/the student likes Mary.'

The above facts thus illustrate that determinerless noun phrases have the same distribution as noun phrases with determiners. The DP-analysis of noun phrases would not be able to capture this generalization, unless one postulated an empty determiner in the D position in (1b), which seems to be an ad-hoc solution.

In addition, Zwicky's (1985) headedness tests described in the next section show that the noun rather than the determiner exhibits the head-like properties, and thus, is the head of the Slavic noun phrase.

2.2 Noun as the Head of the Slavic Noun Phrase: Headedness Tests

In his 1985 paper, Zwicky proposed the following criteria for determining the head of a given phrase. They are listed in (5).

- (5) i. the morphosyntactic locus
 ii. the determinant of concord
 iii. the obligatory constituent
 iv. the distributional equivalent
 v. the subcategorizand
 vi. the governor
 vii. the semantic argument

Zwicky considers the morphosyntactic locus test to be one of the most important tests for determining the head of a given phrase. He defines the morphosyntactic locus as the constituent on which morphosyntactic inflectional markings are located. Applying this test to the Serbo-Croatian noun phrase, it can be easily established that the noun is the morphosyntactic locus, and hence, the head of the noun phrase. In other words, the grammatical phi-features, i.e., gender and number, as well as animacy, are lexical

properties of the noun and not the determiner, and thus, originate on the noun. This is especially obvious when considering gender features, which are lexically assigned to all common nouns, as depicted by the Serbo-Croatian examples in (6).

- (6)
- | | | | |
|--|--------------------|-------------------------|-----------------------|
| | Masculine | Feminine | Neuter |
| | <i>grad</i> 'city' | <i>država</i> 'country' | <i>selo</i> 'village' |

The determinant of concord test is tightly related to the morphosyntactic locus test. This is because the determinant of concord is defined as the constituent that determines ‘concord’ (or agreement) features of other co-constituents. As observed in (7) below, Slavic determiners inflect for case, number and gender features, agreeing in these features with the noun they specify. In this respect, determiners behave no differently from regular adjectives, which also inflect for these features in agreement with the modified noun. Based on these facts, we can thus conclude that the noun is a concord determinant, and hence, the head of the noun phrase.

- (7)
- | | | | |
|----|-------------|--------------------|---------------|
| a. | <i>ova</i> | <i>zanimljiva</i> | <i>knjiga</i> |
| | this-N.F.SG | interesting-N.F.SG | book-N.F.SG |
| b. | <i>ovaj</i> | <i>zanimljivi</i> | <i>čovjek</i> |
| | this-N.M.SG | interesting-N.M.SG | man-N.M.SG |

Similarly, with respect to the obligatoriness criterion for headedness, the noun is the obligatory constituent (disregarding elliptical constructions) since a determiner is always an optional element in Slavic, as was shown in (2), (3) and (4) above. As a consequence, the noun is also a distributional equivalent, and hence, is the head of the noun phrase. In other words, the Noun has the same distribution as the sequence Determiner + Noun, as shown in (4) above, and repeated in (8) below:

- (8)
- | | | | |
|--------|--------------------------------|-------------|----------------|
| (Ovaj) | <i>student</i> | <i>voli</i> | <i>Mariju.</i> |
| | this student | likes | Mary |
| | ‘This/the student likes Mary.’ | | |

The noun is also a semantic argument in the sense that it describes the type of the object denoted by the noun phrase. The remaining two criteria for headedness, the subcategorizand and form governor tests, cannot conclusively prove whether the noun or the determiner is the head of the noun phrase. This is because, in general, common nouns in Slavic articleless languages do not require an overt determiner, so that they do not act as ‘obligatory’ subcategorizands or form governors.²

² Where the term subcategorizand means the lexical, i.e., a zero-level category that subcategorizes for its sister constituents. And the term, form governor, means a lexical item that determines the morphological form of its sister constituent(s) without being inflected for the same features.

In the following section, I examine the categorial status of Slavic determiners, showing that they are categorially adjectives rather than the independent syntactic category Determiner.

2.3 Determiners and Adjectives are Non-Distinct Categories

Slavic languages lacking articles use two kinds of lexical items to distinguish indefinite from definite noun phrases, namely, demonstratives and the indefinite determiners corresponding to English words *one* and *some*. Based on syntactic and morphological evidence, I show that these determiners are indistinguishable from the syntactic category Adjective, and thus, should be classified as adjectives. Corver (1990, 1992) makes a similar claim based on the data from Polish and Czech.

2.3.1 Morphological Evidence

There are two pieces of morphological evidence that indicate that Slavic determiners pattern like adjectives. The first pertains to agreement phenomenon, whereby, determiners, just like ordinary adjectives, agree in gender, number and case with the head noun. The following examples from Czech, Polish, Russian, and Serbo-Croatian, illustrate this.

NP-internal agreement:

- (9) a. ta pekna devčata (Czech)
 this-N.F.PL beautiful-N.F.PL girl-N.F.PL
 ‘these beautiful girls’
- b. ta mila dziewczyna (Polish)
 this-N.F.SG nice-N.F.SG girl-N.F.SG
 ‘this nice girl’
- c. eti milye devushki (Russian)
 this-N.F.PL nice-N.F.PL girl-N.F.PL
 ‘these nice girls’
- d. neke mlade devojke (Serbo-Croatian)
 some-N.F.PL young-N.F.PL girl-N.F.PL
 ‘some young girls’

The second piece of morphological evidence for the adjectival status of Slavic determiners comes from the fact that they decline like adjectives, rather than like nouns. This declensional paradigm is exemplified in Table 1.

Table 1. Declensional Paradigm

Serbo-Croatian		Czech (Corver 1992 : 71)	
Nom.	jedan dobar čovek a good man	Nom.	ten dobry student that good student
Gen/Acc	jedn og dob rog čoveka	Gen/Acc	to ho dobr ého studenta
Dat/Loc	jedn om dob rom čoveku	Dat/Loc	to m(u) dobr ém(u) studentovi(-u)
Instr.	jedn im dob rim čovekom	Instr.	t ím dob rym studentem

We observe that in all cases except nominative, the endings (indicated in boldface) of both determiners and adjectives are different from those on the nouns (in italics).

2.3.2 Syntactic Evidence

The syntactic evidence pertains to distribution and extraction. With respect to distribution within the noun phrase, Slavic determiners are found in prenominal position, exactly where other adjectival-like elements appear, as shown in (9) above. These examples represent the neutral or unmarked word order. However, under the appropriate context, these determiners can also occur after the noun, just like adjectives:

- (10) a. devčata ta pekna (Czech)
girls these beautiful
- b. dziewczyna ta mila (Polish)
girl this nice
- c. devushki eti milye (Russian)
- d. devojke ove mlade (Serbo-Croatian)
girls these young

The fact that Slavic determiners can also occur after the head noun indicates that these elements do not have the status of a functional category, since generally, functional categories, such as D(eterminer), AGR(eement), TNS(tense), C(omplementizer), occur in a fixed position. For example, in languages claimed to have a functional category Determiner, the postposing of determiners is not an option (compare the ungrammatical sequences: English: *book the, French: *livre le, Italian: *libro il).

One might want to treat examples (10) as instances of N-to-D movement, as has been suggested for Scandinavian languages, or for Rumanian. However, the problem then is how to explain the following sequences (from Serbo-Croatian), in which either the

adjective or the determiner is postposed, but not both, leaving the noun in between these elements.

- (11) a. ove devojke mlade
 these girls young
 b. mlade devojke ove
 young girls these

Furthermore, an N-to-D movement analysis cannot explain why determiners in a prenominal position have no fixed order (see examples in (14) below).

A final piece of evidence for the adjectival status of Slavic determiners comes from the syntactic process of extraction. Specifically, like regular adjectives, determiners can be extracted from within the Slavic noun phrase, as illustrated by the Serbo-Croatian example in (12).³

- (12) a. Ovu_i/lepu_j sam pronašla [t_i/t_j knjigu.]
 this/nice-A.F.SG AUX found book-A.F.SG
 (lit. 'This/nice I found book.')
- b. Koju_i/kakvu_j si pronašla [t_i/t_j knjigu.]
 which/what kind-A.F.SG AUX found book-A.F.SG
 (lit. 'Which/what kind did you find book?')

Example (12a) illustrates extraction of a demonstrative and/or an attributive adjective out of the noun phrase. Example (12b) illustrates that the corresponding interrogative adjectival elements can be extracted as well. For similar examples involving Czech and Polish, see Corver (1992), who also uses left-branch extraction facts as evidence that these two languages lack a DP-projection.

To conclude, the facts presented above show that Slavic noun phrases are not DPs, but rather plain NPs. In the following two sections, we show what the structure of these NPs is.

3. The Structure of the Slavic Noun Phrase

In this section, I examine word order in the Slavic noun phrase and propose noun phrase structure that does not employ functional projections or movement. The overall generalization is that elements preceding the noun are all categorially adjectives, while those following the head noun can be NPs, PPs, clauses, or right branching APs.

³ Among Slavic languages, Slovenian does not allow left-branch extraction.

3.1 The Structure of Prenominal Elements

3.1.1 Word Order

The elements appearing in prenominal position are semantically diverse elements, consisting of universal quantifiers, demonstratives, indefinite determiners, adjectives and possessives. A prototypical order of these elements is shown in (13), and various other word order sequences are summarized in Table 1 of the Appendix.⁴

(13) unmarked order: -Det-Poss-Adj-N(oun)

In all Slavic languages, universal quantifiers precede determiners, as well as everything else. The order determiner-universal quantifier-noun is also possible, in the stylistically marked contexts. These facts are presented in (14).

(14)	\forall - Det-N (unmarked) gloss: <i>all these pictures</i>	Det - \forall - N (marked) gloss: <i>these all pictures</i>
a) Belarusian	usie hetyja malunki	hetyja usie malunki
b) Czech	vsechny tyhle obrazy	tyhle vsechny obrazy
c) Polish ⁵	wszystkie te zdjecia	te wszystkie zdjecia
d) Russian	vse eti kartiny	eti vse kartiny
e) Serbo-Croatian	sve ove slike	ove sve slike

As shown in (15) below, universal quantifiers cannot switch order with any of the other prenominal elements, such as adjectives and possessives.

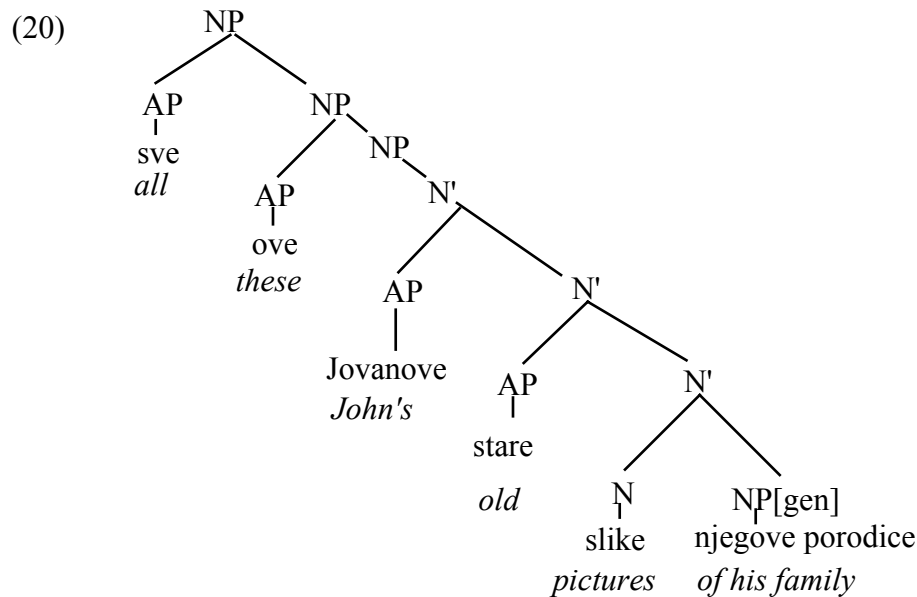
(15)	*Adj - \forall -N (unmarked) gloss: <i>old all pictures</i>	*Poss - \forall - N gloss: <i>sister's/mother's all pictures</i>
a) Belarusian	*staryja usie malunki	*siastryny usie malunki
b) Czech	*stare vsechny obrazy	*sestriny vsechny obrazy
c) Polish	*stare wszystkie zdjecia	not applicable
d) Russian	*vse starye kartiny	*maminy vse kartiny
e) Serbo-Croatian	*stare sve slike	*sestrine sve slike

⁴ The word order patterns presented here are based on the survey conducted via several linguistic discussion groups on the internet.

⁵ As can be seen from Table 1 of the Appendix, among Polish speakers there is a variation with respect to judging which order is unmarked and which is marked. Three of my informants treat both orders: \forall -Det-N and Det- \forall -N as neutral, while the remaining three informants find only the order Det- \forall -N as neutral.

3.1.2 The Noun Phrase Structure

Based on the above word order facts, I propose a structure of the Slavic noun phrase as in (20). For convenience, Serbo-Croatian glosses are used to fill the terminal strings.



We observe that all elements that precede the head noun are categorially adjectives. In the previous section, we provided evidence based on agreement that possessives are adjectives. This is in contrast to Rappaport's claim (in this volume), that possessives are covert or hidden genitive nouns. For further evidence that all prenominal elements are adjectives, see Zlatić (1997b).

As the tree in (20) shows, the possessive, *Jovanove* 'John's', is analyzed as an N'-adjunct, on a par with the ordinary adjective *stare*. By analyzing possessives as N'-adjuncts, we are able to explain why they can switch their usual order with ordinary adjectives, as shown in (19) above.

However, not all possessives have the syntactic status of an adjunct. Due to the fact that with event-denoting nouns, such as *opisivanje* in (21) below, possessives cannot switch their order with regular adjectives, it would be more accurate to analyze such possessives as specifiers.⁷

⁷ It is not so unusual to treat certain parts of speech differently depending on the syntactic context. For example, Allegranza (1999) proposes disjunctive analysis of adjectival determiners in Italian, treating them as either specifiers or adjuncts depending on the syntactic context.

(21) a. Marijino podrobno opisivanje svoje majke
 Mary-POSS thorough description self's mother
 'Mary's thorough description of her mother'

b. * podrobno Marijino opisivanje svoje majke

In fact, Slavic binding facts support this disjunctive analysis of possessives. Specifically, Zlatić (1997a, 1997b) has observed that in Serbo-Croatian, only those possessives that are arguments of argument-taking nouns are obligatory binders of reflexives (as in (22a)), others are not (cf. (22b)).

(22) a. Jovan_i je primetio [Marijinu_j lošu brigu o sebi*_{i/j}].

John AUX noticed Mary.POSS bad caring about self
 'John noticed Mary's poor caring for herself.'

b. Jovan_i je pročitao/izgubio [Marijin_j članak o sebi_{i/o}/_j].

John AUX read/lost Mary's-ADJ article about self
 'John read/lost Mary's article about herself/him.'

The 'material' noun *slike* 'pictures' in (20) selects only one dependent, namely, the genitive NP-complement, *njegove porodice*. The lexical entry for this noun appears as follows.

(23) *slika*: [VALENCE[COMP <(NP[*gen*)]>]]

From this lexical entry we see that the noun *slika* does not 'subcategorize' for a determiner, as is the case in English. This is because determiners are always optional elements, as illustrated in (4). Rather, as the phrase marker in (20) depicts, Slavic determiners are adjuncts, more precisely, NP-adjuncts, on a par with universal quantifiers.

The lexical entry of both universal quantifiers and determiners looks as in (24).

(24) *sve/ove* 'all/these' [SYNSEM||HEAD[$\begin{matrix} adj \\ MOD\ NP \end{matrix}$]]

where NP abbreviates as in (25).

(25) HEAD [$\begin{matrix} noun \\ SPR < > \\ COMPS < > \end{matrix}$]

In the Head Driven Phrase Structure Grammar (HPSG) framework (Pollard and Sag 1994) adopted here, to be an NP-adjunct simply means that the element subcategorizes

through its MOD(ified) feature for a fully saturated phrase, i.e., an NP that has an empty specifier (SPR) list, as shown in (25). In this theory, grammatical relations such as specifiers, are defined in valence terms, as a dependent for which the specific head subcategorizes via its valence feature called SPR. The element from the SPR list is discharged or saturated when it is structurally realized.

From the tree in (20) we further observe that regular adjectives are analyzed as N'-adjuncts on a par with possessives. To be an N'-adjunct simply means that the adjunct selects an N'-level category, as shown in (26).

$$(26) \textit{stare 'old'} \left[\text{SYNSEM} || \text{HEAD} \left[\begin{array}{l} \textit{adj} \\ \text{MOD N'} \end{array} \right] \right]$$

where N' abbreviates as in (27).

$$(27) \left[\text{HEAD} \left[\begin{array}{l} \textit{noun} \\ \text{SPR} < [] > \\ \text{COMPS} < > \end{array} \right] \right]$$

N' is defined as a not fully saturated phrase, i.e., a phrase that has one item on the SPR list, indicated by the brackets on the specifier list in (27). As we can see, in this theory, bar levels are not primitives but are defined in terms of degree of saturation.

By assuming that determiners are NP-adjuncts and not N'-adjuncts we are able to account for the fact that they can be freely ordered with universal quantifiers, which are also NP-adjuncts, as shown in (14). The proposed structure in (20) can also account for the fact that neither universal quantifiers nor determiners can switch the order with other elements in the noun phrase. Specifically, they cannot permute with regular adjectives or possessives, which are N'-adjuncts (cf. (15) and (18)).

To summarize, the noun phrase structure proposed in (20) can account for word order patterns in the Slavic noun phrase without employing either movement or functional-lexical category distinction. This is in contrast to an approach adopted in Rappaport's position paper, which uses both of these mechanisms to account for Slavic word order facts. It is worth mentioning here that Rappaport's treatment of possessives and demonstratives as specifiers of the functional category D(eterminer) is problematic in cases when these two elements co-occur, as in examples below. Furthermore, Rappaport cannot predict the impossibility of permutation between possessives and determiners, as shown in (28).

(28)	Det- Poss-N	*Poss-Det-N
a. Belarusian	hetyja siastryny malunki	* siastryny hetyja malunki
b. Czech	tyhle sestryny obrazy	*sestryny tyhle obrazy
c. Russian	eti maminy kartiny	*maminy eti kartiny
d. Serbo-Croatian	ove sestrine slike	*sestrine ove slike

Even if we assumed that determiners occupy the head position of D, rather than the specifier position, we would still be unable to account for the fact that determiners

precede, rather than follow possessives. The structure proposed in (20) predicts both of these facts without any ad hoc stipulations.

4.2 The Structure of Postnominal Elements

Elements appearing after the head noun are comprised of NPs, PPs, clauses or right-branching APs. In this paper, I focus on postnominal NP sequences, accounting for their order without employing movement or functional projections. Table 2 of the Appendix gives combinatorial possibilities of postnominal NP sequences across Slavic. In the postnominal domain, we find a greater word order variation among Slavic languages than in the prenominal domain. However, there are still some common orderings.

Across Slavic, postnominal NPs can bear any of three cases: genitive, dative and instrumental, with genitive being the ‘default’ case. When two or more NPs appear together, the tendency is to have an NP bearing genitive case adjacent to the head noun. In Serbo-Croatian and Czech, this is an unviolable constraint, whereas in Belarusian, Russian and Polish this is a violable constraint, to use the terms of Optimality Theory. The following Czech example illustrates this adjacency requirement imposed on genitive NPs.

- (29) a. *venovani peněz nemocnicím*
donation money-G hospitals-D
‘donation of money to hospitals’
- b. **venovani nemocnicím peněz*
donation hospitals-D money-G

The deverbal noun *venovani* takes two ‘internal’ NP-arguments, the theme marked for genitive case and the goal marked for dative case. The corresponding imperfective verb *venovat* ‘to donate’, also takes two NP-complements with the same thematic relations, but with the theme argument marked for accusative case and goal for a dative case, as shown in (30). Note that in (30) both orders are possible, with the first being the unmarked one.

- (30) a. *venovat nemocnicím peníze*
donate-INF hospitals-D money-A
‘to donate money to hospitals’
- b. *venovat peníze nemocnicím*
donate-INF money-A hospitals-D

In general, deverbal nouns inherit the argument structure of the verbs from which they are derived, although not necessarily the same case or

subcategorization frame. Prototypical structural cases of the clausal domain, nominative and accusative, become genitives in nominalization. I take this to mean that such genitives are structural, and as such, have more restricted distribution within the noun phrase. Only oblique cases of the verbal domain are normally retained in nominalization, as evidenced by the dative NP in (29), as well as by the examples in (31) below.

- (31) a. *pretnja lopovu zatvorom*
 threat thief-D prison-I
 'a threat to the thief by imprisonment'
- b. *pretnja zatvorom lopovu*
 threat prison-I thief-D
- c. *pretiti lopovu zatvorom*
 threaten-INF thief-D prison-I
 'to threaten a thief with imprisonment'

The Serbo-Croatian deverbal noun *pretnja* 'threat' in (31a) selects two internal arguments, Goal and Instrument, which are in dative and instrumental case respectively, just like the corresponding arguments of the related verb *pretiti* in (31c). The second example in (31) shows that these postnominal NPs have a flexible order, hence, behaving differently from genitive NPs. Zlatić (1997b) took these facts to mean that dative and instrumental cases in (31a) are inherent, and as such, do not need to obey the adjacency condition required for structural case. This condition was violated in (29b).

Across Slavic, and cross-linguistically in general, we normally don't find two postnominal genitive noun phrases occurring together. For example, one can't say something like (32), regardless of the relative position of these NPs.

- (32) a. **opisanie Ameryki matki*
 description America-G mother-G
 (intended meaning: the mother's description of America)
- b. **opisanie matki Ameryki*

The Polish noun *opisanie* 'description' in (32) is derived from the verb *opisać* 'to describe'. This verb selects the agent and theme arguments, with cases assigned structurally, namely nominative and accusative. Cross-linguistically (see Koptjevskaja-Tamm 1993), nouns derived from transitive verbs with nominative and accusative arguments, cannot express both the agent and theme by the use of genitive NPs, as seen by the ungrammatical sequences in (32). Notice that the order of postnominal genitives in (32) is irrelevant; either order renders the construction ungrammatical. If we assume that these two genitives are both structural, we can automatically account for the unacceptability of such constructions. Namely, sequences in (32) are ruled out by the following condition, which prohibits an assignment of two structural cases by the same

predicate.

(33) *COMPS <NP[*str*] ... NP[*str*]>

This condition, which says that the two complement NPs with structural cases are prohibited, applies to verbs as well as nouns. Notice that in HPSG, case assignment is lexically determined within the complement structure of the assigner, rather than being determined within a specific constituent structure configuration. In his position paper, Rappaport rules out examples with double genitives such as those in (32), by resorting to an NP-internal passivization process. Under my proposal, movement of this sort is unnecessary.

However, there are two types of contexts where two postnominal genitives can in fact co-occur. The first context is found with deverbal, event-denoting nouns derived from ditransitive verbs, taking one accusative and one genitive complement. The Serbo-Croatian noun *lišavanje* in (34b) is one such noun. This noun is derived from the verb *lišavati* that takes two NP-complements with two distinct cases: accusative and genitive, as shown in (34a). As we can see, the two adnominal genitive phrases in (34b) correspond to accusative and genitive NPs of the verbal domain. I claim that the first genitive in (34b) is structural and the second is inherent. This is further supported by the fact that the permutation of these two genitives is disallowed, since that would violate the adjacency condition on structural case assignment, which is operative in Serbo-Croatian in Czech, and, as far as this specific example is concerned, also in other Slavic languages (see Table 2 of the Appendix).

- (34) a. lišavati brata nasledstva
deprive-INF brother-A inheritance-G
'to deprive the brother of his inheritance'
- b. lišavanje brata nasledstva
deprivation brother-G inheritance-G
'depriving the brother from inheritance'
- c. *lišavanje nasledstva brata
deprivation inheritance-G brother-G

In his position paper, Rappaport shows that Russian 'material' or result denoting nouns also allow double genitives. Table 2 of the Appendix shows that double genitives with such nouns are allowed in other Slavic languages as well, with more or less variable judgments in Serbo-Croatian, Czech and Polish. The following Russian example (reprinted from Rappaport's position paper) illustrates such construction.

- (35) a. kolekcija redkix monet profesora
collection rare-G coins-G professor-G
'professor's collection of rare coins'

b.* kolekcija profesora redkix monet

As seen by the grammaticality contrast in (35), the ordering of these genitive NPs is fixed. In particular, only the order possessed item - possessor is allowed, except in Polish, where most speakers I consulted allow both orders. According to Rappaport, the DP-structure comes into play here in explaining the contrast between (35a) and (35b). Briefly, the two genitives in (35a) are permitted, since, the first genitive receives inherent case from the material noun, whereas the second, possessor NP gets inherent case from a different head, namely Determiner. This claim is rather unusual in that it goes against the Minimalist assumptions that functional categories (such as Agreement or Determiner) assign, i.e. license inherent cases. Another drawback of Rappaport's analysis is that it proposes two different mechanisms of case assignment or licensing by D(eterminer), depending whether we are dealing with process or non-process nominals. Specifically, according to Rappaport's proposal, case licensed by D in process nominals is structural whereas in non-process nominals is inherent. (For further criticisms of Rappaport's proposal see also Engelhardt and Trugman in this volume).

Instead of resorting to functional projections, for which we saw that there is no empirical evidence, I propose to treat the first genitive phrase in (35a) as bearing structural case and the second, as bearing non-structural genitive case. This case is assigned to adjunct NPs, such as the possessor in (35a). By treating the first genitive as structural, we automatically explain the unacceptability of (35b), ruling it out on a par with examples such as (29b) and (34c).

Our analysis also predicts why the corresponding process-denoting noun 'kollekcionirovanie' doesn't allow double genitives, as shown below.

- (36) *kollekcionirovanie redkix monet profesora
 collecting rare-G coins-G professor-G
 'professor's collecting rare coins'

We rule out examples like (36) on a par with examples such as (32). The two genitive phrases in (36) are the noun's arguments bearing structural cases, hence, triggering the condition in (33).

In order to make both (36) and (32) grammatical, one can use a prenominal possessive adjective to express a possessor or an agent argument, and the adnominal genitive complement to express the theme. This is shown below.

- (37) a. moje kollekcionirovanie redkix monet
 my- POSS collecting rare-G coins-G
 'my collecting rare coins'
- a. mamin opis Amerike
 mother- POSS description America-G
 'the mother's description of America'

According to our proposal, both noun's dependents in (37a) and (37b) are properly licensed. For example, the adnominal genitive receives the structural genitive from the noun *kollekcijirovanie* while the prenominal possessor phrase, being an AP, doesn't need case, so it can freely stand in a prenominal position.

5. Conclusions and Theoretical Implications

In this paper, I have argued for the single-head analysis of noun phrases in Slavic articleless languages, proposing a simple noun phrase structure in which the noun rather than the determiner is the head of the Slavic noun phrase. I showed that it is possible to account for word order facts in the Slavic noun phrase without employing movement or functional projections.

This paper's findings that noun phrases in articleless Slavic languages lack functional projection, DP (or any functional projections in the noun phrase) have serious consequences for the Minimalist Program framework (Chomsky 1995), where functional projections play an important role in explaining word order variation. The results of this paper are closer to Fukui and Speas' (1986) hypothesis about parametric variation of functional categories than to Chomsky's (1995) hypothesis about their universality.

Based on the data from Serbian, Zlatić (1997b) hypothesized that headedness of the noun phrase is related to the presence/absence of definite/indefinite articles in a given language. The data from other Slavic articleless languages presented here support such a hypothesis.

APPENDIX
I Prenominal Word Order in Slavic

A Prototypical Order: \forall -Det-Poss-Adj-N(oun)

Table 1. Prenominal Sequences

SEQUENCE	Serbo-Croat (12 informants)	Belarusian (1 informants)	Czech (5 informants)	Polish (6 informants)	Russian (5 informants)
1. \forall -Det -N	ok (umk)	ok (umk)	ok (umk)	3ok (umk) / 3ok (mk)	ok (umk)
2. Det- \forall -N	ok (mk)	ok (mk)	ok (m)	6ok umk	ok (mk)
3. \forall -Adj-N	ok (umk)	ok (umk)	ok (umk)	ok (umk)	ok (umk)
4. Adj- \forall -N	*	*	*	*3/3ok(mk)	*
5. \forall -Poss-N	ok (umk)	ok (umk)	ok (umk)	NA	ok (umk)
6. Poss- \forall -N	*	*	*3/1ok (mk)	NA	*
7. Det-Poss-N	ok (umk)	ok (umk)	ok (umk)	NA	ok (umk)
8. Poss-Det-N	*	*	*	NA	*
9. Det-Adj-N	ok (umk)	ok (umk)	ok (umk)	ok (umk)	ok (umk)
10. Adj-Det-N	*	*	*	*3/3ok (mk)	*3/2ok (mk)
11. Poss-Adj-N	ok (umk)	ok (umk)	ok (umk)	NA	ok (umk)
12. Adj-Poss-N	ok (mk)	ok (mk)	*1/4ok mk	NA	ok (mk)

where: ok = grammatical; * = ungrammatical; umk = unmarked; mk = marked. Numerals indicate number of informants. For example, ‘*3/2ok (mk)’ means that the three speakers judged the given sequence as ungrammatical and the two judged it as grammatical, but marked.

Examples of prenominal sequences: (English glosses are used for convenience only.)

- | | |
|--------------------------|--------------------------|
| 1. all these pictures | 7. this mother’s picture |
| 2. these all pictures | 8. mother’s this picture |
| 3. all old pictures | 9. this old picture |
| 4. old all pictures | 10. old this pictures |
| 5. all mother’s pictures | 11. mother’s old picture |
| 6. mother’s all pictures | 12. old mother’s picture |

II Postnominal Word Order in Slavic

Prototypical: N(oun)-NPs-PPs-S

Table 2. Postnominal NP Sequences

SEQUENCE	Serbo-Croat (12)	Belarusian (1)	Czech (5)	Polish (6)	Russian (5)
1. N-Gen-Dat/Inst	ok	ok (mk)	ok	ok (umk)	ok (umk)
2. N-Dat/Inst-Gen	*	ok (um)	*	ok (mk)	*2/3ok (mk)
3. N-Dat-Inst	ok (umk)	ok (umk)	ok (umk)	ok (umk)	ok (umk)
4. N-Inst-Dat	ok (mk)	ok (mk)	ok (mk)	ok (mk)	ok (mk)
5. N-Gen(str)-Gen(str)	*	ok ⁸	*	*4/2ok	*
6. N-Gen(str)-Gen(inh)	ok	ok	ok	ok	ok
7. N-Gen(inh)-Gen(str)	*	*	*	*5/1ok	*
with 'material' Ns: 8. N-Gen - Gen (possessed-possessor)	*2/9ok	ok	*2/3ok (umk)	*1/5ok (umk)	ok
9. N-Gen - Gen (possessor-possessed)	*	*	*4/1ok (mk)	*2/4ok (mk)	*

Where: Gen(inh) = inherent genitive case; Gen(str) = structural genitive case

Examples of postnominal NP sequences: (English glosses are used for convenience only.)

1. a. donation/giving money-Gen hospitals-Dat ('donation of money to the hospitals')
b. dissatisfaction children-Gen life-Inst ('the children's dissatisfaction with life')
2. a. donation hospitals-Dat money-Gen
b. dissatisfaction life-Inst children-Gen
3. threat thief-Dat imprisonment-Inst ('a threat to the thief by imprisonment')
4. threat imprisonment-Inst thief-Dat
5. a. description America-Gen mother-Gen ('the mother's description of America')
b. description mother-Gen America-Gen

⁸ Only the order as in (5a) is acceptable in Belarusian.

6. depriving brother-Gen inheritance-Gen ('depriving the brother from his inheritance')
7. depriving inheritance-Gen brother-Gen
8. collection old stamps-Gen this student-Gen ('the student's collection of old stamps')
9. collection this student-Gen old stamps-Gen

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