

## STRUCTURES FOR POSSESSION IN UPPER SORBIAN AND CZECH

Elizabeth Cowper<sup>1</sup> & Daniel Currie Hall<sup>2,1</sup>

<sup>1</sup>University of Toronto, <sup>2</sup>Meertens Instituut

### 1. Introduction

The Slavic possessive adjective construction, illustrated in (1), is intriguing in that it exhibits some properties normally associated with adjectives, and other properties that are characteristic of nominal possessors.

- (1) *wučerj+ow+i*                      *syn+ojo*  
teacher+PA+MASC.NOM.PL    sons+MASC.NOM.PL  
'the teacher's sons'  
(UPPER SORBIAN; Faßke (1981: 381), quoted in Corbett (1987: 301))

Morphologically, possessive adjectives (PAs) behave like adjectives in that they agree in number, gender, and case with the possessum. However, as we will show, their syntactic behaviour suggests that they are more possessors than adjectives. The facts presented here have been noticed before, but they have not been given an explicit formal syntactic treatment. As we will see, although many Slavic languages have PAs, a comparison of their structure and behaviour in two West Slavic languages—Upper Sorbian and Czech—strongly suggests that the construction is not cross-linguistically uniform. There are clear differences, even between closely related languages. However, as we will attempt to show, the differences between possessive adjectives in Upper Sorbian and those in Czech can be attributed to grammatical properties of the functional element heading the construction.

### 2. Three Upper Sorbian possessive constructions

In Upper Sorbian, possession can be expressed in three ways: by a possessive adjective, by an adnominal genitive, or by a prepositional phrase. However, as described in the following sections, the three alternatives are not fully interchangeable.

#### 2.1 Possessive adjective (PA)

- (2) *wučerj+ow+a*                      *dźowk+a*  
teacher+PA+F.NOM.SG    daughter+F.NOM.SG  
'the teacher's daughter' (Faßke 1981: 384)

The PA construction can be used only when the possessor is animate, singular, and definite. As Faßke (1996: 66) puts it, possessive adjectives are formed only from nouns that denote a concrete and specific individual.<sup>1</sup> The nominal in

<sup>1</sup> The original German version states that "sie nur von Substantiven gebildet werden, wenn diese ein konkretes und bestimmtes Individuum bezeichnen [...]."

(2) therefore cannot be interpreted as ‘a teacher’s daughter.’ The restriction is also evident in (3a), where the possessor is plural, and (3b), where the possessor is indefinite. Both of these examples are ungrammatical; the adnominal genitive must be used instead.

- (3) a. \* *naš+ich muž+ow+e praw+o*  
 our+M.GEN.PL husband+PA+NT.NOM.SG right+NT.NOM.SG  
 Intended: ‘our husbands’ right’ (Corbett 1987: 302)
- b. \* *někajk+eho muž+ow+e praw+o*  
 some+M.GEN.SG husband+PA+NT.NOM.SG right+NT.NOM.SG  
 Intended: ‘some husband’s right’ (Corbett 1987: 302)

## 2.2 Adnominal genitive

The adnominal genitive construction is not restricted as the PA is. It can be used when the possessor is indefinite, or inanimate, or plural, as shown in (4).

- (4) a. *praw+o někajk+eho muž+a*  
 right+NT.NOM.SG some+M.GEN.SG husband+M.GEN.SG  
 ‘some husband’s right (right of some husband)’ (Corbett 1987: 302)
- b. *tvarc to+ho+le hrod+u*  
 builder.M.NOM.SG this+M.GEN.SG+PROX. castle+M.GEN.SG  
 ‘the builder of this castle’ (Faßke 1981: 454)
- c. *praw+o naš+ich muž+ow*  
 right+NT.NOM.SG our+M.GEN.PL husband+M.GEN.PL  
 ‘our husbands’ right (right of our husbands)’ (Corbett 1987: 302)

However, an animate singular possessor is normally interpreted as indefinite, as shown in (5). If the possessor were definite, a PA would be used instead in ordinary speech, as in (2) above.

- (5) *džowk+a wučerj+a*  
 daughter+F.NOM.SG teacher+M.GEN.SG  
 ‘daughter of a teacher’ (Faßke 1981: 384)

Corbett (1987: 302) notes that, when the possessor nominal is a proper name, as in (6), the PA (6a) is preferred to the adnominal genitive (6b), which is judged as markedly literary:

- (6) a. *Jan+ow+a knih+a*  
 Jan+PA+FEM.NOM.SG book+FEM.NOM.SG  
 ‘Jan’s book’
- b. ? *knih+a Jan+a*  
 book+FEM.NOM.SG Jan+MASC.GEN.SG  
 ‘Jan’s book’

### 2.3 Prepositional phrase

Possessors in Upper Sorbian can also appear inside a prepositional phrase, as in (7); Corbett (1987: 302) describes this construction as “a Germanism.”

- (7) *knih+a*                      *wot Jan+a*  
 book+FEM.NOM.SG of Jan+MASC.GEN.SG  
 ‘Jan’s book’ (Corbett 1987: 302)

Apart from the presence of the preposition *wot*, the PP construction is very similar to the adnominal genitive, differing from it primarily in register. The prepositional construction is colloquial, while the adnominal genitive is more literary, especially in contexts where the PA is possible.

## 3. The syntactic category of possessive adjectives

### 3.1 Adjective-like properties

PAs are similar in several respects to adjectives. First, they agree in gender, number, and case with the possessum, as shown in (8).

- (8) a. *wučerj+ow+e*                      *blid+o*  
 teacher+PA+NEUT.NOM.SG table+NEUT.NOM.SG  
 ‘the teacher’s table’ (Faßke 1981: 381)  
 b. *wučerj+ow+i*                      *syn+ojo*  
 teacher+PA+MASC.NOM.PL son+MASC.NOM.PL  
 ‘the teacher’s sons’ (Faßke 1981: 381)  
 c. *wučerj+ow+eje*                      *džowk+i*  
 teacher+PA+FEM.GEN.SG daughter+FEM.GEN.SG  
 ‘of the teacher’s daughter’ (Faßke 1981: 381)

Second, the forms of the suffixes that mark these features on PAs in Upper Sorbian are the same as those used on ordinary adjectives.

Finally, PAs can be formed even from ‘indeclinable’ nouns. These nouns are usually borrowings, such as *abbé* ‘priest.’ When they appear as nouns, they are not inflected with the ordinary nominal affixes for number and case. Corbett (1987: 305), citing Richter (1980), points out that the fact that such nouns can appear as PAs makes the PA suffix *-ow* look like a very productive derivational affix deriving adjectives from (uninflected) nouns, rather than like an inflectional possessive marker.

### 3.2 Non-adjective-like properties

There are, however, several ways in which PAs in Upper Sorbian differ from ordinary adjectives, and seem to resemble nominals. They can themselves be modified, as shown in (9), and they can be (recursively) possessed, as in (10).

- (9) *star+eho                      wučerj+ow+a                      žona*  
 old+MASC.GEN.SG teacher+PA+FEM.NOM.SG wife+FEM.NOM.SG  
 ‘the old teacher’s wife’ (Šewc-Schuster 1976: 24)
- (10) *naš+eho    nan+ow+eho    bratr+ow+e                      dźěć+i*  
 our+M.G.SG father+PA+M.G.SG brother+PA+N.NM.PL child+N.NM.PL  
 ‘our father’s brother’s children’ (Faßke 1996: 68)

The morphology of the modifier in (9), and of the further possessors in (10), clearly shows agreement with the modified or possessed possessor, not with the possessum. The adjective in (9) is masculine and genitive, agreeing with ‘teacher,’ rather than feminine and nominative, to agree with ‘wife.’ In (11) below, ‘my’ shows masculine genitive singular marking, agreeing with ‘husband’s,’ and not feminine or dual or nominative, as would be required if it were to agree with ‘sisters.’

- (11) *moj+eho                      muž+ow+ej                      sotř+e*  
 my+MASC.GEN.SG man+PA+FEM.NOM.DU sister+FEM.NOM.DU  
 ‘my husband’s [two] sisters’ (Faßke 1981: 383)

A second nominal property of PAs in Upper Sorbian is that they can serve as the antecedent of a pronoun, as in (12).

- (12) *To je [naš+eho    wučerj]<sub>i</sub>+ow+a                      zahrodk+a.*  
 that is our+M.GEN.SG teacher+PA+F.NOM.SG garden+F.NOM.SG  
 ‘That is [our teacher]<sub>i</sub>’s garden.’

*Wón<sub>i</sub> wjele w njej dźěła.*  
 he a.lot in it works

‘He<sub>i</sub> works in it a lot.’ (Faßke 1981: 385)

Nouns inside regular denominal adjectives are not referential in this way, as illustrated in (13). Here, the pronoun is unambiguously marked to agree with the feminine noun ‘leather,’ and thus cannot be construed as coreferential with the masculine ‘coat.’ The sentence is infelicitous because ‘leather’ is inside a derived adjective and thus inaccessible for coreference.

- (13) *To je kož+an+y                      plašč.    #Won+a je droh+a.*  
 that is leather+ADJ+M.SG coat.M.SG it+F.SG is expensive+F.SG  
 Intended: ‘That is a leather<sub>i</sub> coat. It<sub>i</sub> is expensive.’ (Faßke 1981: 385)

Also unlike derived adjectives such as *kožany*, PAs have the full range of interpretations available to genitives. They need not be possessors, and indeed they can bear other thematic roles assigned by an argument-taking head noun. Thus, the PA in (14) is interpreted as the external argument of ‘visit,’ while the one in (15) is interpreted as the internal argument of ‘burial.’

- (14) *Hilž+in+y*                      *wopyt*  
 Hilža+PA+MASC.NOM.SG visit.MASC.NOM.SG  
 ‘Hilža’s visit’ (Faßke 1981: 386, quoted in Corbett 1987: 329)
- (15) *Jur+ow+y*                      *pohrjeb*  
 Juro+PA+MASC.NOM.SG burial.MASC.NOM.SG  
 ‘Juro’s burial’ (Faßke 1981: 386, quoted in Corbett 1987: 329)

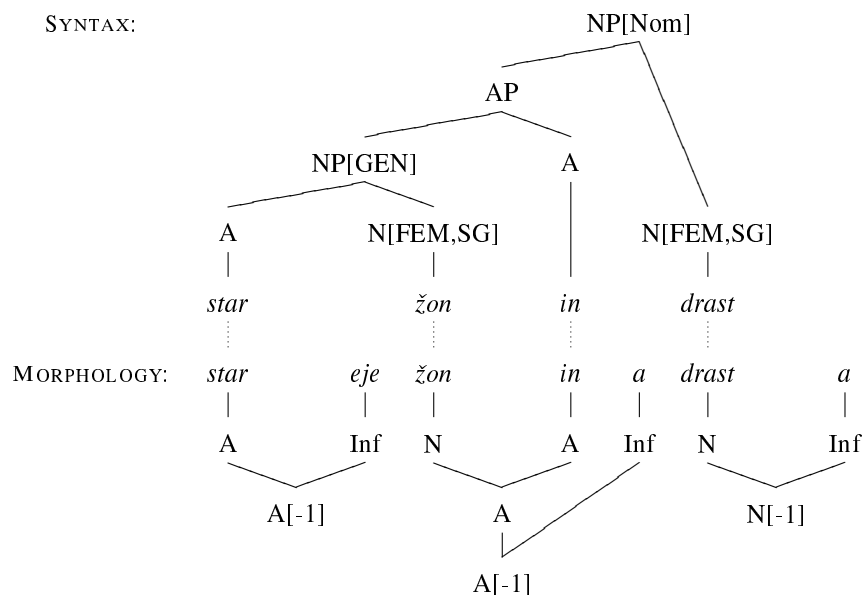
#### 4. Syntactic structure

##### 4.1 Previous treatments

Sadock (1985, 1991) discusses Upper Sorbian PAs as an example of the kind of mismatch between morphology and syntax that his theory of Autolexical Syntax is well-equipped to handle. He gives the double tree in (17), which captures the intuition that in (16), ‘old woman’ is a syntactic/semantic unit, but *žonina* is a morphological unit.

- (16) *star+eje*                      *žon+in+a*                      *drast+a*  
 old+FEM.GEN.SG woman+PA+FEM.NOM.SG dress.FEM.NOM.SG  
 ‘the old woman’s dress’ (Sadock 1991: 160)

- (17) Sadock (1991: 160):



Both Šewc-Schuster (1976) and Faßke (1981) suggest that the PA construction is derived from an underlying adnominal genitive, but they are not explicit about the structures and processes involved. Šewc-Schuster’s (1976) derivation is given in (18).

(18) Šewc-Schuster (1976: 24):

- žona stareho wučerja* adnominal genitive ('the wife of the old teacher')  
 → *stareho wučerja žona* prenominal genitive  
 → *stareho wučerjowa žona* possessive adjective ('the old teacher's wife')

Schaarschmidt (2003: 135) has the following to say about Šewc-Schuster's analysis:

Schuster-Šewc's [*sic*] intermediate structure *stareho wučerja žona* 'the old teacher's wife' [...] seems to be intuitively correct, especially since such structures also occur overtly instead of a possessive adjective construction (Faßke 1996: 67). One must wonder, however, why this structure could not be viewed as the underlying structure, perhaps as a feature complex on a head noun, rather than the result of a linearly conditioned transformational rule. **A formal syntactic analysis will aid in solving this question.** [*Emphasis added.*]

Faßke (1981) also alludes to a transformational relation between the adnominal genitive and the PA, as shown in (19).

(19) Faßke (1981: 384):

The possessive [adjective] corresponds at Deep Structure to a noun in the adnominal genitive:

*džowka wučerja* → *wučerjowa džowka*

*džowka našeho wučerja* → *našeho wučerjowa džowka*

Rappaport (1998, 2000) takes a morphological approach. He proposes that PAs are derived by a post-syntactic derivational morphological rule that takes an input categorially specified as both [N] and [D] and adds the feature [Adj], as shown in (20).

(20) Rappaport (1998: 11):

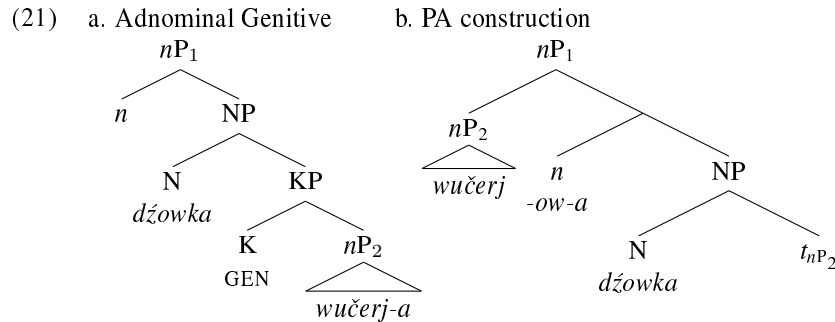
*Maš*:- [D, N, third person, singular, feminine, genitive] ⇒

*Maš-in*: [D, N, Adj, third person, singular, feminine]

The addition of [Adj] feeds post-syntactic concord, which assigns new  $\phi$ -features to the PA and spells them out.

#### 4.2 A syntactic account of PAs

Building on the work cited in the previous section, and taking seriously the intuition that PAs are in some fashion derivationally related to genitives, we propose the structures in (21) for adnominal genitives and PAs in Upper Sorbian.

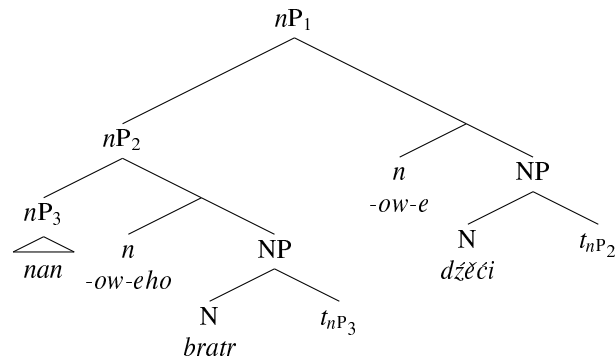


In both structures, the possessor merges in NP as a sister to N, as we assume ordinary adjectives do. The crucial difference between an adnominal genitive and a possessive adjective is whether the possessor *nP* is in a Case Phrase (KP), as in the adnominal genitive structure, or not, as in the PA structure. If the possessor is in a KP, it receives genitive case *in situ*, and the construction surfaces as an adnominal genitive. The colloquial PP possessor construction mentioned in §2.3 is similar to the adnominal genitive, except that the possessor is in a PP rather than a KP.

If, however, the possessor is simply *nP*, it does not receive case *in situ*. We propose that it receives case from a special possessive *n* head, as shown in (21b). This head has an EPP feature, and thus attracts a nominal to its specifier. It also has uninterpretable definite, singular, and animate  $\phi$ -features, which must be checked by its specifier. Finally, it licenses and spells out genitive case on its specifier (as *-ow* or *-in*, depending on the gender of the possessor).

This analysis accounts for the nominal properties of PAs in Upper Sorbian, as follows. First, since the possessor is a full *nP*, it has the structure necessary to accommodate modifiers. And, as a full *nP*, it can itself be headed by the same special genitive-marking *n*, and have a possessor of its own, as shown in (22).

- (22) *nan+ow+eho*      *bratr+ow+e*      *džěći*  
 father+PA+M.GEN.SG    brother+PA+N.NOM.PL    child.PL  
 ‘father’s brother’s children’



Since the structure is syntactically generated, the possessor *nP* is visible to coindexing and binding, and can therefore serve as the antecedent of a pronoun.

The structure also accounts for another property of PAs: they can be modified by a relative clause which surfaces after the possessum, as shown in (23). Under the analysis we propose, the relative clause is stranded postnominally when the *nP* moves to check the EPP feature of the special *n* head.

- (23) *Słysetaj* ... *Wićaz<sub>i</sub>+ow+y* *htós,* *kotryž<sub>i</sub> je zastupit.*  
 hear.3.PL.PRES *Wićaz+PA+M.A.SG* voice.M.A.SG who is gone-in  
 ‘They hear [...] the voice of *Wićaz<sub>i</sub>*, who<sub>*i*</sub> has gone in.’  
 (Corbett 1987: 304, citing Löttsch 1965: 378)

As shown in (14) and (15), a PA can be either an external or an internal argument of the head noun. However, it is also possible for a nominal to contain both an argumental PA and an argumental adnominal genitive, and our proposal predicts that in such a nominal, the PA must be the external argument. Because the external argument merges higher than the internal argument, it is the external argument that will move to check the EPP of *n* and thereby become a PA.

Comrie (1976) and Rappaport (2000) show that this prediction is borne out in Russian, Czech, and Bulgarian, and we expect that it holds in Upper Sorbian as well. The pattern is illustrated by the Russian examples in (24): (24a) shows that it is possible for the internal argument of ‘humiliation’ to be realized as a PA when no external argument is present, but in (24b) the PA can only be an external argument and the adnominal genitive an internal argument.

- (24) RUSSIAN; Rappaport (2000: 26)
- a. *Ja byl sviditel+em* *ego uniženi+i.*  
 I was witness+M.INST.SG his.PA humiliation+N.LOC.SG  
 ‘I was a witness to his humiliation.’
- b. *Ja byl sviditel+em* *ego uniženi+i*  
 I was witness+M.INST.SG his.PA humiliation+N.LOC.SG  
*inostranc+a.*  
 foreigner+M.GEN.SG  
 ‘I was a witness to his humiliation of a foreigner.’  
 (NOT: ‘... his humiliation by a foreigner’)

Our syntactic treatment of PAs thus accounts for all the ways in which they pattern like nouns: their ability to be interpreted as arguments, their ability to serve as antecedents, and their ability to be modified by adjectives and relative clauses. The main respect in which PAs resemble adjectives is that they are inflected to agree with their head noun, a property which they also share with demonstratives. We assume that this inflection results from a rule of concord that copies  $\phi$ -features from the head noun to all functional heads in the nominal phrase, including the PA *n* head.

In representing PAs as *n* heads with *nP* specifiers, we resolve the apparent conflict between derivational and inflectional properties noted by Corbett (1987).



On the one hand, a PA is not simply an inflected form of a noun: the *n* head is itself inflected like an adjective, and ‘indeclinable’ nouns such as *abbé* can appear in the specifier position. On the other hand, a PA is not a denominal adjective: it contains a syntactically accessible nominal.

## 5. Czech and beyond

### 5.1 Possessors in Czech

While some properties of PAs are consistent across the Slavic languages, the Upper Sorbian pattern is not entirely representative; the construction is rather more restricted in most of the other Slavic languages, as can be seen by comparing Upper Sorbian with Czech (also a member of the West Slavic branch). Unmodified possessors in Czech can be expressed by PAs that look much like those of Upper Sorbian, as illustrated in (25).

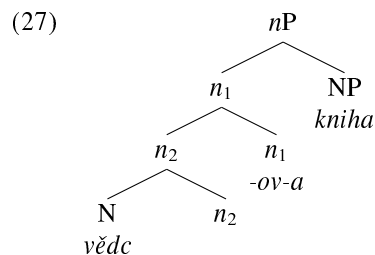
- (25) *vědc+ov+a*                      *knih+a*  
 scientist+PA+F.NOM.SG book+F.NOM.SG  
 ‘the scientist’s book’ (Comrie 1976: 184)

However, modified PAs of the sort found in Upper Sorbian are not possible, as shown in (26a); a modified possessor must instead be expressed as an adnominal genitive, as in (26b).

- (26) a. \* *star+ého*            *vědc+ov+a*                      *knih+a*  
 old+M.GEN.SG scientist+PA+F.NOM.SG book+F.NOM.SG  
 Intended: ‘the old scientist’s book’ (Comrie 1976: 185)
- b. *knih+a*                      *star+ého*                      *vědc+e*  
 book+F.NOM.SG old+M.GEN.SG scientist+M.GEN.SG  
 ‘the old scientist’s book’ (Comrie 1976: 185)

### 5.2 A non-unified account

We infer from the pattern in (26) that the structure of PAs is not entirely the same across all Slavic languages. Czech PAs, unlike those of Upper Sorbian, but like those in most other Slavic languages, are non-phrasal. Specifically, we propose that the possessor is adjoined to *n* as in (27) and cannot be modified or possessed.



Although they are not phrasal, these PAs are still referential and can thus antecede pronouns, as shown in (28).

- (28) *To je [matč<sub>i</sub>+in dům]<sub>j</sub>.*  
 this is mother+PA.M.NM.SG house.M.NM.SG  
 ‘This is [mother<sub>i</sub>’s house]<sub>j</sub>.’

*Ø<sub>i</sub> Chce jej<sub>j</sub> prodat.*  
 pro wants it.M.ACC.SG to.sell

‘She<sub>i</sub> wants to sell it<sub>j</sub>.’ (Corbett 1987: 314)

This pattern can be accounted for as follows. Nominals in Czech can be referential even when they do not project phrases. Like most Slavic languages, Czech lacks determiners; the referential and argumental status of a nominal is contributed by *n* rather than by D. In the structure in (27), *n*<sub>2</sub> makes the noun ‘scientist’ referential, but does not project. Instead, ‘scientist’ is incorporated into *n*<sub>2</sub>, and the resulting structure is then incorporated into the PA head *n*<sub>1</sub>. If we assume that only phrasal nominals, and not nominal heads, require case, then the difference between Czech and Upper Sorbian can be explained by saying that in Czech the PA *n* head does not assign genitive case, while the Upper Sorbian one does.

The Czech PA construction essentially involves incorporation of the possessor to the possessive *n*-head. This process is analogous in at least some respects to incorporation of noun roots to *v* heads in other languages; see, for example, Johns (2007) on Inuktitut. PAs in Upper Sorbian, because they are phrasal, are more like the pseudo-incorporation structures in Niuean discussed by Massam (2001).

Phrasal possessors in Czech must receive genitive case, and thus must appear in the adnominal genitive construction, where they are assigned case *in situ* by the K head.

Other Slavic languages show a range of patterns, as discussed by Corbett (1987). PAs are consistently referential, but differ as to whether and how they can be modified. The two types of PA structure proposed here account for the endpoints of the continuum; we expect that the intermediate possibilities will involve minor variations on one or the other of them.

## 6. Conclusions and implications

The conclusion to be drawn at this point is that the term ‘possessive adjective’ is a semi-misnomer. PAs are indeed possessive, but they are not adjectives. However, the structures we have proposed deserve further scrutiny, in the context of Slavic nominal structure more generally.

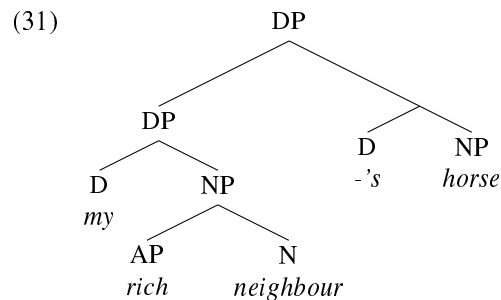
The structures proposed above treat nominal arguments in Upper Sorbian and Czech as *n*Ps rather than DPs, without explicit justification. While nothing in our proposals hinges crucially on the presence or absence of DP, Bošković (2007,

2010) draws a major typological distinction between languages with and without articles, with significant attention to Slavic languages, among which both types can be found. He argues on syntactic grounds that languages without articles have NP arguments, while languages with articles have DPs. (See also Chierchia 1998 and Piriawiboon 2010 for a semantic motivation for this claim.)

In contrasting Serbo-Croatian (which lacks articles) with DP languages, Bošković (2007: 107) notes that PAs in Serbo-Croatian cannot be possessed or modified, as illustrated in (29) and (30), and infers from this that they are adjectives.

- (29) (\**moi*) (\**bogati*) *sused+ov* *konj*  
 my rich neighbour+PA horse  
 ✓ ‘the neighbour’s horse’  
 \* ‘my neighbour’s horse’  
 \* ‘the rich neighbour’s horse’  
 \* ‘my rich neighbour’s horse’ (Bošković 2007: 107)
- (30) a. *sestr+in+e* *star+e* *slik+e*  
 sister+PA+AGR old+AGR picture+PL  
 ‘sister’s old pictures’  
 b. *star+e* *sestr+in+e* *slik+e*  
 old+AGR sister+PA+AGR picture+PL  
 ✓ ‘sister’s old pictures’  
 \* ‘old(er) sister’s pictures’ (Zlatić 1998: 9)

This contrasts with the kinds of possessives that are possible in languages like English, which have articles, and whose nominals are thus DPs, as shown in (31).



However, Serbo-Croatian PAs can serve as antecedents, as in (32). Here, the PA *Marijin* can bind the reflexive anaphor *sebi*.

- (32) *Jovan<sub>i</sub> je procita+o* *Marij<sub>j</sub>+in* *clanak o* *sebi<sub>{i,j}</sub>*.  
 John is read+PAST.PART Mary+PA article about REFL  
 ‘John<sub>i</sub> read Mary<sub>j</sub>’s article about {himself<sub>i</sub>, herself<sub>j</sub>}.’  
 (Zlatić 1997, quoted in Rappaport 2000: 24)

If PAs in Serbo-Croatian are accessible as antecedents, then they must have syntactically accessible internal structure, and should therefore not be treated as syntactically atomic adjectives. They are perhaps better analyzed as head-adjoined *n*'s, along the lines sketched above for Czech.

Furthermore, Upper Sorbian, which is standardly described as lacking articles, does allow phrasal PAs, as discussed in detail above. Interestingly, though, Upper Sorbian does not lack articles entirely; Breu (2004) shows that in colloquial Upper Sorbian the proximal demonstrative TÓN has been developing into a definite article, under the influence of German. A case might be made on these grounds that Upper Sorbian has DPs, and that Upper Sorbian PAs are similar in structure to the English possessive in (31). However, such an account would be diachronically dubious if the emerging determiners are a more recent development than the phrasal PAs.

However, Upper Sorbian is not the only Slavic language that allows phrasal PAs. PAs in Slovak can also be possessed and modified, as shown in (33), and Slovak does not have articles.

- (33) *naš+ho            dobr+ého            sused+ov+a*  
 our+M.GEN.SG good+M.GEN.SG neighbour+PA+F.NOM.SG  
*záhrad+a*  
 garden+F.NOM.SG  
 'our good neighbour's garden' (Schaarschmidt 2003: 123)

Bošković (p.c.) agrees that Upper Sorbian and Slovak phrasal PAs involve movement of the possessor to the specifier of some nominal projection. Crucially, for him, that projection cannot be DP, at least in Slovak, since under his view Slovak should lack D altogether. He argues (Bošković 2007, 2010) that the presence or absence of DP in a language correlates with a wide range of typological properties. Since DP determines a phase, its presence or absence in a structure has significant consequences for many extraction phenomena. It would be interesting to explore how Upper Sorbian, with its possibly emerging determiners, and Slovak, with phrasal PAs but no determiners, fit into this picture.

## References

- Bošković, Željko. 2007. What will you have, DP or NP? In *NELS 37: Proceedings of the Thirty-Seventh Annual Meeting of the North East Linguistic Society*, eds. Emily Elfner, and Martin Walkow, vol. 1, 101–114. Amherst, MA: GLSA.
- Bošković, Željko. 2010. Phases beyond clauses. Presented at GLOW XXXIII, University of Wrocław, April 2010.
- Breu, Walter. 2004. Der definite Artikel in der obersorbischen Umgangssprache. In *Slavistische Linguistik 2002: Referate des XXVIII. Konstanzer Slavistischen Arbeitstreffens*, eds. Marion Krause, and Christian Sappok, vol. 434 of *Slavistische Beiträge*, 9–57. München: Otto Sagner.
- Chierchia, Gennaro. 1998. Reference to kinds across languages. *Natural Language Semantics* 6:339–405.

- Comrie, Bernard. 1976. The syntax of action nominals: A cross-language study. *Lingua* 40:177–201.
- Corbett, Greville G. 1987. The morphology/syntax interface: Evidence from possessive adjectives in Slavonic. *Language* 63:299–345.
- Faßke, Helmut. 1981. *Grammatik der obersorbischen Schriftsprache der Gegenwart: Morphologie*. Bautzen: Domowina.
- Faßke, Helmut. 1996. *Sorbischer Sprachatlas 15: Syntax*. Bautzen: Domowina.
- Johns, Alana. 2007. Restricting noun incorporation: Root movement. *Natural Language and Linguistic Theory* 25:535–576.
- Lötzsch, R. 1965. Das sogenannte Possessivadjektiv im Slawischen, speziell im Sorbischen, und seine Stellung im System der Redeteile. *Forschungen und Fortschritte* 39:377–379.
- Massam, Diane. 2001. Pseudo noun incorporation in Niuean. *Natural Language and Linguistic Theory* 19:153–197.
- Piriyawiboon, Nattaya. 2010. Classifiers and determiner-less languages: The case of Thai. Doctoral dissertation, University of Toronto.
- Rappaport, Gilbert C. 1998. The Slavic noun phrase. Presented at the Workshop on Comparative Slavic Morphosyntax, Bloomington, IN, June 1998. Available online at <http://www.indiana.edu/~slavconf/linguistics/rapp.pdf>.
- Rappaport, Gilbert C. 2000. The Slavic noun phrase. Manuscript, University of Texas at Austin. Revised version of a position paper presented at the Workshop on Comparative Slavic Morphosyntax, Bloomington, IN, June 1998. Available online at <http://www.utexas.edu/courses/slavling/grapp/papers/Slavnp.pdf>.
- Richter, Heinz. 1980. Die Possessivadjektive im Sorbischen unter Berücksichtigung der benachbarten slawischen Sprachen. Dissertation zur Promotion A, Karl-Marx-Universität, Leipzig.
- Sadock, Jerrold M. 1985. Autolexical syntax: A proposal for the treatment of noun incorporation and similar phenomena. *Natural Language and Linguistic Theory* 3:379–439.
- Sadock, Jerrold M. 1991. *Autolexical Syntax: A Theory of Parallel Grammatical Representations*. Studies in Contemporary Linguistics. Chicago: University of Chicago Press.
- Schaarschmidt, Gunter. 2003. Some contrastive-typological features of Upper Sorbian syntax (agreement, passivization, and deletion processes). *Canadian Slavonic Papers* 45:119–139.
- Šewc-Schuster, Hinc. 1976. *Gramatika hornjo-serbskeje rěče: Zwjazk-syntaksa*, vol. 2. Budyšin: Ludowe nakładstwo Domowina.
- Zlatić, Larisa. 1997. The structure of the Serbian noun phrase. Doctoral dissertation, University of Texas, Austin.
- Zlatić, Larisa. 1998. Slavic noun phrases are NPs not DPs. Presented at the Workshop on Comparative Slavic Morphosyntax, Bloomington, IN, June 1998. Available online at <http://www.lztranslation.com/pdf/SlavicNPsAsNPs2.23.03.pdf>.