

Linguistic Society of America

The Morphology/Syntax Interface: Evidence from Possessive Adjectives in Slavonic

Author(s): Greville G. Corbett

Source: *Language*, Vol. 63, No. 2 (Jun., 1987), pp. 299-345

Published by: Linguistic Society of America

Stable URL: <http://www.jstor.org/stable/415658>

Accessed: 23/02/2009 04:52

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at <http://www.jstor.org/action/showPublisher?publisherCode=lsa>.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is a not-for-profit organization founded in 1995 to build trusted digital archives for scholarship. We work with the scholarly community to preserve their work and the materials they rely upon, and to build a common research platform that promotes the discovery and use of these resources. For more information about JSTOR, please contact support@jstor.org.



Linguistic Society of America is collaborating with JSTOR to digitize, preserve and extend access to *Language*.

<http://www.jstor.org>

THE MORPHOLOGY/SYNTAX INTERFACE: EVIDENCE FROM POSSESSIVE ADJECTIVES IN SLAVONIC

GREVILLE G. CORBETT

University of Surrey

P[ossessive] A[djective]s in Slavonic, formed from nouns via suffixation, show unusual syntactic behavior. In Upper Sorbian, the form of attributive modifiers, relative pronouns, and personal pronouns can be controlled by the syntactic features of the noun underlying the PA. Control of attributive modifiers gives rise to phrases in which word structure and phrase structure do not match. The fact that the underlying noun is available for syntactic purposes suggests that PA formation is an inflectional process, while other factors (such as change of word-class membership) point just as clearly to a derivational process. It thus appears that any sharp differentiation between inflectional and derivational morphology must be abandoned. Data presented from all thirteen Slavonic languages, based on extensive work with native speakers, show that the control possibilities of the PA vary considerably. However, control of the attributive modifier is possible only if control of the relative pronoun is also possible, and that in turn only if control of the personal pronoun is possible. This result is subsumed under the constraints of the Agreement Hierarchy.*

The last few years have seen the gradual re-acceptance of the traditional view that morphology requires separate study, rather than merely being divided between syntax and phonology (Anderson 1982:571–2). Once this is recognized, the question arises as to how morphology interfaces with other parts of linguistic structure (cf. Comrie 1982, Zwicky 1983, Baker 1985). This paper presents data which are significant for the syntax/morphology interface, since the phrase structure and word structure of the examples to be examined are radically different. The behavior of the P[ossessive] A[djective] in Upper Sorbian is described in §1; the theoretical significance of the construction is then outlined in §2, with consideration of its relevance to the theory of autolexical syntax (Sadock 1985) and to the distinction between inflectional and derivational morphology (cf. Anderson). To highlight the difficulties caused for the latter distinction, as well as to avoid the possibility of detailed theoretical discussion based on superficially interesting data which later prove inadequate, relevant information is given on all the languages identified as having a com-

* Versions of this paper were read at the Spring Meeting of the Linguistics Association of Great Britain, Salford, April 1985, and in the Department of Theoretical Linguistics, Leipzig University, May 1985. I am grateful to those present for their comments, and to all the following for help of various kinds: Stephen Barbour, Jan Bosák, Wayles Browne, Catherine Chvany, Michael Colenso, N. E. Collinge, Bernard Comrie, Annabel Cormack, Francis Cornish, L'. Đurovič, Helmut Fasske, Jan Firbas, Richard Hudson, David Huntley, Johanna Nichols, Janez Orešnik, H. Richter, H. Šewc-Schuster, Robert Slonek, Neil Smith, Christo Stamenov, Gerald Stone, A. E. Suprun, and Roland Sussex. I am also very thankful for the time and intuitions of over fifty native speakers, especially P. Asipowich, Božena Činkole, Katarzyna Dziubalska-Kotaczyk, Smiljka Gee, Barbara Gorayska, Ewa Jaworska, Duška Johnson, Olga Lalor, Anna Maslennikova, J. Michaluk, Magda Newman, Alexander Soloshenko, Bogusia Sussex, and Vaska Waterhouse. Errors are of course mine. The British Council provided a grant toward travel to Leipzig and Bautzen. The paper is based on research funded in part by the Economic and Social Research Council (UK), reference number C00232218. The support of both is gratefully acknowledged.

parable construction (§3). It turns out that the data can be covered by a single cross-linguistic generalization, and a plausible hypothesis as to the historical development of the construction is offered (§4). Related problems, which may offer scope for wider generalizations, are recorded in §5.

1. POSSESSIVE ADJECTIVES IN UPPER SORBIAN. This language belongs to the West Slavonic group, the other branches of the family being South and East Slavonic. It is spoken in Lusatia, which is in the eastern part of East Germany (GDR), and its cultural center is Budyšin (Bautzen). It is hard to give the number of speakers; taking Upper Sorbian together with the related Lower Sorbian, the total number of speakers is around 60,000. There are no monolingual adult speakers: all are bilingual in German, though some speak Sorbian better. (Note that the construction under consideration is not found in German, but is found in other Slavonic languages; thus there is no question of interference from German.)

The construction of interest is illustrated by the following phrase (Michałk 1974:510):¹

- (1) *mojeho* (gen. sg. masc.) *bratrowe* (nom. pl.) *džěći* (nom. pl.)
 my brother's children

Bratrowe is a PA, formed from the noun *bratr* 'brother'. The adjectival stem *bratrow-* takes the ending *-e* to show agreement with the head noun *džěći*. The problem is the form *mojeho*, which has no apparent head; clearly it does not agree with *džěći*, since it carries the wrong features. It seems rather that its agreement controller is a form of *bratr*, which is masc. sg. and which underlies the adjective *bratrowy* (this is the citation form, the nom. sg. masc.). Note that ex. 1 is synonymous with the adnominal genitive:

- (2) *džěći* (nom. pl.) *mojeho* (gen. sg. masc.) *bratra* (gen. sg. masc.)
 children of.my brother

In both instances, the children are those of only one brother. Thus *bratrowe* is plural solely because it agrees with the head noun *džěći*, while at the same time it is the controller of *mojeho*.

This is not the sort of behavior normally associated with adjectives. My first task is therefore to demonstrate that *bratrowy* and similar forms are indeed adjectives. (Their status cannot be reflected in the glosses; however, to make the examples easier to follow, I shall use *-s* forms consistently to gloss the PA, and *of* for the adnominal genitive.) In §1.2, we shall determine the conditions under which such adjectives can be formed, and then we will investigate what other elements they can control (§1.3).

1.1. ADJECTIVAL PROPERTIES. The property which makes it quite clear that forms like *bratrowy* are indeed adjectives is agreement. They agree in precisely the same features—number, case, and gender (including sub-genders)—as do

¹ The construction has been considered in various places. This section is based largely on the chapter by Michałk & Fasske in Fasske (1981:381–8).

In such a construction, the genitive must be used:

- (10) *prawo* (sg. neut.) *našich* (pl. gen.) *mużow* (pl. gen.)
 right of.our husbands

Since a specific referent is required for the use of the PA, *mużowy* must indicate a specific husband; it cannot be used generically. Nor can it have a non-specific referent:

- (11) **někajkeho* (sg. gen.) *mużowe* (sg. neut.) *prawo* (sg. neut.)
 some husband's right

Again, the adnominal genitive must be used:

- (12) *prawo* (sg. neut.) *někajkeho* (sg. gen.) *muža* (sg. gen.)
 right of.some husband

While these adjectives share several syntactic properties with ordinary adjectives, their formation is restricted in a way not found with other derived adjectives.

The PA is the normal method of expressing what is conveyed by the genitive in many other Indo-European languages. It would be unusual to find a one-word adnominal genitive referring to a specific person:

- (13) ?*kniha Jana* (sg. gen.)
 book of.Jan

The normal expression in the spoken language would be:⁴

- (14) *Janowa* (sg. fem.) *kniha* (sg. fem.)
 Jan's book

Furthermore, the PA is not restricted to possession; it can cover a wide range of genitive uses, including the subjective and objective genitive—a point taken up in §5.1, below.

⁴ This is the judgment of native speakers, also given by Richter (1980:139). The genitive as in 13 is possible if the logical accent falls on *Jana*, or in high literary style. For the sake of completeness, we should mention a third alternative:

- (a) *kniha wot Jana*
 book of Jan

The inclusion of the preposition *wot* is a Germanism. Ex. (a) was judged the second most common variant, after 14; it is colloquial and dialectal. According to Fasske (p.c.), the inclusion of an attributive modifier does not affect the relative stylistic positions of the variants. Thus the use of the PA is normal:

- (b) *našeho nanowe knihi*
 our father's books

The use of the preposition suggests dialectal usage:

- (c) *knihi wot našeho nana*
 books of our father

The genitive represents high style:

- (d) *knihi našeho nana*
 books of.our father

Other speakers, however, consider that examples like (b), with an attributive modifier present, indicate careful speech; they suggest that examples like (c) are more common.

1.3. THE POSSESSIVE ADJECTIVE AS CONTROLLER. What is striking about Upper Sorbian is that the PA construction is possible even though the corresponding adnominal genitive would include a modifier. We have already seen several examples where the PA controls an attributive modifier.⁵ This modifier takes its gender from the noun underlying the PA, not from the head noun (Fasske, 382–3):

- (15) *mojeho* (gen. sg. masc.) *mužowa* (nom. sg. fem.)
 my husband's
sotra (nom. sg. fem.)
 sister

Here *mojeho* is masculine in agreement with *muž* 'husband', which underlies *mužowa*. Consider next a PA formed from a feminine noun:

- (16) *mojeje* (gen. sg. fem.) *sotřiny* (nom. sg. masc.)
 my sister's
nawoženja (nom. sg. masc.)
 fiancé

Here *mojeje* is feminine because *sotra* 'sister', the source of *sotřiny*, is feminine; the gender of the head noun is irrelevant. The same is true here:

- (17) *mojeje* (gen. sg. fem.) *sotřine* (nom. sg. neut.)
 my sister's
městno (nom. sg. neut.)
 place

As previously stated, the PA is formed only when the referent is singular; this means its attributive modifier can only be singular, as in 15–17 (cf. 9). Furthermore, the attributive modifier is normally restricted to the genitive case, regardless of the case of the head noun (Fasske, 384):

- (18) *našeho* (gen. sg. masc.) *wučerjowu* (acc. sg. fem.)
 our teacher's
džowku (acc. sg. fem.)
 daughter
- (19) *k našeho* (gen. sg. masc.) *wučerjowej* (dat. sg. fem.)
 to our teacher's
džowce (dat. sg. fem.)
 daughter

There is a complication here. Provided that the PA stands in the singular (Fasske, 384), it is possible for the attributive modifier to take on the same features as those of the PA and head noun; this is known in Sorbian grammar as 'attraction'. Besides the expected 20, examples showing attraction, like 21,

⁵ The attributive modifier may itself be a PA (Lötzsch 1965:378):

přez Marineje (gen. sg. fem.) *mačernu* (acc. sg. fem.) *smjerć* (acc. sg. fem.)
 through Marja's mother's death

The PA *mačernu* controls the preceding PA *Marineje*, which is therefore gen. sg. Speakers accept this; but they say that the use of the adnominal genitive would be much more likely, especially in the spoken language.

are also found (Šewc-Schuster 1976:27):

- (20) *w našeho* (gen. sg. masc.) *nanowej* (loc. sg. fem.)
 in our father's
chěži (loc. sg. fem.)
 house

- (21) *w našej* (loc. sg. fem.) *nanowej* (loc. sg. fem.) *chěži* (loc. sg. fem.)
 in our father's house

Apart from the constraint that the PA must be in the singular, little is known about the factors which favor attraction.

While the ability of the PA to control an attributive modifier is particularly striking, this does not exhaust its controller potential. It is also able to control a relative pronoun (Löttsch, 378; cf. Fasske, 385):

- (22) *Stysetaj ... Wićazowy hlós, kotryž je zastupit.*
 (They) hear Wićaz's voice, who is gone.in

The relative pronoun *kotryž* is masc. sg.; the sense shows that its antecedent is *Wićaz*, the noun underlying the PA, and not *hlós* (which is also masc. sg.).

The PA can similarly control personal pronouns (Fasske, 385):

- (23) *To je našeho* (gen. sg. masc.) *wučerjowa* (nom. sg. fem.)
 that is our teacher's
zahrodka (nom. sg. fem.) *Wón* (nom. sg. masc.) *wjele w njej*
 garden he [our teacher] a.lot in it
džěta.
 works

The personal pronoun *wón* takes as its antecedent the noun phrase *naš wučer* 'our teacher', which underlies the phrase headed by the PA. This is not possible for other types of adjective, even relational adjectives derived from nouns:

- (24) *To je kožany plać.* **Wona* (nom. sg. fem.) *je droha.*
 that is leather coat it [leather] is expensive

Kožany is formed from *koža* 'leather', which is feminine; this noun is not available for anaphoric reference. However, PA's, as we have seen, can control attributive modifiers, relative pronouns, and personal pronouns.

2. THEORETICAL SIGNIFICANCE. I have given prominence to Upper Sorbian because it exhibits the most complete set of possibilities for the PA. The status of this formation in various Slavonic languages has, however, concerned scholars from time to time—originally in the context of the competing claims of inflectional and derivational morphology. The debate is worth reviewing briefly, particularly since the same concerns have recently been given prominence by Anderson. He considers two possible criteria: relative productivity—inflection is typically completely productive—and change of word-class membership (which can be effected only by derivational morphology). He finds neither criterion fully satisfactory, and concludes: 'Inflectional morphology is what is relevant to the syntax' (585–7). We shall see that these criteria have been used in earlier discussions; but the Slavonic data will not fit into the neat

division between inflectional and derivational morphology which Anderson proposes.

Trubetzkoy (1937:16) examined the situation in Old Church Slavonic. He claimed that, since every noun denoting an animate has a PA, the latter should be considered a part of the paradigm of the noun—just as participles are considered to be part of a verb paradigm. That is, the PA should be treated as a matter for inflectional rather than derivational morphology. Isačenko (1954:288–9) followed Trubetzkoy, citing Slovak data. The primary criterion used was productivity; but note that, in the material discussed so far, the PA is not totally productive, though it is largely so for animate nouns.

A dissenter to Trubetzkoy's analysis was Dmitriev 1961. He discussed Serbo-Croatian, where the PA is also highly productive; but he claimed that it could not be counted as part of the noun paradigm, since its 'grammatical meaning' was different. But he did accept the participle as part of the verb paradigm. A point not noted is that both formations involve a change of word-class membership. As demonstrated above for Upper Sorbian, the PA, formed from a noun, behaves in many respects like an adjective. According to Anderson (586), if a given process changes word-class membership, this is a sufficient—though not necessary—condition for classifying it as derivational.

It appears, therefore, that the formation of the PA in the material considered above is a matter of derivational morphology. There are other supporting arguments. Richter (116–17) points out that Upper Sorbian has a small number of indeclinable nouns, e.g. *abbé* 'priest'. Although these nouns cannot take inflectional endings, they do form PA's, e.g. *abbéowy*. Since other indeclinables in general permit derivational suffixes, this evidence suggests that PA formation is a matter of derivational morphology. Furthermore, inflectional morphology normally appears 'outside' derivational morphology (Anderson, 609). In Slavonic, there may be several prefixes and suffixes; but nouns and adjectives, at least, normally take only a single inflectional ending. This supports the analysis of the PA as formed derivationally, then taking inflections (marking case, number, and gender).

According to the criterion of change of word-class membership, along with other arguments, we should have to treat the PA in derivational morphology. But another line of argument leads to the opposite conclusion. Löttsch considers data from various Slavonic languages (control facts are as in §1.3; certain other constructions are discussed in §5.3). He claims that these syntactic characteristics of the PA are shared with the noun; thus he supports Trubetzkoy in treating the PA as part of the noun paradigm. Topolińska (1981:123) agrees. Fasske (381–8) goes as far as assigning them to a separate part of speech. The approach which emphasizes the syntactic facts is in accord with Anderson's conclusion.

Clearly, given the control possibilities of PA's in Slavonic (§1.3), their formation is relevant to syntax. Thus they meet the sufficient condition for being derivational, and they fully meet the definition of what is inflectional. They are therefore difficult to accommodate to the claim that

'... morphology is divisible into two parts: an inflectional part, which is integrated (and shares theoretical primes) with the syntax, and a derivational part, which is confined to the lexicon and opaque to the syntax.' (Anderson, 591)

The notion of opacity to syntax is worth considering a little further, since the data above are pertinent to questions of the status of lexical items, first raised in the debate on anaphoric islands. Postal (1969:207) suggests that 'lexical items are anaphoric islands with respect to outbound anaphora involving co-referential pronouns'; he extends this claim to derivatives (213–17). Pronouns are constrained to relate anaphorically to all, but not part of, the semantic structure of their antecedents. But exceptions to this constraint have been found. Thus Lakoff & Ross (1972:121) give this sentence:

(25) *John became a guitarist because he thought it was a beautiful instrument.*

Lakoff & Ross mark this with '?', but many speakers find it fully acceptable. Further exceptions are documented by Corum, who makes the point (1973:93) that anaphoric peninsulas, where anaphoric linking to part of the semantic structure of the antecedent is possible, suggest a weakness in the lexicalist position. However, this argument loses much of its force, since Browne (1974:620) shows that the anaphoric link may be not only to part of the semantic structure of the antecedent, but also just to items 'related to part of the semantic structure of the antecedent'. The importance of Slavonic for an understanding of the problems first raised by Postal is twofold. First, it provides more systematic data (with relatively clear-cut acceptability judgments) from several languages; note in particular the distinction between exx. 23 and 24. Second, the elements involved go beyond anaphoric pronouns to include relative pronouns and even attributive modifiers.

Although she does not specifically refer to the debate just outlined, Chvany (1977:51–3) discusses Slavonic data in similar terms, and so puts the Slavists' inflectional/derivational debate into a new context. She discusses Russian data analogous to Upper Sorbian ex. 23, in which the PA controls a personal pronoun. She claims that, even within a lexicalist framework, some words must be derived by a syntactic process (in traditional terms, an inflectional one). PA's are 'most likely' (44) to be such examples.

Following Chvany, it has been claimed that Sorbian data, particularly the attributive modifiers as in ex. 1, provide even stronger evidence than hers for the syntactic derivation of PA's (Corbett 1981a). It is also pointed out that examples like 1 and 20 pose problems for a formal account of agreement, as does the existence of 'attraction' examples like 21. The data have been used to support a previous claim that certain movement rules could operate after agreement. If attributive agreement operates before PA formation, then the usual forms, like 20, arise; if it operates after, then examples like 21 result. Most linguists would now wish to do without such powerful devices, though the problems raised earlier still require a solution. The difficulties of handling the examples like 21—and those like 20, where the form of the attributive modifier appears to be determined by a 'reluctant' controller (one which is not

present on the surface in a form matching that of the agreement target)—are again pointed out by Corbett 1986, a general survey of problems which agreement poses for linguistic theory.

The data on Upper Sorbian in this survey prove relevant to Sadock 1985, who proposes a theory of 'autolexical syntax', based on the notion that the connection between word structure and phrase structure is not uniformly hierarchical. He postulates a single-level syntax and a single-level morphology, assuming a context-free phrase structure grammar for each. Given such a framework, an important task is to constrain the possible relationships between morphology and syntax. A construction which shows a clear disparity between the two is noun incorporation, which is Sadock's major concern. He is able to limit the types of instance in which a lexeme can combine syntactically with one element to form a phrase, but morphologically with another to form a word (his Principle VII in its various versions). In Sorbian, the noun underlying a PA in sentences like *ex. 1* similarly combines syntactically with the attributive modifier to form a phrase, but morphologically with the suffix and inflection to form a word. This can be shown by the following bracketing:

(26) [_{NP} *mojeho* [*bratr*]*owe*]

What is most interesting is that the Upper Sorbian construction conforms to the constraints established by Sadock. A different approach—based in part on work in Generalized Phrase Structure Grammar—is taken by Zwicky 1986, who uses these data as part of his evidence to support a distinction between imposed and inherent features. *Bratrowe* shows agreement according to features imposed on it by the head noun, while the agreement of *mojeho* is determined by the inherent features of *bratrowe*.

Given the importance of the construction for current as well as older theoretical debates, it is worth gathering the available evidence and filling the many gaps. This will be done in §3 and in §5.

3. COMPARATIVE DATA. We will now examine data from all the other Slavonic languages. We shall thus be engaged in intragenetic typology, which has its advantages (see Greenberg 1978:80–84). The forms of the PA found in the other Slavonic languages are basically similar to Upper Sorbian, and so may reasonably be compared—even though the conditions under which it may be formed differ somewhat; however, the control possibilities vary considerably (as noted by Revzin 1973a:46). In this instance, the method is largely forced upon us, given the paucity of data on comparable constructions in other language families (see, however, §4.2 for a mention of Greek and Latin). We shall concentrate on the suffixes *-in/-yn* and *-ow/-ov/-ev*; the distinctions within each are part phonological and part orthographic, and need not concern us. We shall refer to the pair as *-in/-ov*. Other suffixes are used in Slavonic for forming denominal adjectives, but a discussion of these would take us too far afield; note that the literature contains confusing references to 'the possessive adjective', covering forms which behave rather differently.

As mentioned earlier, the Slavonic family is traditionally divided into three groups: East, South, and West. We will consider the groups in that order, since

we can thus start with languages in which PA's are most restricted in terms of what they can control, and move toward those with progressively greater possibilities.

3.1. RUSSIAN is the East Slavonic language in which PA's are, in general, most restricted in usage. In Modern Russian, e.g., the genitive is more common than the PA.⁶ However, the latter is often used in speech when derived from kinship terms, given names, short forms of names (*Saša* for Aleksandr), or their diminutives; not surprisingly, it is used particularly within the family and other closely-knit groups (Frolova 1972:33, 37). Of the two suffixes used to form PA's, the one which survives the better is *-in*; though now largely restricted to the categories just given, *-in* maintains its original morphological distribution in that it is used for masculine nouns in *-a*, like *Griša* (man's name) in 27, as well as for feminines. It is not unusual to find the PA controlling a personal pronoun:

- (27) ... *čto-nibud' o Grišinyx* (loc. pl.) *delax* (loc. pl.):
 something about Griša's affairs
iz kinostudii emu otvetili?
 from film.studio to.him replied

'... something about Griša's affairs: had they replied to him from the film studio?' (Trifonov, *Dolgoe proščanie*)

This is the only control possibility of the PA in Modern Russian. However, as recently as the early part of the 19th century, occasional examples of relative pronouns were found, as well as personal pronouns (Belošapkova 1964:137):

- (28) *Iskal pokrovitel'stva* (gen. sg. neut.)
 (He) sought patronage
Kazimirova (gen. sg. neut.), *kotoryj* (nom. sg. masc.)
 Kazimir's who
postupil črezvyčajno neostorožno.
 acted extremely imprudently
 (Polevoj, *Istorija ruskogo naroda*, 1829–33)

Here the relative *kotoryj* has as its antecedent *Kazimir*, which underlies the adjective *Kazimirova*. It may be significant that, in all three such examples quoted by Belošapkova, the PA is postposed. In the 19th century, both orders were possible, preposing being the more usual. By the 20th century, the PA was established in prenominal position. This may be part of the reason for the loss of the construction illustrated in 28, since the relative pronoun would no longer be adjacent to its antecedent. This is not a sufficient reason, however: the PA is also preposed in Upper Sorbian, and control of the relative pronoun

⁶ For the diachronic competition between the PA and the adnominal genitive, see Makarova 1954, Richards 1976, Sannikov 1978:151–9, Marojević 1983a,d, 1984a, and references there. The relative frequency of the two alternatives in Russian, Belorussian, and Ukrainian is discussed by Sannikov 1968:87, Poliščuk 1972, and Zverev 1981:127–8; see also Table 4 in §4.3. The role of the different adnominal suffixes in the development of Russian is considered in the works of Marojević quoted above, in Marojević 1983b,c, and in Zemskaja 1964. For the PA as a source of names, see Marojević 1985.

is maintained. Another part of the explanation is that the frequency of use of the PA in Russian declined considerably during the 19th century (Zemskaja, 282).

Old Russian has several examples of both personal and relative pronouns controlled by PA's (cf. Potebnja 1968:408–9). However, from the earliest texts onward, the PA never regularly controlled attributive modifiers (as in ex. 1). Very few examples are quoted in the literature, not all of which are fully convincing. The clearest is quoted by Potebnja (384):

- (29) *toě* (gen. sg. fem.) *Marfinymŭ* (inst. sg. masc.)
 that Marfa's
mužemŭ (inst. sg. masc.) (*Akty istoričeskie*, 1573)
 husband

This is fully analogous to ex. 1; but such examples are extremely rare in Old Russian.

To sum up: in Modern Russian, the PA controls only personal pronouns; as recently as the beginning of the last century, it could also control relative pronouns. In Old Russian, isolated examples of the control of attributive modifiers also occurred.

3.2. BELORUSSIAN is closely related to Russian. The PA is more frequently used than in Modern Russian, but its control possibilities are the same. Control of the personal pronoun is acceptable:

- (30) *Perad nami mamin* (nom. sg. masc.) *dom* (nom. sg. masc.).
 in.front.of us (is) mother's house
Jana (nom. sg. fem.) *xoča jaho* (acc. sg. masc.) *pradac'*.
 she wants it to.sell
 '... She wants to sell it.'

Speakers reject examples where the PA controls the relative pronoun:

- (31) **Perad nami mamin* (nom. sg. masc.) *dom* (nom. sg. masc.),
 in.front.of us (is) mother's house
jakaja (nom. sg. fem.) *xoča pradac' jaho* (acc. sg. masc.)
 who wants to.sell it

In addition to the agreeing relative *jakaja*, there is a non-agreeing *što* 'that'; but substituting it for *jakaja* in 31 (no other change is required) fails to give an acceptable sentence. Control of the attributive modifier is similarly impossible:

- (32) **našaj* (gen. sg. fem.) *mamin* (nom. sg. masc.)
 our mother's
dom (nom. sg. masc.)
 house

Thus the PA can control only the personal pronoun.

3.3. UKRAINIAN, the remaining East Slavonic language, is less closely related to Russian. Like Belorussian, it uses the PA more frequently than does Russian, but the control possibilities are the same. The personal pronoun can be controlled:

- (33) *Ce knyha* (nom. sg. fem.) *bat'kova* (nom. sg. fem.).
 this (is) book Daddy's
Vin (nom. sg. masc.) *jiji* (acc. sg. fem.) *zabuv*.
 he it forgot

Control of relative pronoun and attributive modifiers is rejected.⁷

3.4. BULGARIAN, in the South Slavonic group, has PA's formed mainly from kinship terms and given names, rarely from common nouns which denote humans or animals (Andrejčin 1978:263).⁸ As regards control possibilities, we find a situation similar to that already observed in the East Slavonic languages. Control of personal pronouns is possible:

- (34) *Pred nas e maminijat* (nom. sg. masc.)
 before us is mother's.the
apartment (nom. sg. masc.) *Tja* (nom. sg. fem.)
 flat she
iska da go (acc. sg. masc.) *prodade*.
 wants that it sell
 'Before us is mother's flat. She wants to sell it.'

Note the postposed definite article on *maminijat*, and the clause introduced by *da* 'that' (Bulgarian has no infinitive). Ex. 34 was fully acceptable to three speakers; a fourth accepted it reluctantly. Control of relative pronouns and attributive modifiers is excluded.⁹

⁷ A bilingual Russian/Ukrainian consultant feels that control of the relative pronoun is nevertheless better in Ukrainian than in Russian. This is almost certainly because the PA can be more readily postposed in Ukrainian, and so stand next to the relative. (For a textual example of a demonstrative pronoun controlled by a PA, see Zverev, 143.)

⁸ Surnames formed historically with *-ov* can be used as possessives without the addition of a new suffix, thus *Vazovo stixotvorenie* 'Vazov's poem' (Andrejčin, 263). Adjectives derived from inanimates, like *lipov* 'of lime', should not be confused with PA's. A different suffix is involved here, as shown by the fact that *-ov* is used regardless of the morphology of the noun (*lipov* is derived from *lipa* 'lime(-tree)'; if it were a possessive, the form would be **lipin*). The semantics of this suffix also differ from *-in/-ov*.

⁹ In both Bulgarian and Macedonian, the case system has been radically simplified, with loss of the genitive. In its place, the preposition *na* 'of, to' is used. The alternative to *maminijat apartment* 'mother's flat' in 34 would be:

- (a) *apartmentät na mama* 'mother's flat'
 flat.the of mother

There is another construction of interest here. In place of the possessive pronoun, a dative clitic may be used; it stands after the first stressed word in an NP (Scatton 1984:147, 314–15):

- (b) *čičo mu* 'his uncle'
 uncle to.him
 (c) *starata mu kăšta* 'his old house'
 old.the to.him house

According to Wayles Browne (p.c.), Bulgarian permits the clitic no matter what is possessed, while Macedonian restricts it to the 'possessing' of family members—Macedonian would permit the equivalent of (b) but not of (c). What is particularly interesting is that the clitic may still be used colloquially in Bulgarian—even when, as in (b), the noun is replaced by a PA (Christo Stamenov, p.c.):

3.5. MACEDONIAN is Bulgarian's closest relative; they are sometimes classified together as East South Slavonic. Macedonian forms PA's mainly from given names and from kinship terms (Koneski 1967:314), and it allows greater control possibilities than Bulgarian. An example with the personal pronoun is similar to 34 above:

- (35) *Pred nas e majčiniot stan (nom. sg. masc.)* *stan (nom. sg. masc.)*.
 before us is mother's.the flat
Taa (nom. sg. fem.) saka da go (acc. sg. masc.) prodade.
 she wants that it sell
 'Before us is mother's flat. She wants to sell it.'

Unlike Bulgarian speakers, my Macedonian consultant also accepted control of the relative pronoun:

- (36) *Pred nas e majčiniot (nom. sg. masc.) stan (nom. sg. masc.)*
 before us is mother's.the flat
koja (nom. sg. fem.) što saka da go (acc. sg. masc.) prodade.
 who that wants that it sell
 'Before us is mother's flat, who wants to sell it.'

Koja što is a compound relative; the first element shows agreement with the noun which is the source of the PA. Though control of the relative pronoun is accepted, control of attributive modifiers is again rejected.

3.6. SLOVENIAN is sometimes classified with Serbo-Croat as West South Slavonic. The situation as concerns the PA is somewhat different in each.

In Slovenian the following example is completely natural:

- (37) *To je očkova (nom. sg. fem.) knjiga (nom. sg. fem.)*.
 that is Daddy's book
Pozabil (sg. masc.) jo je.
 forgotten it is
 '... He has forgotten it.'

-
- (d) *čičovata (nom. sg. fem.) mu kášta (nom. sg. fem.)* 'his uncle's house'
 uncle's.the to.him house

Čičova is a PA with the definite article *-ta*. The dative clitic *mu* indicates whose uncle is involved, not whose house. The use of the dative clitic with the PA goes back to Old Church Slavonic (cf. Vaillant 1964:134), and is attested in Old Russian (Marojević 1983a:12).

Phrases analogous to (d) were not accepted by my Macedonian consultant. We have already noted that this use of the clitic is more restricted in Macedonian than in Bulgarian. Though that fact is not directly relevant to examples like (d), the general restriction of the clitic in this use is probably part of the reason for the speaker to reject it in (d). In any case, Wayles Browne (p.c.) provides a Macedonian example of precisely this usage, from a song:

- (e) *Zaspala Janka, Janinka, / na majkino si koleno.*
 fell.asleep Jean Jeannie on mother's REFL knee
 'Jean, Jeannie, fell asleep on her mother's knee.'

(*Majkin* is an alternative to *majčin*.) Thus this construction is possible in Macedonian, though it is not readily accepted as in Bulgarian. The construction is of interest since it shows another example of noun behavior being retained by the PA. However, the form of the clitic involved is not determined by the noun or PA. This can be seen clearly in (e): the clitic is reflexive because its antecedent is *Janka*, the subject of the sentence.

Since Slovenian is a pro-drop language, the second sentence has no subject pronoun; but the form *pozabil*, which is masc. sg., indicates that the subject is *on* 'he', referring anaphorically to *očka* 'Daddy'. With contrastive stress, *On jo je pozabil* 'He has forgotten it' is also acceptable.

This is the only control possibility in Modern Slovenian; informants reject examples with relative pronouns, or with attributive modifiers controlled by PA's.¹⁰

3.7. SERBO-CROAT allows extensive use of the PA. In modern texts, in situations where the choice is between PA or unmodified adnominal genitive, Dmitriev (50) finds the PA in 95% of the cases (N=293). Certainly, when reference is to a specific human, use of the PA is the norm (Stevanović 1939/40:38; Ivić 1967:260–62). Ivić 1986 gives an interesting account of the factors which allow the use of the genitive, even when the PA would be possible on syntactic grounds. The more closely the speaker is associated with the person referred to, the more likely the use of the PA; the genitive is rare for given names, somewhat more frequent for family names, and more common again for common nouns (over-all, however, the PA is the more frequent). Speaking of a deceased friend, only *nad Brankovim grobom* 'over Branko's grave' (with a PA) would be used. But *nad grobom Branka* 'over the grave of Branko' would be a possible alternative when referring to Branko Radičević—a poet so well-known that he is referred to by his first name—provided that the speaker is not closely associated with the poet.

Speakers readily accept personal pronouns controlled by PA's (though the personal pronoun is normally dropped unless stressed):

- (38) *To je tatina* (nom. sg. fem.) *knjiga* (nom. sg. fem.)
 that is Daddy's book
On (nom. sg. masc.) *ju* (acc. sg. fem.) *je zaboravio*.
 he it is forgotten
 '... He has forgotten it.'

There appears to be less certainty about relative pronouns. These do occur as targets in texts, as was pointed out by Maretić (1899:460); but they are rare. Dmitriev (52–3) quotes such examples as the following:

- (39) *Palili su kmetovu* (acc. sg. fem.) *kuću* (acc. sg. fem.)
 (they) burned are headman's house
koli (nom. sg. masc.) *je potkazao partizane*
 who is given.away partisans
Nemcima.
 to.Germans
 'They burned the house of the headman who gave away the partisans to the Germans.' (Ćosić, *Daleko je sunce*, 1955)

¹⁰ Miklosich (13) gives two cases of relative pronouns controlled by PA's; e.g.,

To sô besêde (nom. pl. fem.) *očetove* (nom. pl. fem.), *ki me je poslal*.
 those are words father's who me is sent
 'Those are the words of my Father, who sent me.'

In modern Slovenian this is rejected as archaic.

This situation is reminiscent of Russian at the beginning of the 19th century, with personal pronoun and relative pronoun both possible targets for the PA.¹¹ Control of attributive modifiers does not occur.

3.8. OLD CHURCH SLAVONIC, also a South Slavonic language, provides the best evidence as to the probable situation in Common Slavonic. Though the major codices date from the 11th century, they are copies of 9th century originals. Since the final break-up of Common Slavonic is usually put between the 6th and 8th centuries, this means that OCS reflects a situation relatively close to that of Common Slavonic.

Useful data on the PA are given by Večerka 1957, 1963; however, the fullest source is Huntley 1984 (see also his references). In OCS, the PA could not control an attributive modifier; there are no attested examples strictly comparable to ex. 1. However, in all examples where the modifier of the head noun is itself modified by a subordinate clause, the PA is used (Huntley, 219):

- (40) *Pristopaimŭ kŭ trepezě* (dat. sg. fem.) *xristově* (dat. sg. fem.),
 let.us.come to table Christ's
sŭ nimže (inst. sg. masc.) *otcu slava ...*
 with whom to.Father (is) glory
 'Let us come to the table of Christ, to whom with the Father is
 glory ...' (Suprasliensis 424.10–12)

Note that the PA *xristově* follows its head noun, as is normal in OCS, and agrees with it fully. The PA controls the relative pronoun *nimže*, which is therefore masc. sg.; it is instrumental because the preposition *sŭ* governs the instrumental.

Personal pronouns are regularly dropped in OCS if unstressed. In the following example (Huntley, 220), the pronoun can be adduced from the verb:

- (41) *Psalmŭ* (nom. sg. masc.) *davydovŭ* (nom. sg. masc.) *egda*
 psalm David's when
běgaše otŭ lica aveseluma, syna svoego
 was.fleeing from face of.Absalom son his.own
 'A psalm of David, when he was fleeing from the face of Absalom
 his son.' (Psalms 3.1, Sinaiticum)

Instances with overt personal pronouns also occur.¹² Thus, in OCS, the PA

¹¹ Dmitriev (55) states that, of the possible extensions to the PA construction, the relative pronoun is the most frequent. However, since Serbo-Croat is a pro-drop language, examples with the personal pronoun would return an artificially low figure. Work with consultants suggests that the personal pronoun (including instances where it is dropped) is more readily acceptable than the relative pronoun. Dmitriev also (54) gives examples of PA's which control relative pronouns in Old Croatian and Old Serbian texts. Ivanova (1974:39) suggests that, in the modern language, the PA is losing ground to the genitive.

¹² Vaillant (1964:134) quotes an example:

slovu (dat. sg. neut.) *Božiju* (dat. sg. neut.) *roždšuumu se otŭ*
 word God's having.borne REFL of
ńego (Suprasliensis 188.5)
 him
 'the word of God, born of him'

could control both personal and relative pronouns; however, it could not control attributive modifiers.

3.9. POLISH belongs to the West Slavonic branch, which includes Upper Sorbian. Modern Polish differs markedly from Upper Sorbian: its use of the PA is extremely restricted (the adnominal genitive normally being preferred), and its control possibilities are very limited. In this respect, Polish is therefore more similar to East Slavonic than to other West Slavonic languages.

For some speakers, the PA can control personal pronouns:

- (42) *?Przed nami stoi matczyny* (nom. sg. masc.)
 before us stands mother's
dom (nom. sg. masc.). *Ona* (nom. sg. fem.) *go chce*
 house she it wants
*sprzedać panu Nowakowi.*¹³
 to.sell to.Mr. Nowak

This construction is not unanimously accepted. Of seven speakers questioned, only three found it acceptable; a fourth considered it marginally acceptable.¹⁴ No speaker accepted control of relative pronouns or attributive modifiers. This means that Polish has the most restricted control possibilities for the PA, since not even control of the personal pronoun is accepted by all speakers.

3.10. CZECH uses the PA more productively and widely than Polish. There is no problem with the control of personal pronouns, and all consultants accepted the following sentence:

- (43) *To je matčín* (nom. sg. masc.) *dům. Chce*
 this is mother's house (she)wants
jej (acc. sg. masc.) *prodat.*
 it to.sell
 '... She wants to sell it.'

Subject personal pronouns are regularly dropped, as here; but under logical

The antecedent of the pronoun *niego* is 'God', the noun underlying the PA. (A different PA suffix is used in this particular instance; cf. Marojević 1984b:53–6.)

¹³ This example is taken from Petr (1971:35), except that his demonstrative *ta* 'this' has been replaced by *ona* 'she'. When presented with Petr's version, several speakers suggested (without prompting) that *ona* would be preferable to *ta*.

Petr 1971 gives a general account of the PA and includes dialect data; Petr 1968 considers Polish adjectives as a whole, and treats the PA as the possessive form of the noun. For Kashubian—sometimes treated as a Polish dialect, sometimes as a separate language—Perkowski (1969:74) considers only attributive control, and says that this was not found in the speech of his consultant.

¹⁴ For speakers who reject 42, at least part of the problem is the marginal status of the PA in Modern Polish; these speakers have severe restrictions as to possible contexts in which the PA can appear without sounding inappropriately elevated or archaic in style. One speaker found it almost impossible to construct an example in which the PA retained possessive meaning: for her, qualitative meaning was normal, so the lack of control possibilities is not surprising. According to statistics quoted in §4.3, below, the PA is used considerably less often in Polish than in other Slavonic languages. In Old Polish, the PA was in more general use, and control of the relative pronoun was possible (Szlifersztejnowa 1960:50).

stress, *ona* 'she' can be included (*Ona jej chce prodat*); *ho* would be a more colloquial alternative to the clitic *jej*. Similar sentences with a relative pronoun were rejected by two speakers. However, when several others were given the following example from Trávníček (1951b, §657), they accepted it, though one found it stilted:

- (44) *dovolával se slov* (gen. pl.) *básníkůvých* (gen. pl.),
 (he)appealed REFL of. words poet's
který (nom. sg. masc.) *praví ...*
 who says
 'he appealed to the words of the poet, who says ...'

Trávníček states that control of both personal and relative pronouns is very rare (his example of the former is given below as ex. 77). Our data suggest rather that control of personal pronouns is fully acceptable, while control of the relative pronoun is limited. Control of attributive modifiers is not possible in Modern Czech.

Old Czech unfortunately yields no data for the personal pronoun; but the construction with the relative pronoun, comparable to 44, is attested (Bauer 1960:200):

- (45) *řeč* (nom. sg. fem.) *bratrova* (nom. sg. fem.)
 talk brother's
jenžt' (nom. sg. masc.) *mě je smútil*
 who me is saddened
 'my brother's talk, who saddened me'

Attributive modifiers were also found. According to Skorvid (1981:47–8), who studied 14th–15th century texts, the construction was constrained by semantic factors. Among his examples is this:

- (46) *ot krvi* (gen. sg. fem.) *Abelovy* (gen. sg. fem.)
 from blood Abel's
pravého (gen. sg. masc.)
 just

'from the blood of the just Abel' (*Čtenie kněze Benešovy*, 14th c.)

Apart from word order, this is comparable to ex. 1.¹⁵

3.11. SLOVAK is closely related to Czech. Both show the innovation found in all the West Slavonic languages except Polish, whereby the suffix of the PA depends on the gender of the root noun, not on its declensional type (details in fn. 21). However, both are conservative in that the PA is used rather than the adnominal genitive, provided that there is a specific human singular referent and that there is no modifier (Trávníček 1951b, §657; Isačenko 1954:288; Štolc 1966:261). PA's may be formed from nouns denoting animals, but this is less common. If a modifier is present, then both the adnominal genitive and the PA are possible (Pauliny 1981:122):

¹⁵ Before leaving Czech, it is worth pointing out that in some southern and western dialects, discussed by Vachek (1954, 1961:29–31), the PA has become indeclinable.

- (47) *môjho* (gen. sg. masc.) *otcova* (nom. sg. fem.)
 my father's
knižnica (nom. sg. fem.)
 library
- (48) *knižnica* (nom. sg. fem.) *môjho* (gen. sg. masc.)
 library of.my
otca (gen. sg. masc.)
 father

Of these alternatives, 47 is colloquial while 48 is neutral, stylistically.¹⁶ Isačenko (289) states that the PA with an attributive modifier is found particularly if the modifier is a possessive pronoun (as in 47), or if a phraseological unit is involved:

- (49) *starého* (gen. sg. masc.) *otcov* (nom. sg. masc.)
 old father's
dom (nom. sg. masc.)
 house
 'grandfather's house'

Starý otec, literally 'old father', actually means 'grandfather'.

The important point is that examples like 47, with an attributive modifier controlled by the PA, are fully acceptable. In this respect, of the languages examined so far, Slovak is the most similar to Upper Sorbian. As in Upper Sorbian (Richter, 78), there can be more than one attributive modifier (Horák, 220):

- (50) *nášho* (gen. sg. masc.) *dobrého* (gen. sg. masc.)
 our good
susedova (nom. sg. fem.) *záhrada* (nom. sg. fem.)
 neighbor's garden

Published sources give no information on the control of personal and relative pronouns. L'. Ďurovič (p.c.) gives the following as fully acceptable (and Jan Bosák accepts a similar example):

- (51) *To je Janova* (nom. sg. fem.) *košel'a* (nom. sg. fem.)
 that is Jan's shirt
Hráva v nej futbal.
 (he)plays in it football

The subject pronoun is normally dropped. Under logical stress, however, it can appear:

¹⁶ The assessment of the use of the PA with an attributive modifier (as in 47) as colloquial, as compared to the neutral use of the adnominal genitive (48), is a consensus view. L'. Ďurovič (p.c.) gives exactly this judgment. Jan Bosák (p.c.) judges 48 as neutral; he adds that 47 can also be used in literary style (which is the view in Horák 1966:220). Pauliny 1981 says that the adnominal genitive, as in 48, has a more bookish, official character. However, Pauliny et al. (1968:212) claim that PA's, as in 47, are relatively frequent in literary style and dialects. Štolc (263-4) gives data on the distribution of the construction in dialects, including a rare dialect construction similar to Upper Sorbian attraction.

- (52) *To je Janova* (nom. sg. fem.) *košel'a* (nom. sg. fem.). *Ale*
 that is Jan's shirt but
on (nom. sg. masc.) *sám sa z vojny nevrátil.*
 he himself REFL from war did.not.return

With relative clauses, the picture is more complex (data from Ďurovič, who checked with several speakers). The agreeing relative pronoun is almost unacceptable (Jan Bosák rejects such sentences):

- (53) *?*To je nášho* (gen. sg. masc.) *Janova* (nom. sg. fem.)
 that is our Jan's
košel'a (nom. sg. fem.), *ktorý* (nom. sg. masc.) *sa*
 shirt who REFL
nevrátil (sg. masc.) *z vojny.*
 did.not.return from war

Yet the sentence becomes fully acceptable when the non-agreeing relative pronoun *čo* is substituted:

- (54) *To je nášho* (gen. sg. masc.) *Janova* (nom. sg. fem.)
 that is our Jan's
košel'a (nom. sg. fem.), *čo* (nom. sg.) *sa*
 shirt who REFL
nevrátil (sg. masc.) *z vojny.*
 did.not.return from war

The masc. sg. agreement on the verb *nevrátil* demonstrates clearly that the relative *čo* has *Jan* as its antecedent.

Apart from this complication with the relative pronoun, and the stylistic limitation on the control of attributive modifiers, Slovak is like Upper Sorbian in permitting all three types of control by the PA.

3.12. LOWER SORBIAN is Upper Sorbian's closest relative; so we might expect the situation of the PA to be the same. This turns out not to be true: the PA is much less used in Lower Sorbian (Richter, 147), and its control possibilities differ. Control of the personal pronoun is possible, as in Upper Sorbian (Richter, 102–3):

- (55) ... *te dny mamineje smjerši a jeje* (gen. sg. fem.)
 those days of.mother's death and her
zakopowanje ... (W. Bjero, *Na Kalpjeńcu*)
 burial

Jeje is the genitive form of the personal pronoun, used as a possessive. Control of the relative pronoun is also found (Richter, 104; a misprint has been amended):

- (56) ...*z tych psewuconych Juppowych* (gen. pl.) *bajkow* (gen. pl.),
 from those over.erudite Jupp's fairy.tales,
kotaremuž (dat. sg. masc.) *njegronje bžez winy*
 whom not.call without reason
pšijašele 'Münchhausen'.
 friends

'... from those over-erudite fairy tales of Jupp, whom his friends not without some justification call "Münchhausen"'. (F. Mětšk, *Bjerduški*)

The major difference from Upper Sorbian is that the PA cannot control attributive modifiers.¹⁷ This brings us back, then, to Upper Sorbian—where, as we have seen, control of personal and relative pronouns, and of attributive modifiers, is fully acceptable.

4. GENERALIZATIONS. Having examined data from all the Slavonic languages, we are now in a position to establish a typology of control possibilities (§4.1). This will lead to an account of historical change affecting the construction we have analysed (§4.2), and a survey of the factors which influence the competition between the PA and the genitive (§4.3). We will then review the question of the distinction between inflectional and derivational morphology (§4.4).

4.1. THE TYPOLOGICAL PATTERN. The data previously discussed are presented graphically in Table 1.¹⁸ The basic generalization covering these data is clear:

(57) The PA can control attributive modifiers only if it can also control relative pronouns, and it can control relative pronouns only if it can also control personal pronouns.

It can be seen that 57 holds for all the languages analysed—from Upper Sorbian, which shows maximum control possibilities, to Polish, where control is highly restricted. We can therefore set up a hierarchy of targets for the PA:

(58) Attributive < Relative pronoun < Personal pronoun.

This 'Control Hierarchy' is fully justified by the evidence above.

It is also possible to go beyond 57, capturing the fact that control may be possible but restricted at a particular position on the hierarchy (e.g. control of

¹⁷ This point should be stressed. Janaš (1976:123) gives the following example:

To su našogo (gen. sg. masc.) *nanowe* (nom. pl.) *crjeje* (nom. pl.), *won jo je zabył.*
that are our father's shoes he is them forgotten
'Those are our father's shoes; he has forgotten them.'

This sentence illustrates control of the personal pronoun *won*, and also of the attributive modifier (by the PA *nanowe*, derived from *nan* 'father'). Richter (83–4) explicitly contradicts Janaš, stating that such attributive modifiers are not found in Lower Sorbian. Fasske (p.c.) tells me that, in work on the dialect atlas, no dialect speakers accepted attributive modifiers as in the above example; when presented with such sentences, they corrected them to adnominal genitives. He suggests that Janaš has taken the construction from Upper Sorbian. It is significant that one of the few changes in the 1984 edition of Janaš' book is the omission of this example (Stone 1986:263–4). According to Richter (84–5), such forms are excluded in the Schleife dialect (usually treated as transitional between Lower and Upper Sorbian, though he considers it Lower Sorbian).

¹⁸ Old Czech is omitted, since we have no information on the personal pronoun. The prediction is that control of personal pronouns was possible in Old Czech, as in Modern Czech.

	attributive	relative pronoun	personal pronoun
East Slavonic			
Russian			
Russian (19th century)			
Old Russian			
Belorussian			
Ukrainian			
South Slavonic			
Bulgarian			
Macedonian			
Slovenian			
Serbo-Croat			
Old Church Slavonic			
West Slavonic			
Polish			
Czech			
Slovak			
Lower Sorbian			
Upper Sorbian			

TABLE 1. Control possibilities of the Possessive Adjective in the Slavonic languages. Note: The blacker the square, the greater the possibility of control by the PA.

the relative pronoun in Modern Czech). A stronger claim is as follows:

- (59) As we move rightward along the Control Hierarchy, the likelihood of control by the PA will increase monotonically.¹⁹

The Control Hierarchy above is similar to the Agreement Hierarchy, proposed on the basis of agreement options in a range of languages (Corbett 1979). As corroborated with detailed analysis of Slavonic data (Corbett 1983:8–41, 81–6), it consists of the following positions:

- (60) Attributive < Predicate < Relative pronoun < Personal pronoun.

The claim made is as follows:

- (61) For any controller that permits alternative agreement forms, as we move rightward along the Agreement Hierarchy, the likelihood of agreement forms with greater semantic justification will increase monotonically.

As a brief illustration of the type of phenomena covered by the Agreement Hierarchy, consider agreement with numeral phrases in Serbo-Croatian involving the numerals 2, 3, and 4. These require a special form of masculine

¹⁹ A 'monotonic' increase is one which has no decrease. Thus the series 1,2,2,4,4,5 shows a monotonic increase, while the series 1,5,4,7,6,9 does not.

nouns—a survival of the dual number, synchronically a genitive singular. Attributive modifiers must take the ending *-a*; it has been argued that this should be analysed synchronically as a neuter plural (Corbett 1983:13–14, 89–92). No matter how it is analysed, this form represents syntactic agreement, which is what counts for the present discussion. I shall therefore simply label it as ‘dual’, indicating that it is a dual survival:

- (62) *dva dobra* (dual) *čoveka* (gen. sg.)
two good men

In the predicate, the dual form (syntactic agreement) and the masc. pl. form (semantic agreement) are both possible:

- (63) *Ova dva čoveka su dobra* (dual) / *dobri* (pl. masc.)
these two men are good

The relative pronoun is also found in both forms:

- (64) *dva čoveka koja* (dual) / *koji* (pl. nom.) ...
two men who ...

The personal pronoun must take the masc. pl. form *oni* (**ona* is unacceptable). Thus we have syntactic agreement in attributive position, both types of agreement of the predicate and relative pronoun, and only semantic agreement of the personal pronoun. We can go further, in that very convincing statistics are available for the relative frequency of the two forms in the positions where there is an option (Sand 1971:55–6, 63); see Table 2.

	ATTRIBUTIVE	PREDICATE	RELATIVE PRONOUN	PERSONAL PRONOUN
Percentage showing plural (semantic) agreement	0	18	62	100
		(N=376)	(N=32)	

TABLE 2. Percentage distribution of dual and plural forms in Serbo-Croat (data from Sand).

Note: N indicates the total number of examples.

Table 2 shows a monotonic increase in the likelihood of agreement forms with greater semantic justification. While we cannot consider more data in detail here, Table 3 gives an indication of some of the support for the Agreement Hierarchy (from Corbett 1983:28).

While the two hierarchies can be independently justified, it would be preferable to see them as one and the same, given their obvious similarity. The problem is the fact that the predicate is not involved as a target for PA's. (This would require a construction with a subject of the type *Tanin brat*, 'Tanja's brother' and a predicate in the feminine, agreeing with *Tanja* rather than *brat*.) Three reasons can be suggested for the predicate's not being a target for the PA; one is specific to Slavonic, but the other two are more general.

First, in Slavonic, predicate verbs agree with subjects which stand in the nominative. The case of the PA for agreement purposes is genitive, as attributive modifiers show. It should not therefore be able to control predicate agreement. (It is true that, in some instances, predicates agree—or rather, show default agreement forms—when there is a genitive subject. In these instances,

The varying possibilities of semantic agreement.

	← Syntactic		Semantic →	
	Attributive	Predicate	Relative pronoun	Personal pronoun
Cz: <i>děvče</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
R: <i>para</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SC: dual noun	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SC: <i>gazde</i> , (pl, 19th c.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SC: <i>gazde</i> , (pl, 20th c.)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SC: conjoined plural NPs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
R dial: representative	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
R: conjoined NPs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
P: <i>łajdaki</i> (pl)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
P: titles	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
R: titles	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
R: respected noun	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
R: <i>vrač</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
R: <i>značitel' noe lico</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Note: the blacker the square, the greater the likelihood of semantic agreement.

TABLE 3. The varying possibilities of semantic agreement. Note: the blacker the square, the greater the likelihood of semantic agreement.

Glosses: *děvče* 'girl', *para* 'couple', *gazde* 'masters', *łajdaki* 'scoundrels', *vrač* 'doctor', *značitel' noe lico* 'important person'.

however, there is no nominative subject; this would not be true with the PA, since its head noun in subject position would stand in the nominative, and so would control predicate agreement.)

Second, the phenomena covered are of rather different types. The Agreement Hierarchy typically covers situations where agreement is required, but where the controller permits a choice as to the form of agreement to be realized; the hierarchy then constrains the distribution of the options. But the targets of the PA are different—an attributive modifier, relative clause, or anaphorically related personal pronoun—in that their actual presence is optional; by contrast, the existence of a predicate is typically essential. A way of viewing the control possibilities of the PA is that they are constrained by those parts of the Agreement Hierarchy which relate to optional elements (all but the predicate).

The third and major argument, related to the second, concerns coherence. If sentences of the type 'Tanja's brother came' existed, in which 'came' was controlled by 'Tanja', then 'brother'—the head of the subject NP—would have no role, syntactic or semantic, and the sentence would simply be incoherent.

It appears, therefore, that the PA cannot control predicate agreement for quite independent reasons. Given that this position is excluded, the control possibilities of the PA are constrained by the remainder of the Agreement

Hierarchy. As we move rightward along that hierarchy, the likelihood of control by a PA will increase monotonically.²⁰

4.2. A DIACHRONIC VIEW. The implicational claims of the last section are clearly relevant to historical change, since they constrain possible control systems.

The PA was inherited from Indo-European (see Watkins 1967:2194–5 and references there); however, Slavonic is distinctive in the frequency of its use (it was also widely used in Tocharian, and Grošelj 1955 attempts to find a common cause for this similarity). Vaillant (1958:596) suggests that Slavonic is conservative in its extensive use of the PA, preserving an earlier state of Indo-European. Wackernagel (1908:137–46) discusses the frequency of the use of the PA in Greek and Latin (as compared to the genitive); Neumann 1910

²⁰ Further typological work remains to be done on the control possibilities of the PA and the Agreement Hierarchy. In addition to the constructions described so far, the PA can control a participial phrase in Upper Sorbian. Fasske accepts the following example (p.c.):

- (a) *To je wučerjowa* (nom. sg. fem.) *zahrodka* (nom. sg. fem.), *bydlaceho* (gen. sg. masc.)
 that is teacher's garden living
w našim domje.
 in our house.

'That is the garden of the teacher who lives in our house.'

The participle stands in the genitive (like attributive modifiers). Since the participles are themselves largely written forms in Upper Sorbian, examples like (a) would be found in the written rather than the spoken language. Data on participial phrases were omitted earlier, since the status of participles varies from language to language. However, control of participial phrases is possible not only in Upper Sorbian, but also in Old Church Slavonic (Huntley, 221–2), Old Polish (Szlifersztejnowa, 50), and Old Russian (Potebnja 1968:408, Sannikov 1978:155). In all these, control of the relative pronoun is similarly possible; in Upper Sorbian and marginally in Old Russian, control of the attributive modifier is also found. It would appear that participial modifiers—and appositive phrases in general—fit somewhere between the present attributive and relative pronoun positions. However, this suggestion raises a problem, since it leads us to expect examples like (a) in Slovak—but a comparable example is rejected by Ďurovič:

- (b) **To je učitel'ov dom, vyhodeného z práce.*
 that is teacher's house dismissed from work

'That is the house of the teacher who was dismissed from his job.'

The solution may well lie in the different status of the participles in the different Slavonic languages.

A certain amount of work has been done on appositives as agreement targets, and this is relevant to their position as targets for control by the PA. Some evidence suggests that appositive phrases (including participial phrases), which may be intonationally detached from the head, are more likely to show semantically justifiable agreement forms than are ordinary attributive modifiers. Thus, in the Serbo-Croat ex. 62 discussed above, attributive modifiers must show syntactic agreement, but appositive ones can show semantic agreement:

- (c) *dva visoka* (dual) *i crna* (dual) *čoveka* (gen. sg.), *slični* (pl. masc.) *kao*
 two tall and dark men alike as
braća (Andrić)
 brothers

The syntactically agreeing form *slična* is also accepted by consultants. (For further evidence from Russian, see Crockett 1976:202–4, Corbett 1981b:59–60.) In ongoing work on the Agreement Hierarchy, Cornish (1986:208–11) suggests that the present attributive position should be subdivided (in much the way that the predicate forms a subhierarchy, Corbett 1983:163–74); appositive modifiers can then be seen as part of a subhierarchy of non-finite modifiers.

also discusses Greek, while Löfstedt (1928:83–99) concentrates on Latin. As far as control possibilities are concerned, N. E. Collinge states (p.c.) that adjectives controlling personal and relative pronouns, as well as participles, are not uncommon in Greek and Latin (cf. Löfstedt 1933:139–42, Collinge 1953:133). The construction is not so firmly established in Greek and Latin as in Slavonic, nor so clearly defined in terms of the type of adjective involved; still, the evidence points to an IE origin. In trying to establish the situation in Common Slavonic, we naturally look first to OCS, the oldest source of information. We saw above (§3.8 and fn. 20) that OCS allows control of personal pronouns, relative pronouns, and participles; the fact that this coincides with Greek and Latin suggests that OCS may well reflect Common Slavonic in this respect.

Given this hypothesis as to the Common Slavonic situation, let us now trace the development of control possibilities in the three branches of Slavonic. In East Slavonic, control of relative and personal pronouns was retained; control was extended to attributive modifiers, but only sporadically. This possibility was subsequently lost, followed by control of the relative pronoun; in Russian the latter loss occurred as recently as the 19th century. All three East Slavonic languages now preserve control only of the personal pronoun.

The South Slavonic languages are slightly more conservative. Bulgarian and Slovenian have lost the possibility of control of relative pronouns (Slovenian only in the 19th century). Macedonian still permits control of relative pronouns, as does Serbo-Croat to a limited degree. The latter two have moved relatively little from the OCS position.

It is the West Slavonic group which has been most innovative. Upper Sorbian and Slovak show greater control possibilities than those of OCS, while Polish has lost almost all control possibilities. At least one of the West Slavonic languages, namely Czech, has undergone a 'there and back' change: in Old Czech, control was extended to attributive modifiers (ex. 46), but this possibility has since been lost.

We may account for this development in two rather different ways, both of which are consistent with the presently available data. According to the first, West Slavonic inherited the Common Slavonic situation; from then on, development in the different languages was largely independent. Czech and Slovak extended control to attributive modifiers; Czech, but not Slovak, later lost this possibility, and has partially lost control for relative pronouns. Upper Sorbian has extended control to attributive modifiers, while Lower Sorbian retains the Common Slavonic pattern. Control of relative pronouns is attested in Old Polish (Szlifersztejnowa, 50); but this is no longer possible, and even control of personal pronouns is not accepted by all speakers.

According to the second scenario, all the West Slavonic languages extended control to attributive modifiers. This possibility was subsequently lost in Czech, Lower Sorbian, and Polish; the last-named then lost the possibility of control for relative pronouns. This apparently simpler account requires that Polish gained and lost the possibility of controlling attributive modifiers before the time of the earliest texts (say, the last quarter of the 14th century).

As yet we have insufficient evidence to choose between these versions. Either one involves at least one example of control being extended and then reduced. More generally, however, the different languages at the different stages of development all show systems of control by the possessive adjective which are consistent with generalization 59.

4.3. COMPETITION BETWEEN THE POSSESSIVE ADJECTIVE AND THE GENITIVE. We have concentrated on the control possibilities of the PA; but the genitive has been a recurrent theme, since it is the main alternative. Let us now briefly consider the competition in instances where both are syntactically possible (typically when there is no further modification of the possessor). Data have been given, where available, in the relevant language entries of §3. My purpose here is to suggest a tentative typology of constraints on the use of the PA, and to provide a background to the discussion in §4.4 of derivational and inflectional morphology.

Apart from the syntactic factors already dealt with, other factors may restrict the use of the PA (and so favor the genitive). To begin, there are straightforward morphological constraints. Any restriction on the productivity of the PA will clearly favor the genitive; the most obvious example of such a restriction is the fact that nouns which are adjectival in form cannot form PA's. In addition, it is often impossible to form PA's from neuter nouns (e.g. Czech *dítě* 'child'; Trávníček 1951a, §208). Three constraints of a different sort have also been mentioned above. The first is that the referent must be singular; this appears to hold for the languages discussed, with very few exceptions (other suffixes for forming denominative adjectives are not subject to this constraint, but a discussion of the competition between different suffixes is beyond the scope of this paper). Second, some languages require the referent to be animate. Third, we have seen instances (e.g. Upper Sorbian) where the referent must also be specific. These three constraints relate to the morphological constraints in the sense that, if a noun can never (or only rarely) meet the constraints on number, animacy, and specificity, it is likely to be perceived as one from which the PA cannot be formed.

For the original Slavonic situation, the best evidence we have comes from Old Church Slavonic. Huntley (224) gives a careful account of the factors at work, and demonstrates that the PA was overwhelmingly dominant with stems having unambiguous lexical reference to unique beings (such as *xristos*- 'Christ'). These are followed by stems having almost unambiguous lexical reference to unique beings, then by given names, and then by stems denoting social ranks and professions. (The examples he gives with common human nouns almost all involve suffixes other than *-in/-ov*, and so do not concern us.) The PA was extremely common; Huntley found only two examples of the unmodified genitive of *xristos*-, as compared to 140 of the unmodified PA.

The PA has competed with the genitive with varying degrees of success in the development of the modern Slavonic languages. Ivanova (1976:9–10) gives comparative data based on contemporary literature, criticism, and journalism. For each language investigated, she scanned 1,000 pages (counting 2,000 char-

acters as a page). Table 4 gives the approximate frequencies of use which she reports for the PA, expressed as a percentage of the total instances of the PA and of the genitive (without preposition). The number of actual instances is not given by Ivanova.

East Slavonic	
Russian	10%
Belorussian	36%
Ukrainian	23%
South Slavonic	
Slovenian	66%
Serbo-Croat	52%
West Slavonic	
Polish	3%
Czech	51%
Slovak	42%

TABLE 4. Frequency of use of the Possessive Adjective (data from Ivanova).

The figure given for Serbo-Croat differs considerably from the 95% quoted from Dmitriev in §3.7. Dmitriev counted only unmodified examples, where both genitive and PA are theoretically possible. Ivanova counted the over-all totals, which accounts for the discrepancy. Her figures are valuable because they give an idea of the differences among the Slavonic languages.

The general trend of development has been against the PA, particularly in East Slavonic (for documentation, see fn. 6). The factors militating against the PA seem not to have been of the straightforward morphological type. The restriction against its formation from nouns which are adjectival in form has generally been maintained (though no longer in colloquial and dialectal Czech, according to Trávníček 1951a, §208). There have been various realignments of the denominal suffixes; sometimes these have been in favor of *-in/-ov*, sometimes against (see Huntley, 233–4, and references at the end of fn. 6). Some languages have changed the distribution of *-in* as opposed to *-ov* between the different stems;²¹ but this does not affect their over-all range. Of the other

²¹ The suffix selected may depend on the declensional class of the noun, or on its grammatical gender. For most Slavonic nouns, gender is predictable from the declensional class; hence both criteria give the same result. Simplifying somewhat, we may say that nouns with no ending in the nom. sg., and which follow a particular declension (say Class I), are masculine, and form the PA with *-ov*. Nouns with the ending *-a* in the nom. sg. follow a different declension (Class II), are feminine, and form the PA with *-in*. One group of nouns, like Russian *papa* 'Daddy', follow Class II but are masculine. Originally the PA suffix was determined by the declensional class, giving forms like Modern Russian *papin* 'Daddy's'. Some of the Slavonic languages have gone over to the gender criterion, so that such nouns take *-ov* (e.g. Upper Sorbian *starosta* 'headman', *starostowy* 'headman's'): these are Belorussian, Slovenian, Czech, Slovak, Upper and Lower Sorbian (but not Polish). This is a very surprising list of languages to be involved in a similar change (it shows considerable, though not complete, overlap with the list of languages which modify the declension of masculine Class II nouns to make them more like Class I nouns.) However, both gender and declensional class are available in the lexicon, whether specified or derivable; hence the use of one or the other as the criterion for the formation of PA's does not bear on the inflectional/derivational argument in §4.4. It should be added that, while following one or the other criterion,

constraints, the restriction to singular referents is consistent. The question of animacy is more complex. It appears that the PA is more likely to be formed when the referent is human than when it is animal. Some languages (e.g. Upper Sorbian) allow the formation in both cases, but favor a human referent. Others, such as Russian, normally form the PA only when the referent is human. If the PA can be formed when the referent is animal (as in Serbo-Croatian and Slovenian), then usually higher animals are involved. Occasionally inanimates are included; Stevanović (1974:185) gives *sunčev* 'sun's' and *mesečev* 'moon's' as possible in Serbo-Croat.

Turning to specificity, recall that a specific referent is given by Fasske as a requirement in Upper Sorbian. It is also a condition in Modern Russian (Trubetzkoy 1939:82) and in Bulgarian (Andrejčin, 262). The situation is particularly interesting in Serbo-Croat: when common nouns are involved and there is a specific human referent, the PA is much the more frequent. If the referent is not specific, the PA may still be used; but so may the genitive (Stevanović 1974:183–4). It is significant that the inanimates given as having a PA are 'sun' and 'moon', which typically have specific referents. This factor also has an effect on the choice between the PA and the genitive in Czech and Slovak.

There is a hypothesis consistent with the facts given (though more work will be required to substantiate it fully). Generalizing the analyses of Stevanović, Ivić, and Huntley, I propose two hierarchies:

- (65) Human > Animal > Inanimate;
 Specific > Non-specific.

The higher the referent on the hierarchies, the more likely the PA is to be used—the prototypical case being reference to a specific human. Of course, these hierarchies are familiar from other studies (e.g. Comrie 1981:178–93).

Different languages have different cut-off points for the use of the PA. Upper Sorbian requires a specific referent, Serbo-Croat and Slovenian do not. Russian requires a human noun; but the resulting PA's are used within the family or other close-knit group, where kin terms and the like typically have a uniquely determinable referent. Thus the history of the competition between the PA and the genitive can be seen as a progressive tightening of the restrictions on the PA in terms of the two hierarchies above—though their influence was evident even in Old Church Slavonic.²² When a particular noun can never fall within the constraints operating at a given time, it may be said not to form the PA, though the formation may be possible in special circumstances (e.g. for personification, as exemplified by Russian examples from Majakovskij, cited by Frolova 1960:324).

languages may show sporadic exceptions; thus Bulgarian has gone over to the gender criterion, but preserves *baštín* 'father's' from *bašta* 'father'. Macedonian is moving in the same direction. Both languages show some avoidance of forming PA's from masculines in *-a* (Bezиковић & Gordova-Rybal'čenko 1957:293, Koneski 1967:314, Vaillant 1974:443, Andrejčin 1978:262–3). For simplicity, I have omitted original *i*-stems in this discussion; they include few animates.

²² Frolova 1960 accounts for Russian developments in similar terms.

4.4. INFLECTIONAL AND DERIVATIONAL MORPHOLOGY. The complex data we have reviewed give a new perspective on the theoretical discussion of §2. A surprising fact which emerges from §3 is that pairs of languages which are closely related—Czech and Slovak, Lower Sorbian and Upper Sorbian, Bulgarian and Macedonian—show different control possibilities. One apparently promising line of analysis is to link the productivity of the PA with its control possibilities: thus the Polish PA has low productivity, and is on the verge of losing its control possibilities. However, when we look at languages in which the PA is much more productive, such as Slovenian and Upper Sorbian, we find no direct correlation between productivity and control.

Productivity has proved an unreliable criterion for deciding whether we are dealing with inflectional or derivational morphology; instead Anderson suggests the criterion of relevance to syntax. If we look back to Table 1, we must surely say that, in those languages which permit control of three target types, the formation of the PA is relevant to syntax. Where relative and personal pronouns can be controlled, we may accept the same conclusion. But what if only personal pronouns are controlled: does this count as relevant to syntax? If so, what of Polish, where the personal pronoun may be controlled, but not consistently? The choice is not at all straightforward (cf. Revzin 1973a:46); and data presented in §5, below, make the situation more difficult, if anything. Furthermore, the paradox of §2 remains: in those languages where we accept PA formation as relevant to syntax, and so inflectional, it still involves change of word-class membership, and so is derivational.

Given that a clear division between derivational and inflectional morphology appears difficult to maintain, it is worth reviewing the typical features of each. Table 5 gives six such criteria, to be expanded on in turn.

DERIVATIONAL MORPHOLOGY	INFLECTIONAL MORPHOLOGY
1. May be non-productive and irregular.	Productive and regular.
2. May change word-class membership.	Does not change word-class membership.
3. Opaque to syntax.	Transparent to syntax.
4. Appears 'inside' inflectional morphology.	Appears 'outside' derivational morphology.
5. Depends on inherent features.	May depend on non-inherent features.
6. Marks words.	May mark phrases.

TABLE 5. Typical properties of derivational and inflectional morphology.

The entries in the table serve only as mnemonics for established areas of discussion, most of which are given by Anderson (cf. Matthews 1974:37–58, and references there.) Point 1 is fairly commonplace: we expect an inflectional process to be productive, in the sense that it will apply to all items to which it theoretically could apply, and we expect it to apply in a regular way. Typically—and that is what Table 5 is about—a process like case-marking would apply to all nouns regularly. There are, of course, various exceptions to this

pattern (for a detailed investigation, see Barbour 1982). However, productivity represents a typical expectation about inflectional morphology, not imposed on derivational morphology. As we saw in §4.3, the PA in some languages shows a high degree of productivity (for animate nouns), and it is largely regular. In other languages, its productivity has been severely curtailed over the course of time, so that it is formed only for a small proportion of nouns.

Point 2, the question of change of word-class membership has already been discussed. The position is straightforward: the PA does change word-class membership.

Point 3, the question of opacity to syntax, has also figured in the previous discussion. The PA is indeed transparent to syntax, but to different degrees in the different Slavonic languages.

Point 4 applies only to those languages where inflectional processes are reflected as separately identifiable morphs. We then normally expect derivational affixes to appear closer to the root than do inflectional affixes; this is the claim of Greenberg's *Universal 28* (1966:93). (There are exceptions, however, such as Russian reflexive *-sja*, which occurs in word-final position—after the inflectional endings which code person/number or gender/number.) Point 4, then, gives no clear indication as to the status of the PA. On the one hand, the suffix which forms the PA stands before the inflectional endings; e.g., from Russ. *tetja* 'aunt', we have *tet-in-o* (possessive, nom. sg. neut.) 'aunt's'. On the other hand, the possessive suffix comes after all other suffixes, including diminutives: from *tetuška* 'aunt' (dim.), we have *tet-ušk-in-o* (possessive, nom. sg. neut.). However, both adjectives and nouns in Slavonic regularly take only one inflectional ending at a time. Since the suffix which forms the PA comes before the ending, this suggests that it is derivational.

Point 5 notes that, since derivational morphology starts with items stored in the lexicon, it must refer to their inherent features. Inflectional morphology, by contrast, may refer to non-inherent features; e.g., it may introduce a whole range of agreement markers, which do not relate to inherent features of the carrier. This point is particularly interesting for the PA. As we saw in §4.3, some languages form the PA in *-in* or *-ov* only if the referent is specific; the referent must also be singular. It could be argued that since specificity and number are not available in the lexicon as inherent features of nouns, this must imply an inflectional process. However, as Janez Orešnik points out (p.c.), it does not follow that the requirement of a specific referent need be associated with the noun. Both features, where appropriate, could be included as conditions on the use of the suffix. This makes good sense, since Slavonic has other suffixes for forming denominative adjectives, and these require different constraints. Nevertheless, though the argument is not so clear-cut as it at first appeared, elements whose appearance depends on the features of number (and in some cases specificity) are typically the concern of inflectional morphology.

Point 6 relates to the preceding one. Inflectional morphology may regularly mark a single item for a feature which rightly belongs on a whole phrase (Carlson 1983:73)—thus case may be marked just on the noun which heads an NP;

definiteness may be marked just on an adjective but not on its head noun, etc. (This is to be distinguished from the sporadic examples in derivational morphology.) In languages like Upper Sorbian, which allow the PA to control attributive modifiers, the process which forms it can be seen as applying to the phrase, rather than just to an underlying noun. In languages which do not permit control of attributives, the process applies to a single lexical item, and so yields no evidence on this point. (Data to be presented in §5.3 are also relevant here, since there are further constructions in which the PA suffix marks a phrase.)

The conclusion to be drawn from the discussion of the PA in terms of Table 5 is that no clear dividing line can be found between derivational and inflectional morphology. Various criteria typically cluster together; however, the PA seems to select features of derivational and inflectional behavior almost on a 'pick-and-mix' basis. It is, in turn, (a) inflectional, though becoming derivational in some languages; (b) derivational; (c) inflectional, though to varying degrees; (d) ambiguous, with evidence suggesting it is derivational; (e) inflectional; and (f) inflectional in some languages—no evidence in the remainder. Furthermore, the mixture varies from one Slavonic language to another. Thus the difference between inflectional and derivational morphology is not clear-cut, but rather one of degree. This suggests that inflectional and derivational morphology belong together—which lends some support to the account of Lieber (1981:101), to earlier accounts cited by her (2–3), and more recently to the work of Jensen & Stong-Jensen (1984) and of Miller (1985:2).

5. OTHER FEATURES OF THE SYNTAX OF THE POSSESSIVE ADJECTIVE. In this section we consider other facts of interest concerning the PA—not included above either because the generalizations cannot be related to those in §4, or because there are as yet insufficient data to draw firm conclusions. In both cases, I shall record what is known, together with sources of information. We consider further the relation of the PA to the adnominal genitive in action nominals (§5.1), in conjoined expressions (§5.2), and in instances involving multi-word possessors (§5.3); finally, I examine problems of anaphora (§5.4).

5.1. POSSESSIVE ADJECTIVES FOR SUBJECTIVE AND OBJECTIVE GENITIVES. As pointed out in §1.2, the PA is not restricted to possession. Thus it can, when modifying action nominals, have both subjective and objective readings, as in Upper Sorbian (Fasske, 386):

(66) *Hilžiny wopyt*
Hilža's visit

(67) *Jurowy pohrjeb*
Juro's burial

Fasske points out that the objective use is found with a restricted number of items (otherwise, the adnominal genitive is used). This observation leads to a generalization concerning use with action nominals, which in fact holds for all the languages for which we have data:

(68) The range and frequency of use of the PA for the subjective genitive are at least as great as for the objective genitive.

The data on which this generalization is based are given in Table 6.

	SUBJECTIVE USE		OBJECTIVE USE		SOURCE
East Slavonic					
Modern Russian	(✓)	>	(✓)		consultants ^a
Russian (18th– 19th c.)	✓	>	✓		Belošapkova 1964:137–9, Zemskaja 1964:289–90
Old Russian	✓		✓		Lomtev 1956:466–8, 474–6, Nilsson 1972:39–40
Belorussian	✓	>	✓		consultants; Zverev 1981:141–2
Ukrainian	✓	>	✓		consultant; Zverev 1981:141–2
South Slavonic					
Bulgarian	✓		✓		consultants
Macedonian	(✓)		(✓)		consultant
Slovenian	✓	>	((✓))		consultants
Serbo-Croat	✓	>	(✓)		consultants; Stevanović 1974:181–2
Old Church Slavonic	✓		✓		Miklosich 1926:7–9
West Slavonic					
Polish	(✓)	>	(✓)		consultants ^b
Czech	✓	>	✓		Trávníček 1951b, §§660–62
Slovak	✓		✓		consultant
Upper Sorbian	✓	>	✓		Fasske 1981:386 ^c

TABLE 6.

Note: (✓) indicates restricted usage.

> indicates that the possessive adjective is more readily used with subjective than with objective reading.

^a Authorities tend to dismiss these uses of the PA in Modern Russian; they are unusual in the written language, though occasional examples of the subjective genitive are found. Work with consultants suggests a different picture in the spoken language (where the PA is, in any case, more widely used). The following phrase with subjective reading was accepted by all of nine speakers: *mamin prixod* 'mother's arrival'. More complex phrases (cf. fn. 23, below) were not accepted by all speakers. Phrases with objective reading were also more problematic: *mamino osvobodzenie* 'mother's release'. This was accepted by six of the speakers, with two uncertain; the ninth rejected it outright. Both uses are marked as 'restricted' in Table 6, because use is less widespread than in the other periods of Russian included.

^b Petr (1971:34) claims that subjective but not objective use is found in Polish. However, consultants accepted both subjective and objective readings, and Topolińska (1981:147–50) gives examples of both. (She also makes the interesting claim that the PA is more frequently found in nominalizations than in primary NP's.) Work with consultants is difficult, given the restricted nature of the PA; it appears, however, that subjective use is more readily acceptable than objective.

^c Richter (1980:50–1) gives textual examples of both subjective and objective uses in Upper Sorbian; for Lower Sorbian, he has examples of subjective but not of objective use (see 55 above). This does not prove that the latter is unacceptable; but it suggests that, at the very least, it is less common than subjective use.

In all cases where we have information on the relative frequency or acceptability of the two uses, subjective use is favored. Generalization 68 follows from work by Comrie (1976:184–8) who, using data from Trávníček (1951b,

§661), examined the Czech situation. He reported that, with action nominals, the Czech PA occurs with subjective and objective readings; but when it occurs with the adnominal genitive, it must be subjective:

- (69) *Gebauerova* (nom. sg. fem.) *znalost staré češtiny*
 Gebauer's knowledge of.Old Czech

This constraint lends support to generalization 68. But there is also the general tendency, demonstrated in Table 6, for the PA to be subjective, and the adnominal genitive to be objective—even when only one of them is present. Comrie suggests that, where action nominals have two available slots, languages have a strong tendency to distinguish them; one is normally subjective (whether or not the other is filled), and the other objective. Furthermore, there is a parallelism between a typical Slavonic simple sentence (subject, verb, object) and the action nominal pattern (PA, action nominal, adnominal genitive). Comrie is careful to avoid a simplistic explanation in terms of word order; however, the parallelism may be part of the explanation for generalization 68.

Generalization 68 goes further than previous claims in that it applies to all the languages investigated. It is tempting to try to link it to generalization 59; but there is no direct way in which this can be done. The reason is that 59 refers to a hierarchy of targets which are controlled by the PA, but 68 concerns the PA as a target for the action nominal (for more on the syntax of action nominals in Slavonic, see Revzin 1973b, Comrie 1976).

When the PA functions as subject of an action nominal in Upper Sorbian, it can control a reflexive within the action nominal phrase (Fasske, 388):

- (70) *Janowy wopyt w swojim ródny domje*
 Jan's visit in his.own paternal home

This possibility remains open even when the PA controls an attributive modifier (Fasske, p.c.):

- (71) *twojeho nanowy wopyt w swojim ródny domje*
 your father's visit in his.own paternal home

Examples comparable to 70 are also found in Czech. Bílý (1981:139) gives the following contrasting examples, showing the impossibility of control of the reflexive with ordinary nouns:

- (72) *Karlova ranní rozvička ve své pracovně*
 Charles' morning exercise in his.own study
 (73) **Karlova knihovna ve své pracovně*
 Charles' bookcase in his.own study

This interesting construction has received remarkably little attention in the literature.²³

²³ For comparative purposes, nine Russian consultants were asked about the following phrase:

- (a) *mamin pereezd v ee/svoju novuju kvartiru*
 mother's move to her/her.own new flat

Only two speakers accepted the reflexive form *svoju*. These two speakers regarded non-reflexive *ee* as questionable, but four others accepted it. The remainder accepted neither variant. A Ukrainian speaker, given a similar example, accepted the reflexive form. A Pole found the forms unnatural

5.2. CONJOINING OF THE POSSESSIVE ADJECTIVE AND ADNOMINAL GENITIVE. Given that the PA and adnominal genitive fulfil similar functions, it is natural to ask whether they can be conjoined. In Upper Sorbian, they cannot (Fasske, p.c.):

- (74) **To je zahrodka nanowa (PA) a našeho wučerja (gen.)*
 that is garden father's and of.our teacher

Preposing both conjuncts also fails to give an acceptable sentence. In the 19th century this construction was possible (Gerald Stone, p.c.):

- (75) *Stawy Jozuowe (PA) a tych sudnikow (gen.)*
 books Joshua's and of.the judges
 (Bartko, *Bibliske stawizny*, 1853)
 'the books of Joshua and Judges'²⁴

If we go back as far as Old Church Slavonic, examples like the following are not uncommon (Cooper 1971:164):

- (76) *otŭ vitanię gradīca marina (PA) i marŭty (gen.)*
 from Bethany village Mary's and of.Martha
sestry eję (John 11.1, Zographensis)
 sister her
 'from Bethany, the village of Mary and of Martha her sister'

(because of the general problem with the PA in Polish), but preferred the non-reflexive form; a Slovak rejected the reflexive in a phrase like (a), as did both a Bulgarian and a Serbo-Croat speaker.

Another complex problem, also related to the subjective/objective use of the PA, is its use with 'picture' nouns. Richter (94) gives the following phrase with a PA:

- (b) *wučerowy wobraz*
 teacher's picture

He states that this phrase can mean 'the picture which the teacher owns' or 'the picture which the teacher has painted', but not 'the picture which depicts the teacher'. (The adnominal genitive has all three readings.) Fasske concurs with Richter's judgment of (b); surprisingly, a similar phrase has the missing reading:

- (c) *mačerny portret*
 mother's portrait

This can be interpreted as the portrait which depicts mother, the one she has painted, or the one she owns (Fasske, p.c.) Thus the nouns *wobraz* and *portret* differ in the arguments which can be realized by the PA.

Again for comparison, eight Russian speakers were asked about a phrase equivalent to this:

- (d) *mamin portret*
 mother's portrait

All eight accepted the reading in which mother is depicted. Five also accepted that in which she owns the portrait; of them, four accepted the variant in which she is the artist. A Ukrainian speaker accepted all three readings, preferring that in which mother is depicted. Two Serbo-Croat speakers accepted all three, ranking depiction first, then artist, then owner; a third ranked depiction and painter equally, ahead of owner; and a fourth preferred the depiction reading, accepted that of artist, but rejected that of the owner. One Bulgarian accepted only the depiction reading; but a second accepted also that of artist, given an appropriate context. Two Czechs preferred the depiction reading, accepted that of artist in context, and considered that of owner just possible with a lot of contextual support. A Slovak accepted the depiction and artist readings (no information on that of owner).

²⁴ *Tych* functions as an article here; see Fasske (568) for details.

Similar examples are attested in Old Russian (Makarova 1954:27, Sannikov 1978:158), and up to the beginning of the 19th century in Russian (Belošapkova 1964:139), as well in Old Polish (Szlifersztejnowa, 38). Such examples are not accepted in Modern Russian, Modern Ukrainian, Modern Bulgarian, Modern Serbo-Croat, Modern Polish, or Modern Slovak. But Trávníček (1951b, §657) gives the following Czech example:

- (77) *dům sousedův (PA) a jeho sourozenců (gen.)*
 house neighbor's and of.his brothers.and.sisters
 'the house of the neighbor and of his brothers and sisters'

(Here *jeho* is the gen. sg. of the personal pronoun, which functions as the possessive pronoun.) A partial explanation for the loss of this construction, in most of the modern Slavonic languages for which we have data, can be found in the change of position of the PA. Originally, as in Old Church Slavonic, it stood after the noun, as did the adnominal genitive. Over the centuries, the PA has gravitated to prenominal position, while the adnominal genitive has remained in postnominal position (though neither is firmly fixed). Where examples of conjoining the two constructions are found, from earlier stages in the development of the Slavonic languages, they have the PA in postnominal position. It is significant that Modern Czech allows the PA to occur postnominally more readily than most other Slavonic languages, as in 77.

5.3. POSSESSIVE ADJECTIVES FOR COMPOUND ADNOMINAL GENITIVES. A major point of interest in the Upper Sorbian data is that PA phrases can be formed even though the corresponding adnominal genitive would consist of modifier plus noun. The PA is therefore not limited to one-word possessors. Another potential source of multi-word possessors is the situation in which the adnominal genitive would consist of more than one noun, in compounds like *John Smith* or *Father Brown*. Normally two nouns are involved, but these may in turn be modified, as in the second part of 88 below—or three nouns may be found; hence the expression 'multi-word possessors'. Given two nouns, there are three logical possibilities:

- (78) a. Both elements as PA's.
 b. Noun plus PA.
 c. No PA (both elements as nouns).

In the modern Slavonic languages over-all, the adnominal genitive is most widely used in these cases (option 3: see ex. 80, below). However, the first two strategies are both found, and they were more widely used earlier in Slavonic. We will look at examples of both of them.

In Modern Slovak, it is fully acceptable to have two PA's (Horák, 220):

- (79) *Števova (PA) Malinova (PA) záhrada*
 Stephen's Malina's garden
 'Stephen Malina's garden'

This construction is considered colloquial and literary. In more official prose, the genitive could be used:

- (80) *záhrada Števa (gen.) Malinu (gen.)*
 garden of.Stephen Malina

Examples comparable to 79 are no longer possible in Upper Sorbian; Richter (1980:79) reports that they were found in the Schleife dialect until the 19th century (this dialect is normally treated as transitional between Upper and Lower Sorbian). Examples of double PA's are also attested in Old Polish (Szlifersztejnowa, 47) and Old Czech (Skorvid, 44–5). Indeed, the construction can be found in Old Church Slavonic (Miklosich 1926:15). Of the other South Slavonic languages, it is attested in the development of Serbo-Croat (Miklosich, 15) and occurs in Modern Bulgarian (native speakers):

- (81) *čičovata* (PA) *Tomova* (PA) *kášta*
 uncle's.the Tom's house
 'Uncle Tom's house'

In East Slavonic, the construction was once relatively common; Makarova (1954:19–21) gives several examples from Old Russian, including the following (from the *Suzdal'skaja letopis'*):

- (82) *Volodimeri* (PA) *vnukū* *Monomaxovū* (PA)
 Volodimer's grandson Monomax's
 'Volodimer Monomax's grandson'

I include this example which shows a different suffix (on *Volodimeri*), since the difference does not affect the argument (there are also examples with *-in/-ov*), but it does allow a clear contrast with ex. 87, below. What is particularly interesting about 82 is that it demonstrates that the PA's could be split by the head noun (a feature also found in Old Czech). Not surprisingly, examples of double PA's are found in the history of Ukrainian (Miklosich, 15), and are marginally possible in Modern Ukrainian (Shevelov 1963:191).

The alternative strategy is for one part of the name to take the form of a PA, while the other remains as a noun. The subsidiary problem of the case of this noun then arises: it is more often genitive, but the nominative is also found. Upper Sorbian is again good for illustration:

- (83) *Handrija* (gen.) *Bahrowy* (PA, nom.) *list* (nom.)
 Handrij Bahr's letter

Lötzsche (378) quotes this and several other similar examples. In 83, the noun part of the name stands in the genitive, as is usual in Upper Sorbian; however, the nominative is also possible (Richter, 79–80):

- (84) *Thomas* (nom.) *Mannowy* (PA, nom.) *roman* (nom.)
 Thomas Mann's novel

When the case of the head noun is changed, the PA also changes to agree with it, but the noun part of the name remains in the nominative:

- (85) *Thomas* (nom.) *Mannoweho* (PA, gen.) *romana* (gen.)
 of.Thomas Mann's novel

The construction with the noun in the nominative (84–85) represents colloquial usage according to Fasske (384).

This second strategy, noun plus PA (in its main variant with the noun in the genitive) can, like the first, be traced back to Old Church Slavonic (Miklosich, 14). Again, examples are attested in the development of all three branches of

Slavonic. In the West, there are instances in Old Czech (Skorvid, 45),²⁵ Old Polish (Szlifersztejnowa, 52–7), Old Slovak (Štolc, 265), to a limited extent in Modern Slovak (Isačenko, 289; Štolc, 263, 266), as archaisms in Modern Czech (Gebauer 1929:158)—and, as we have already seen, as fully acceptable in Modern Upper Sorbian. For the South Slavonic group, the construction occurs in Bulgarian (native speakers):

- (86) *čičo Tomovata* (PA) *kášta*
uncle Tom's.the house
'Uncle Tom's house'

This should be contrasted with ex. 81.²⁶ Examples are also found in Macedonian (Topolińska, 123), rarely in Serbo-Croat (Dmitriev, 55)—with the nominal part of the name more commonly in the nominative—and residually in Slovenian (Topolińska, 123).²⁷ Finally, the strategy (but usually with the noun in the genitive) is well represented in East Slavonic: it is found in Old Ukrainian (Miklosich, 14) and in Old Russian (Makarova, 21–5). Richards (262–3) points out that, among Makarova's examples from the same manuscript as ex. 82, above, this also occurs (p. 21):

- (87) *vnukū Volodimeri* (PA) *Monomaxa* (gen.)
grandson Volodimer's of.Monomax
'Volodimer Monomax's grandson'

Some cases have two PA's and a genitive; again, 'split' constructions are found,

²⁵ While the noun part of the name was normally in the genitive, there are instances of it matching the case of the head noun (cf. fn. 27).

²⁶ No case is given for *čičo* 'paternal uncle', since case inflection is largely lost in Bulgarian. *Uncle Tom's cabin* is translated as *Čičo Tomovata koliba*. Note the position of the article *ta* in this construction; it normally attaches itself to the first full word of the NP—which suggests that, in this strategy (unlike ex. 81, with two PA's) the combination *Čičo Tomova* is taken as one word. If the dative clitic is included (as in fn. 9), then only the first strategy, with two PA's, is possible (Christo Stamenov, p.c.):

- (a) *čičovata* (PA) *ti Stojanova* (PA) *kášta*
uncle's.the to.you Stoyan's house
'your uncle Stoyan's house'.

It would appear that the second strategy is ruled out because the name in it is treated as one word; if the clitic followed this, then it would not relate back to *čičo*.

²⁷ In the standard language, the use of the adnominal genitive is the norm. For 'lower colloquial style', however, Janez Orešnik reports a fascinating situation (p.c.). For masculines, the second strategy can be used, with the first part of the compound in the nominative throughout; *Thomas* (nom.) *Mannov* (PA, nom.) *roman* (nom.) 'Thomas Mann's novel'; *iz Thomas* (nom.) *Mannovega* (PA, gen.) *romana* (gen.) 'from Thomas Mann's novel'. When we turn to feminines however, with the PA formed with *-in*, then the first part of the compound can match the case of the head noun of the phrase: *teta* (nom.) *Mickina* (PA, nom.) *hiša* (nom.) 'Aunt Micka's house'; *iz tete* (gen.) *Mickine* (PA, gen.) *hiše* (gen.) 'from Aunt Micka's house'; *k teti* (dat.) *Mickini* (PA, dat.) *hiši* (dat.) 'to Aunt Micka's house'; *nad teto* (inst.) *Mickino* (PA, inst.) *hišo* (inst.) 'above Aunt Micka's house', etc. However, if the phrase stands in the dual or plural, *teta* remains in the nom. sg.: *iz teta* (nom.) *Mickinih* (PA, gen. pl.) *hiš* (gen. pl.) 'from Aunt Micka's houses'. A second speaker reluctantly accepted the nominative of the first part of the name in a singular oblique case: *v teta* (nom.) *Marjančini* (PA, loc.) *hiši* (loc.) 'in Aunt Marjanca's house'; the genitive (**tete*) seems to be totally excluded in these examples (unless the whole phrase is in the genitive).

with PA and genitive on opposite sides of the head. When both are on the same side, some examples have the PA nearer the head, others have the genitive nearer (in Old Czech—cf. Gebauer, 158—as well as in Old Russian). As an example of what could be achieved, consider the following (Makarova, 24):

(88) *po korolevoj (PA) i velikogo knjazja (gen.) voli*
 according.to king's and of.grand duke will
Kazimirove (PA)
 Kazimir's

'according to the will of the King and Grand Duke Kazimir'.

This expression may be analysed as involving conjoined possessive expressions (both with the same referent). The first consists of a PA, the second of genitive plus PA; and this second is split, with the genitive noun (and its modifier) before the head noun, and the PA after.²⁸ The construction genitive plus PA survives in Modern Russian (though not in the luxuriance of ex. 88), in colloquial usage, and to some degree in Modern Belorussian.²⁹

There are gaps in the preceding account; a full history of these constructions is a task awaiting Slavists. But it is important that the basic facts should be recorded, since an attempt at a more formal account of the data in §3, where a consistent and full analysis was presented, could still be shown inadequate by the data given in the present section. The problems are considerable. First, some examples involve both strategies, and the elements of the possessor NP are split by the head. Then there is the point that the two strategies may coexist; the lists of languages, as given above, overlap (for statistics on the competition between the two strategies in Old Russian, see Richards). But the crux of the problem is again the interaction of syntax and morphology.

Let us assume that a node dominating the possessor NP is marked as requiring some type of possessive marker. In the first strategy, this is realized as a suffix (forming the PA) on each element. Then agreement markers are required. In the third strategy (no PA), genitive case-markers are required on all elements. It is the second strategy which is particularly difficult: one, but not both (or all) of the elements takes the PA suffix. This element must then show agreement with the head; the other takes the genitive (or nominative)

²⁸ A construction related to that of the genitive plus PA is that in which a noun stands in the genitive in apposition to the PA; sometimes it is very difficult to distinguish the two constructions. For examples, see Makarova (1954:25–6), Lomtev (1956:463), Szlifersztejnowa (49–50), Huntley (223) and Marojević (1985:107–8); see also Watkins (1967:2195) for comparative data from Greek. An alternative analysis for ex. 88 would be that *voli* is modified by *Kazimirove*, which has two elements in apposition, namely *korolevoj* and *velikogo knjazja*. However, the word order favors the analysis given in the text.

²⁹ Of nine Russian consultants, six accepted the following phrase:

reti (gen.) Olina (PA, nom.) kniga 'aunt Olja's book'
 of.aunt Olja's book

Not surprisingly (see discussion of (c) in fn. 30, below), the same phrase with *tetja* (nom.) was rejected by all speakers; the phrase with two PA's (*tetina Olina*) was also rejected by all. For Belorussian, Ivanova (1976:5) quotes a single example like the above.

marker, and does not show agreement. Thus morphology and syntax appear to be out of step.³⁰

5.4. PROBLEMS OF ANAPHORA. As we saw in §3, the PA can control a personal pronoun in all the Slavonic languages—though not all Polish speakers accept this possibility. We now consider constraints on the construction. (The problems discussed here were first raised by L'. Āuroviĉ, p.c. Judgments on Slovak are from him and several colleagues; Upper Sorbian data come from five consultants, and Czech from a similar number.) The constraints relate to coherence problems caused by the presence of the head of the PA. All the individual sentences in this section are grammatical, taken separately; judgments relate to the juxtaposing of the two sentences in each case.

Consider again an example of a personal pronoun controlled by a PA in Upper Sorbian:

- (89) *To je našeho* (gen. sg. masc.) *wučerjowa* (nom. sg. fem.)
 that is our teacher's
zahrodka (nom. sg. fem.). *Wón* (nom. sg. masc.) *wjele w*
 garden he [our teacher] a.lot in
njej džěta.
 it works

This is typical of examples in §3 from various languages. The PA controls a personal pronoun which is the subject of the following sentence; this second

³⁰ There is a final twist to the problem. In 19th century Russian, we find examples both with nominative plus PA and with genitive plus PA (Zemskaja, 286):

- (a) *Martyn* (nom.) *Petroviĉeva* (PA nom.) *lošad'* (Turgenev)
 Martyn Petroviĉ's horse
 (b) *oni ne Nikolaja* (gen.) *Petroviĉevy* (PA, nom.) (Āexov)
 they (are) not of Nikolaj Petroviĉ's
 'they are not Nikolaj Petroviĉ's'

Examples like (a), with the nominative, were possible only with PA's formed with *-ov*. Those formed with *-in*, from feminine nouns and from masculines in *-a*, co-occurred only with nouns in the genitive (Zemskaja, 295). Examples comparable to (b) were found in texts:

- (c) *k teti* (gen.) *Taninomu* (PA, dat.) *obedu* (dat.) (Tolstoj)
 to of.aunt Tanja's dinner
 'to aunt Tanja's dinner'

However, forms comparable to (a) are not found with PA's formed with *-in*: **k tetja* (nom.) *Taninomu* ... This suggests that the inflectional rule which assigns case to one part of the name has access to information about the morphology of the other part of the name. A possible solution is suggested by Šaxmatov (1941:288–9). He gives examples in which combinations of given name and patronymic have zero ending (equivalent to the nominative) on the given name, even in oblique cases. It appears therefore that the given name and patronymic can fuse as a single stem—to which inflectional endings are added, or which can be extended by the PA suffix. This option is available for masculines only.

A similar account would be adequate for many of the examples quoted from other languages; however, it is not the case that the nominative is found on the first element of such compounds only with masculine nouns. Exceptions to such a generalization are found in South Slavonic languages, notably in Slovenian (involving a phrase in the plural), as in fn. 27.

sentence also includes a pronoun controlled by the inanimate head noun with which the PA agrees (the antecedent of *njej* is *zahrodka*). When the head is inanimate, it may be possible to omit this second pronoun:

- (90) *To je Janowa košla. Wón hraje kopańcu.*
 this is Jan's shirt he plays football

Given a suitable context (someone holding a dirty shirt), speakers found this acceptable in Upper Sorbian.

With an animate head noun, the picture is more complex:

- (91) **?To je Janowa sotra. Wón je jej knihu dał.*
 this is Jan's sister he is to.her book given
 '... He gave her a book.'
- (92) *To je Janowa sotra. Wona je jemu knihu dała.*
 this is Jan's sister she is to.him book given
 '... She gave him a book.'

When the head is animate, it (rather than the PA) should control the subject pronoun in the next sentence. This is particularly clear when pronouns of the same gender are involved:

- (93) *To je Janowy bratr. Wón je jemu knihu dał.*
 this is Jan's brother he is to.him book given
 '... He gave him a book.'

This example is fully acceptable; the antecedent of *wón* is taken unambiguously to be *bratr*. Thus in Upper Sorbian, if the head is animate, a subject pronoun in the following clause must take this (and not the PA) as its antecedent. If the head is inanimate, a subject pronoun may take the PA as its antecedent. A second pronoun may also occur, with the head as its antecedent; but under the right conditions, this pronoun may be omitted.³¹

It is known that animate nouns are more likely to be selected as subject than are inanimates (see Itagaki & Prideaux 1985). It appears, not surprisingly, that the same is true of pronouns. This preference for an animate subject interacts with the competition between head noun and PA for the control of a following pronoun.

In Russian, the typical configuration in which the PA controls a personal pronoun is that in which the head noun is inanimate, and the pronoun takes as its antecedent the animate noun underlying the PA:

- (94) ... *deržal Ljaliny ruki, ona vryvala ix ...*
 was.holding Ljalja's hands she pulled.away them
 (Trifonov, *Dolgoe proščanie*)

This example also contains the pronoun *ix*, whose antecedent is the head noun *ruki*; but examples without such a pronoun can also be found.

Upper Sorbian and Russian both normally retain the subject pronoun; in languages which do not, the picture is different. In Slovak, the following is

³¹ As a curiosity, consider again the phrase with two stacked possessive adjectives, given in fn. 5. Consultants said that, given the appropriate context, a following pronoun *wona* could take *Marja* as its antecedent, or *mać* 'mother', or the head noun *smerć* 'death', which is also feminine.

acceptable:

- (95) *To je Janova košel'a. Hráva v nej futbal.*
 this is Jan's shirt (he)plays in it football

If *v nej* is omitted, then the example is completely unacceptable (compare Upper Sorbian ex. 90). With no overt pronoun linked anaphorically to either possible antecedent, there is nothing to establish that *Jan* is the intended subject of the verb.

When animates are involved, the difference as compared to Upper Sorbian is more striking. The following is fully accepted in Slovak (unlike 91 in Upper Sorbian):

- (96) *To je Janova sestra. Dal (masc.) jej korunu.*
 this is Jan's sister (he)gave to.her crown [coin]

Conversely, the following is hardly acceptable in Slovak (cf. 92):

- (97) **?To je Janova sestra. Dala (fem.) mu korunu.*
 this is Jan's sister (she)gave to.him crown

Consider next the situation where the two possible (animate) antecedents are of the same gender. The result is unacceptable in Slovak (in contrast to Upper Sorbian):

- (98) **To je Janov brat. Dal (masc.) mu korunu.*
 this is Jan's brother (he)gave to.him crown

The pro-drop factor seems to have an effect; the absence of any pronoun linked anaphorically to the head noun is more acceptable when the subject pronoun is retained. But knowing that we are dealing with a pro-drop language does not allow us a full prediction concerning PA's and anaphora. This becomes clear when we turn to Czech—which, like Slovak, also regularly drops subject pronouns. The Czech equivalent of 95 is fully acceptable:

- (99) *To je Janova košile. Hraje v ní futbal.*
 this is Jan's shirt (he)plays in it football.

If the phrase *v ní* is omitted, then the immediate reaction is to reject the example; but given an appropriate context, it may be grudgingly accepted. Czech also behaves differently from Slovak in sentences where the head noun is animate:

- (100) (?) *To je Janova žena. Má ho ráda (fem.)*
 this is Jan's wife (she) has him glad
 '... She is fond of him.'

- (101) (?) *To je Janova žena. Má ji rád (masc.)*
 this is Jan's wife (he)has her glad
 '... He is fond of her.'

Jan Firbas (p.c.) feels there is a lack of cohesion between the two sentences (which was not the case with sentences with an inanimate head); nevertheless, he and other native speakers accept both these sentences. Unlike the situation in Slovak, no difference was found between them (cf. 96–97).

We have seen that control of personal pronouns by PA's may conflict with the claim of the head noun, which is the stronger when the latter is animate.

Considerable variation is found among languages, and more work needs to be done—including comparison with the control possibilities of adnominal genitives. While these problems are interesting, it is worth stressing that the data here in no way weaken the analysis of §§3–4. In the language discussed here, the PA can certainly control personal pronouns. In certain circumstances, we encounter problems of coherence just in case the controlled pronoun is the subject (and especially if it is dropped).

6. CONCLUSION. We have seen that the PA's of Slavonic show a complex interrelationship of morphology and syntax. In some languages they are highly productive; yet there are constraints on the animacy, number, and specificity of the referent.³² Whether the PA is preferred to its competitor—the adnominal genitive—depends on these factors, as well as on its syntactic role (subjective or objective) and on the construction of the phrase (e.g., whether another noun is involved; §5.3). Once formed, and having changed word-class membership, the PA is not opaque to syntax, but allows the underlying noun to serve as an antecedent for anaphors in a way that other derived adjectives do not. This behavior makes the suggestion of a clear division between inflectional and derivational morphology appear implausible.

Given the inherent interest of the PA's, it seems sensible to establish the facts as clearly as possible. This leads to a typological account, based on the Control Hierarchy. As we move from attributive, to relative, to personal pronoun, the likelihood of control by the PA increases monotonically. The Control Hierarchy may in turn be subsumed under the Agreement Hierarchy.

REFERENCES

- ANDERSON, STEPHEN R. 1982. Where's morphology? LI 13.571–612.
- ANDREJČIN, LJUBOMIR D. 1978. Osnovna bałgarska gramatika. Sofia: Nauka i Izkustvo. [First edn., 1944; the 1978 edn. has minor corrections.]
- BAKER, MARK. 1985. The mirror principle and morphosyntactic explanation. LI 16.373–415.
- BARBOUR, J. S. 1982. Productive and non-productive morphology: The case of the German strong verbs. JL 18.331–54.
- BAUER, J. 1960. Vývoj českého souvětí. (Studie a práce lingvistické, 4). Prague: Nakladatelství Československé Akademie Věd.
- BELOŠAPKOVA, V. A. 1964. Izmenenija v substantivnyx slovosocetanijax. Očerki po istoričeskoj grammatike russkogo literaturnogo jazyka XIX veka, IV: Izmenenija v sisteme slovosocetanij v russkom literaturnom jazyke XIX veka, ed. by V. V. Vinogradov & N. Ju. Švedova, 128–220. Moscow: Nauka.
- BEZIKOVIČ, E. I., and T. P. GORDOVA-RYBAL'ČENKO. 1957. Bolgarskij jazyk: Učebnik dlja vuzov. Leningrad: Izdatel'stvo Leningradskogo Universiteta.
- BILÝ, MILAN. 1981. Intrasentential pronominalization and functional sentence perspective (in Czech, Russian, and English). (Lund Slavonic monographs, 1.) Lund: Slaviska Institutionen vid Lunds Universitet.
- BÄUER, HERBERT. 1986. Die possessiven Adjektiva auf *-ov* und *-in* des Russischen der Gegenwart und ihre Possessivität I. Zeitschrift für Slavische Philologie 46.51–139.
- BROWNE, WAYLES. 1974. On the topology of anaphoric peninsulas. LI 4.619–20.

³² See now also Bräuer 1986.

- CARLSON, GREG N. 1983. Marking constituents. *Linguistic categories: Auxiliaries and related puzzles*, ed. by Frank Heny & Barry Richards, 1.69–98. Dordrecht: Reidel.
- CHVANY, CATHERINE V. 1977. Syntactically derived words in a lexicalist theory (toward a restudy of Russian morphology). *Folia Slavica* 1:1.42–58. [Russian translation in *Novoe v zarubežnoj lingvistike XV: Sovremennaja zarubežnaja rusistika*, ed. by T. V. Bulygina & A. E. Kibrik, 26–41. Moscow: Progress.]
- COLLINGE, NEVILLE E. 1953. The mental equation factor in 'aberrant' syntax of Greek and Latin. *Greece and Rome* 22.130–39.
- COMRIE, BERNARD. 1976. The syntax of action nominals: A cross-language study. *Lingua* 40.177–201.
- . 1981. *Language universals and linguistic typology: Syntax and morphology*. Oxford: Blackwell.
- . 1982. Syntactic-morphological discrepancies in Maltese sentence structure. *Communication & Cognition* 15.281–306.
- COOPER, DONALD S. 1971. *Studies on possessive adjectives in Old Church Slavonic*. Harvard University dissertation.
- CORBETT, GREVILLE G. 1979. The agreement hierarchy. *JL* 15.203–24.
- . 1981a. Syntactically derived words: Evidence from Sorbian. *Melbourne Slavonic Studies* 15.13–17.
- . 1981b. A note on grammatical agreement in *Šinel'*. *Slavonic and East European Review* 59.59–61.
- . 1983. Hierarchies, targets and controllers: Agreement patterns in Slavic. London: Croom Helm; University Park: Pennsylvania State University Press.
- . 1986. Agreement: A partial specification, based on Slavonic data. To appear in *Agreement in natural language: Approaches, theories, descriptions*, ed. by Michael Barlow & Charles A. Ferguson. Stanford: Center for the Study of Language and Information.
- CORNISH, FRANCIS. 1986. *Anaphoric relations in English and French: A discourse perspective*. London: Croom Helm.
- CORUM, CLAUDIA. 1973. Anaphoric peninsulas. *CLS* 9.89–97.
- CROCKETT, DINA B. 1976. *Agreement in Contemporary Standard Russian*. Cambridge, MA: Slavica.
- DMITRIEV, P. A. 1961. Pritjažatel'nye prilagatel'nye serboxorvatskogo jazyka (K voprosu ob ix meste v sisteme častej reči). *Problemy jazykoznanija: Sbornik v čest' akademika I. I. Meščaninova (Učenyje zapiski Leningradskogo Gosudarstvennogo Universiteta*, 301, vyp. 60), 49–57. Leningrad: Izdatel'stvo Leningradskogo Universiteta.
- FASSKE, HELMUT. 1981. *Grammatik der obersorbischen Schriftsprache der Gegenwart: Morphologie*. Bautzen: VEB Domowina Verlag.
- FROLOVA, S. V. 1960. K voprosu o prirode i genezise pritjažatel'nyx prilagatel'nyx russkogo jazyka. *Učenyje zapiski Kujbyševskogo Gosudarstvennogo Pedagogičeskogo Instituta* 32.323–40.
- . 1972. Dvojtvennost' prirody pritjažatel'nyx prilagatel'nyx v sovremennom ruskom jazyke. *Naučnyje trudy Kujbyševskogo Gosudarstvennogo Pedagogičeskogo Instituta* 103.31–40.
- GEBAUER, JAN. 1929. *Historická mluvnice jazyka českého, IV: Skladba*. Prague: Nákladem České Akademie Věd a Umění.
- GREENBERG, JOSEPH H. 1966. Some universals of grammar with particular reference to the order of meaningful elements. *Universals of language*, ed. by J. H. Greenberg, 2nd edn., 73–113. Cambridge, MA: MIT Press.
- . 1978. Diachrony, synchrony, and language universals. *Universals of human language, I: Method and theory*, ed. by J. H. Greenberg et al., 61–91. Stanford: University Press.
- GROŠELJ, MILAN. 1955. O posesivnem adjektivu v slovanščini in toharščini. *Slavistična Revija* 8.2–10.

- HORÁK, GEJZA. 1966. Pridavné mená. Morfológia slovenského jazyka, ed. by Josef Ružička, 196–232. Bratislava: Vydavateľ'stvo Slovenskej Akadémie Vied.
- HUNTLEY, DAVID. 1984. The distribution of the denominative adjective and the adnominal genitive in Old Church Slavonic. *Historical syntax*, ed. by Jacek Fisiak (*Trends in linguistics: Studies and monographs*, 23), 217–36. Berlin: Mouton.
- ISAČENKO, A. V. 1954. Grammatičeskij stroj ruskogo jazyka v sopostavlennii s slovacckim: Morfológija, Čast' pervaja. Bratislava: Izdatel'stvo Slovackoj Akademii Nauk.
- ITAGAKI, NOBUYA, and GARY G. PRIDEAUX. 1985. Nominal properties as determinants of subject selection. *Lingua* 66.133–49.
- IVANOVA, T. A. 1974. Nekotorye osobennosti upotreblenija roditel'nogo prinadležnosti v sovremennyx slavjanskix jazykax. *Voprosy filologii* 4 (Izdatel'stvo Leningradskogo Universiteta), 33–40.
- . 1976. K voprosu o sootnošenii upotrebljaemosti possessivnyx konstrukcii v sovremennyx slavjanskix jazykax. *Voprosy Filologii* 5 (Izdatel'stvo Leningradskogo Universiteta), 3–10.
- IVIĆ, MILKA. 1967. Genitivne forme srpskohrvatskih imenica i odgovarajuća pridevska obrazovanja sufiksom *-ov* (*-ev*, *-ovlev*, *-evljev*), *-in* u odnosu 'kombinatoričnih varijanata'. *Godišnjak Filozofskog Fakulteta u Novom Sadu* 10.257–62.
- . 1986. On referential strategies: Genitivization vs. adjectivization in Serbo-Croatian. Forthcoming.
- JANAŠ, PĚTR. 1976. *Niedersorbische Grammatik*. Bautzen: Domowina-Verlag. [Revised, 1984.]
- JENSEN, JOHN T., and MARGARET STONG-JENSEN. 1984. Morphology is in the lexicon! *LI* 15.474–98.
- KONESKI, BLAŽE. 1967. *Gramatika na makedonskiot literaturni jazik*, I–II. Skopje: Kultura. [First published, 1952–54.]
- LAKOFF, GEORGE, and JOHN ROBERT ROSS. 1972. A note on anaphoric islands and causatives. *LI* 3.121–5.
- LIEBER, ROCHELLE. 1981. *On the organization of the lexicon*. Bloomington: Indiana University Linguistics Club.
- LÖFSTEDT, EINAR. 1928. *Syntactica, Studien und Beiträge zur historischen Syntax des Lateins, I: Über einige Grundfragen der lateinischen Nominalsyntax*. Lund: Gleerup.
- . 1933. *Syntactica, Studien und Beiträge zur historischen Syntax des Lateins, II: Syntaktisch-stilistische Gesichtspunkte und Probleme*. Lund: Gleerup.
- LÖTZSCH, R. 1965. Das sog. Possessivadjektiv im Slawischen, speziell im Sorbischen, und seine Stellung im System der Redeteile. *Forschungen und Fortschritte* 39, pt. 12, 377–9.
- LOMTEV, T. P. 1956. *Očerki po istoričeskomu sintaksisu ruskogo jazyka*. Moscow: Izdatel'stvo Moskovskogo Universiteta.
- MAKAROVA, S. JA. 1954. Roditel'nyj padež prinadležnosti v ruskom jazyke XI–XVIII vv. *Trudy Instituta Jazykoznanija AN SSSR* 3.7–31.
- MARETIĆ, T. 1899. *Gramatika i stilistika hrvatskoga ili srpskoga književnog jezika*. Zagreb: Hartman.
- MAROJEVIĆ, RADMILO. 1983a. Posesivne kategorije u ruskom jeziku (u svome istorijskom razvitku i danas). Belgrade: Filološki Fakultet Beogradskog Universiteta.
- . 1983b. Posesivni pridevi sa sufiksom *-in* u istoriji ruskog jezika. *Zbornik za Filologiju i Lingvistiku* 26.7–60.
- . 1983c. Sufiks *-sk-* u posesivnoj funkciji u ruskom jeziku (u istorijskom razvoju i danas). *Južnoslovenski Filolog* 39.159–78.
- . 1983d. Possessivnye kategorii v ruskom jazyke (istorija razvitija i sovremennoe sostojanie). *Filologičeskie Nauki* 1983:5.56–61.
- . 1984a. Izražavanje posesivnosti u istoriji ruskog jezika. *Crnogorska Akademija*

- Nauka i Umjetnosti, Glasnik odeljenja umjetnosti, 5.171–9. [Closely follows Marojević 1983d.]
- . 1984b. Praslovenske tvorbeno-semanticke rekonstrukcije. Prilozi za Književnost, Jezik, Istoriju i Folklor 1980 (Belgrade 1984), 46.53–8.
- . 1985. Posesivne izvedenice u staroruskom jeziku: Antroponimski sistem, toponimija, 'Slovo o polku Igoreve'. Belgrade: Filološki Fakultet Beogradskog Univerziteta.
- MATTHEWS, PETER H. 1974. Morphology: An introduction to the theory of word-structure. Cambridge: University Press.
- MICHAŁK, F. 1974. Kratkij očerk grammatiki sovremennogo verxnelužickogo literaturnogo jazyka. Hornjoserbski–ruski slovník, compiled by K. K. Trofimovič, 472–511. Budyšin: Ludowe Nakładnistwo Domowina.
- MIKLOSICH, FRANZ. 1926. Vergleichende Grammatik der slavischen Sprachen, IV: Syntax. Heidelberg: Winter. [Reprint of the first edn., 1868–74.]
- MILLER, JIM. 1985. Semantics and syntax: Parallels and connections. Cambridge: University Press.
- NEUMANN, PAUL. 1910. Das Verhältnis des Genetivs zum Adjektiv im Griechischen. (Inaugural-Dissertation ... der Westfälischen Wilhelms-Universität zu Münster in Westfalen). Münster in Westfalen: Westfälische Vereinsdruckerei.
- NILSSON, BARBRO. 1972. Old Russian derived nominals in *-nie*, *-tie*: A syntactical study. Stockholm: Almqvist & Wiksell.
- PAULINY, E. 1981. Slovenská gramatika (Opis jazykového systému). Bratislava: Slovenské Pedagogické Nakladateľstvo.
- ; J. RUŽIČKA; and J. ŠTOLC. 1968. Slovenská gramatika. 5th edn. Bratislava: Slovenské Pedagogické Nakladateľstvo.
- PERKOWSKI, JAN LOUIS. 1969. A Kashubian idiolect in the United States. (Language science monographs, 2). Bloomington: Indiana University.
- PETR, JAN. 1968. K charakteristice polských adjektiv. Slavica Pragensia 10.73–86.
- . 1971. Posesivní adjektiva v současné polštině. Slavica Pragensia 13.33–44.
- POLIŠČUK, G. G. 1972. Sinonimika atributivnyx slovosocetanij v vostočnoslavjanskix jazykax. Razvitie sintaksičeskix konstrukcij v ruskom literaturnom jazyke XVIII v., ed. by N. A. Širokova, 8–14. Izdatel'stvo Kazan'skogo Univerziteta.
- POSTAL, PAUL M. 1969. Anaphoric islands. CLS 5.205–39.
- POTEBNJA, A. A. 1968. Iz zapisok po ruskoj grammatike, III: Ob izmenenii značenija i zamenax suščestvitel'nogo. Moscow: Prosveščenie. [First published in 1899.]
- REVZIN, I. I. 1973a. Ponjatie paradigmy i nekotorye spornye voprosy grammatiki slavjanskix jazykov. Strukturno-tipologičeskie issledovanija v oblasti grammatiki slavjanskix jazykov, ed. by A. A. Zaliznjak, 39–50. Moscow: Nauka.
- . 1973b. Transformacionnoe issledovanie konstrukcij s sub'ektnym i ob'ektnym priimennym dopolnieniem (Genitivus subjectivus i Genitivus objectivus). Problemy grammatičeskogo modelirovanija, ed. by A. A. Zaliznjak, 88–96. Moscow: Nauka.
- RICHARDS, KAREN RONDESTVEDT. 1976. Toward a history of the possessive in literary Russian: The demise of the possessive adjective. Papers from the Parasession on Diachronic Syntax, ed. by Sanford B. Steever et al., 260–73. Chicago: CLS.
- 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.
- SAND, DIANE E. Z. 1971. Agreement of the predicate with quantitative subjects in Serbo-Croatian. University of Pennsylvania dissertation. [Distributed by University Microfilms, Ann Arbor, 72–17,420.]
- SANNIKOV, V. Z. 1968. Soglasovannoe opredelenie. Sravnitel'no-istoričeskij sintaksis

- vostočnoslavjanskix jazykov: Členy predloženia, ed. by V. I. Borkovskij, 47–95. Moscow: Nauka.
- . 1978. Soglasovannoe opredelenie. Istoričeskaja grammatika russkogo jazyka: Sintaksis, Prostoje predloženie, ed. by V. I. Borkovskij, 148–86. Moscow: Nauka.
- ŠAXMATOV, A. A. 1941. Sintaksis russkogo jazyka. 2nd edn. Leningrad. [Photomechanical reprint. The Hague: Mouton, 1963.]
- SCATTON, ERNEST A. 1984. A reference grammar of Modern Bulgarian. Columbus, OH: Slavica.
- ŠEWC-SCHUSTER, H. 1976. Gramatika hornjoserbskeje rěče, II: Syntaksa. Budyšin: Ludowe Nakładnistwo Domowina.
- SHEVELOV, GEORGE Y. 1963. The syntax of modern literary Ukrainian: The simple sentence. The Hague: Mouton.
- SKORVID, S. S. 1981. O sintaksičeskix svojstvax pritižatelj'nyx prilagatel'nyx v drevnečeskom jazyke. Vestnik Moskovskogo Universiteta, Serija 9: Filologija, pt. 4, 43–50.
- STEVANOVIČ, M. 1939/40. Posesivne forme u srpskohrvatskom jeziku. Godišnjak Skopskog Filozofskog Fakulteta 4:1.3–50. [Cited from Ivić 1967.]
- . 1974. Savremeni srpskohrvatski jezik (Gramatički sistemi i književnojezička norma), II: Sintaksa. 2nd edn. Belgrade: Naučna Knjiga.
- ŠTOLC, J. 1966. Vyjadrovanie posesivneho vzt'ahu v slovenčine a jeho slovanská súvislosť. Slavica Slovaca 1:3.259–67.
- STONE, GERALD. 1986. Review of Janaš 1984. Slavonic and East European Review 64.263–4.
- SZLIFERSZTEJNOWA, SALOMEA. 1960. Przymiotniki dzierżawcze w języku polskim. (Prace językoznawcze, 22.) Wrocław: Polska Akademia Nauk.
- TOPOLIŃSKA, ZUZANNA. 1981. Remarks on the Slavic noun phrase. (Prace Instytutu Języka Polskiego, 37.) Wrocław: Polska Akademia Nauk.
- TRÁVNÍČEK, FRANTIŠEK. 1951a. Mluvnice spisovné češtiny, I: Hlásokslaví, tvoření slov, tvarosloví. Prague: Slovanské Nakladatelství.
- . 1951b. Mluvnice spisovné češtiny, II. Skladba. Prague: Slovanské Nakladatelství. [First edn., 1949; pagination differs, so references are given by paragraph.]
- TRUBETZKOY, N. S. 1937. O pritižatelj'nyx prilagatel'nyx (possessiva) starocerkovnoslavjanskogo jazyka. Zbornik lingvističkich i filoloških rasprava A. Beliću o četrdesetogodišnjici njegova naučnog rada posvećuju njegovi prijatelji i učenici, 15–20. Belgrade: Mlada Srbija.
- . 1939. Le rapport entre le déterminé, le déterminant et le défini. Mélanges de linguistique offerts à Charles Bally, 75–82. Geneva.
- VACHEK, JOSEF. 1954. K problematice českých posesivních adjektiv. Studie a Práce Linguistické 1.171–89.
- . 1961. Some less familiar aspects of the analytical trend of English. Brno Studies in English (Prague) 3.9–78.
- VAILLANT, ANDRÉ. 1958. Grammaire comparée des langues slaves, II: Morphologie, deuxième partie, Flexion pronominale. Lyon: IAC.
- . 1964. Manuel du vieux slave, I: Grammaire. 2nd edn. Paris: Institut d'Études Slaves.
- . 1974. Grammaire comparée des langues slaves, IV: La formation des noms. Paris: Klincksieck.
- VEČERKA, R. 1957. Ke konkurenci adnominálního genitivu a adjektiva v staroslověnině. Sbornik Prací Filozofické Fakulty Brněnské University A5.25–38.
- . 1963. Sintaksis bespredložnogo roditel'nogo v staroslavjanskem jazyke. Issledovanija po sintaksisu staroslavjanskogo jazyka: Sbornik statej, 183–223. Prague: Izdatel'stvo Československé Akademie Nauk.
- WACKERNAGEL, JACOB. 1908. Genetiv und Adjektiv. Mélanges de linguistique offerts à F. de Saussure, 125–52. Paris. [Reprinted in his *Kleine Schriften*, 2.1346–73. Göttingen: Vandenhoeck & Ruprecht, 1955.]

- WATKINS, CALVERT. 1967. Remarks on the genitive. To honor Roman Jakobson: Essays on the occasion of his seventieth birthday, 3.2191–8. The Hague: Mouton.
- ZEMSKAJA, A. E. 1964. *Izmenenija v sisteme slovoobrazovanija prilagatel'nyx. Očerki po istoričeskoj grammatike ruskogo literaturnogo jazyka XIX veka, I: Izmenenija v slovoobrazovanii i formax suščestvitel'nogo i prilagatel'nogo v ruskom literaturnom jazyke XIX veka*, ed. by V. V. Vinogradov & N. Ju. Švedova, 277–555. Moscow: Nauka.
- ZVEREV, A. D. 1981. *Slovoobrazovanie v sovremennyx vostočnoslavjanskix jazykax*. Moscow: Vysšaja Škola.
- ZWICKY, ARNOLD M. 1983. An expanded view of morphology in the syntax-phonology interface. *Proceedings of the 13th International Congress of Linguists*, ed. by Shirō Hattori et al., 198–208. Tokyo.
- . 1986. Imposed versus inherent feature specifications, and other multiple feature markings. To appear in *Indiana University Linguistics Club Twentieth Anniversary Volume*.

[Received 4 December 1985;
revision received 3 June 1986;
accepted 19 August 1986.]