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The Possessive and Adjective Phrases in Croatian[1]

It is argued that the syntactic behaviour of the Croatian possessive NPs can be accounted for by Role and Reference Grammar (RRG). The prohibition against possessive NPs with more than one possessive adjective is a consequence of a basic claim of RRG, namely, that adjectives are operators and are not represented in the constituent projection. Therefore, adjectives, including the Croatian possessive adjectives, cannot have a branching structure, so possessive adjectives are replaced by postnominal possessive genitives whenever a possessed noun is modified by more than one possessor. Adjectives taking complements (e. g. full of beer) are also invariably postnominal in Croatian and English, as well as in other right–branching languages. Such adjective phrases should be analyzed as a kind of reduced relative phrase.

I. In this paper I shall try to show that the syntactic differences between the two different ways of expressing possession in Croatian, and several other Slavic languages, are predicted by Role and Reference Grammar (RRG), the syntactic theory developed over the last couple of decades by Robert D. Van Valin, Jr., and several other linguists (cp. e. g. Van Valin 1993, Van Valin & LaPolla 1997). It is certainly of high theoretical significance that a particular syntactic theory predicts a syntactic idiosyncrasy of a group of languages, or rather, that some syntactic properties of particular constructions in Slavic follow naturally from the design of a theory that had not been constructed to account for them

originally. However, before we proceed, we must give the reader some basic information about RRG.

RRG is similar to some syntactic theories of European provenance (e. g. Tesnière's structural syntax, Dik's functional grammar, Valenzgrammatik, etc.) in that it treats the verb and its arguments as the principal unit of syntactic organization; a clause is represented as a layered structure, consisting of several units with decreasing internal syntactic cohesion: Nucleus (usually containing the verb), Core (containing the Nucleus and its arguments), and Periphery (usually containing nominal non–arguments), which together with the Core combines to form the Clause. Noun Phrases are also represented as layered structures, containing nominal cores (usually head–nouns) and peripheries (containing dependent nouns). In this way the structure of the nominal phrase is treated parallely to the structure of the clause, similarly as in Chomsky's Minimalism, and in other recent varieties of Generative Grammar[2].

However, in contrast to generativism, RRG is a monostratal syntactic theory, which means that it does not accept multiple levels of syntactic structure, nor does it posit transformational rules for deriving surface representations from underlying ones. In RRG all syntactic information is encoded in three so–called »projections«: 1. the constituent projection, 2. the operator projection, and 3. the focus structure projection. All of these projections are equally »basic«, in the sense that none of them is derived from the others. It is just that different kinds of syntactic information are represented in different projections. The constituent projection contains constituents, i. e. syntactic units that can be determined by applying the standard tests for constituency (permutation, substitution, and coordination); units such as Nucleus, Core, Clause, Periphery, various NPs, and the relations among those constituents, are represented in the constituent projection. Elements called operators, which modify constituents and affect the syntax of the sentence, but do not necessarily form constituents, are represented in a different projection, called operator projection; operators are categories such as tense, aspect, negation, directionality, illocutionary force, or definiteness, number, nominal aspect, and adjectives (on the NP level). Different operators have different scopes, and their relative distances from the Nucleus (or from the Core of the NP) are determined universally for all languages by a principle called Natural Serialization Principle (NSP); the NSP predicts, for example, that in no human language is the illocutionary force marker nearer to the verb than the aspect marker, and that in no language is the definite article nearer to the head noun than the adjective modifying it; these predictions have so far been confirmed by the data in all known languages. It is important to note that operators can be realized as morphological markers (e. g. tense and aspect affixes) in some languages, but syntactically in others (e. g. illocutionary force can be marked by inversion, as

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2   For a cross–theoretical introduction to the basic concepts of Syntax, see Van Valin 2001.

is the case with questions in Germanic). The third projection, called the focus structure projection, contains the pragmatic information relevant for syntax, such as the potential focus domain within the sentence, and this need not concern us here.

RRG differs from all brands of generativism in two more significant respects: firstly, it does not accept the autonomy of syntax, but rather defines some crucial syntactic concepts, such as »privileged syntactic argument«[3], by involving semantic notions such as »actor« and »undergoer«[4]. Secondly, RRG is a very typologically–oriented theory, in that it strives for its concepts to be applicable to languages of typologically very different structures and genetic affiliations. This also means that the internal design of the theory is crucially affected by the observed linguistic diversity of possible syntactic structures. This is why we believe that the Croatian possessive constructions, to be discussed below, are relevant to RRG.

For further information about RRG the reader is addressed to the readily available full–scale presentation of the theory in Van Valin & LaPolla 1997.

II. There are two ways of expressing possession in Croatian: by means of a possessive genitive (A), and by means of a possessive adjective[5] (B)

(A)
kuć–a   duh–ova »The house of spirits«
house–Nsg spirit–Gpl
(B)
kralj–ev–a   kuć–a »The king's house«
king–Poss. Adj. –Nsg. f.   house–Nsg. f.

The order in the Croatian possessive constructions is invariably Possessed (X) –Possessor (Y) in constructions of the type (A), and Possessor (Y) — Possessed (X) in constructions of the type (B), since Croatian is a SVO language with the Adj–N and N–Gen dominant orders.

There are several semantic and syntactic restrictions on the employment of the type (B):

    1. Possessive adjectives cannot be formed from inanimate nouns: *kamenov »stone's«, *stolov »table's« *kućin »house's«. Thus, with inanimate pos-

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3   Roughly corresponding to »grammatical relation«, such as Subject, in traditional syntax.

4   These concepts are called »semantic macroroles« in RRG, and represent generalizations over particular semantic roles such as »agent«, »patient«, »experiencer«, etc. The semantic roles are in turn defined as particular positions in the argument structure of lexically decomposed verbs.

5   In most contemporary grammars of Croatian (e. g. Barić *et alii* 1979, Babić 1986: 336ff), possessive adjectives are treated as »relative adjectives«, as opposed to »descriptive adjectives«. A morphological feature that relative adjectives share is that they do not have comparative and superlative degrees.

sessors — inasmuch as they make sense semantically — only the pattern (A) is possible: *vrata kuće* »door of the house«.

2. If Y is plural, a possessive adjective cannot be formed, so pattern (A) is the only possible:
   sinovi otaca »Fathers' sons«

3. Moreover, if Y is indefinite, the pattern A is also the only possible (Ivić 1986, Browne 1993):

mačkin rep 'the cat's tail', but *rep mačke* 'a cat's tail'; *mačkin rep* cannot mean 'a cat's tail', a particular cat is intended. However, with generic (rather than specific) possessors, the possessive adjective is the norm; the Russian title of Šoloxov's novel *Sud'ba čeloveka* »Man's Destiny« is translated naturally as *Čovjekova sudbina* into Croatian (with possessive adjective); the use of the genitive (*Sudbina čovjeka*) would imply that some unspecified individual was intended. For animals, there is a special suffix *–ji* for generic possession: *mačji rep* cannot mean the tail of a particular cat, but rather denotes the body part of the generic animal.

Since proper names are definite by default, the pattern B is the only pattern allowed with proper names:

Markov auto 'Mark's car' is OK, but *Auto Marka is impossible (or at least, odd). Thus, in semantic terms, possessive adjectives can be used only when they refer to possessors that are singular, animate, and either generic or definite.

4. If a NP is modified by a complex possessor (consisting of more than one word), the pattern (B) is impossible: *kraljeva Markova kuća »The house of king Mark«. The pattern (A) must be used: *kuća kralja Marka*.
   However, a NP modified by a single possessor can again be modified by an adjective, or by several other modifiers:

ta	*velika,*	*stara*	*očeva*	*kuća*
that(Nfem.)	big(Nfem.)	old(Nfem.)	father's(Nfem.)	house (N)

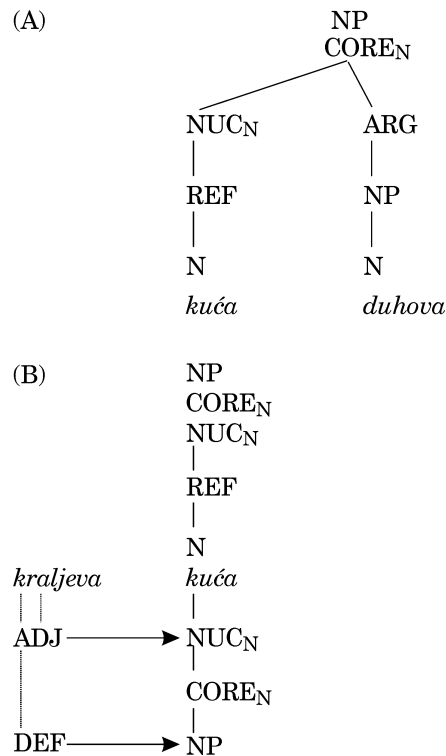»That big old father's house«; here the interpretation *»the house of that big old father« is strictly ruled out.

5. It is, however, impossible to combine (A) and (B) in a single phrase: *Ivanova kuća sestre »John's house of sister«. On the other hand, it is possible to say, e. g. *Ivanova kuća duhova* 'John's ghost–house', but here *kuća duhova* is not a proper possessive phrase, i. e. it cannot be translated as »the house of spirits« as in (A) above; it is rather interpreted as sort of a nominal compound, like *ghost–house* in English. Also, if the possessor is modified by a relative clause, it has to be expressed by the genitive (cp. Maretić 1899: 522):

kuć–a	*kralj–a*	*koj–i*	*vlad–a*	*ov–om*	*zemlj–om*
house–Nsg. f.	king–Gen. sg.	who–Nsg. m.	rule–3sg. pres.	this–Instr. sg. f.	country–Instr. sg. f.

»The house of the king who rules this country«

III. Possessive adjectives and possessive genitives thus behave quite differently in the syntax of Croatian, although they are semantically similar. Is there a theoretical justification for this, or rather, is there a syntactic theory which would clearly predict this difference in syntactic behavior? I believe that the different treatment of elements in the operator projection and those in the constituent projection in RRG (Van Valin & La Polla 1997) appropriately explains this fact of Croatian syntax. Namely, adjectives are operators in RRG, and receive a different treatment in that theory from nouns in the genitive in possessive constructions. Elements in constituent projections can have a complex internal structure, i. e., they can be phrases with heads and dependents, whereas elements in the operator projection cannot be internally complex (although there can be many operators with different scopes), and cannot form recursively branching phrases. Thus, the difference between patterns (A) and (B) in RRG would be:

(A)
$$
\begin{array}{c}
\text{NP} \\
\text{CORE}_N \\
\diagdown
\end{array}
$$

NUC$_N$	ARG
REF	NP
N	N
kuća	*duhova*

(B)
$$
\begin{array}{c}
\text{NP} \\
\text{CORE}_N \\
\text{NUC}_N \\
| \\
\text{REF} \\
| \\
\text{N}
\end{array}
$$

kraljeva   *kuća*

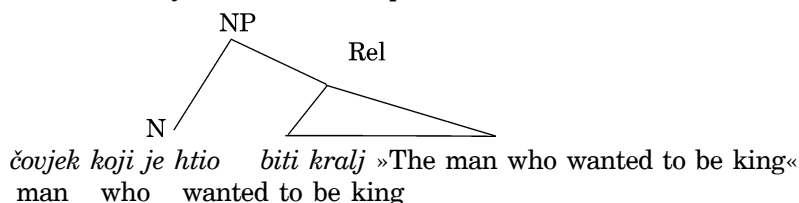ADJ $\longrightarrow$ NUC$_N$

CORE$_N$

DEF $\longrightarrow$ NP

The fact that the adjective contributes the definite meaning to the NP is indicated by assigning both ADJ and DEF operators to it in the operator projection. However, with complex possessors, complex phrases can be formed only in the constituent projection:

Kuća   drugoga   sina Markove sestrične »Mark's cousin's second son's house«
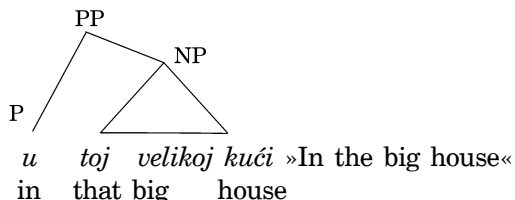house(N) second(G) sonG Mark(G) cousin(G)

(simplified RRG representation):

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        CORE
     NUC      ARG
              |
             CORE
             /    \
          NUC     ARG
           |        |
           N        N

   kuća drugoga sina Markove sestrične

      |     ADJ ──►|  ADJ ──►|
      NP       NP        NP
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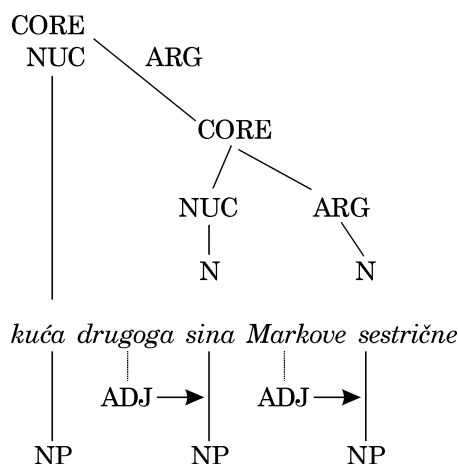
Croatian is a consistently right–branching language (in the sense of Dryer 1992); therefore, all phrases follow their heads in Croatian, and thus branch to their right. This is certainly true of relative phrases:

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          NP
         /  \
        /    Rel
       N
   čovjek koji je htio    biti kralj »The man who wanted to be king«
   man    who   wanted to be king
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And it is also true of PPs:

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         PP
        /  \
       /   NP
      P
   u    toj  velikoj kući »In the big house«
   in   that big      house
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This is all in accordance with the predictions of RRG; if a language is consistently right–branching, it will treat all its phrasal structures in the constituent projection alike. Adjectives, however, do not form phrases, because they are operators, and »operators in the operator projection of clauses or NPs do not head phrases with a layered structure« (Van Valin & La Polla 1997: 69). Van Valin and LaPolla (*ibid.*) illustrate this with the contrast between the predicative and the attributive use of adjectives in English. As predicates, adjectives are not operators, but rather behave like verbs, and form clauses, hence the grammaticality of *Bill is very proud of Pat* and the ungrammaticality of *The very proud of Pat Bill. In Croatian, the possessive phrases with bracketed structure of the type (Mark's (cousin's (second son's (house)))) cannot be formed with possessive adjectives precisely because the bracketed structure has to be expressed with a branching construction (for the ease of processing), and a branching construction cannot be formed with possessive adjectives, because adjectives are not phrasal categories.

IV. The theory predicts, moreover, that the prohibition against branching structures with possessive adjectives will be impossible not only in Croatian, but in other languages that have possessive adjectives. That is, the restrictions imposed on the syntactic behavior of possessive adjectives are not just an accidental fact of Croatian grammar, but follow from some universal principles affecting the syntactic representation of any language. The Slavic languages having possessive adjectives and making extensive use of them — e. g. Czech, Polish, Bulgarian — do seem to conform to the same restrictions affecting the possessive adjectives in Croatian (cp. Corbett 1987)[6]. However, in some early texts written in Old Church Slavonic and Old Russian, possessive adjectives and possessive genitives seem to be completely equivalent and interchangeable. Thus, in *Russkaja Pravda* (ORuss.) we read:

zakonъ   Jaroslavy   Svjatoslaviča »the law of Jaroslav Svjatoslavič«
law(Nsg.) Jaroslav(adj. Nsg.) Svjatoslavič(Gsg.)

In the Codex Suprasliensis (OCS):

otъ   uzdy   konьnyję   cěsarę »from the bridle of the horse of the Emperor«
from bridle(Gsg.) horse(adj. Gsg. fem.) emperor (adj. Gsg. fem.)

obrazomъ krestъnyimъ   Xristosovomъ »with the sign of the cross of Christ«
sign(Isg.) cross(adj. Isg.) Christ(adj. Isg.)

Here we face a problem affecting most research in historical syntax: the unavailability of native speakers of dead languages, whose linguistic intuitions can be tested. In the absence of them, it is not clear how such examples as the above should be interpreted. One is tempted, for example, to treat the ORuss. example, as a case of apposition, rather than a structure with a CORE$_{NP}$, i. e. to treat it as equivalent to something like »the law of Jaroslav, namely Svjatoslavič«. Such a structure would be possible in Croatian: *Zakon Jaroslavov, Svjatoslaviča*, but with a pause separating the two nouns in apposition, indicated by a comma. The written nature of our ORuss. and OCS documents do not allow us to make any firm inferences. They also do not permit us to ascertain how »natural« a phrase such as *obrazomъ krestъnyimъ Xristosovomъ* appeared to the speakers of OCS, and it is by no means certain that there were any native speakers of that language, since it was a semi–artificial literary idiom created by St. Constantine.

More damaging to our thesis could be the following data from Upper Sorbian, a living language with ca. 50000 native speakers[7] (Fasske 1981: 382–3):

mojeho   mužowa   sotra   mojeje   sotřiny   nawoženja
my (Gsg. m.) husband's(Nsg. f.) sister(Nsg. f.)   my(Gsg. f.) sister's(Nsg. m.) fiancé(Nsg. m.)
»My husband's sister«   »My sister's fiancé«

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6   Some languages, e. g. Russian and Polish, had possessive adjectives, but lost them, or nearly lost them (for Russian see Marojević 1983).

7   All are bilingual in German, but this is probably irrelevant for the data to be presented below.

Can things get any worse for the argument I am trying to defend? It seems that in Upper Sorbian possessive adjectives behave exactly the way they are not supposed to, controlling attributive modifiers in multiply–embedded possessive constructions[8]. The phrase *mojeho mužowa sotra* looks like a very good candidate for a branching construction involving a possessive adjective:
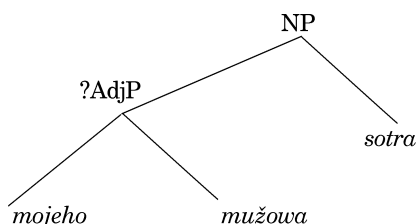
Complex NPs of this kind are not supposed to exist in RRG, if they involve adjective phrases, since adjectives cannot form phrases or constituents.

However, a closer examination of the Upper Sorbian data shows that the so–called possessive adjectives in that language do indeed behave differently from the Croatian possessive adjectives. For instance, they can be relativized upon (Fasske 1981: 385):

Słyšetaj... Wićazowy hłós, kotryž je zastupił
hear(3pl. pres.) W. (poss. adj. Nsg. m) voice(Nsg. m) who(Nsg. m) is gone(Nsg. m)
»They hear Wićaz's voice, who is gone«

Such a sentence is quite unacceptable in Croatian[9], and also in other living Slavic languages (except, perhaps, in Slovak). In it the relative pronoun *kotryž* refers to *Wićaz*; this shows that in Upper Sorbian the so–called possessive adjectives are actually *nominal forms*, equivalent to a separate possessive case, but differing from other case forms in the language in that they show agreement in gender, number and case with the head noun denoting the *possessum*[10].

It is not that we are claiming that Upper Sorbian adjectives aren't really adjectives just in order to save our thesis, but rather on the basis of independent evidence, involving their syntactic properties. Here one must bear in mind that morphological criteria are never completely reliable in identifying syntactic categories; for example, in Croatian, very few morphological proper-

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8   Similar constructions appear also to be possible in Slovak (cp. Corbett 1987: 315–316); Corbett's data lead me to think that the explanation offered below for Upper Sorbian would hold for Slovak as well.

9   I checked this with 13 native speakers who unanimously rejected the sentence *Vidio sam sestrin auto koja je stigla. However, perhaps such relative constructions were not impossible in the earlier history of Croatian, cp. Maretić 1899: 522.

10 In some cases even the other possessor agrees in case with the head noun (rather than being in the genitive); this is called »case attraction« (Corbett 1987: 304): *w našej* (Lsg. f) *nanowej* (Lsg. f) *chěži* (Lsg. f) »In our father's house«.

ties are shared by all adjectives; e. g. it is not the case that all adjectives have comparative and superlative forms, it is also not the case that all adjectives have definite and indefinite forms, and even that all adjectives agree with their head nouns in gender, number, and case[11]. Moreover, in Upper Sorbian ordinary adjectives do behave differently from possessive adjectives with respect to syntax, although they share most of their morphological properties; for instance, they cannot be relativized upon; you cannot say, e. g.

*To je kožany   płašč,   kotraž   je droha

this is leather(m.) coat(m) which(f.) is expensive(f.)

»this is a leather coat, which (namely, leather) is expensive«; note that *koža* »leather«, from which *kožany* is derived, is feminine in Upper Sorbian.

Thus, *independent evidence* shows that there is a syntactic difference between proper adjectives and possessive adjectives in Upper Sorbian, and that a different treatment of this word class is appropriate. It should be noted that the fact that possessive adjectives can be relativized upon is *a priori* independent of the fact that they can be modified by other possessive adjectives or genitives; however, in no language is the latter fact observed, unless the former also obtains. In my opinion, this shows that Slavic possessive adjectives actually represent two different things: in Upper Sorbian, and perhaps in Slovak, they are nominal forms showing a typologically uncommon kind of agreement[12], whereas in other Slavic languages, including Croatian, they are true adjectives. It is therefore proper to represent the Upper Sorbian possessive adjectives as phrasal categories in the constituent projection, while the Croatian possessive adjectives should be analyzed as operators, just as we suggested above.

V. The problem for the theory, however, might arise from the fact that some adjectives do seem to take complements, and thus to form phrases, even in English: what is *full of beer* in a NP such as *A pitcher full of beer?* In Croatian too, attributive adjective phrases are allowed:

dolina bogata izvorima »Valley rich in springs«

valley rich   spring(Instr. pl.)

policajac   lud za   Marijom »The policeman (who is) mad about Mary«

policeman mad about Mary(Instr. sg.)

džep   pun novca »pocket full of money«

pocket full money(Gen. sg.)

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11   Think of the recent loan words such as *super* »great«, as in *Ti si super djevojka* »You are a great girl«.

12   The agreement pattern is unusual, because dependent nouns seldom lose their inherent gender, and agree in gender and case with head nouns within NPs; however, in some Nakh–Dagestanian languages in the Caucasus agreement is even more pervasive than in Upper Lusatian (cp. Matasović 2001: 104–106).

Note, however, that such adjective phrases (if indeed they are adjective phrases) must be postposed, hence the ungrammaticality of the following NPs:

*bogata izvorima dolina

*lud za Marijom policajac

*pun novca džep

Thus, it seems that adjective phrases are treated like any other branching structure in Croatian, i. e., that they are right branching. They could, therefore, perhaps be treated as a kind of relative clauses, rather than a special type of phrasal structure unprovided for by RRG. We could argue that indeed they are relative clauses, with omitted relative pronouns and copula, since in each case they can be paraphrased by inserting these elements, without a change in meaning:

dolina koja je bogata izvorima »A valley which is rich in springs«

policajac koji je lud za Marijom »A policeman who is crazy about Mary«

džep koji je pun novca »A pocket which is full of money«

Just like any other relative clause, these adjective clauses are right–branching in Croatian, as we would expect them to be. Of course, we cannot say that they are *underlyingly* relative clauses, because nothing is underlying anything in the RRG framework (it is a monostratal syntactic theory). We can treat them as a special kind of relative clauses with omitted relative pronouns and copula, and represent them more or less along the following lines:
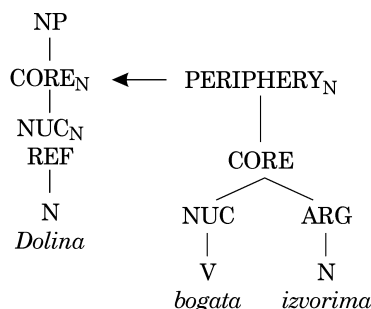
What might seem counterintuitive in this representation is that we are treating a word, that is morphologically an adjective, as if it were a verb[13]. There is nothing inherently implausible in this, however, especially if we consider the fact that adjectives do behave like verbs in predicative constructions, when they are (at least in Croatian and English, but not e. g. in Russian) preceded by a copula. Had there been a relative pronoun and a copula in the sentence, the relative pronoun would be in the precore slot preceding the core in the above representation, while the copula would be a part of the nucleus, which would thereby become verbal (*je bogata*), rather than adjectival.

13　Katičić (1986: 125) also treats adjectives which head adjective phrases as verb–like, and their complements as object–like, but from a different perspective. We could say that RRG provides an independent theoretical confirmation that Katičić's intuition was justified.

Similarly, in English, adjective phrases would be equivalent to relative clauses without a relative pronoun, i. e. *A pitcher full of beer* would be structurally parallel to *the man Bill saw* (cp. Van Valin & La Polla 1997: 499)[14]. Thus, an investigation of a syntactic structure in Croatian leads us to a recognition of an unexpected syntactic parallelism in English and, perhaps, in Universal Grammar.

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Posvojne i pridjevske sintaktičke skupine u hrvatskome

Teza je ovog članka da gramatika uloga i referenci (GUR, v. Van Valin & La Polla 1997) može objasniti sintaktičke osobitosti hrvatskih posvojnih imenskih skupina. Zabrana posvojnih imenskih skupina s dva ili više posvojnih pridjeva posljedica je temeljne teze GUR–a da su pridjevi operatori, te da stoga nisu predstavljeni na prikazu konstituenata u rečenici. U skladu s time, pridjevi, uključujući i hrvatske posvojne pridjeve, ne mogu imati granajuću strukturu, a posvojni pridjevi zamjenjuju se posvojnim genitivima kad god je posjedovana imenica — possessum — u sintagmi s više od jednog possessora. Pridjevi koji traže dopunu (npr. pun piva) također obavezno slijede imenicu uz koju stoje, te se sintaktički ponašaju poput reduciranih odnosnih konstrukcija.

Key words: adjective forms, possessive forms, role and reference grammar, Croatian
Ključne riječi: pridjevski oblici, posvojni oblici, gramatika uloga i referenci, RRG, hrvatski jezik