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OBJECTS IN SERBO-CROATIAN

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The aim of this paper is to characterize the class of object grammatical arguments in Serbo-Croatian. The analysis will be presented in the framework of Lexical Functional Grammar, henceforth LFG (cf. Kaplan and Bresnan 1982), and the exposition is organized as follows: part 1 deals with the case-marking of objects, part 2 explores the phrasal positions which object NP's can assume, and part 3 focuses on broader implications of this analysis for the grammar of Serbo-Croatian.

1. Case-marking of objects

I will first focus on the case-marking of objects in Serbo-Croatian. We can say that in principle any second argument of a dyadic predicate is a potential object, assuming that objects may have lexically governed or irregular case. To illustrate this point, consider cases listed in (1) - (4).

- (1) Policija je uhapsila Pavla.
 Police(NOM) Aux arrested Pavle(ACC)
- (2) Petar pomaže Mariji Petar(NOM) helps Marija(DAT)
- (3) Petar se boji Marije.
 Petar(NOM) fears Marija(GEN)
- (4) Petar upravlja tom firmom
 Petar(NOM) manages that firm(INS)

The verb uhapsiti 'arrest' in (1) has an accusative second argument, in (2) the verb pomagati 'help' has a dative argument, bojati se 'fear' in (3) has a genitive second argument, and upravljati 'manage' in (4) takes an instrumental second argument. I will argue here that only the verbs in (1) and (3), i.e. 'arrest' and 'fear' are transitive. Or, more generally, that objects occur either in the accusative or the genitive, but not in the instrumental or the dative, as summarized in (5):

The argument will be based on the applicability of lexical rules, the only productive component in an LFG grammar. In particular, it will be assumed that certain lexical rules are sensitive to the transitivity of input lexical forms. A classical case is the personal

passive, which operates solely on transitive lexical forms. However, passive may not be a highly reliable test for transitivity, since it may be restricted in certain languages to a subset of objects with regular case-marking. Thus, assuming that passivization can sometimes be blocked by irregular case-marking, we may find verbs with second arguments in an oblique case which do not passivize, and yet have no conclusive argument concerning their transitivity.

This is exactly the situation we find in Serbo-Croatian. Verbs like *uhapsiti* 'arrest', illustrated in (1), are fairly uncontroversial: the second argument of 'arrest' is in the accusative case and, as shown in (6), it readily passivizes.

(6) Pavle je uhapšen. Pavle(NOM) is arrested

But, since none of the verbs listed in (2) - (4) pass this test of transitivity, as shown in (7) - (9), further evidence is needed to decide whether they are transitive or not.

- (7) *Marija je pomognuta. Marija(NOM) is helped
- (8) *Marija je bojana. Marija(NOM) is feared
- (9) *Firma je upravljana. Firm(NOM) is managed

The next test to be applied is the ability of a lexical form to undergo a rule like Impersonalization. In a sense, this is a negative test, since Impersonalization will be blocked by the presence of OBJ. In other words, a transitive lexical form will fail to undergo this rule. The effect of this lexical rule is to "eliminate" the subject and introduce the morpheme se, which I analyze as an impersonal subject.² The rule of Impersonalization can be stated as in (10):

(10) Impersonalization

This rule says that se acts as an impersonal subject in third person singular form; and

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 \neg (\uparrow OBJ) captures the fact that it operates only on intransitive forms. Thus, a verb like polaziti 'leave', which is intransitive, can undergo this rule, as shown in (11). But this is not the case with the transitive verb uhapsiti 'arrest', hence the ill-formedness of (12b).

- (11) a. Petar polazi u pet. Peter leaves at five
 - b. Polazi se u pet.
 Leaves SE at five
 'One leaves at five.'
- (12) a. Policija je uhapsila Pavla.
 Police(NOM) Aux arrested Pavle(ACC)
 - b. *Uhapsilo se Pavla. arrested SE Pavle(ACC)
- (13) (15) show how Impersonalization operates on the remaining lexical forms listed in (1) (4). Bojati se 'fear' in (13), whose second argument is in the genitive case, fails to undergo Impersonalization, as shown by the ill-formedness of (13b). But pomagati 'help' and upravljati 'manage' readily undergo this rule, i.e. behave like intransitives.
 - (13) a. Petar se boji Marije.
 Petar(NOM) fears Marija(GEN)
 - b. *Bojalo se Marije.(One) feared Marija(GEN)
 - (14) a. Petar pomaže Mariji.
 Petar(NOM) helps Marija(DAT)
 - b. Pomagalo se Mariji.(One) helped Marija(DAT)
 - (15) a. Petar upravlja tom firmom vrlo dobro. Petar(NOM) manages that firm(INS) very well
 - b. Tom firmom se upravlja vrlo dobro. That firm(INS) SE manage very well

The evidence we have suggests that verbs like uhapsiti 'arrest' with accusative second arguments subcategorize for objects, since they pass both tests for transitivity; and that those verbs whose second arguments are in the dative or instrumental, and which fail both tests for transitivity, subcategorize for oblique arguments. The relevant lexical forms are listed in (16) - (18):

- (16) uhapsiti V (PRED) = 'arrest < (SUBJ) (OBJ)>'
- (17) pomagati V (tPRED) = 'help <(tSUBJ) (tOBL_{DAT})>'
- (18) upravljati V (tPRED) = 'manage <(tSUBJ) (tOBL_{INS})>'

It remains to be resolved, however, what would present an adequate analysis of a verb like bojati se 'fear' with a genitive argument. In the case of Passive it patterns with intransitive lexical forms, and in the case of Impersonalization with transitive lexical forms. The remarks made earlier about the nature of Passivization in languages with extensive case-marking are relevant here. I will assume that arguments which carry irregular case exhibit the so-called case preservation property, as proposed in Zaenen and Maling (1983), and that this property will affect their ability to passivize. In other words, given the fact that bojati se 'fear' fails to undergo Impersonalization, I will maintain that it patterns with transitives but does not passivize because of the irregular case feature on the OBJ argument. The lexical form for bojati se 'fear' is given in (19):

I propose, then, to analyze as object any second argument of a dyadic predicate⁵ whose case is either accusative or genitive.⁶ This claim is based on the applicability of the Impersonalization rule and its restrictedness to intransitive contexts. The relevant facts are summarized in (20):

(20)		Impersonalization		
		does apply	doesn't apply	
	'arrest'		~ ···	
	'help'	✓		
	'fear'		~	
	'manage'	~		

I will now show that the proposed analysis is supported by another area of Serbo-Croatian grammar. The question to be addressed next is the phrasal positions of OBJ grammatical arguments.

2. C-structure positions of objects

Both accusatives and genitives can occur either in clitic or in non-clitic form, and I will propose a set of c-structure rules which will account for regularities governing cliticization.

The order of major constituents is generally free in Serbo-Croatian. Thus, grammatical arguments, including objects, are freely ordered with respect to the verb. The constituent structure rules in (21), where AUX dominates the clitic constituents, capture some of these facts.

Assign
$$(\uparrow G) = \downarrow$$
 to NP, where $G = SUBJ$, OBJ, or OBL Assign $\uparrow = \downarrow$ to V'

Clitics, however, occupy a fixed position, so-called second sentential position, and appear in strictly ordered sequences. Before providing a rule which expands the AUX, I need to address certain issues concerning internal ordering of clitics. It is traditionally assumed (e.g., Maretic 1931, Browne 1974) that table (22) captures the positions available within the clitic complex: Slot I contains the interrogative particle li. Slot II contains the auxiliary forms; those listed here are forms of the auxiliary biti 'be', whose third person singular occupies slot VI. The forms of the other auxiliary, hteti 'want', occupy only slot II. Slot III contains dative clitics, and slots IV and V contain genitive and accusative clitics, respectively.

(22)

I	II	III	IV	V	VI
interrogative particle	auxilia ry	dative	genitive	accusative	auxiliary
li	1sg sam	mi	me	me	3sg je
	2sg si	ti	te	te	
		mu	ga	ga	
	1pl smo	joj	je	je	
	2pl ste	nam	nas	nas	
	3pl su	vam	vas	vas	
	-	im	ih	ih	
				se	

Given this analysis of the clitic complex, it appears that cliticization is governed entirely by case. Thus, dative NP's should cliticize into slot III, genitive NP's into slot IV, and accusative NP's into slot V, regardless of the function they perform. In what follows I will argue against this analysis by pointing to certain wrong predictions that it makes. The position I will argue for is that cliticization is governed by grammatical function.

The analysis presented in (22) predicts that in the case of triadic predicates like *dati* 'give', with an accusative object and a dative, or *osloboditi* 'free', with an accusative object and a genitive, one could cliticize either the accusative or the non-accusative argument, or both.

However, while this is true of dati it is not true of osloboditi. The dative and the accusative cliticize independently, as shown in (23) which exhibits the cliticization possibilities of dati; but in (24) the cliticization facts do not match the predictions of table

- (22). Table (22) allows simultanuous cliticization of a genitive and an accusative. This is falsified by the ill-formedness of (24b). Next, table (22) predicts that either the genitive or the accusative could cliticize. Note, however, that this is possible in the case of an accusative but not a genitive, as shown by the ill-formedness of (24d).
 - (23) a. Petar je dao Mariji poklon.
 Petar(NOM) Aux gave Marija(DAT) present(ACC)
 - b. Petar joj ga je dao. Petar(NOM) her(Cl-DAT)it(Cl-ACC) Aux gave
 - c. Petar joj je dao poklon.

 Petar(NOM) her(Cl-DAT) Aux gave present(ACC)
 - d. Petar ga je dao Mariji.
 Petar it(Cl-ACC) Aux gave Marija(DAT)
 - (24) a. Petar ce Mariju osloboditi straha.
 Petar(NOM) Aux Marija(ACC) will-free of-fear(GEN)
 - b. *Petar ce ga je osloboditi.

 Petar Aux of-it(Cl-gen) her(Cl-ACC) will-free
 - c. Petar ce je osloboditi straha.

 Petar Aux her(Cl-ACC) will-free of-fear(GEN)
 - d. *Petar ce ga osloboditi Mariju.

 Petar(NOM) Aux of-it(Cl-gen) will-free Marija(ACC)

These facts may suggest that genitive NP's never cliticize. However, those genitives that we analyze as objects do cliticize, as shown in (25).

- (25) a. Petar se boji Marije. Petar se fears of-Marija(GEN Sg)
 - b. Petar je se boji. Petar of-her(Cl) se fears

The analysis presented in (22) leaves all these facts unexplained. But if we recall the characterization of objects offered earlier (second arguments in the accusative or genitive case), we can see that it is precisely those arguments that cliticize in (24c) and (25). Note, furthermore, that the elements in IV and V, i.e. the genitive and accusative clitics, are identical in form (if one disregards the clitic se, which will be dealt with in a moment). This, together with the cliticization facts in (23), (24), and (25), strongly suggests that there may be only one clitic position for genitives and accusatives, which is associated solely with the object grammatical function. Thus, I will propose here a revised clitic ordering, as shown in table (26):

(26) Revised clitic complex

I	II	Ш	IV	V
interrogative particle	auxiliary	dative	genitive/ accusative	auxiliary/se
li	sam	mi	me	je
	si	ti	te	se
	etc.	etc.	etc.	

In the revised version of the clitic complex (26), slots IV and V are collapsed, and se shares a slot with the auxiliary form je. Furthermore, the genitive/accusative slot IV will be associated with the object function while slot three will be occupied by (dative) obliques. Thus, this analysis accounts for an apparent gap in the system: that genitive obliques do not cliticize. This leads me to propose that in Serbo-Croatian cliticization is governed not by case but by grammatical function.

A few remarks are in order concerning the clitic se. The traditional analysis presented in table (22) rests on the assumption that se patterns with the accusative clitics and lists it in slot V. By moving se into the final slot of the revised clitic complex (26) I have tacitly questioned this assumption and will now provide arguments for doing so.⁸

But let me first briefly summarize evidence presented in support of the claim that se is an accusative, i.e. object clitic (cf. Browne 1974, Ivic 1962, 1967). First, it has been argued that all accusative (i.e. object) pronouns have clitic and non-clitic forms, and that in this respect se makes no exception. Thus, according to table (27), each full accusative form has a corresponding clitic form.

(27) Accusative (object) pronominal forms

full forms	clitic forms	
mene	me	
tebe	te	
njega	ga	
nju	je	
nas	nas	
vas	vas	
njih	ih	
sebe	se	

Next, it has been claimed that members of each pair listed in (27), including *sebe* and *se*, present alternant forms which are in complementary distribution, as illustrated in (28) and (29).¹⁰

(28)	a.	Petar Petar	brani defends	mene. me
	b.	Petar Petar	me me(Cl)	brani. defends

(29) a. Petar brani sebe.
Petar defends himself

b. Petar se brani.
Petar himself(Cl) defends

The first claim rests on a potentially misleading assumption: that morphological similarity ought to be paralleled by syntactic similarity. But if we allow that this need not necessarily be so, we can offer an alternative explanation for the complementarity of clitic and non-clitic pronouns in (28) and (29). Grimshaw (1982) has argued that French reflexives are markers of intransitivity. Indeed, there is good evidence internal to Serbo-Croatian that a similar case can be made for the Serbo-Croatian reflexive se. I can provide two arguments that se does not pattern syntactically with sebe. The first one, based on the comparative construction, is presented in (30):

- (30) a. Petar je branio mene uspešnije nego Anu. Petar(NOM) Aux defended me(ACC) better than Ana(ACC)
 - Petar me je branio uspešnije nego Anu.
 Petar(NOM) me(Cl-ACC) Aux defended better than Ana(ACC)
 - c. Petar je branio sebe uspešnije nego Anu. Petar AUX defended himself better than Ana(ACC)
 - d. *Petar se branio uspešnije nego Anu.
 Petar SE defended better than Ana(ACC)

While sebe does pattern with the accusative pronouns mene and me, se does not, as shown by the ill-formedness of (30d). In other words, it appears that se has an intransitivizing effect on the lexical form in which it occurs. If so, we expect that lexical forms with this intransitivizing, reflexive se undergo the Impersonalization rule, a fairly reliable transitivity test for Serbo-Croatian, and this is exactly what happens, as shown in (31d). Note that the presence of object NP's mene, me, and sebe, blocks Impersonalization, hence the ill-formedness of (31 a,b,c).

- (31) a. *Branilo se mene.

 Defended SE me
 - b. *Branilo me se. Defended me SE
 - c. *Branilo se sebe.

 Defended SE oneself

d. Branilo se.
Defended SE
'One defended oneself.'

In order to account for these data, I will postulate two distinct lexical forms for the verb braniti (cf. (32a) and (32b)), one transitive and one intransitive, and relate them by the lexical rule of Reflexivization listed in (33), which has an intransitivizing effect.¹¹

(33) Reflexivization 12

This analysis is further supported by the fact that there is independent motivation for having se in the same clitic slot as je. As illustrated in (34), se and je cannot cooccur.

- (34) a. *Petar se je branio.
 Petar(NOM) himself Aux defended(3,Sg,M)
 - b. Petar se branio.
 Petar(NOM) himself defended(3,Sg,M)

Note, however, that the constraint exemplified in (34) happens to be a pure idiosyncracy: if an auxiliary other than je appears in a sentence it freely cooccurs with se, as is the case with the auxiliary su in (35):

(35) Petar i Marko su se branili.
Petar and Marko(NOM) Aux themselves defended(3,Pl,M)

I can now propose an AUX c-structure rule which provides the five slots of the revised clitic complex (26). Rule (36) has five clitic positions; and CL₄, a position for genitive and accusative clitics, has a single annotation (OBJ)=|.

3. Closing remarks

To sum up, I have made two claims regarding the characteristics of object grammatical arguments in Serbo-Croatian. First, objects occur either in the genitive or in the accusative case. Next, while non-clitic object NP's do not occupy a fixed phrasal position, objects in clitic form occupy a single clitic position regardless of their case-marking.

A test case for this analysis will be a phenomenon in Serbo-Croatian grammar comparable to ne-cliticization in Italian (cf. Belletti and Rizzi 1981, Perlmutter 1983). Specifically, cliticization from phrases like mnogo ljudi 'many people' is permitted in some but not all cases. I will first briefly sketch an analysis of these phrases, and then attempt to account for the cliticization pattern.

Phrases like $mnogo\ ljudi$ 'many people', where mnogo is an undeclinable form and ljudi occurs in the genitive case, will be generated here by the c-structure rule in (37). $Mnogo\ will$ be assigned to Q, and ljudi to N.

(37) NP -> (QP) (N') (
$$\uparrow$$
 SPEC)= \downarrow \uparrow = \downarrow

The genitive of the noun *ljudi* 'people' is the so-called partitive genitive, restricted to mass and plural nouns. I will assume that partitive genitive affix assigns semantic case, and has the following lexical entry:

The f-structure of mnogo ljudi 'many people' is given in (39), with ljudi 'people' performing the partitive (PART) function: 13

Note that the mnogo phrase can function as subject, object, or adjunct, as shown in (40a),(40b), and (40c), respectively. The phrase ljudi 'people' in (40a) and (40b) and the

phrase godina 'years' in (40c) are in the genitive.

- (40) a. Petar poznaje mnogo ljudi.
 Petar(NOM) knows many of-people(GEN)
 - b. Mnogo ljudi poznaje Petra.
 Many of-people(GEN) know Petar(ACC)
 - c. Petar je živeo u Njujorku mnogo godina. Petar(NOM) AUX lived in New York many of-years(GEN)

If partitive genitive is semantic case, as I propose, genitive clitic pronouns should also have corresponding partitive forms. However, our analysis predicts that only (40a) should have a cliticized version, and that is exactly what happens:

- (41) a. Petar ih poznaje innogo. Petar(NOM) of-them(Cl-GEN) knows many
 - b. *Petra ih poznaje mnogo.
 Petar(ACC) of-them(Cl-GEN) know many
 - c. *Petar ih je živeo u Njujorku mnogo.
 Petar(NOM) of-them(Cl-GEN) Aux lived in New York many

(41a) shows that cliticization is possible from (40a), where the *mnogo* phrase acts as object. But it is not possible from (40b), where it acts as subject or from (40c), where it acts as time adjunct, as shown by the ill-formedness of (41b) and (41c). If cliticization were governed by case, we would expect to have cliticized versions of all three sentences in (40).

Note that no stipulation was needed to account for the cliticization pattern in (41). That is to say, I did not have to stipulate either that Serbo-Croatian objects are definable in abstract configurational terms, i.e. that they are $[NP]_{VP}$, which would be a necessary assumption of an analysis along the lines of Belletti and Rizzi (1981); or that cliticization from a mnogo phrase is possible only when it is an object, a proposal that would follow from Perlmutter (1983). The analysis of Serbo-Croatian data presented here is based on the assumption that cliticization from a mnogo phrase is governed by independently motivated constraints on cliticization. Furthermore, if stated in terms of grammatical functions, those constraints prove to be fairly simple and general. Thus, the ill-formedness of (41b) and (41c) follows from an independent fact that genitive NP's can cliticize only if they are objects¹⁴

Notes

¹Serbo-Croatian has a full-fledged case system, with nouns marked for the nominative (NOM), genitive (GEN), dative (DAT), accusative (ACC), instrumental (INS) and locative (LOC) case. In addition, Serbo-Croatian has a relatively free word order; although it is generally assumed that it is an SVO language, major sentential constituents can in fact appear in practically any mutual order. Another important fact about Serbo-Croatian is the occurrence of clitic elements in the second sentential position, where "second sentential" means either after a first word or after a first constituent.

²Compare Rizzi's (1982) analysis of Italian impersonal si which makes a similar claim.

³Verbs with irregularly case-marked objects passivize in Icelandic (cf. Zaenen and Maling 1983), but the subject of the passive form retains the case-marking of the object in the corresponding active form. Interestingly, this correlates with an independent fact, that Icelandic generally allows oblique case-marking on subjects. Although I have no further evidence for this position, it seems reasonable to assume that this type of passivization may be directly corelated with the availability of oblique case-marking for subjects. Note also that Serbo-Croatian subjects appear only in the nominative case.

⁴Russian also has a class of verbs with with second arguments in the genitive case which can be thought of as irregularly case-marked objects. Butorin (1966) and Timberlake (1977) report that this class of verbs shows a marked tendency to appear with the accusative, a regular case-marking for objects in Russian.

⁵Predicates with more than two arguments appear to take only accusative objects.

⁶The analysis of Serbo-Croatian objects proposed in Ivic (1967) makes claims similar to mine about the case-marking of objects.

⁷As mentioned in note 1, clitics can appear either after a first word or after a first constituent. The rules in (21) capture only the latter case.

 8 Note that we would not be able to generate sentences like (25b) with the se occupying slot IV of the revised clitic complex.

⁹For example, Browne (1974, p.38) describes se as "the enclitic accusative of the reflexive pronoun".

¹⁰Ivic (1962, 1967) maintains that in this use se is a combinatorial variant of sebe. Likewise, Browne (1974) introduces a feature [+/- Full], which distinguishes between the full and cliticized forms of the personal pronouns. In particular, he assumes a parallelism between mene and sebe, both [+ Full], and between me and se, which are both [-Full].

¹¹The clitic se acts both as an impersonal subject and as a marker of lexical reflexives. This can be captured by the following lexical entry:

The optional PRED feature will appear with impersonal forms, where se is an

argument, but not with reflexives, where it is an intransitivity marker. Note, however, that the se form occurring with the verb bojati se 'fear' is compatible with OBJ arguments (cf. the lexical form in (19)) and thus appears to be a different morpheme. My guess would be that its effect is to constrain the case feature on the OBJ, since verbs which take genitive objects invariably cooccur with se (for example, kloniti se 'keep away from', setiti se 'remember', dokopati se 'grab upon', stideti se 'be ashamed').

¹²Grimshaw also included into the formulation of this rule an operation on predicate argument structure, whereby one argument is bound to another. This part of the rule is expressed as follows:

¹³An advantage of this analysis is that it brings out a parallel with genitive objects, which alternate with accusatives on a fairly regular basis. They, too, are constrained to mass or plural nouns, and can be analyzed as cases of partitive genitive, the only difference being that they lack the SPEC constituent:

- (i) a. Petar je kupio groždje/groždja Petar(NOM) Aux bought grapes(ACC,SG)/(GEN,SG)
 - b. Petar je kupio jabuke/jabuka
 Petar(NOM) Aux bought apples(ACC,PL)/(GEN,PL)

¹⁴I would like to thank Joan Bresnan for many useful suggestions about the material in this paper. Of great help have been comments on earlier versions by Joan Bresnan, Masayo Iida, Megumi Kameyama, Peter Sells, Elizabeth Traugott, and Annie Zaenen. And thanks go to Peter Sells for helping me to get the paper into its present form.

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