

# Determiner-Possessor Relation in the Bulgarian DP

*Lilia Schürcks and Dieter Wunderlich*

*Heinrich Heine University Düsseldorf*

## 1. Introduction<sup>1</sup>

The aim of this article is to provide an account for the behavior of the short form of the possessive pronoun in the Bulgarian DP. This possessive form is always stuck to the definite element in the DP. Some illustrations of the phenomenon are given in (1):

- (1) a. *statija-ta mu*  
 article-the his  
 'his article'
- b. *interesna-ta mu statija*  
 interesting-the his article  
 'his interesting article'
- c. *mnogo-to mu interesni statij*  
 many-the his interesting articles  
 'his many interesting articles'
- d. *tazi mu interesna statija*  
 this his interesting article  
 'this interesting paper of his'

An analysis involving movement of the respective phrase in order to account for the combination of the article and the short possessive form does not explain the matter.<sup>2</sup> The fact that some material has to move and other has to stay behind does not bring light into the puzzle. The phenomenon has not received enough attention in the literature. We propose a straightforward lexical account which deals with it, clarifying both the morphological peculiarities of the definite element and the possessive form and their syntactic behavior. The lexical analysis is within the two interrelated frameworks of Minimalist Morphology and Lexical Decomposition Grammar (Wunderlich 1994, 1996, 1997a, 1997b and Wunderlich and Fabri 1996). More concretely, we follow the analysis of Ortman and Popescu (to appear) in claiming that the article in Bulgarian has a unique lexical property selecting the feature [+N], corresponding to the lexical categories of nouns, adjectives, demonstrative pronouns and quantifiers. The fact that the short form of the possessive pronoun always occurs with the definite element in the DP, is tackled by arguing that this form appears as an extended projection of the lexical selectional property of the definite element.

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<sup>2</sup> This is also claimed by Franks and King (2000).

## 2. Distribution of the possessive clitics in DPs

The Bulgarian possessive pronoun appears in two forms, i.e. long forms and short forms. The long forms have adjectival endings agreeing with the nominal head, while the short forms are clitics, identical in form with the dative clitics appearing with verbs. The full paradigm of the possessive pronoun is presented below in (2):

(2)		Long Forms				Short Forms
	Possessor	masc	fem	neuter	Plural	
	1sg	moj	moja	moe	moi	<i>mi</i>
	2sg	tvoj	tvoja	tvoe	tvoi	<i>ti</i>
	3sg masc	negov	negova	negovo	negovi	<i>mu</i>
	3sg fem	nein	nejna	nejno	nejni	<i>i</i>
	1pl	naš	naša	naše	naši	<i>ni</i>
	2pl	vaš	vaša	vaše	vaši	<i>vi</i>
	3pl	texen	tjaxna	tjaxno	texni	<i>ti</i>

(3) gives a detailed picture of the various environments where the definite element and the short possessive form occur together. Both items immediately follow the head noun in (3a), the adjective in (3b), and the quantifier in (3c,d). If a demonstrative shows up, which is definite by itself, the short possessive form is attached to it as shown in (3e,f). These examples may suggest that the definite element and the short possessive form are second position clitics. However, as (3g) illustrates, these elements are not restricted to second position: here they follow the whole adjectival phrase formed by a participle. If the adjectival head is not final in the AP, they only follow the adjective but precede post-head modifiers or PP-complements of the adjective, as shown in (3h) and (3i).

- (3)
- a. knigi-te *mi*  
books-the my  
'my books'
  - b. semej-ni-te *im* problemi  
family-adj-the their problems  
'their family problems'
  - c. malko-to *ni* rastenija  
few-the our plants  
'our few plants'
  - d. mnogo-to *ti* interesni knigi  
many-the your interesting books  
'your many interesting books'
  - e. tezi *mu* knigi  
these his books  
'these books of him'
  - f. onezi *im* novi knigi  
those their new books  
'those new books of them'
  - g. tvurde burzo izpraznena-ta *mu* butilka  
too quickly emptied-the his bottle  
'his too quickly emptied bottle'

- h. *izbrana-ta i vèera roklja*  
 chosen-the her yesterday dress  
 'her dress chosen yesterday'
- i. *predpisano-to mi ot lekar lekarstvo*  
 prescribed-the my by doctor medicine  
 'my medicine prescribed by a doctor'/'the medicine prescribed to me  
 by a doctor'

The short possessive does not form a group with any of the following elements, it is incorporated to the right of the definite element. Consequently, the environments where the definite element and the possessive occur, can be summarized as follows:

- (4) a. [Q, A, or N] < article < short form  
 b. demonstrative pronoun < short form

In other words, a descriptive generalization can be derived that the short possessive form is always stuck to the definite element in the DP. The short possessive cannot follow indefinite NPs. Compare the examples in (5):<sup>3</sup>

- (5) a. \**tetradka mu*  
 notebook his  
 b. *tetradka-ta mu*  
 notebook-the his  
 'his book'  
 c. \**xubava mi kniga*  
 nice my book  
 d. *xubava-ta mi kniga*  
 nice-the my book  
 'my nice book'

The fact that the short possessive follows only DPs and is ruled out after indefinite NPs is generalized in (6):

- (6) a. [DP + short poss]  
 b. \*[indef. NP + short poss]

Another context where the short possessive forms occur, are VPs. A relevant question to be asked here is whether the two forms, those in DP and VP, are the same. They do exhibit a controversial behavior, as illustrated in (7) and (8):

- (7) a. *Vidja-x interesna-ta i statija*  
 saw-1sg interesting-the her article  
 'I saw her interesting article.'

<sup>3</sup> In contrast, the long forms can occur both with or without the article. Consider the sentences in (i):

- (i) a. *Vidja-x moja-ta xubava kniga* 'I saw my nice book.'  
 saw-1sg my-the nice book  
 b. *Vidja-x moja xubava kniga* 'I saw one of my nice books/I saw a nice book of mine.'  
 saw-1sg my nice book

- b. Vidja-x *i* interesna-ta statija  
saw-1sg her interesting-the article  
'I saw her interesting article.'
- (8) a. \*Vidja-x interesna *i* statija  
saw-1sg interesting her article  
b. Vidja-x *i* interesna statija  
saw-1sg her interesting article  
'I saw one of her interesting articles/I saw an interesting article of hers.'

The short possessive allows raising out of the DP into the verbal domain, as illustrated in (7). But possessor raising is possible also with an indefinite NP (see (8b)), whereas the combination of indefinite NP and a short possessive is impossible (see (5) and (6)). We will postpone the discussion about the behavior of the short possessive in VPs vs. DPs until section 4.

It is evident from the empirical data presented in this section that it is not the syntactic ordering which plays a role in determining the behavior of the short possessive, rather it is a matter of lexical selection of a category containing the characteristics [+def].

### 3. The proposal

It is a real puzzle why the article and the short possessive in fact target the same head. Let us try to handle the problem with a movement analysis. If we assume Abney's structure for the DP (Abney 1987), then the NP *statija* in (9) would move to [SpecDP]. In the same way, the AP *mnogo interesna* in (10) would move to [SpecDP].

- (9) a. statija-ta  
article-the  
'the article'  
b. [DP [D [N statija] -ta] [NP *t<sub>N</sub>*]]
- (10) a. mnogo interesna-ta statija  
very interesting-the article  
'the very interesting article'  
b. [DP [AP mnogo interesna ] [D' [D -ta] [NP *t<sub>AP</sub>* statija]]]  
c. \*mnogo interesna statija-ta

But if *mnogo interesna* in (10) moves, what happens to *statija*, the head of the NP? Does it also move, or remains in situ? If it moves, the article would follow the whole phrase, which is wrong (see (10c)). Turning to (11) and (12), we see that only a part of the AP can move, while the other elements of the AP have to stay behind. Otherwise, the phrase would be ungrammatical.

- (11) a. kupeni-te včera knigi  
bought-the yesterday books  
'the books bought yesterday'  
b. [DP [A kupeni ] [D' [D -te] [NP [AP *t<sub>A</sub>* včera] knigi]]]  
c. \*kupeni včera-te knigi  
\*kupeni včera knigi-te

- (12) a. nova-ta i interesna kniga  
new-the and interesting book  
'the new and interesting book'
- b. [DP [A nova ] [D' [D -ta] [NP [AP t<sub>A</sub> i interesna] kniga]]]
- c. \*nova i interesna-ta kniga  
\*nova i interesna kniga-ta

Neither the whole AP nor the whole NP can move in these instances. On the contrary, the article always appears on **the head** of the AP. Regard the following examples where it appears on the head of the NP:

- (13) a. kniga-ta za istorija na Sofia  
book-the about history of Sofia  
'the book about the history of Sofia'
- b. ideja-ta èe vsièko tuk e skupo  
idea-the that everything here is expensive  
'the idea that everything is expensive here'

It is clear from (11) - (13) that the article goes always on the head of the respective phrase, it **does not** follow the phrase. In all cases (9) - (13), the short possessive form appears immediately after the article.<sup>4</sup> Look at the examples in (14):

- (14) a. mnogo interesna-ta *mi* statija  
very interesting-the my article  
'my very interesting article'
- b. ideja-ta *mi* èe vsièko tuk e skupo  
idea-the my that everything here is expensive  
'my idea that everything is expensive here'

With the short possessive form (or dative clitic) following the article, we get even into more trouble with the movement analysis. Being impossible to separate the two forms, this would predict that the short possessive must be moved to the head of the DP, regardless of how deeply it is embedded. Consider (3i), repeated here as (15), in which *mi* is base-generated as the indirect object of *predpisvam* 'prescribe':

- (15) a. predpisano-to *mi* ot lekar lekarstvo  
prescribed-the to me by doctor medicine
- b. [DP [A predpisano ] [D' [D -to] [CL mi]] [NP [AP t<sub>A</sub> t<sub>CL</sub> ot lekar] lekarstvo]]]

Given the apparent problems with the movement strategy, we propose a lexical analysis within the framework developed by Wunderlich (1994, 1996, 1997a, 1997b). The main points are given in (15):

- (15) (i) There is a lexical operation in which the article and the short possessive form select their host.
- (ii) The article in Bulgarian has an inherent lexical property which selects [+N], corresponding to quantifiers, adjectives and nouns. The short possessive form appears as an extended projection of the article.

<sup>4</sup> Due to the lack of space, we will illustrate only two examples with the short possessive form.

Our first step concerning (15), is to regard the status of the article in Bulgarian. Its form can be sensitive to the element it attaches to. Consider the examples in (16), which exhibit three different forms.

- (16) a. sela-ta                                    ‘the villages’  
 b. xubavi-te sela                                ‘the beautiful villages’  
 c. mnogo-to xubavi sela                      ‘the many beautiful villages’

We, therefore, claim that the article is a suffix and present our morpho-phonological considerations.<sup>5</sup> The forms of the article are shown in (17) below:

- (17) The Article in Bulgarian:<sup>6</sup>

Masc	Fem	neuter	Plural
-ta, -to, -jat (-ja), -ût (-a)	-ta	-to	-ta, -te

The following table shows that the distribution of these forms depends on several conditions:

(18)

	-ta	-to	others	
sg masc	sūdiĵa-ta ‘the judge’	svako-to ‘the uncle’	kon-jat ‘the horse’	vek-ût ‘the century’
sg fem	sestra-ta ‘the sister’			
sg neut		selo-to ‘the village’	dete-to ‘the child’	
pl masc			snegove-te ‘the snows’	
pl fem			Źeni-te ‘the women’	
pl neut	sela-ta ‘the villages’			
Pluralia- tantum	xora-ta ‘the people’			
adj-plural			xubavi-te ... ‘the beautiful ...’	

After examining the examples in (18), it is clear that the reference to both phonological and morphological factors is necessary. The following generalization emerges then:

- (19) If the stem ends in *-a* or *-o*, the article is always *-ta* or *-to*, respectively. In all other cases, the form of the article depends on the gender and number of the head noun (and on further conditions regarding the two masculine allomorphs).

<sup>5</sup> Other authors have also argued for the suffix character of the article in Bulgarian: Halpern (1995), Franks (1998), Franks and King (2000), Ortmann and Popescu (to appear).

<sup>6</sup> In the masculine, *-ût* and *-jat* are used in the nominative, while in all other contexts *-a* or *-ja* appears. Consider the examples in (i):

- (i) a. Vidĵa-x kon-ĵa                            ‘I saw the horse’  
       see-1sg horse-the  
 b. Kon-jat e vidĵa-n                            ‘The horse is seen’  
       horse-the AUX see-PART

The interplay between phonological and morphological factors can be illustrated further in (20), where two competing synchronic plurals coexist:

- (20) a. kolene-te/kolena-ta [pl neut]  
       'the knees'  
       b. ramene-te/ramena-ta [pl neut]  
       'the shoulders'  
       c. dve-te/dva-ta [pl fem/neut, pl masc]  
       'the two'

Looking further at the possessive form following the article, there are a few words expressing 'kinship' in Bulgarian which lack an overt article form but are definite in interpretation. Examples of such words are given in (21):<sup>7</sup>

- (21) a. *žena mu*  
       'this wife'  
       b. *majka mi*  
       'my mother'

The addition of the possessive form in (22) results in ungrammaticality:

- (22) a. *?žena-ta mu*  
       b. *\*majka-ta mi*

It is interesting to note that when we modify the noun, the article must appear again, as shown in (23):

- (23) a. *krasiva-ta mu žena*  
       'this beautiful wife'  
       b. *čarovna-ta mi majka*  
       'my charming mother'

Consequently, the lack of a definite marker in (21) is a pure lexical property. After having seen the failure of the movement analysis above, we argue for the structure in (24), reflecting the state of the matters in examples like (25):

- (24) [ [ X-ta ] *mi* ]

- (25) a. *tetradka-ta mi*  
       notebook-the my  
       'my notebook'  
       b. *xubava-ta mi tetradka*  
       nice-the my notebook  
       'my nice notebook'

In the lexical theory we assume, lexical items project to syntactic phrases in which their arguments are realized by complements. The feature system determines which syntactic com-

<sup>7</sup> That the possessive clitic needs a definite context is clear also from the following cooccurring forms:

- (i) a. *svako ti/ svako-to ti* 'your uncle'  
       b. *sin ti (colloq) /sin-ût ti* 'your son'

The interpretation of both types of forms is definite and is not dependent on the presence or the absence of the article.

plement is attached to which theta-role (see Wunderlich 1997b). For the sake of brevity, we present the complex feature relevant for the dative as [dat].

Thus the input and the output for the representation in (24) will be like that in (26):

(26) *mi*: [dat,1sg] / [+def] \_\_\_\_\_

The input, presented to the right of the slash in (26), means that the possessive form has to combine locally with an element with that particular specification. In other words, the possessive is specified according to the information of the element it selects. The output, given to the left of the slash in (26), constitutes the information the possessive adds to the syntactic projection at the DP level: it is linked to a theta-role specified by [dat] and adds the information [1sg]. A syntactic projection is formulated as follows:

(27) *Syntactic Projection* (Wunderlich and Fabri 1996: 248)

- A (possibly) complex word marks a syntactic position by means of the category which heads it, and it c-selects a category in virtue of its lowest feature value.
- Syntactic heads are potentially ‘complex’ in the sense that they project to their hierarchically highest element, and select the complement of their lowest element.

Hence, the combination [adjective + article] is a complex category D/A. It projects to the hierarchically highest element (D) and picks up the complements of the lowest element (A), if there are any available. Any element of the category D/A satisfies the morphological input condition of the possessive clitics ([+def]), so that one of these can be attached. Semantically, however, the article relates to a noun rather than to an adjective. Therefore, D/A can form a full DP only if it is complemented with an NP. Since the possessive does not alter the requirement for an NP complement, the category that results by adding a possessive form is still D/A. This is illustrated with the tree (28) below, which represents the structure of (25b):

(28)

				DP
		e		i
		D/A		NP
	3			tetradka
	D/A		DP	
	2		mi	
	A	D		
	xubava	ta		

There are two facts to explain: the agreement between the adjective and the noun within the DP, and the way in which the definite suffix finds its NP target. We assume that there are two complementary ways of integrating adjectives and possessors into NPs, either by means of argument extension or by means of modifier extension (see Wunderlich 1997b), the latter being relevant here. We further assume that the definite suffix does not necessarily bind the argument of the element it attaches to, but it always binds the referential argument of a noun. (Note that combinations such as *mnogo-to* ‘the many...’ or *xubava-ta* ‘the beautiful ...’ are disallowed without the presence of a noun.)

The semantic composition along the structure given in (28) can then be performed as follows. (29) shows that adjectives, possessive adjectives, and quantifiers can all be marked for taking an NP-complement, where N is a predicative variable ranging over NPs with the minimal structure  $\lambda x \text{ NOUN}(x)$ .



plex DPs such as that in (33b). Each step of the composition projects to a new morphological or syntactic level, depending on the status of the elements that are combined, and on further constraints.

Nothing in the semantics requires that the article combines with the adjective rather than the noun or the whole NP. In addition to the input information for the possessive clitic, which requires surface adjacency, there are at least two other constraints that are relevant here: the default order of the potential elements of a DP (demonstrative < quantifier < adjective < noun), and the requirement that the definite element (and consequently, also the possessive clitic) appears at the utmost left edge of a DP. Since the definite article is a suffix selecting [+N], the optimal candidate then turns out to be a phrase in which the article is attached to the first possible [+N] element. Consequently, the generative power of SF is restricted by these additional constraints.

It is noteworthy, however, that not many languages behave like Bulgarian. There is a discrepancy between the requirement that the definite article binds the referential argument of a noun and the actual placement of this element. The conflict between constraints induced by morphological idiosyncrasies on the one hand, and general syntactic ordering principles on the other, is solved here in a way that molests the syntax-semantics harmony. We conclude that the syntax-semantics mismatching found in Bulgarian can be accounted for if one concedes generative power to SF, but not as easily (or not at all) if generative power is considered to be a sole property of the syntactic component.

Another, even more complex example for the Bulgarian way to form DPs is shown in (34), for which we propose the structure in (35).

- (34) nabŭrzo predpisano-to *mi* ot lekar lekarstvo  
 hastily prescribed-the my by doctor medicine  
 'my medicine hastily prescribed to by a doctor'/  
 'the medicine hastily prescribed to me by a doctor'

- (35)
- |            |       |       |           |
|------------|-------|-------|-----------|
|            |       | DP    |           |
|            | e     | i     |           |
|            | D/A/V |       | NP        |
|            | e     | i     | lekarstvo |
| Adv        |       | D/A/V |           |
| nabŭrzo    |       | 3     |           |
|            | D/A/V |       | PP        |
|            | 3     |       | ot lekar  |
|            | D/A/V | DP    |           |
|            | 2     | mi    |           |
| A/V        | D     |       |           |
| predpisano | to    |       |           |

The adverb *nabŭrzo* cannot attract the article because it is not [+N]. The first element that can attract the article is the passive participle, being of the category A/V. It selects complements of V; but projects to AP. Hence, if it combines with the article, the even more complex category D/A/V obtains.

- (36) a. *predpisano* A/V  $\lambda N \lambda z^{\text{neut}} \lambda y \exists x \text{ PRESCRIBE}(x,y,z)$   
 dat



In the VP, the dative clitic (the possessive form) is in the clitic cluster. In this environment, the restriction to definite contexts does not hold any longer, as shown in (43) (see also (8)).

- (43) a. \*Pročetox statija *i*.  
 b. Pročetox *i* statija.  
 'I read one of her articles.'

The possessive clitic in (43b) cannot emerge from syntactic movement because the clitic is impossible within a nondefinite NP. Hence, the clitic must be base-generated in the VP, which, however, does not have a feature such as [+def]. The possessive clitic in the VP is identical with the dative clitic, as shown in (44).

- (44) a. Ana ti go e dala pismo-to  
 Anna CL.DAT CL.ACC AUX given letter-the  
 'Ana has given you the letter.'  
 b. Ivan ste im go pročete  
 Ivan AUX CL.DAT CL.ACC read  
 'Ivan will read it to them.'

Hence the clitic in the VP will be represented like in (45):

- (45) *mi*: [dat, 1sg]

That the possessive clitic must be base-generated in the VP is also predicted by the way the semantic composition works in our account. At the DP-level, the clitic has become an inseparable part of the DP, illustrated in (32c) above. Such an element can never be moved. How, then, do we account for the base-generation of an element that seems to belong to the DP rather than to the VP? We assume that verbs, like adjectives or nouns, can undergo argument extension in order to integrate possessives. This is shown for the examples given in (38). In (46), V1 represents the base verb, and V2 - the verb with a possessor argument. Possible DPs that can satisfy the object role of 'read' ( $\lambda y$ ) are represented by D2 and D1, with or without a possessive clitic.

- (46) V1  $\lambda y \lambda x \text{ READ}(x,y)$   
 V2  $\lambda y \lambda z \lambda x [\text{READ}(x,y) \ \& \ \text{POSS}(z,y)]$   
 D1 *statija-ta*: Du ARTICLE(u)  
 D2 *statija-ta i*: Du [ARTICLE(u) & POSS(3fsg,u)]

There are four possible combinations. If V1 is applied to D1, a VP without any possessive element arises. V1 applied to D2 yields the representation in (38a), whereas V2 applied to D1 yields the representation in (38b). It is not possible that V2 applies to D2 because the second part in the representation would be semantically deviant: an individual  $z$  cannot 'possess' something which another 3fsg-individual already 'possesses'.

- (47) V1(D1)  $\lambda x \text{ READ}(x, \text{Du ARTICLE}(u)y)$   
 V1(D2)  $\lambda x \text{ READ}(x, \text{Du [ARTICLE}(u) \ \& \ \text{POSS}(3\text{fsg},u)])$   
 V2(D1)  $\lambda z \lambda x [\text{READ}(x, \text{Du ARTICLE}(u)) \ \& \ \text{POSS}(z, \text{Du ARTICLE}(u))]$   
 \*V2(D2)  $\lambda z \lambda x [\text{READ}(x, \text{Du [ARTICLE}(u) \ \& \ \text{POSS}(3\text{fsg},u)]) \ \& \ \text{POSS}(z, \text{Du [ARTICLE}(u) \ \& \ \text{POSS}(3\text{fsg},u)])]$

Thus, the generative power involved in semantic composition explains why (38a) and (38b) stand in free variation. It is further required that in VPs (or projections above VP), clitics

appear as far to the left as possible, which is similar to the constraint we have found for the article in DPs. However, we will not deal with this aspect any further, leaving the matter for future research.

## 5. Conclusions

In this paper, we have argued that short possessive forms in DP-internal structures in Bulgarian select a host which has the categorial characteristics [+def]. If these forms appear DP-externally, such a restriction does not hold. We suggest that the placement of the definite article and the placement of VP-clitics follow from the same principle. A lexical analysis has been proposed, having the advantage of successfully dealing with this phenomenon.

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