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## Crosslinguistic Perspective: The Case of the Dative\*

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### 1 Introduction

This paper presents a syntactic and semantic analysis of how the dative DP interacts with adjectives in Serbian and briefly examines the same construction in Bulgarian and Russian. The construction in question is exemplified by (1), where the dative DP appears in addition to the subject of predication; compare (2):<sup>1</sup>

(1) Tanja je Marku lepa.  
Tanja<sub>NOM</sub> is Marko<sub>DAT</sub> pretty<sub>F.SG.NOM</sub>  
'Tanja is pretty by Marko's standards.'

(2) Tanja je lepa.  
Tanja<sub>NOM</sub> is pretty<sub>F.SG.NOM</sub>  
'Tanja is pretty.'

Sentence (1) means that from Marko's point of view Tanja is pretty. Sentence (2) makes a more general claim about Tanja's prettiness, the speaker assuming that she is pretty by generally accepted standards. The dative in (1) relativizes the semantic content of the sentence to the particular point of view of the referent of the dative.

The main goal of the paper is to see what the characteristics of the

\* I am grateful to Hagit Borer, Roumi Pancheva, and James Higginbotham for many useful discussions. Thanks also go to two reviewers who provided helpful comments. Further thanks are due to the audiences at DGfS 2004, and at FASL 13, especially to Maria Babyonshev and Ljiljana Progovac. I would further like to thank Elvira and Alenka Mandić, Aleksandar Macura, Darnir Islamović, and Dejan Kostić for their help with the Serbian data; Tania Ionin, Stella de Bode, Pavel Nikitin, and Katya Pertsova for their help with Russian; and Roumi Pancheva, Katerina Kroucheva, and Milena Petrova for their help with Bulgarian.

<sup>1</sup> In the translation I use the notation "by X's standards" to express the meaning of the dative. As will be shown in section 2, this is an accurate translation.

construction in (1) and (2) are and how the dative contributes to the meaning. I will argue that the contribution of the dative DP is due to its being generated in Spec, DegP and relativizing the meaning of the adjective directly there. Kennedy (1999) provides the background for my analysis of adjectives. After establishing the relevant properties of this construction in Serbian, I will examine data from Bulgarian and Russian in order to determine the compatibility of the dative with adjectives in these languages.

## 2 Serbian

Serbian allows this construction with all adjectives which admit predicative use. The same contrast as noted above in (1) and (2) can be seen in (3) and (4).

(3) Ona je zabavna.  
she<sub>NOM</sub> is fun<sub>F.SG.NOM</sub>  
'She is fun.'

(4) Ona je Mariji zabavna.  
she<sub>NOM</sub> is Marija<sub>DAT</sub> fun<sub>F.SG.NOM</sub>  
'She is fun by Marija's standards.'

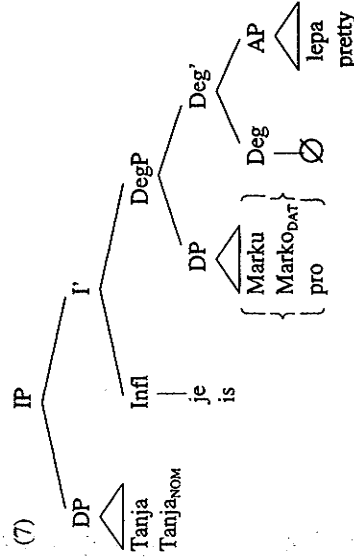
The dative is used when the dative DP's standards are felt to diverge from universal standards or when these standards are less clear. The felicity of the dative depends on the extent to which the property described by the adjective is a matter of point of view. Sentence (5) (due to H. Borer, p.c.) is grammatical, but it is pragmatically not felicitous: Michael Jordan is tall by everyone's standards. The dative is superfluous in this sentence. On the other hand, (6) is more felicitous, because the

dative's point of view diverges from the common standards.<sup>2</sup>

(5) Majkl Džordan mi je visok.  
Michael<sub>NOM</sub> Jordan<sub>NOM</sub> is tall<sub>M.SG.NOM</sub> by my standards.  
'Michael Jordan is tall by my standards.'

(6) Meni Majkl Džordan nije visok.  
I<sub>DAT</sub> Michael<sub>NOM</sub> Jordan<sub>NOM</sub> is not tall<sub>M.SG.NOM</sub> by my standards.  
'Michael Jordan is not tall by my standards.'

The syntactic structure for sentences (1) and (2) is given in (7).<sup>3</sup>



The dative DP is generated in Spec, DegP. It checks its dative case in Spec, DegP (parallel to the checking of the genitive in Spec, DP). When there is no dative DP, as in (2), I will assume that *pro* is generated in

<sup>2</sup> As a reviewer notes, in (5) the dative is a clitic and in (6) it is a full DP. A full DP as opposed to the clitic is in general used for emphasis. In (5) a full DP would make the sentence even more pragmatically anomalous: the dative DP signals a divergent point of view, and using a full DP would stress the uniqueness of this viewpoint: from my, as opposed to the general point of view, Michael Jordan is tall. As with other pragmatically anomalous dative sentences, the anomaly of (5) can be remedied by an appropriate context (for example, if the speaker were in the company of giants, who would presumably think Michael Jordan is short, sentence (5) would be fine). Sentence (6) on the other hand is possibly even more natural with a full DP than it would be with a clitic, for the same reason: a full dative DP emphasizes even more that my point of view diverges from the standard. But (6) would be grammatical and felicitous with a clitic as well.

<sup>3</sup> This structure is based mainly on preposing, binding, and deletion data (see Krivokapic (in preparation)).

Spec, DegP instead and gets interpreted as a universal quantifier (based on Epstein 1984).

The semantics of the construction is derived using Kennedy's (1997) scalar theory of the adjective. In scalar analyses, gradable adjectives are expressions that denote relations between objects and points on a scale, degrees.<sup>4</sup> A scale is a linearly ordered set of degrees, i.e., a set where a relation "greater than" is defined. A degree on a scale represents the amount of the gradable property an object has. In other words, the adjective orders objects along a scale of degrees depending on how much of the property expressed by the adjective they have.

According to Kennedy, the meaning of adjective constructions is derived by comparing two degrees, and for the positive construction the two degrees to be compared are the degree of the standard and the degree of the reference.<sup>5</sup> The sentence *John is tall* has the interpretation 'the degree to which John is tall (the reference value) is at least as great as some standard for tallness'. This is implemented by posting that in positive constructions a null morpheme  $\emptyset$  is generated in Deg, with a semantic representation as is shown in (8) and explained below.

$$(8) [\text{Deg } \emptyset] = \lambda G \lambda P \lambda x [\text{ABS}(G(x))(\text{STND}(G(P)))]$$

This degree morpheme makes reference to two functions, ABS and STND. The function ABS is the main function of the degree morpheme in that it computes the degree comparison. The first argument of the function ABS is  $G(x)$ , the degree of the reference value (which is the degree to which the subject has the property G). The second argument is  $\text{STND}(G(P))$ , the degree of the standard value (which is calculated by the function STND by taking into account the comparison class P for the property G; see Kennedy 1999 for details). The function ABS returns truth values, and the way ABS decides on them is given in (9).

<sup>4</sup> I will not go into the various theories of adjectives. For a detailed discussion of the vague predicate analyses see, e.g., Kamp (1975) and Klein (1980), and for the scalar analyses see, e.g., von Stechow (1984), Bierwisch (1989), Kennedy (1999), and Heim (2000).

<sup>5</sup> It should be noted that Kennedy argues that adjectives denote functions from objects to intervals, rather than to degree points. For the purposes of this analysis, the question of degree point vs. interval is not crucial, so I will use the more common notion of degree points here.

<sup>6</sup> Kennedy postulates different degree heads for different degree constructions (i.e., a different degree head for the positive construction, and three different degree heads for the comparative construction).

$$(9) \|\text{ABS}(d1)(d2)\| = 1 \text{ iff } d1 \geq d2$$

According to (9), ABS yields the truth value 1 (true) when the first argument,  $d1$  (the reference value), is higher or at the same degree on the scale of the adjective than the second argument,  $d2$  (the standard value); otherwise it yields the truth value 0 (false). This corresponds to the intuition that the sentence *John is tall* is true when the height of John is above or equal to what, in one way or other, is determined to be the standard for tallness.

For sentences with an overt dative, the intuition is that the dative is part of the meaning of the adjective, contributing to the identification of the standard degree. Looking at non-measure adjectives (e.g., *pretty*, *mysterious*) we see that the ordering of objects along the scale of the adjectives is also determined by the dative. Non-measure adjectives have less agreed-upon ordering of objects on the scale of the adjective, i.e., there is no universal scale for these adjectives (as opposed to measure adjectives, e.g., *tall*, *long*, etc.). So the dative has to perform two operations: it sets the standard value and it orders the objects along the adjective scale. A sentence like (1) means 'Marko has a standard scale of prettiness, and by this standard, Tanja is pretty'.

The first component of the semantic contribution of the dative (i.e., setting the standard) can be implemented by treating the dative as the third argument of the STND function, yielding  $\text{STND}(y)(G)(P)$ , where  $y$  is the dative argument,  $G$  the property of the adjective, and  $P$  the comparison class (see (12) for the complete degree head). The dative in this way encodes the fact that the degree of the standard depends on the perspective of some entity. The function gives as value the degree of the standard, as determined by the dative, as shown in (10).

$$(10) \text{STND}(y)(G)(P) = d_y$$

Another way to think of the STND function is that it consists of two separate functions. The first function takes as argument the dative argument  $y$  and returns as the value a function that takes  $G$  and  $P$  as arguments and gives the dative's standard degree ( $d_y$ ) as the value. This corresponds to the intuition that different people have different standards for the same property and same comparison class.

The second component of the function of the dative is the selection of the relevant ordering. This component can be integrated in the ABS function. The purpose of ABS is to decide whether a sentence is true by comparing the reference value  $d1$  and the standard value  $d2$ . Kennedy's original formulation assumes that there is just one ordering of the degrees. So the fact that there is more than one ordering possible needs to be integrated with the fact that the dative has the possibility of choosing

one particular ordering out of all those available. This can be done by treating the dative as the third argument of the ABS function. The value of the ABS function is still a truth value as before, and this truth value depends on the comparison of two degrees as before, but now it is the comparison of two degrees taken from a particular ordering that is relevant, i.e., the particular ordering selected by the dative argument. The way the new ABS function decides on the truth value is as given in (11).

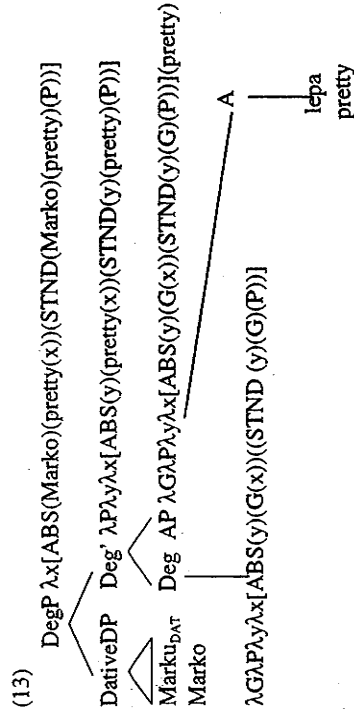
$$(11) \|\text{ABS}(y)(d1)(d2)\| = 1 \text{ iff } d1_{(\varphi)} \geq d2_{(\varphi)}$$

Adding the dative as the third argument of the ABS function is a way to capture the dependency of the ordering on the perspective given by the dative. Another way to think of the ABS function is that it consists of two separate functions. The first function takes a set of orderings as the argument, yielding a single ordering as its value (the ordering of the dative DP), and the second function takes the dative's ordering as the argument and compares two degrees along that ordering, yielding a truth value as the value. The new ABS function does the work of these two functions at the same time, directly taking as the arguments the dative and the two degrees in the chosen order and yielding a truth value as its value.<sup>7</sup>

The semantics for the degree morpheme is now:

$$(12) [\text{Deg } \emptyset] = \lambda G \lambda P \lambda y \lambda x [\text{ABS}(y)(G(x))(\text{STND}(y)(G)(P))]$$

Here the ABS function takes three arguments: the dative  $y$ , the reference value  $G(x)$ , and the degree of the standard value as given by  $\text{STND}(y)(G)(P)$ . The function  $\text{STND}$  takes three arguments as well: the dative  $y$ , the property  $G$ , and the comparison class  $P$ . The derivation in (13) shows the semantic computation of the DegP for (1).



To sum up, the dative DP is generated in Spec, DegP, where it sets the standard variable and the ordering of objects on the scale of the adjective, thus straightforwardly deriving the interpretation. In sentences without an overt dative, *pro*, interpreted as the universal quantifier, is responsible for these operations. In this way, a general, universally valid interpretation is achieved.

In the remaining part of the paper I look at Bulgarian and Russian to see to what extent the dative is compatible with adjectives in these languages.

### 3 Bulgarian

In Bulgarian the use of the dative is more restricted than in Serbian. According to whether they allow the dative construction or not, there are three classes of adjectives in Bulgarian:

- Class 1: *xubav* 'pretty', *inteligenten* 'intelligent', *glupav* 'stupid', *pástâr* 'colorful', *idealnen* 'ideal', etc.
- Class 2: *čist* 'clean', *goręšt* 'hot', *dálâg* 'long', *dalečen* 'distant', *červen* 'red', etc.
- Class 3: *mil* 'dear', *težák* 'difficult', *gnusen* 'disgusting', *vesel* 'fun', *interesen* 'interesting', etc.

The characteristics of these classes are as follows. Class 3 allows the dative:

- (14) Tja mi e mila.  
 she <sub>DAT</sub> is dear<sub>F.SG</sub>  
 'She is dear by my standards.'

<sup>7</sup> Note that the only difference between measure and non-measure adjectives is that for the former there is only one ordering of objects whereas for the latter there are several. The dative selects one particular ordering in both cases, but in the case of measure adjectives the selection is a vacuous operation.

- (15) Gnusen mi e.  
 disgusting<sub>M.SG</sub> I<sub>DAT</sub> is  
 'He is disgusting by my standards.'

The interpretation of the sentences is the same as in the corresponding Serbian examples: the dative DP sets the standard and the scale of the adjective.

Class 2 adjectives allow the dative, as seen in (16) and (17).<sup>8</sup>

- (16) San Francisco mi e dalečen.  
 San Francisco I<sub>DAT</sub> is faraway<sub>M.SG</sub>  
 'San Francisco is too far away according to my standards.'

- (17) Čajat mu e gorešt.  
 Tea-the he<sub>DAT</sub> is hot<sub>M.SG</sub>  
 'The tea is too hot by to his standards.'

Class 2 adjectives have the interpretation of 'too adjective', even if there is no overt 'too' (R. Pancheva, p.c.). Sentence (16) means 'San Francisco is too far away for me', and sentence (17) means 'the tea is too hot for me'. In both sentences the dative DP is in some sense affected by the adjective. Note that the adjectives in this class have a common scale associated with them, i.e., they are adjectives whose scale has a standard measure unit associated with it.

Finally, Class 1 adjectives are adjectives which do not allow the dative, unless an overt 'too' (*prekaleno*) is added.

- (18) Tja mu e prekaleno inteligentna.  
 She he<sub>DAT</sub> is too intelligent<sub>F.SG</sub>  
 'She is too intelligent by his standards.'

- (19) Rokljata mi e prekaleno červena.  
 Dress-the I<sub>DAT</sub> is too red<sub>F.SG</sub>  
 'The dress is too red by my standards.'

The common property of Class 3 adjectives is that they are psych predicates. The common property of Class 2 adjectives is that they have a standard measure unit associated with them.

<sup>8</sup> Note that Bulgarian does not have dative case for full DPs, it uses the clitic and the preposition *na* with an accusative marked DP instead. For pronouns, the dative clitic is available (Franks and King 2000).

#### 4 Russian

Like Bulgarian, Russian does not allow datives in all adjective constructions, and again the adjectives fall into three classes, corresponding to the classes in Bulgarian. Class 1 does not allow the dative and includes adjectives like *krasiva* 'pretty', *glup* 'stupid', *umen* 'smart'. In contrast to Bulgarian, these adjectives do not allow the dative even when *sliškom* 'too' is added. Class 2 is also hardly acceptable with the dative. The acceptance of the dative with this class of adjectives varies across speakers and improves for all speakers with the addition of *sliškom* or in an empathic context. It includes adjectives like *vysok* 'tall', *gorjač* 'hot', *dlinen* 'long', etc.

- (20) Mne ètot čaj sliškom gorjač.  
 I<sub>DAT</sub> this tea<sub>M.SG.NOM</sub> too hot<sub>M.SG.SF</sub>  
 'The tea is too hot by my standards.'

Finally, Class 3 allows the dative, as in Bulgarian, but it is still very dependent on speaker and context. It includes adjectives like *truden* 'difficult', *prijatan* 'pleasant', *dorog* 'dear', *protiven* 'unpleasant', *vraždebен* 'hostile', *skučen* 'boring'.

- (21) Mne ona doroga.  
 I<sub>DAT</sub> she<sub>NOM</sub> dear<sub>F.SG.SF</sub>  
 'She is dear by my standards.'

We can conclude that in Russian there is a graded distinction between the three classes of adjectives, as there is in Bulgarian, but that in general, the usage is more restricted.

#### 5 Discussion

The previous sections looked at three different languages that to varying degrees accept the dative with adjectives. The question that remains is why the construction is more restricted in Bulgarian and Russian than it is in Serbian. Here I will only offer some suggestions as to the possible reasons for these differences.

Serbian allows the dative with all adjectives. Russian and Bulgarian both allow the dative with psych adjectives. Bulgarian allows Class 2

<sup>9</sup> It should be noted that only the short form of the adjective is allowed in this construction. This issue needs further investigation.



adjectives (the measure adjectives) with the dative as well, and Russian, given the right context, marginally accepts Class 2 adjectives. Finally, Class 1 adjectives do not take the dative in any context either in Russian or in Bulgarian. However, Bulgarian allows all adjectives with 'too', even Class 1 adjectives. This is not true for Russian, even though *slis̄kom* 'too' improves acceptability.

I would like to suggest that the crucial difference among these languages lies in how fixed the standard of the adjective is, i.e., how easy it is to use a personal standard with an adjective. In Serbian, any adjective can have its standard determined by the dative, as opposed to having a fixed standard. This is true only for psych adjectives in Russian and for measure and psych adjectives in Bulgarian.

Support for this hypothesis comes from the fact that in all the examples the acceptability of the dative rises with the extent to which the referent of the dative is affected by the adjective. Under the suggested analysis of the dative as setting the standard and the scale of the adjective, this is not surprising: the less fixed the standard of an adjective is, the easier it is to get a personal standard, i.e., the dative's standard. Psych predicates are the core for the proposed semantics of the dative. For these adjectives, there is no fixed standard, and the dative DP is by default the only standard.

Furthermore, for Russian and Bulgarian 'too' can make the standard of an adjective less fixed (all adjectives are acceptable with 'too' in Serbian). For example 'the dress is too red by my standards' (context: for me to wear, for example) or 'he is too stupid by her standards' (context: for her to marry, for example) is acceptable in Bulgarian and marginally acceptable in Russian. The fact that 'too' further facilitates the use of the dative is expected: 'too adjective' has a less fixed standard degree than just the adjective itself.

The languages vary as to how fixed the standard is for the adjectives. Psych predicates are the core case for dative use with adjectives, and the felicity of the dative declines with the classes according to the hierarchy Class3 > Class2 > Class1. Under this analysis it is expected that if a language allows Class 1 it allows Class 2 and Class 3, but not the other way around. It is also expected that a language that allows [dative + adjective] allows [dative + 'too' + adjective], but not the other way around. The difference among the languages discussed then is that they vary as to the point at which they grammaticalize the pragmatic hierarchy. I leave for future work the clarification of these notions and the ramifications for the analysis of the dative suggested here.

## 6 Summary

The paper examined the use of the dative with adjectives in Serbian. It was argued that the dative DP is generated in Spec, DegP. There it relativizes the meaning of the adjective to the point of view of the dative. I, further looked at Bulgarian and Russian. Serbian, Bulgarian, and Russian accept the dative to different degrees. It was suggested that psych adjectives exemplify the core case for the use of the dative analyzed here and that the differences among the three languages are the result of different grammaticalizations of a pragmatic hierarchy.

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