

- Rivero, M. L. & U. Savchenko (2004). Russian anticausatives with oblique subjects. In S. Franks, F. Gladney, & M. Tasseva-Kurktchieva (Eds.), *Formal approaches to Slavic linguistics 13. The South Carolina meeting* (pp. 276–288). Ann Arbor, MI: Michigan Slavic Publications.
- Schoorlemmer, M. (1994). Dative subjects in Russian. In J. Toman (Ed.), *Formal approaches to Slavic linguistics 1* (pp. 129–172). Ann Arbor, MI: Michigan Slavic Publications.
- Smith, C. (1991). *The parameter of aspect*. Dordrecht: Kluwer.
- Svenonius, P. (2002). Subject positions and the placement of adverbials. In P. Svenonius (Ed.), *Subject, expletives, and the EPP* (pp. 199–240). Oxford: OUP.
- Tenny, C. (1994). *Aspectual roles and the syntax-semantic interface*. Dordrecht: Kluwer.
- Van Valin, R. D., Jr. & R. J. LaPolla (1997). *Syntax: Structure, meaning and function*. Cambridge: CUP.
- Verkuyl, H. (1972). *On the compositional nature of the aspects*. Dordrecht: Reidel.
- Wegener, H. (1985). *Der Dativ im heutigen Deutsch*. Tübingen: Narr.
- Williams, E. (1981). Argument structure and morphology. *The Linguistic Review*, 1, 81–114.

## Putting things into perspective

### The function of the dative in adjectival constructions in Serbian\*

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The aim of this paper is to provide a formally explicit analysis of the syntax and semantics of the dative case in adjectival constructions in Serbian. The sentences under consideration are predicative constructions with a dative DP, as in *Ona je Marku lepa* 'She is pretty to Marko', where 'Marko' corresponds to the dative-marked DP. This construction is contrasted with the predicative construction without the dative (*Ona je lepa* 'She is pretty'). I will argue for the following: (a) syntactically, the dative is generated in SpecDegP; (b) semantically, the contribution of the dative is to relativize the meaning of the adjective to the particular point of view of the referent of the dative phrase. When there is no dative phrase, *pro* is generated in SpecDegP and is bound by a generic quantifier (adapting Epstein 1984) and the construction is interpreted as a general observation. The proposal is formally developed within the framework of Kennedy's (1997) theory of the semantics of adjectives. The analysis is extended to comparative constructions.

#### 1. Introduction

This paper examines how the dative DP interacts with adjectives in Serbian. The construction to be discussed is given in (1). The main property of this construction is that the nominal (DP) in the dative case is used to express the perspective of the individual denoted by the dative DP on the situation described in the sentence, as exemplified in the contrast between (1) and (2):<sup>1</sup>

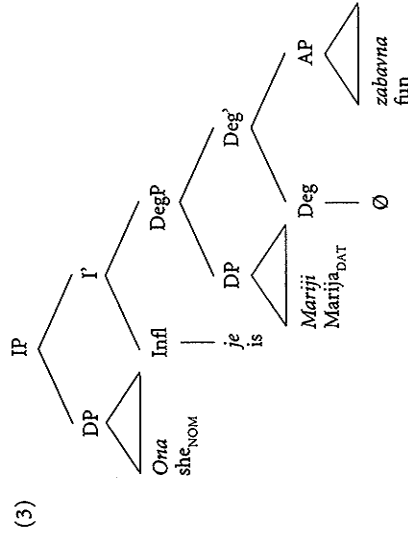
- (1) *Ona je Mariji zabavna.*  
she<sub>NOM</sub> be.3SG.CLITIC Marija<sub>DAT</sub> fun.F.SG<sub>NOM</sub>  
'She is fun<sup>DAT</sup> Marija.'
- (2) *Ona je zabavna.*  
she<sub>NOM</sub> be.3SG.CLITIC fun.F.SG<sub>NOM</sub>  
'She is fun.'

Sentence (2) expresses a general observation, a general point of view. Sentence (1) relativizes the semantic content of the sentence to the particular point of view of the referent of the dative phrase in (2). In the remainder of this paper I will discuss how these interpretations are arrived at, starting with the discussion of the syntactic structure of the dative sentences, followed by a semantic analysis.

## 2. Syntactic properties

### 2.1 Overview

Serbian has relatively free word order (Kunzmann-Müller 1994; Stevanović 1970), but the basic word order is assumed to be SVO (Bošković 1997; Kunzmann-Müller 1994; Stevanović 1970). I will show that the basic word order of the dative construction examined here is as given in (1), and that the dative DP is generated in SpecDegP. I assume that the dative DP checks its case in SpecDegP, parallel to the genitive in SpecDP. Like the possessive nominal, the dative nominal does not bear a thematic relation to the lexical head and just checks its case *in situ*. The structure of sentence (1) will be shown to be as given in (3).<sup>3</sup>

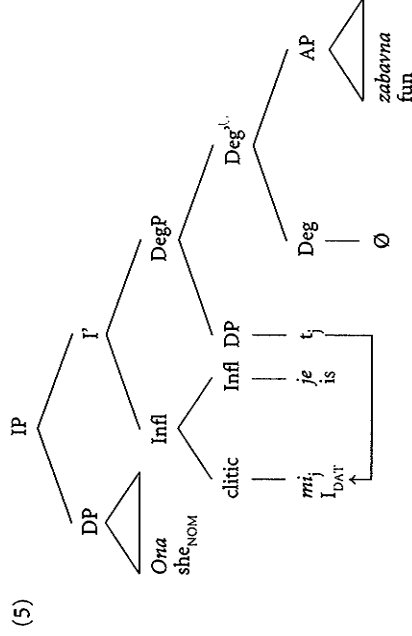


Other positions of the dative DP are derived by topicalization, which I will discuss in Section 2.2, and by cliticization, as in (4).

- (4) *Ona mi je zabavna.*  
 she<sub>NOM</sub> I<sub>CLITIC</sub><sub>DAT</sub> be.3sg.CLITIC fun.F.SG<sub>NOM</sub>  
 'She is fun<sub>DAT</sub>.'

Serbian has a developed second-position clitic system. The exact nature of clitics in Serbian is not agreed upon (cf. Bošković 2001 for an overview of the existing theories of clitics in Serbian). For the present discussion, it is important that the linear order of

the clitics in clitic clusters is fixed and is, for the dative, as given in (4). The proposed structure is shown in (5).



When the dative DP is not realized, as in example (2), I will assume that *pro* is generated in SpecDegP, adapting a suggestion originally proposed by Epstein (1984).<sup>4</sup>

The reason to assume the structures in (3) and (5) is that syntactic tests, examined in 2.3, suggest that the dative is in a functional projection above AP. Furthermore, semantic reasons, examined in Section 3, suggest that the dative DP is in SpecDegP.

### 2.2 Is the dative DP a "quirky" subject?

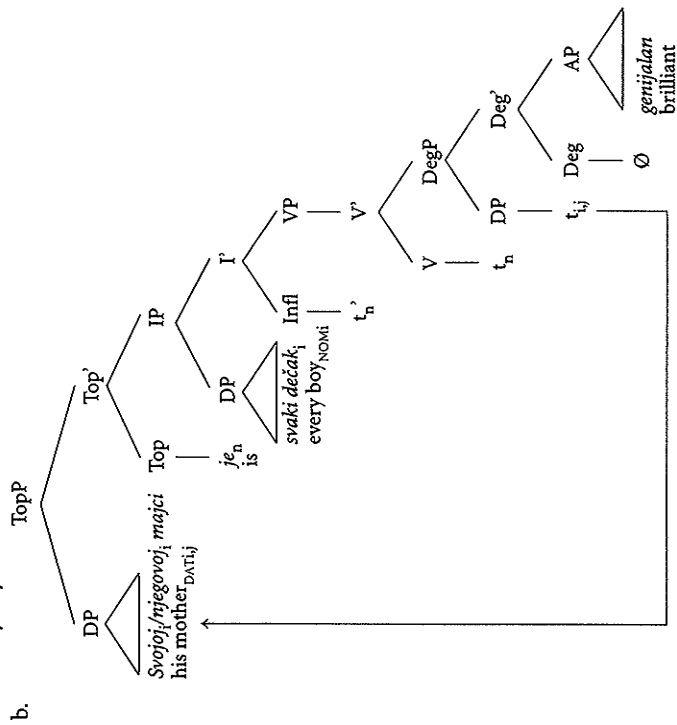
The dative DP can be overtly realized higher in the tree than the nominative DP. Both of the word orders in the embedded clauses in (6) and (7) are perfectly natural. In (6) the dative DP is higher than the nominative DP, and in (7) the nominative DP is higher than the dative DP.

- (6) *Marko je rekao da je Marija zabavna.*  
 Marko<sub>NOM</sub> be.3sg.CLITIC say.PPART.M.SG that be.3sg.CLITIC Marija<sub>DAT</sub>  
 Tanja<sub>NOM</sub> fun.F.SG<sub>NOM</sub>  
 'Marko said that Tanja is fun<sub>DAT</sub> Marija.'
- (7) *Marko je rekao da je Tanja zabavna.*  
 Marko<sub>NOM</sub> be.3sg.CLITIC say.PPART.M.SG that be.3sg.CLITIC Tanja<sub>NOM</sub>  
 Marija<sub>DAT</sub> fun.F.SG<sub>NOM</sub>  
 'Marko said that Tanja is fun<sub>DAT</sub> Marija.'

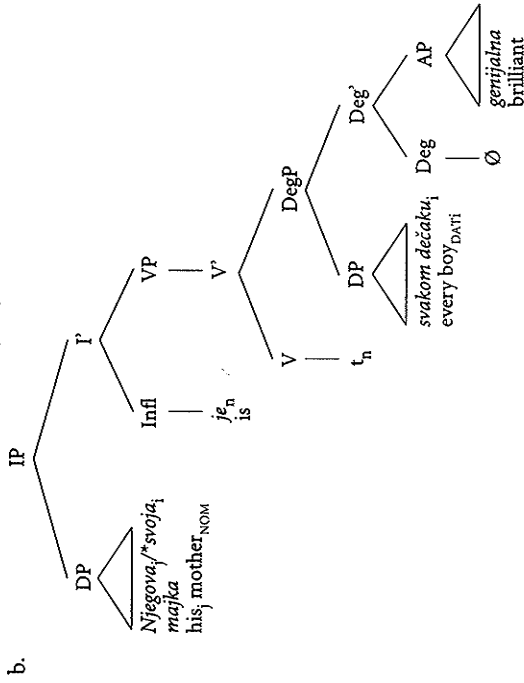
I assume that the dative DP is topicalized in (6), i.e., the dative DP is not a "quirky" subject, because sentences (8) to (10) suggest that the dative DP originates in a lower

position than the nominative DP and then topicalizes. The reason is the following: there are two different possessive pronouns in Serbian, for 3M.SG they are *svojoj* and *rijevovoj*, and *svojoj* is a reflexive pronoun that needs to be bound and *rijevovoj* has to be free.<sup>5</sup> In (8) *svojoj* 'his.refl' is bound by *svaki dečak* 'every boy', but in (9) it is not. Condition A is not violated in (8) by the dative DP, so the nominative DP has to be higher than the dative DP at D-Structure, the dative DP topicalizes at S-Structure, reconstructs at LF and the reconstructed anaphor then satisfies Condition A (Lasnik & Stowell 1991). In (9) the anaphor is within a nominative DP, which is generated higher than the dative DP, there is no topicalization, reconstruction does not apply and Condition A is violated. In (10) reconstruction (which is optional) does not take place and Condition A is satisfied. Note that there are no Weak Crossover effects (WCO, Wasow 1979) in (8) and (10) because topicalization does not induce WCO effects (Lasnik & Stowell 1991).<sup>6</sup>

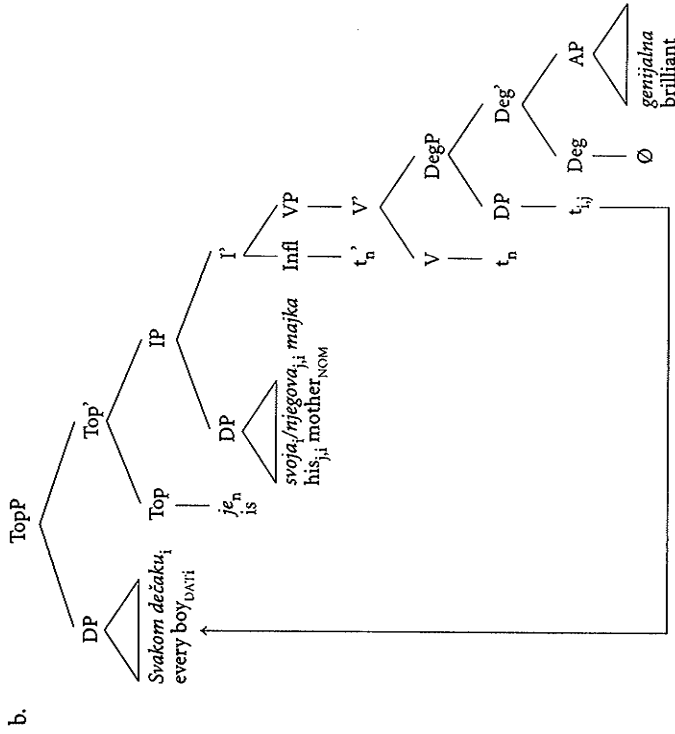
- (8) a. *Svojoj/Rijevovoj majci je svaki dečak genijalan.*  
 his<sub>DAT,i</sub> mother.F.SG<sub>DAT</sub> be.3SG.CLITIC every.M.SG<sub>NOM</sub>  
*dečak* boy.M.SG<sub>NOM</sub> brilliant.M.SG<sub>NOM</sub>  
 'Every boy is brilliant<sup>DAT</sup> his mother.'



- (9) a. *Njegovaj/\*Svoja; majka je svakom dečaku genijalna.*  
 his<sub>NOM</sub> mother.F.SG<sub>NOM</sub> be.3SG.CLITIC every.M.SG<sub>DAT</sub>  
*dečaku* boy.M.SG<sub>DAT</sub> brilliant.F.SG<sub>NOM</sub>  
 'His mother is brilliant<sup>DAT</sup> every boy.'



- (10) a. *Svakom dečaku je svoja/rijevovaj, majka genijalna.*  
 every.M.SG<sub>DAT</sub> boy.M.SG<sub>DAT</sub> be.3SG.CLITIC his<sub>NOM</sub>  
*majka* mother.F.SG<sub>NOM</sub> brilliant.F.SG<sub>NOM</sub>  
 'His mother is brilliant<sup>DAT</sup> every boy.'



Furthermore, the bound reading is available in (8) and (10) but not in (9). Thus in (8) and (10), but not in (9), *svakom* 'every' has the needed wide scope at LF. If the dative DP is generated lower than the nominative DP, this is expected: in (8) the position of the dative DP is the result of topicalization; the dative DP reconstructs at LF to its base-generated position, thus the needed scope for 'every' is achieved. In (9) the dative DP cannot move at LF above the nominative DP without WCO effects, so the bound reading is not possible. In (10) the dative DP is topicalized but it does not reconstruct at LF; the LF scope is as given in the surface representation. As there are no WCO effects and there is reconstruction, following Lasnik and Stowell (1991) it can be concluded that the dative DP has topicalized in sentences (8) and (10), i.e., the dative DP has to originate lower than the nominative DP.

Further evidence that the dative DP is generated lower than the nominative DP comes from Superiority effects, shown in (11) and (12).<sup>7</sup>

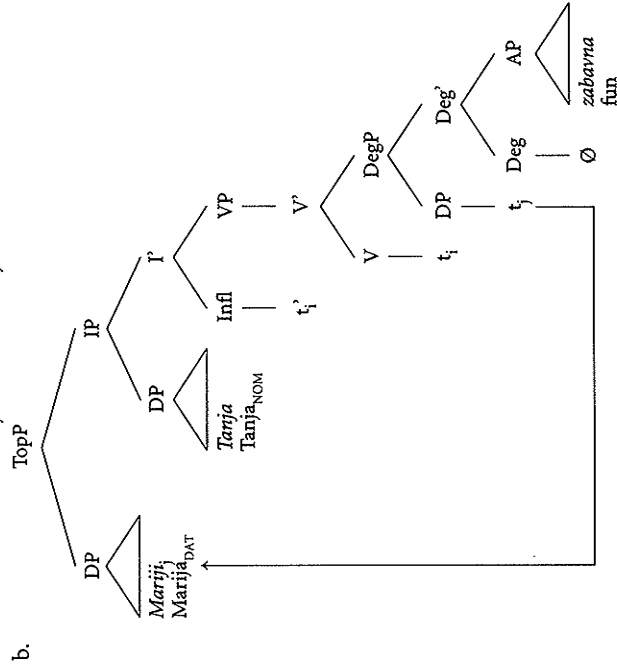
- (11) a. \**Kome li je ko lep?*  
 who<sub>DAT</sub> li be.3SG.CLITIC who<sub>NOM</sub> pretty.M.SG<sub>NOM</sub>  
 '(I wonder) Who is pretty<sup>dat,who</sup>?  
 b. \**[CP kome, li je [IP ko [DegP t<sub>j</sub> lep]]]*

- (12) a. *Ko li je kome lep?*  
 who<sub>NOM</sub> li be.3SG.CLITIC who<sub>DAT</sub> pretty.M.SG<sub>NOM</sub>  
 '(I wonder) Who is pretty<sup>dat,who</sup>?  
 b. *[CP ko, li je [IP t<sub>j</sub> [DegP kome lep]]]*

The contrast between (11) and (12) can be explained if the dative DP is base-generated lower than the nominative DP: in (11) the dative DP cannot move to SpecCP because the nominative DP is superior to the dative DP.

I will take the binding and superiority facts as evidence that the dative DP is base-generated lower than the nominative DP. If the dative DP occurs higher than the nominative DP, as in (6), this is the result of topicalization. Accordingly, the structure for the topicalized dative DP sentence (6), repeated below in (13a), is as given in the partial tree in (13b).

- (13) a. *Marko je rekao da je zabavna.*  
 Marko<sub>NOM</sub> be.3SG.CLITIC say.PPART.M.SG that be.3SG.CLITIC  
*Marija Tanja zabavna.*  
 Marija<sub>DAT</sub> Tanja<sub>NOM</sub> fun.F.SG<sub>NOM</sub>  
 'Marko said that Tanja is fun<sup>dat,Marija</sup>.'



To summarize this section: the dative DP is generated lower than the nominative DP. I will turn now to the structure of the dative DP and the adjective.

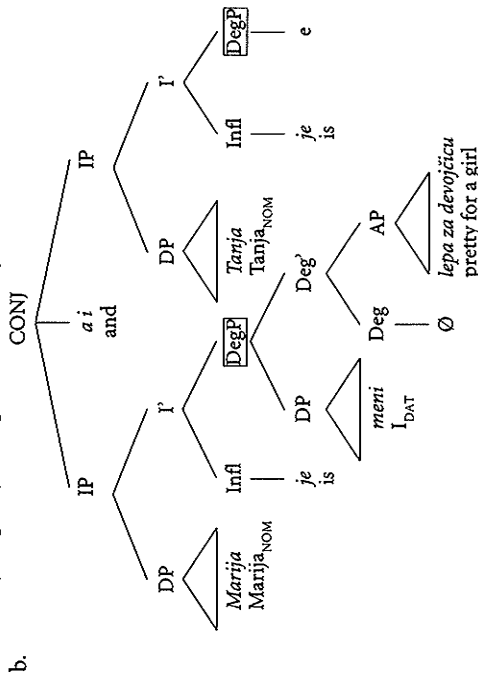
## 2.3 The structure of [dative DP + AP]

The internal structure of the [dative DP + AP] construction will be examined based on ellipsis and preposing data. It will be argued that the dative DP is higher than the AP and forms a constituent with it. Evidence from control properties and restrictions on movement will further corroborate this conclusion.

Ellipsis of the [dative DP + AP] sequence in (14a), with the structure in (14b), shows that the deleted part is a constituent (the boxed nodes refer to the relevant constituents).

- (14) a. *Marija je meni lepa za devojčicu a*  
 Marija<sub>NOM</sub> je be.3SG.CLITIC I<sub>DAT</sub> pretty.F.SG<sub>NOM</sub> for girl.F.SG<sub>ACC</sub> and  
 i Tanja je.  
 too Tanja<sub>NOM</sub> be.3SG.CLITIC

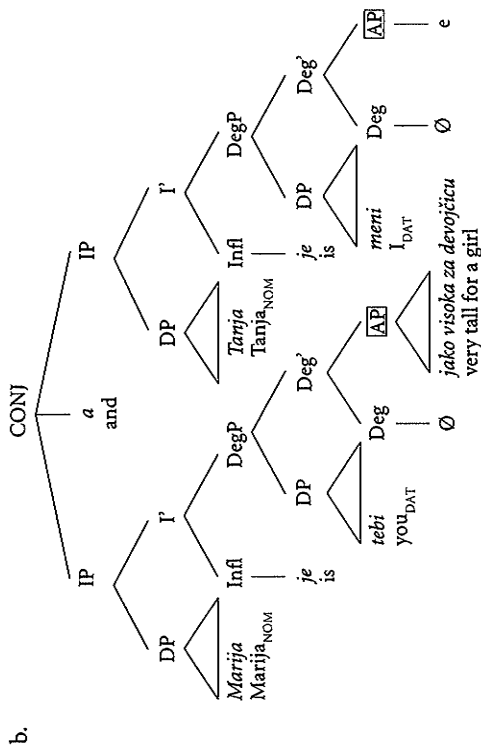
'Marija is pretty for a girl<sup>DAT</sup>I, and Tanja is too.'



The AP ['very' + A + PP] alone can also be elided, as in (15a), with the structure in (15b), showing that the AP is a lower constituent than the dative DP.

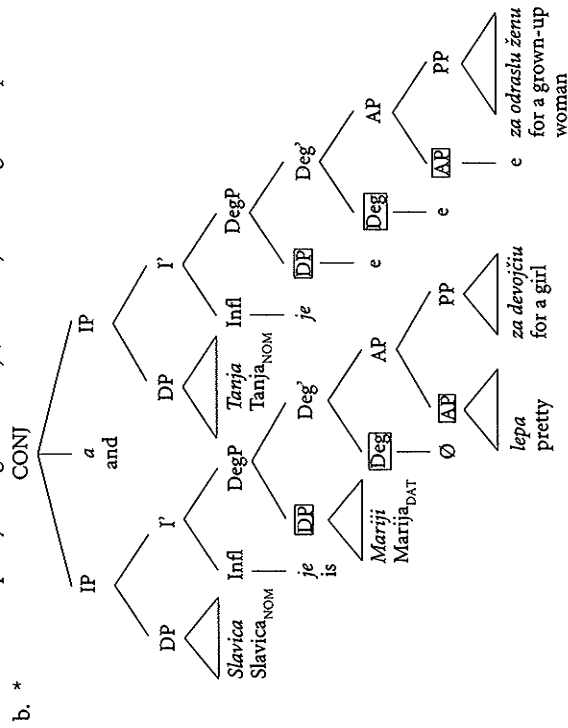
- (15) a. *Marija je tebi jako visoka za devojčicu*  
 Marija<sub>NOM</sub> je be.3SG.CLITIC you<sub>DAT</sub> very tall.F.SG<sub>NOM</sub> for girl.F.SG<sub>ACC</sub> and  
 a Tanja je meni.  
 Tanja<sub>NOM</sub> be.3SG.CLITIC I<sub>DAT</sub>

'Marija is very tall for a girl<sup>DAT</sup>you, and Tanja is<sup>DAT</sup>I.'



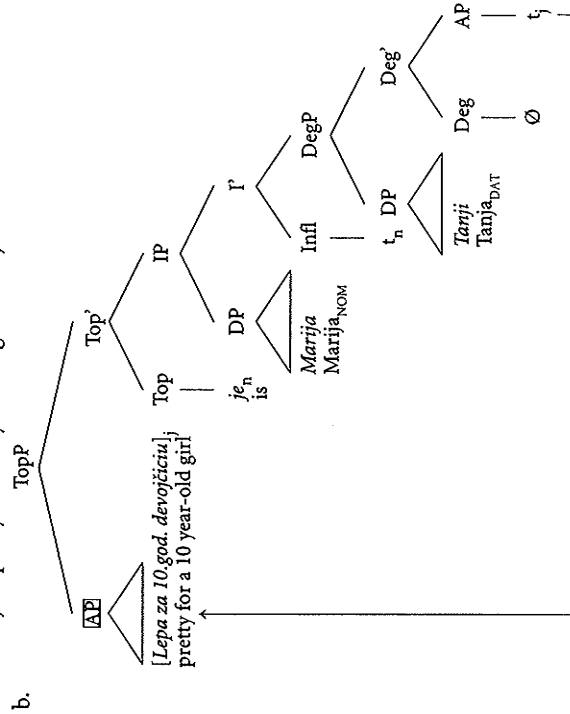
However, the deletion of the dative DP and the A, stranding the PP, is ungrammatical, as shown in (16), which yet again shows that the dative DP is higher than the PP.

- (16) a. \**Slavica je Mariji lepa za devojčicu*  
 Slavica<sub>NOM</sub> je be.3SG.CLITIC Marija<sub>DAT</sub> pretty.F.SG<sub>NOM</sub> for girl.F.SG<sub>ACC</sub>  
 a Tanja je za odraslu ženu.  
 and Tanja<sub>NOM</sub> be.3SG.CLITIC for grown up.F.SG<sub>ACC</sub> woman.F.SG<sub>ACC</sub>  
 'Slavica is pretty for a girl<sup>DAT</sup>Marija, and Tanja is for a grown-up woman.'



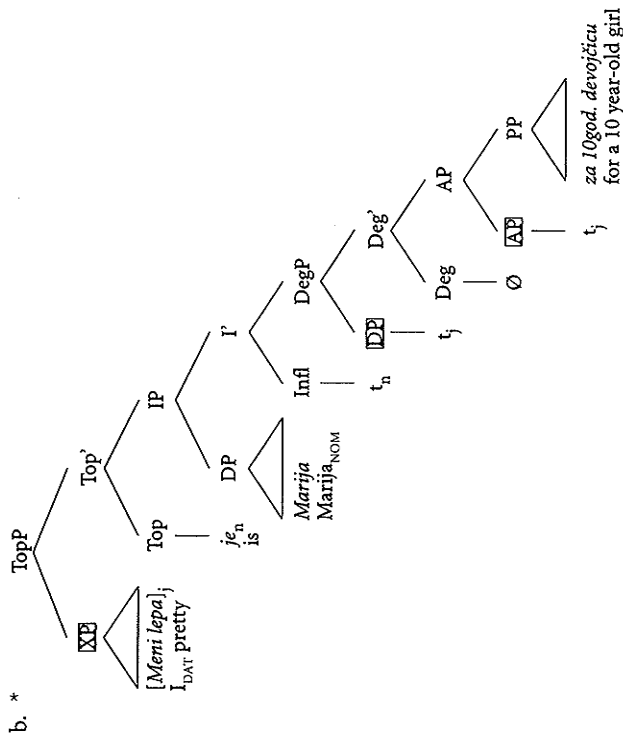
These tests show that the dative DP is higher than the AP. Further evidence for this comes from preposing tests, exemplified in sentences (17) to (20). In (17a), with the structure in (17b), the AP ([A + PP]) is preposed, establishing that the A and the PP form a constituent.

- (17) a. *Lepa za desetogodišnju devojčicu je Marija Tanja.*  
 pretty.F.SG<sub>NOM</sub> for 10.year.old.F.SG<sub>ACC</sub> girl.F.SG<sub>ACC</sub> be.3sg.CLITIC  
*Marija Tanja*  
 Marija<sub>NOM</sub> Tanja<sub>DAT</sub>  
 'Marija is pretty for a 10 year-old girl<sup>DAT</sup>Tanja.'



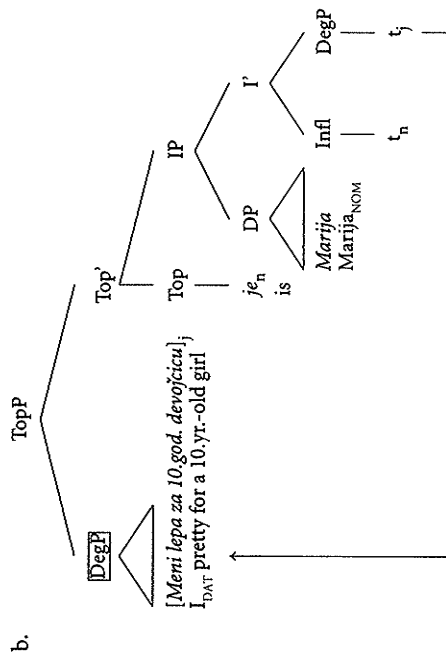
Preposing [dative DP + A], and stranding the PP, is ungrammatical, as can be seen in (18). This shows that the dative DP and the A do not form a constituent.

- (18) a. \**Meni lepa je Marija za desetogodišnju devojčicu.*  
<sup>DAT</sup> pretty.F.SG<sub>NOM</sub> be.3sg.CLITIC Marija<sub>NOM</sub> for 10.year.old.F.SG<sub>ACC</sub> girl.F.SG<sub>ACC</sub>  
<sup>DAT</sup>I Marija is pretty for a 10 year-old girl.'



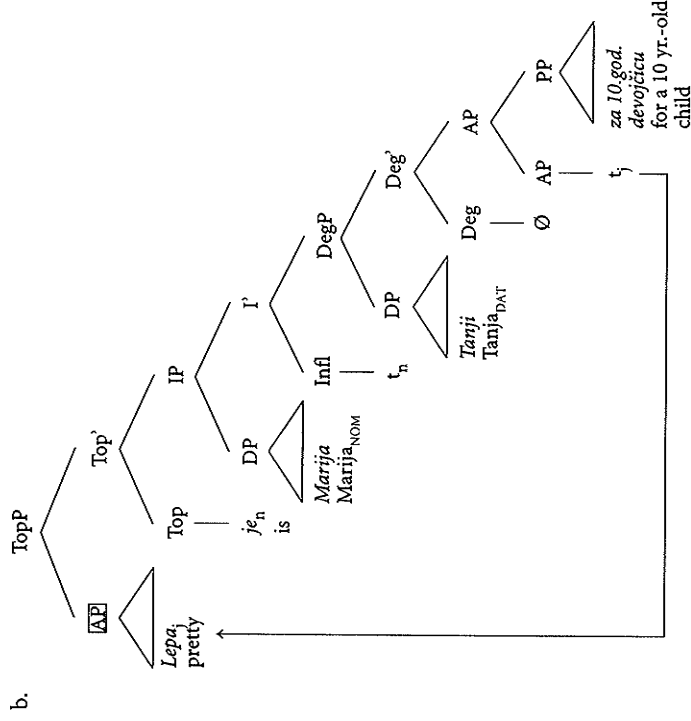
Sentence (19), where the whole DegP ([dative DP + AP]) is preposed, is unacceptable to some speakers, but is still better than (18), so [dative DP + AP] is a constituent.<sup>8</sup>

- (19) a. \**Meni lepa za desetogodišnju devojčicu je Marija.*  
<sup>DAT</sup> pretty.F.SG<sub>NOM</sub> for 10.year.old.F.SG<sub>ACC</sub> girl.F.SG<sub>ACC</sub> be.3sg.CLITIC  
<sup>DAT</sup>I Marija is pretty for a 10 year-old girl.'



Finally, the AP can be preposed without the PP, as shown in (20).

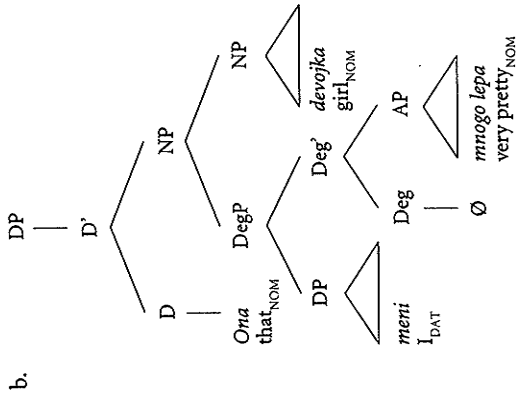
- (20) a. *Lepa je Marija Tanja za*  
 pretty.F.SG<sub>NOM</sub> be.3SG.CLITIC Marija<sub>NOM</sub> Tanja<sub>DAT</sub> for  
*desetogodišnjju devojčicu.*  
 10.year.old.F.SG<sub>ACC</sub> girl.F.SG<sub>ACC</sub>  
 -dat-Tanja Marija is pretty for a 10 year-old girl?



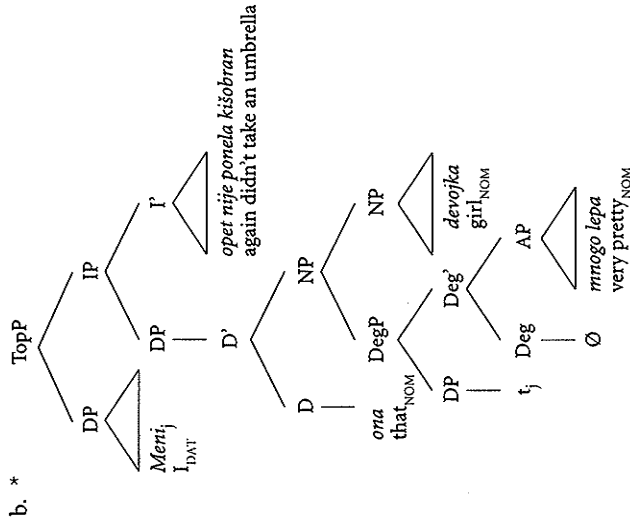
So preposing tests (sentences (17) to (20)) confirm that the dative DP is highest in the structure of the DegP.

Another distributional property of the dative is that it can appear prenominally, as shown in (21), but it cannot precede the demonstrative, as shown in (22).

- (21) a. *Ona meni mnogo lepa devojka opet*  
 that.F.SG<sub>NOM</sub> I<sub>DAT</sub> very pretty.F.SG<sub>NOM</sub> girl.F.SG<sub>NOM</sub> again  
*nije ponela kišobran.*  
 not.be.3SG take.PPART.F.PL umbrella.M.SG<sub>ACC</sub>  
 'The girl who is very pretty<sub>DAT</sub>, again didn't take the umbrella.'



- (22) a. \**Meni ona mnogo lepa devojka opet*  
 I<sub>DAT</sub> that.F.SG<sub>NOM</sub> very pretty.F.SG<sub>NOM</sub> girl.F.SG<sub>NOM</sub> again  
*nije ponela kišobran.*  
 not.be.3SG take.PPART.F.PL umbrella.M.SG<sub>ACC</sub>  
 'The girl who is very pretty<sup>DAT</sup>I, again didn't take an umbrella.'

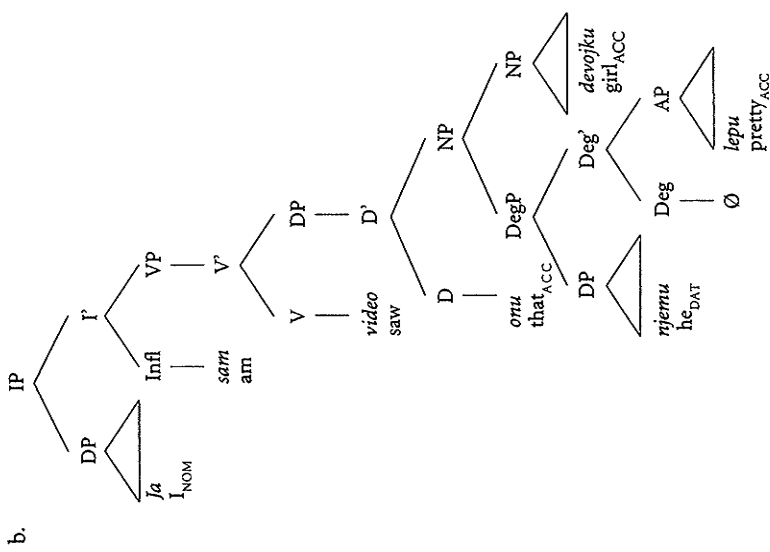


The fact that the word order in (22), with the dative DP preceding the demonstrative, is ungrammatical, shows that the dative DP must be inside the subject DP.<sup>9</sup> In the prenominal position the dative DP is less common, but it is possible, and it has the same interpretation as in the predicative use. The prenominal dative DP leads to the conclusion that the dative DP is generated within a functional projection above the AP and below the DP.<sup>10</sup>

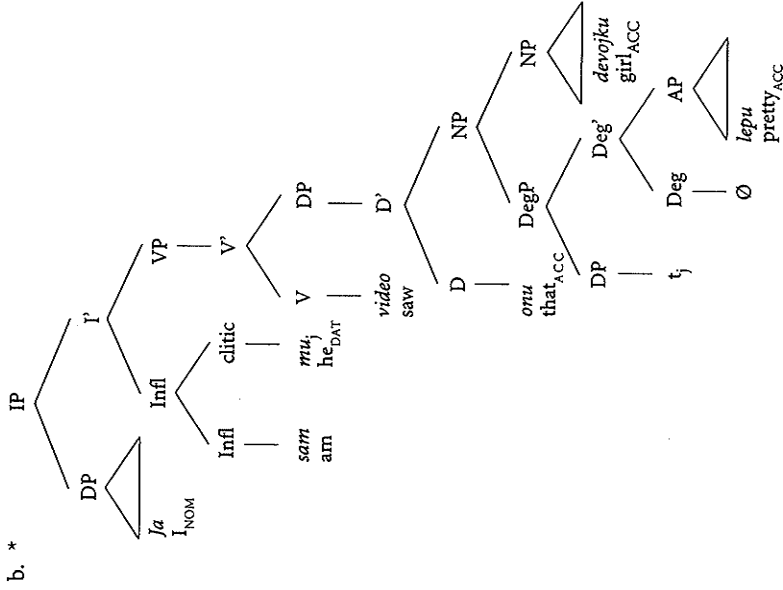
A question arising in this context is why the dative DP cannot topicalize in (22). The reason is that the dative DP in (22) is within a specific DP. This specificity effect (Chomsky 1973) can also be seen in sentences (23) and (24): (23) is grammatical, and the reason that (24) is ungrammatical is that the cliticized DP should be in second position, adjoined to Infl, (recall that Serbian has second-position clitics), but since it cannot move out of the specific DP *onu lepu devojku* 'that pretty girl', it cannot be in second position. The same effects can be observed with other determiners.

- (23) a. *Ja sam video onu njemu lepu*  
 I<sub>NOM</sub> be.1SG.CLITIC see.PPART.M.SG that.F.SG<sub>ACC</sub> he<sub>DAT</sub> pretty.F.SG<sub>ACC</sub>  
*devojku.*  
 girl.F.SG<sub>ACC</sub>  
 'I saw that girl who is pretty<sup>DAT</sup>he.'





(24) a. \*Ja sam mu video onu  
 I<sub>NOM</sub> be.1SG.CLITIC he.CLITIC<sub>DAT</sub> see.PPART.M.SG that.F.SG<sub>ACC</sub>  
 lepu devojku.  
 pretty.F.SG<sub>ACC</sub> girl.F.SG<sub>ACC</sub>  
 'I saw that girl who is pretty that he.'



Sentences (23) and (24) lend further support to the argument that the dative DP is base-generated within the DP *onu devojku* 'that pretty girl', as the reason that prevents the dative DP from cliticizing in (24) is the specificity of that DP.

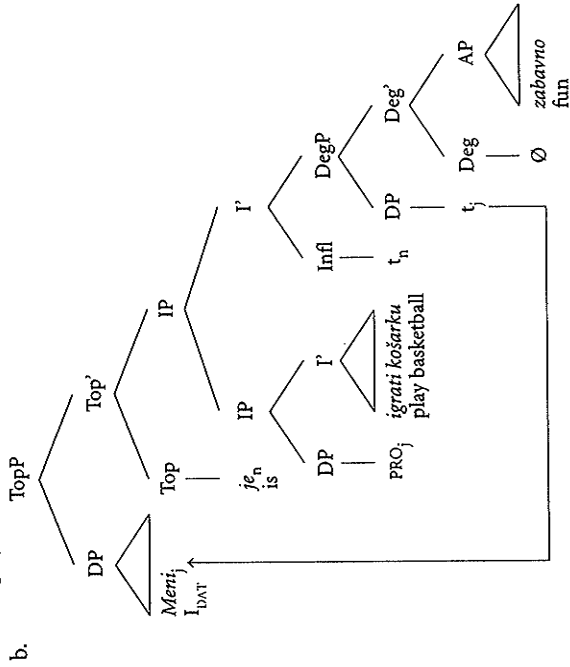
Examples (21) and (22) showed that the dative DP can occur prenominally. Crucially, this fact provides evidence for positing the dative DP within a functional projection that is above the AP and below the DP. This conclusion fits with all the syntactic tests presented (i.e., binding, ellipsis and preposing data), and I will therefore assume that the dative DP is base-generated in SpecDegP.

#### 2.4 Pro in SpecDegP

When there is no overt dative DP, I will assume that *pro* is generated in SpecDegP, adapting Epstein's (1984) analysis of control structures in English. I will argue that control properties require an argument in SpecDegP, and that *pro* fulfills this requirement when there is no overt dative DP. Consider the sentences (25) and (26).

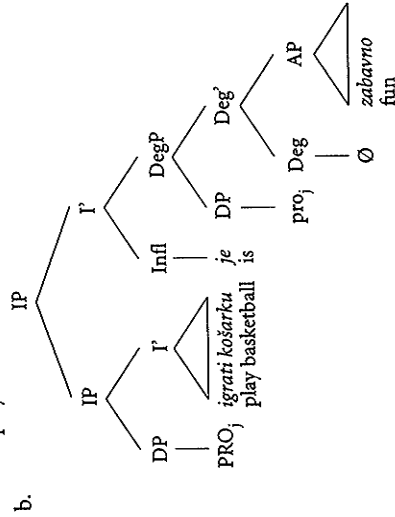
The interpretation of (25) is that I am the one playing, thus PRO in SpecIP of the infinitival clause is controlled by the dative DP.

- (25) a. *Menj; je PRO; igrati košarku zabavno.*  
 I<sub>DAT</sub> be.3SG.CLITIC PRO play<sub>INF</sub> basketball.F.SG.ACC fun.N.SG.NOM  
 'To play basketball is fun<sup>DAT</sup>. (I am the one who plays)



In sentence (26) the dative DP is not overt:

- (26) a. *PRO; igrati košarku je pro; zabavno.*  
 PRO play<sub>INF</sub> basketball.F.SG.ACC be.3SG.CLITIC pro fun.N.SG.NOM  
 'To play basketball is fun.'



The meaning of (26) is that in general it is fun for people if they play basketball. We can interpret this as an instance of generic quantification, introducing a generic quantifier (GEN) in the LF representation given in (27).<sup>11</sup>

- (27) (GEN<sub>x,s</sub>) [[x plays basketball in s] [s is fun for x]]

In (27) the two instances of *x* (ranging over individuals) and *s* (ranging over situations) are bound by the generic quantifier, corresponding to the interpretation of (25). This interpretation is straightforwardly derived if *pro* (corresponding to the individual variable) is generated in SpecDegP and controls PRO in SpecIP of the infinitive, similar to (25), in which the dative DP controls PRO.<sup>12</sup> Given this interpretation, I will assume that when the dative DP is not overt, *pro* is generated in SpecDegP and controls PRO.<sup>13</sup>

To summarize the discussion so far: syntactic evidence (binding facts, constituent tests, the fact that the dative DP can occur prenominally within a DP, restrictions on cliticization and topicalization and evidence from control properties) lead to the conclusion that the dative DP (or *pro*) is in a functional projection above the AP. This leaves the possibility that the dative DP is in SpecDegP or in the specifier of some other functional projection. In the following section it will be shown that there are good semantic reasons that argue in favor of the dative DP in SpecDegP.

### 3. Interpreting the dative

#### 3.1 The semantics of adjectives

The meaning of the dative DP in [X copula DP<sub>dative</sub> AP] is that it relativizes the meaning of the adjective to the particular point of view of the referent of the dative DP. To make this interpretation formally explicit, I will use Kennedy's (1997) scalar theory of adjectives. This section provides a necessarily very brief introduction to this theory.

In scalar analyses, gradable adjectives are expressions that denote relations between objects and points on a scale, i.e., degrees.<sup>14</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.

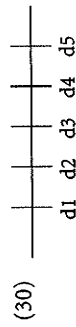
Kennedy postulates different degree heads for different degree constructions. For the absolute construction, Kennedy gives the following semantics: the meaning of adjective constructions is derived by comparing two degrees, namely the degree of the standard and the degree of the reference.<sup>15</sup> The sentence *John is tall* has the interpretation 'The degree to which John is tall (the degree of the reference) is at least as great as some standard for tallness (the degree of the standard)'. Kennedy implements this by positing that in absolute constructions a null degree morpheme  $\emptyset$  is generated in Deg, with a semantic representation as shown in (28) and explained below.

$$(28) \text{Deg } \emptyset = \lambda G \lambda P \lambda x [\text{ABS}(G(x))(\text{STND}(G)(P))]$$

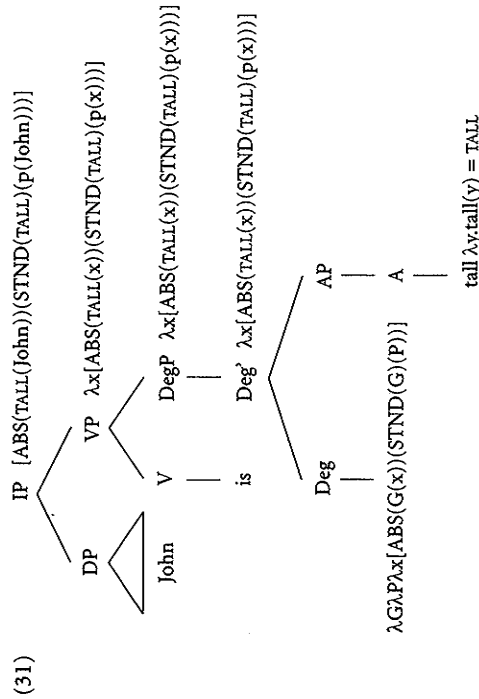
This degree morpheme is defined through two functions, ABS and STND. The function ABS is the main function of the degree morpheme, in the sense that it computes the degree comparison. The first argument of the function ABS is  $G(x)$  – the degree of the reference value (which is the degree to which the subject has the property  $G$ ). The function ABS returns truth values, as defined in (29):

$$(29) [[\text{ABS}(d1)(d2)]] = 1 \text{ iff } d1 \geq d2$$

ABS yields the truth value 1 (true) when the first argument,  $d1$  (the reference value), is higher on the scale of the adjective than, or equal to, the second argument,  $d2$  (the standard value), and it yields the truth value 0 (false) otherwise. This corresponds to the intuition that the sentence *John is tall* is true iff John's height is above, or equal to, what, in one way or another, is determined to be the standard for tallness. So for example if John is mapped onto  $d5$  on the scale in (30) and the standard of tallness is  $d4$ , then the sentence *John is tall* is true. If John is mapped onto  $d3$ , and the standard is  $d4$ , the sentence is false.



While the determination of the first argument ( $d1$ ) of the ABS function is dependent on both a syntactically realized subject and the property  $G$ , the second argument is often not determined by a syntactically overt constituent.<sup>16</sup> The second argument is STND( $G$ )( $P$ ) – the degree of the standard value. This degree is calculated by the function STND, by taking into account the comparison class  $P$  for the property  $G$ , which can be realized as the PP *for a girl* in *Mary is tall for a girl*. When the comparison class is not explicitly introduced, there are two possibilities:  $P$  receives a default value, so STND( $G$ )( $P$ ) is a global standard for property  $G$ , independent of the subject, or as in (31) below,  $P$  is determined by a context-dependent function,  $p(x)$ , where  $x$  is the subject, (so the comparison class is determined by the subject). In this way, in the example *John is tall*, the degree of the standard will be a standard for tallness for male humans. The compositional analysis of the sentence *John is tall* is given in (31), where the degree morpheme defined above is shown.<sup>17</sup>



In (31), *John* determines the reference value and the function STND returns the standard value, i.e., the degree which is the standard for tallness for male humans. The function ABS (which is the semantic content of the degree morpheme  $\emptyset$ ) compares the reference value and the standard value. The truth value of the sentence is determined by the truth condition in (29).

### 3.2 The dative DP with adjectives

The dative DP relativizes the meaning of the adjective to the point of view of the referent of the dative DP. I suggest that this meaning is achieved in the following way: the dative DP determines the standard degree and the ordering of the elements along the scale of the adjective. I will first discuss adjectives in absolute constructions and then in one type of comparative constructions.

How the dative is interpreted is the same for all adjectives, but I will exemplify it first on measure adjectives (these are adjectives which order elements on a scale according to some measure like height, length etc.), in the sentence (32):

(32) *Marko mi je visok.*  
 Marko<sub>NOM</sub> I.CLITIC<sub>DAT</sub> be.3SG.CLITIC tall.N.SG<sub>NOM</sub>  
 'Marko is tall'<sub>DAT</sub>.

In measure adjectives the ordering of objects along a scale is always the same, because there is an exact way to determine the amount of the property that an object has. So the position of Marko on the ordered scale of the adjective will always be the same (Marko has a specific height, univocally measurable in, say, centimeters). However, where the standard value – in this case the standard of tallness – is set, depends on the dative: Marko has a particular height, but different people might have different

opinions about whether he should be considered tall or not. Without the dative DP the sentence *Marko je visok* 'Marko is tall' means that the standard value is set according to some global standard for male humans. With the dative DP the sentence means that the standard value is set according to the individual denoted by the dative-marked DP.

The intuition is that the dative has its prespecified role in the computation of the meaning of the adjective, contributing to the identification of the standard. Syntactically, this can be captured by saying that the dative DP is in SpecDegP. It sets the standard variable, thus straightforwardly deriving the interpretation. In sentences without the dative, as will be shown later, *pro*, bound by a generic quantifier, is responsible for determining the standard value.

For non-measure adjectives the situation is more complex. These are adjectives with degree orderings that are agreed upon to a lesser extent among speakers (like 'pretty'), i.e., there is no universal scale for these adjectives. For example, Marko might think that Marija is pretty and Jane is not, but Anna might think that Jane is pretty and Marija is not. In this case then, as mentioned above, the dative performs two operations – it sets the standard value and it orders the objects along the adjective scale. So a sentence like *Marija je Marku lepa* 'Marija is pretty<sup>dar</sup>Marko' means: according to Marko's scale of prettiness, and according to his standard value, Mary is pretty.

So the first step that the dative performs is to select only one ordering of the objects on the scale of the adjective out of all possible orderings. The second step is to identify one of these objects as the standard (just as with measure adjectives). Then the interpretation proceeds as in the case of measure adjectives. 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.

These two semantic components of the dative (setting the standard and selecting the relevant ordering) can be incorporated into the framework of Kennedy's theory of adjectives by using the two functions ABS and STND.

The purpose of the function STND is to identify the degree of the standard value for a given property. The standard value depends on the property itself and on the comparison class for that property. In Kennedy's original formulation this dependency is implemented by treating the property itself and the comparison class for that property as the arguments of the STND function. In addition to this, the dative further determines the identity of the degree of the standard value. The first component of the semantic contribution of the dative can be implemented by treating the dative as the third argument of the STND function. The dative in this way encodes that the standard depends on the perspective of some entity, which is independent of the parameter given by the comparison class.

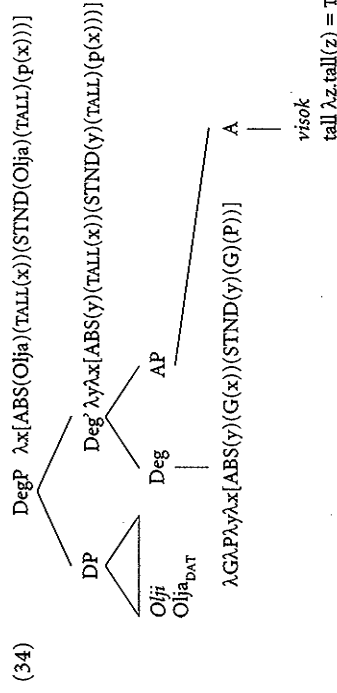
The second component of the function of the dative is the selection of the relevant ordering. This component can be integrated in the ABS function, given in (29). The purpose of the function is to decide whether a sentence is true by comparing the reference value *d1* and the standard value *d2*. Kennedy's original formulation assumes that

there is just one ordering of the degrees. The fact that there is more than one ordering possible and that the dative introduces the possibility of choice of one particular ordering out of those available can be integrated 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, but now this truth value depends not only on the comparison of two degrees as before, but on the comparison of two degrees taken from a particular ordering, i.e., the particular ordering selected by the dative argument. Adding the dative as the third argument of the ABS function captures 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 its argument, yielding a single ordering as value (the ordering of the dative DP) and the second function takes an 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, taking directly as arguments the dative and the two degrees in the chosen ordering and yielding a truth value as the value. The revised semantics for the degree morpheme is given in (33).

$$(33) \text{ Deg } \emptyset = \lambda \text{GAP} \lambda \gamma \lambda x [\text{ABS}(\gamma)(\text{G}(x))(\text{STND}(\gamma)(\text{G})(\text{P}))]$$

Here the ABS function takes three arguments:  $\gamma$ , which is denoted by the dative DP, the reference value  $\text{G}(x)$  and the standard value  $\text{STND}(\gamma)(\text{G})(\text{P})$  (which is the value of the function STND). The function STND takes three arguments as well: the dative  $\gamma$ , the property  $\text{G}$ , and the comparison class  $\text{P}$ . The derivation below shows the semantic computation of the DegP for the sentence *Marko je Olji visok* 'Marko is tall<sup>dar</sup>Olja'.



When the dative DP is not overtly realized, *pro* is generated in SpecDegP. There it performs the same function as the overt dative DP would. In particular *pro* becomes an argument of both the ABS and the STND functions. In the case of ABS, when *pro* is taken as the argument the value associated with it is an ordering of degrees that is the "commonsense" or default ordering. In the case of STND, when *pro* is taken as the argument the value associated with it is the "commonsense" or default standard value

for the relevant property. In the computation *pro* is bound by a generic quantifier, adapting the proposal in Epstein (1984), and in this way the desired interpretation is achieved. Thus, the adjective construction always expresses a point of view. The overt dative DP gives a specific point of view, and *pro* gives the semantics of a common point of view, a general observation.

While the dative DP is possible with all adjectives, there are pragmatic conditions that need to be satisfied for felicitous usage. The use of the dative with adjectives is pragmatically felicitous if a) the standard of the referent of the dative DP is divergent from the “commonsense” global standard that would be selected by default in the absence of an overt dative DP, or b) the referent of the dative DP does not know what the “commonsense” global standard is. If these two conditions are not satisfied, the dative will be infelicitous. This issue can be illustrated with the following example (from Hagit Borer, p.c.):

- (35) *Majkl Džordan mi je visok.*  
 [Michael Jordan]<sub>NOM</sub> I.CLITIC<sub>DAT</sub> be.3SG.CLITIC tall.M.SG<sub>NOM</sub>  
 ‘Michael Jordan is tall<sub>DAT</sub>.’

Everybody knows that Michael Jordan, a famous basketball player, is a very tall person, i.e., he is tall by everybody’s standards. Given this particular knowledge about the world, none of the two conditions is satisfied and (35) is somewhat infelicitous, even though it is grammatical. What determines how likely the two above-mentioned conditions are to be satisfied is the extent to which the property described by the adjective is a matter of point of view, or, in other words, how “fixed” the “commonsense” standard is. Adjectives with subjective standards, like *toplo* ‘warm’, *lepo* ‘pretty’, *prijatno* ‘pleasant’, *ukusno* ‘tasty’, *sumnjivo* ‘doubtful’ are felicitous with the dative. However, if the property is less subjective, the dative becomes less felicitous. This is the case for adjectives like *visok* ‘tall’ or *drven* ‘wooden’, which in Serbian, although possible, require a specific context, a context which will lead to the satisfaction of one of the two conditions mentioned above.

3.3 The dative with comparatives

The analysis proposed above can be extended to comparative constructions. Within Kennedy’s framework, the interpretation of the comparative sentence *Pluto is more distant than Mars* is: the degree to which Pluto is distant is higher on the scale of the adjective than the degree to which Mars is distant. The crucial part is the relation holding between the two degrees of *Pluto* and *Mars* on the scale of the adjective. For the interpretation of this construction, Kennedy (1997) proposes the semantic representation for the comparative morpheme (*-er* or *more* in English) given in (36) and a function *MORE*, given in (37):<sup>18</sup>

(36)  $-er/more = \lambda G\lambda y\lambda x[MORE(G(x))(G(y))]$

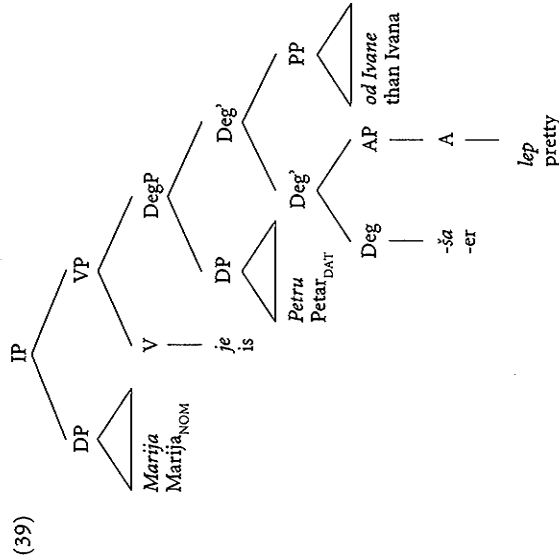
(37)  $[[[MORE(d1)(d2)]] = 1 \text{ iff } d1 > d2]$

This function is analogous to the function *ABS*: it decides whether the sentence is true by comparing two degrees, with the difference that in this case both degrees correspond to overtly realized arguments and none is allowed to be determined by context.

In Serbian the interpretation of the comparative constructions when a dative is present, as in (38), is similar to that of the absolute constructions discussed so far:

- (38) *Marija je Petru lepša od Ivane.*  
 Marija<sub>NOM</sub> be.3SG.CLITIC Petar<sub>DAT</sub> pretty.COMPF.SG<sub>NOM</sub> than Ivana<sub>GEN</sub>  
 ‘<sub>DAT</sub>Peter Marija is prettier than Ivana.’

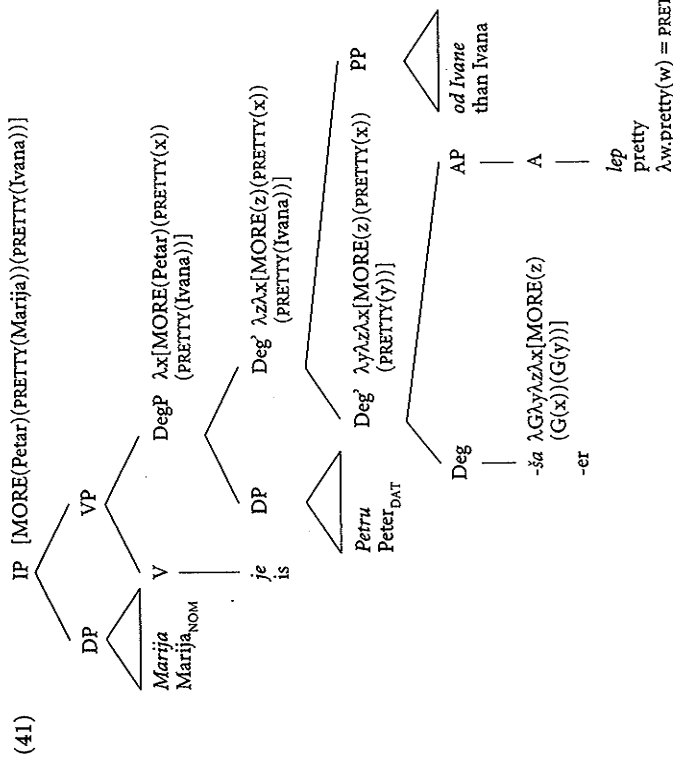
The above sentence means that according to Peter’s standards Marija is more beautiful than Ivana. The structure is given in (39):



Parallel to the reformulation of the semantics of the absolute degree morpheme in (33), I will treat the dative-marked DP as the third argument of the *MORE* function. In this way the revised *MORE* function selects the relevant ordering of degrees on the basis of the dative argument, exactly like the *ABS* function does, and then compares the two degree arguments as in the original formulation. In the comparative construction, selecting the ordering of degrees is the only operation performed by the dative. There is no need or possibility to set the standard value because both degrees come from overt syntax. The new semantics of the comparative degree morpheme is then:

(40)  $-er/more = \lambda G\lambda y\lambda z\lambda x[MORE(z)(G(x))(G(y))]$

Here the MORE function takes three arguments: the referent  $z$  denoted by the dative phrase, the subject degree  $G(x)$  and the second-term-of-comparison degree  $G(y)$ . Accordingly, the semantic computation for sentence (38) is as given in (41):



Sentence (38), containing a non-measure adjective, is perfectly natural, but sentences containing a measure adjective, as (42), are felicitous only in certain contexts, for example a context in which the speaker does not have knowledge, or at least not sufficiently reliable knowledge, about the distance of Pluto and Mars from our planet. In this example, the felicity hinges on imperfect or insufficient knowledge because distance is objectively measurable, and so there is a unique ordering of objects along this dimension that is accessible to knowledge.

- (42) *Pluton je Petru udaljeniji od Marsa.*  
 Pluto<sub>NOM</sub> be.3SG.CLITIC Peter<sub>DAT</sub> distant.COMP.M.SG than Mars<sub>GEN</sub>  
 'Pluto is more distant than Mars' <sup>DAT</sup>Peter'

The limited felicitousness effect follows from the analysis of comparatives. If in comparative constructions the only function of the dative is to select the ordering of degrees and if with measure adjectives there is only one ordering, then it is to be expected that comparative sentences with the dative *and* measure adjectives are less

felicitous and dependent on the context (similar to what we have seen for absolute constructions).

#### 4 Conclusions

The construction [X copula DP<sub>dative</sub> AP] has been compared to the [X is AP] construction. The syntactic analysis suggests that an overt dative DP or *pro* is generated in SpecDegP. This has been confirmed by the semantic analysis. The dative DP relativizes the meaning of the adjective: while [X is AP] is interpreted as a generally true statement, in [X copula DP<sub>dative</sub> AP] the referent of DP<sub>dative</sub> provides the point of view from which the assertion is made. This interpretation extends to comparative constructions. This meaning of the dative DP and the semantics of adjectives as given in Kennedy (1997) can be brought together by integrating the dative in the extended projection of the adjective. The dative, generated in SpecDegP, is an argument of the function that semantically interprets the head of the degree phrase. As such it sets the standard and selects the ordering of the degrees along the scale of the adjective in absolute constructions, and it selects the ordering of the degrees in comparative constructions. The point of view interpretation follows. The interpretation of a generic statement is given by generating *pro* in SpecDegP when there is no overt dative DP.

#### Notes

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1. In the translation I use the superscript <sup>DAT</sup> to the left of DPs to indicate that the dative relativizes the meaning of the adjective to the point of view of the referent of the dative DP.
2. The following abbreviations are used in the text: NOM: nominative, DAT: dative, ACC: accusative, SG: singular, PL: plural, REFL: reflexive, F: feminine, M: masculine, N: neuter, COMP: comparative, PPART: past participle, INF: infinitive.
3. Here and throughout the paper I assume that the copula *je* is base-generated in V and moves to Infl, but for ease of exposition I will not show that movement in the tree. The null degree morpheme  $\emptyset$  will be explained in Section 3.
4. Epstein (1984) actually has *pro* as the complement to the adjective. Syntactic tests will show the dative DP to be higher in the tree than the adjective, so the dative DP cannot be a complement of A.

5. In the standard dialect of Serbian the anaphor *svotoj* must be bound by a nominative DP, and cannot be bound by a DP in any other case. For DPs in non-nominative cases, the pronoun *rije-govoj* functions as the anaphor. In other dialects, *svotoj* can be bound by non-nominative DPs. For example, sentence (10) will be acceptable to some speakers with both *svotoj* (bound reading) and *rijevogvoj* (free pronoun reading); to speakers of the standard dialect *svotoj* will not be acceptable, only *rijevogvoj*, but with both a bound pronoun reading and a free pronoun reading. In the paper, what is marked as ungrammatical is ungrammatical in both of these dialects.
6. A note with respect to the structures (8) to (10) and throughout the paper: in the framework of *Barriers* (Chomsky 1986), in order to avoid VP being a barrier, VP adjunction is assumed. I will leave out the adjunction in the structures for ease of exposition. DegP is properly governed by V, so it is not a barrier for movement.
7. The particle *li* is standardly assumed to be in C, and the translation in these sentences is 'I wonder'.
8. I assume that the reason for this degraded acceptability is the heaviness of the constituent.
9. Sentence (22) is grammatical on the interpretation 'The very pretty girl again didn't bring the umbrella to me', but this is not the relevant interpretation.
10. Strictly speaking, the conclusion to be drawn is just that the dative DP is generated in some projection above the AP and below the DP. However, it is reasonable to assume that this is a functional projection given the fact that APs do have a functional projection above them, and also given the assumption that the dative DP gets its case in this position.
11. Here, a generic quantifier is assumed, as opposed to Epstein (1984), who assumes universal quantification. Thanks to Daniel Hole for clarifying the LF representation and suggesting the use of the variable *s*.
12. The question of how *c*-command of PRO is achieved in subject clauses is generally problematic, independently of the current proposal (see Haegeman 1991).
13. Note however that contrary to what this analysis predicts, control is not always obligatory. In (i), as pointed out by a reviewer, arbitrary control is the preferred reading, i.e., control is optional.
- (i) *Pacijistima je surovo PRO ubijati ljude*  
 pacifist.M.PL<sub>dat</sub> be.3SG.CLITIC cruel.N.SG<sub>nom</sub> PRO kill.INF people.F.PL<sub>acc</sub>  
 'To the pacifists, it is cruel to kill people.'
14. 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 (1997) and Heim (2000).
15. 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 use the more common notion of degree points here.
16. Measure phrases actually have the second degree argument *d2* syntactically realized. In the sentence *John is 192cm tall* the measure phrase *192cm* is *d2*. According to Kennedy, this type of construction has a different kind of null morpheme (Kennedy 1997:130). I will not discuss measure phrases as only one of my consultants accepts the dative DP with measure phrases, with a meaning in which the dative DP relativizes the measure phrase. The proposed analysis can accommodate this interpretation, but since only one of my consultants has this construction, it is not presented here. Another type of construction which has the second argument *d2*

syntactically realized is the comparative construction. For example in *John is taller than Marko*, the syntactic realization of the argument is *Marko*. I will discuss this type of comparative in Section 3.3.

17. The expression *tall* has the lambda representation  $\lambda y.tall(y)$  and is of type  $\langle e, t \rangle$ . For ease of reading, I will replace it in the tree with the expression 'TALL', and will do the same for subsequent trees.

18. Kennedy actually has 3 different comparative morphemes, depending on the type of comparative construction. I expect that the above analysis extends to them, but a discussion of all the types is beyond the scope of this paper.

## References

- Bierwisch, M. (1989). The semantics of gradation. In M. Bierwisch & E. Lang (Eds.), *Dimensional adjectives* (pp. 71–262). Berlin: Springer.
- Bošković, Ž. (1997). *The syntax of nonfinite complementation*. Cambridge, MA: The MIT Press.
- Bošković, Ž. (2001). *On the nature of the syntax-phonology interface. Cliticization and related phenomena*. New York: Elsevier.
- Chomsky, N. (1973). Conditions on transformations. In S. R. Anderson & P. Kiparsky (Eds.), *A festschrift for Morris Halle* (pp. 232–286). New York: Holt, Rinehart and Winston.
- Chomsky, N. (1986). *Barriers*. Cambridge, MA: The MIT Press.
- Epstein, S. (1984). Quantifier PRO and the LF representation of PRO. *ARB-Linguistic Inquiry*, 15, 499–505.
- Haegeman, L. (1991). *Introduction to government and binding theory*. Oxford: Blackwell.
- Heim, I. (2000). Degree operators and scope. In B. Jackson & T. Matthews (Eds.), *Proceedings of the 10th semantics and linguistic theory conference (SALT X)* (pp. 40–64). Ithaca, NY: Cornell Linguistics Club.
- Kamp, H. (1975). Two theories of adjectives. In E. Keenan (Ed.), *Formal semantics of natural language* (pp. 123–155). Cambridge: CUP.
- Kennedy, C. (1997). Projecting the adjective. The syntax and semantics of gradability and comparison. PhD dissertation, University of California Santa Cruz.
- Klein, E. (1980). A semantics for positive and comparative adjectives. *Linguistics and Philosophy*, 4, 1–45.
- Kunzmann-Müller, B. (1994). *Grammatikhandbuch des Kroatischen und Serbischen*. Heidelberg Publikationen zur Slavistik A. Linguistische Reihe. Band 7. Frankfurt: Lang.
- Lasnik, H. & T. Stowell (1991). Weakest crossover. *Linguistic Inquiry*, 22, 687–720.
- Stevanović, M. (1970). *Savremeni srpskohrvatski jezik*. Vol. I and II. Beograd: Naučna knjiga.
- von Stechow, A. (1984). Comparing semantic theories of comparison. *Journal of Semantics*, 3, 1–77.
- Wasow, T. (1979). *Anaphora in Generative Grammar*. Ghent: E. Story-Scientia.