

ON THE LOCALITY OF LEFT BRANCH EXTRACTION AND THE STRUCTURE OF NP*

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Abstract. The paper considers several accounts of crosslinguistic variation regarding left branch extraction (LBE), focusing on adjectival LBE, and explores consequences of a proper analysis of LBE for the internal structure of NP. Two lines of research are pursued, both of which are based on the claim that languages that allow adjectival LBE do not have DP. One is based on the phase-based locality system, extending the phase system from clauses to NPs, and the other one is based on the existence of crosslinguistic variation regarding the position of adjectives in the traditional NP, with some languages having the traditional NP-over-AP structure, others having Abney's AP-over-NP structure. Which structure a language has is argued to depend on the presence/absence of DP in the language, the lack of DP leading to the NP-over-AP structure. Under this analysis, the ban on AP LBE in English-type languages follows from the ban on movement of non-constituents, a problem that does not arise in languages that allow AP LBE. The impossibility of LBE of AP in the presence of another AP in languages that in principle allow such extraction is argued to provide evidence that adjectives are located in multiple specifiers of the same head.

This paper examines the phenomenon of left branch extraction (LBE), focusing on adjectival LBE, and explores consequences of a proper analysis of LBE for the internal structure of NP, in particular, the structural position of AP. I pursue two lines of research, both of which are based on the claim that languages that allow LBE of adjectives do not have DP. One is based on the phase-based locality system, extending the phase-based locality system from clauses to NPs, and the other one is based on the existence of crosslinguistic variation regarding the position of adjectives in the traditional NP, with some languages having the traditional NP-over-AP structure, others having Abney's (1987) AP-over-NP structure. Although there are reasons to favor the latter analysis, ultimately I will not be able to provide a completely conclusive way of teasing apart the alternative analyses. In this respect, the paper reflects our present understanding of the phenomenon of LBE, which is currently too rudimentary to put us in a

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position to conclusively argue for one analysis of the phenomenon.¹ Rather, the goal of this paper is more modest: My hope is that the exploration of the alternative analyses of left branch extraction in this paper will bring us closer to understanding the nature of this rather mysterious phenomenon and shed some light on several important issues concerning the theory of locality and the internal structure of NP.

1. Introduction

Ross (1967/1986:127) proposed the Left Branch Condition (LBC), which blocks movement of the leftmost constituent of an NP. The condition has been used in the literature to block extraction of determiners, possessors, and adjectives out of NP.

- (1) a. *Whose_i did you see [t_i father]?
 b. *Which_i did you buy [t_i car]?
 c. *That_i he saw [t_i car].
 d. *Beautiful_i he saw [t_i houses].
 e. *How much_i did she earn [t_i money]?

As already noted by Ross, some languages, e.g., Latin and most Slavic languages (Ross 1986:145 notes this for Russian), allow LBE, as illustrated by Serbo-Croatian (SC) (2) and Latin (3). (Pied-piping of the LBE remnant is also possible. (3b) was provided by an anonymous reviewer and (3a) is taken from Uriagereka 1988.)

- (2) a. Čijeg_i si vidio [t_i oca]? (Serbo-Croatian)
 whose are seen father
 ‘Whose father did you see?’
 b. Kakva_i si kupio [t_i kola]?
 what-kind-of are bought car
 ‘What kind of a car did you buy?’
 c. Ta_i je vidio [t_i kola].
 that is seen car
 ‘That car, he saw.’
 d. Lijepe_i je vidio [t_i kuće].
 beautiful is seen houses
 ‘Beautiful houses, he saw.’
 e. Koliko_i je zaradila [t_i novca]?
 how-much is earned money
 ‘How much money did she earn?’
- (3) a. Cuiam_i amat Cicero [t_i puellam]? (Latin)
 whose loves Cicero girl
 ‘Whose girl does Cicero love?’

¹ For this reason, some of the remarks made in the paper will remain on a rather speculative level.

- b. Quales_i Cicero amat [t_i puellas]?
 what-kind-of Cicero loves girls
 'What kind of girls does Cicero love?'

As noted above, this paper investigates LBE focusing on adjectival LBE, with the goal to use it to shed light on the structure of NP, in particular, the structural position of AP within the traditional NP.² My point of departure is Uriagereka's (1988:113) observation that LBE is allowed only in languages that do not have overt articles. Thus, Bulgarian, which Uriagereka mentions, and Macedonian, the two Slavic languages that have overt articles, differ from SC, Russian, Polish, and Czech, which do not have overt articles, in that they disallow LBE. ((4a–f) are taken from Bošković 2001.) Notice also that Latin differs from modern Romance languages in that it allowed LBE and did not have an overt article system.³

- (4) a. *Kakva_i prodade Petko [t_i kola]? (Bulgarian)
 what-kind-of sold Petko car
 'What kind of a car did Petko sell?'
 b. cf. Kakva kola_i prodade Petko t_i?
 c. *Čija_i xaresva Petko [t_i kola]?
 whose likes Petko car
 'Whose car does Petko like?'
 d. Čija kola_i xaresva Petko t_i?
 e. *Novata_i prodade Petko [t_i kola].
 new-the sold Petko car
 'The new car, Petko sold.'
 f. Novata kola_i prodade Petko t_i.
- (5) a. *Kakva_i prodade Petko [t_i kola]? (Macedonian)
 what-kind-of sold Petko car
 b. cf. Kakva kola_i prodade Petko t_i?
 c. *Čija_i ja bendisuva Petko [t_i kola]?
 whose it like Petko car
 'Whose car does Petko like?'

² I will therefore mostly ignore works that focus on other types of LBE, e.g., possessor LBE (for recent discussions of possessor LBE, see Boeckx 2001, 2003 and Gavruseva 2000.)

³ Bošković (2001) observes a potential counterexample to the ban on LBE in Bulgarian concerning the *li*-construction and explains it away. Note that we are dealing with a one-way correlation, not having overt articles being a prerequisite, but not sufficient, for LBE. Whatever is responsible for the correlation between overt articles and the impossibility of LBE (call it X) is not the only principle of the grammar. A number of things could go wrong in a language even if X is not active in it that could still block LBE. E.g., LBE of an element could leave a (null) PF affix in a position where it could not be properly supported. Last Resort could also be an interfering factor. Suppose, e.g., that the only operation that could in principle LB extract a phrase in a language is topicalization and that adjectives cannot bear a topic feature (i.e. undergo topicalization) in the language, much like, e.g., control infinitives cannot do it in English (see Stowell 1981). Adjectival LBE in such a language would invariably violate the Last Resort Condition. Notice also that the way Uriagereka's observation is deduced below, even the presence of null articles (more generally, determiners) will block LBE (for relevant discussion, see also Boeckx 2001:78–79).

- d. Čija kola_i ja bendisuva Petko t_i?
 e. *Novata_i ja prodade Petko [t_i kola].
 new-the it sold Petko car
 f. Novata kola_i ja prodade Petko t_i.

2. The ECP account of left branch extraction: Corver (1992)

Corver (1992) proposes an ECP analysis that captures Uriagereka's insight.⁴ He adopts the DP hypothesis, following Abney (1987). However, in contrast to Abney, for whom A takes NP as complement, Corver adjoins AP to NP. Consider first Corver's analysis of (1). Regarding (1b–c), Corver assumes that *that* and *which* are D⁰, hence cannot undergo XP movement, the underlying assumption being that LBE is a phrasal movement (see, however, Bošković 2001:232–238). As for (1a), Corver assumes that *whose* is not a constituent, hence cannot undergo movement. (He places *who* in SpecDP and 's in D⁰.)⁵ For

⁴ See also Bowers (1987) and Corver (1990) for ECP accounts. Kennedy and Merchant (2000) argue against the ECP analysis based on the intriguing claim that some (though not all, see their p.119) LBC violations in non-LBE languages can be rescued by ellipsis, which they treat as PF deletion. Showing that a violation can be rescued by a PF operation, however, does not necessarily argue against a syntactic treatment of that violation. See, e.g. Lasnik (2001) and Bošković (2002b) for different ways of instantiating rescuing effects of various PF operations/mechanisms on violations of locality restrictions on movement and/or licensing of traces. (The authors do attribute an aspect of these restrictions to PF.) Since this work focuses on languages that allow LBE I leave investigation of the very interesting rescuing effect of ellipsis on LBE in languages that normally do not allow it for future research.

⁵ As we will see below, this analysis leaves room for the existence of a language that has DP/determiners to allow possessor LBE. All that would have to happen in such a language is that the whole possessor is located in SpecDP, not just a part of it, as in English. This may be an appropriate way to handle Hungarian, a language that has determiners and allows LBE of possessors at least in some cases. (Hungarian possessive LBE may, however, involve a left dislocation-type configuration with a resumptive pronoun; see den Dikken 1999. For discussion of Hungarian possessor LBE, see also Boeckx 2001, 2003, Szabolcsi 1983/1984, 1994, and Gavrusseva 2000, among others.) Note that Hungarian does not allow adjectival LBE, as expected given the discussion below.

- (i) a. *Magas(-ak-at) látott lány-ok-at.
 tall-PL-ACC saw-3SG girl-PL-ACC
 b. cf. Magas lány-ok-at látott.
 'Tall girls, he saw.'
 c. *Milyen(-ek-et) látott lány-ok-at?
 what-kind-of-PL-ACC saw-3SG girl-PL-ACC
 d. Milyen lány-ok-at látott?
 'What kind of girls did he see?'

In fact, it should become obvious below that the way to refute the DP/NP analysis, one instantiation of which is Corver (1992), is to find a language with determiners that allows adjectival LBE, adjectival LBE being much more informative in the relevant respect than possessor LBE. (This is one of the reasons I am focusing on adjectival LBE in this paper. Notice that, following Corver 1990, 1992 and Grosu 1974, I assume that not all LBC violations should necessarily be analyzed in the same way.)

Corver, AP LBE violates the ECP. His analysis of AP LBE is based on Chomsky's (1986a) ECP system. Since it does not quite work I will modify it to enhance its empirical coverage. The following is thus a modified version of Corver's analysis.

Consider (6), which involves adjectival LBE under the standard assumption that movement out of DP must proceed through SpecDP (see, e.g., Boeckx 2001, 2003, Gavrusseva 2000, Giorgi & Longobardi 1991, Ormazabal 1991, Stowell 1989, Szabolcsi 1994, and Torrego 1987, who all build on insights of Cinque 1980), and (7), a *that*-trace configuration.

(6) [DP AP_i [D' D [NP t_i [NP

(7) [CP who_i [C' that [IP t_i [I'

The configuration in (6) clearly resembles the *that*-trace configuration in (7). Corver suggests that the two should receive a uniform account. In particular, he applies Chomsky's (1986a) rigid minimality barrier account of the *that*-trace effect to (6). On Corver's analysis, AP cannot antecedent govern its trace in (6) because of the intervening D', a minimality barrier in Chomsky's (1986a) sense projected by D.⁶ Consider now (8)–(11).

(8) *Handsome_i she saw [t_i boys].

(9) *Handsome_i she saw that [t_i boy].

(10) Who_i do you think [t_i left]?

(11) *Who_i do you think that [t_i left]?

To account for the fact that both (8) and (9) are unacceptable we need to assume that both overt and null D project a minimality barrier. The null hypothesis (contra Chomsky 1986a) is then that the same should hold for both the overt and the null C. After all, the overt vs. null C/D distinction is really PF-based and should have no bearing on the syntax. It follows then that (8) contains a null D, which projects a minimality barrier, while (10) does not contain a null C. That is, the embedded clause in (10) is an IP, as argued extensively in Bošković (1997), Doherty (1997) and Grimshaw (1997), among others.

Turning now to languages that allow LBE, Corver's analysis of such languages is crucially based on his claim that such languages do not have DP at all. Corver offers several arguments in support of his claim. I will

⁶ The relevant definitions from Corver (1992) are given in (i) (see Corver 1992 for details).

(i) A is a M(inimality)-barrier for B if A includes B, D (an X⁰ i-commander of B), and G (a maximal projection not necessarily distinct from A) containing B, where D i-commands B if the first constituent containing D contains B.

take SC as the representative of this language group, applying Corver's discussion of Czech and Polish to SC.⁷

First, SC does not have overt articles, which are the prototypical instantiation of D⁰. SC does have lexical items corresponding to *that*, *some*, etc., as well as possessives. However, such items are morphologically adjectives in SC (see Zlatić 1997, 1998), as illustrated in (12) with respect to a partial case paradigm.

- (12) a. nekim mladim djevojkama
 some.FEM.PL.INSTR young.FEM.PL.INSTR girls.FEM.PL.INSTR.
 b. nekih mladih djevojka
 FEM.GEN.PL.

Furthermore, in contrast to their English counterparts, the elements in question can occur in typical adjectival positions in SC, as shown in (13), where a possessive occurs in a predicative position of a copula construction. (English examples in (13)–(17) are given through glosses.)

- (13) Ova knjiga je moja.
 *this book is my

Another contrast between English and SC “D”s which indicates that SC “D”s are actually adjectives concerns the fact that, in contrast to English, the elements in question can stack up in SC, just like adjectives.

- (14) ta moja slika
 *this my picture

Moreover, their order is relatively free in SC, in contrast to English, where it is fixed. This is not surprising under the D-as-A analysis, since the relative order of adjectives is also relatively free.⁸

⁷ The claim that languages can differ with respect to the presence vs. absence of DP (regarding the latter option, see also Fukui's 1986 discussion of Japanese and Mahajan's 2003 discussion of SOV languages) has obviously important ramifications for the semantics of NP. For relevant discussion that assumes the crosslinguistic variation in question, see Willim (2000) and especially Chierchia (1998), who convincingly argues (contra Longobardi 1994) that the presence of DP is not necessary for argumenthood. Note that there is some controversy regarding the issue of whether SC lacks DP. Thus, Progovac (1998) and Leko (1999) argue for DP in SC (see also Rappaport 1998 for a more general Slavic perspective intended to be applicable to SC), while Stjepanović (1998), Zlatić (1997, 1998), Bošković (2004b), and Trenkić (2004) argue against DP in SC (for an overview, see Bošković in press a). The strongest arguments for DP in SC concern pronouns (see Progovac 1998). It is worth noting in this respect that nothing in Corver's analysis or the discussion below would actually change if pronouns are Ds, more precisely, the only Ds in SC.

⁸ The order of the SC elements in question is sometimes fixed (see Zlatić 1997, 1998 and Leko 1999), but the same of course holds for adjectives (see, e.g., Sproat & Shih 1991). What is important here is the contrast between English and SC with respect to the permutability of the elements in question.

Note that the permutation can have a semantic effect. Thus, (ia) only has Larson & Cho's (1990) POSS-modifying reading, on which *Jovan's former house* refers to the house that John formerly owned. To express Larson & Cho's N-modifying reading, on which *Jovan's former*

- (15) Jovanova skupa slika vs. skupa Jovanova slika
 John's expensive picture *expensive John's picture
- (16) tall angry men vs. angry tall men

Another argument for the D-as-A analysis, not noted by Corver, concerns the impossibility of modifying a SC prenominal possessive with adjectival morphology (*bratov* in (17)) by a possessive.⁹

- (17) *Moj bratov prijatelj spava.
 my.NOM brother's.NOM friend.NOM sleeps

This actually holds for adjectival modification of the possessives in question more generally, as shown in (18), which is not surprising given the claim that *moj* in (17) is an adjective. ((18) is acceptable only on the pragmatically implausible reading on which *bogati* modifies *konj* instead of *susedov*. A similar situation is found with multiple possessives.)

- (18) *bogati susedov konj
 rich neighbor's horse

Assuming that an adjective cannot be modified by a possessive or, more generally, an adjective, the ungrammaticality of (17)–(18) immediately follows if SC possessives under consideration are indeed adjectives.

Based on the above arguments, following Corver (1992) I conclude that all “D”s are As in SC. SC, and the same holds for other Slavic languages allowing LBE, does not project DP on top of NP.

Let us now examine LBE in SC in light of this conclusion. Consider (19).

- (19) Lijepe_i [VP t_i [VP [V' gleda [NP t_i [NP kuće]]]]].
 beautiful watches houses
 ‘Beautiful houses, he/she is watching.’

Given the absence of D, the problem that arises in English (1d) (cf. (6)) does not arise in SC (19): there is no D to project a minimality barrier. A question arises why V does not project a minimality barrier, i.e., why V' isn't a minimality barrier for the NP-adjoined trace. I assume that

house refers to an object that Jovan now possesses and that was once formerly a house, it is necessary to use (ib).

- (i) a. bivša Jovanova kuća
 former Jovan's house
 b. Jovanova bivša kuća

⁹ Note that a postnominal possessive noun that is assigned genitive by the head noun can be modified by a possessive (more generally, an adjective), as in *prijatelji(nom) moga(gen) brata(gen)* ‘friends of my brother’. (Note that *brata* is a noun, not an adjective. The reader is also referred to Corbett 1987 for a peculiar construction found in Upper Sorbian and Slovak in which only the possessive modifying the possessive bears the adnominal genitive.)

adjunction to XP voids the minimality barrierhood of X, i.e. when Y adjoins to XP, the head of X does not project a minimality barrier for the Y-chain (see Bošković 1992).

Why can't adjunction to DP provide an escape hatch from the minimality effect of D in (1d), as in (20)?

(20) *Beautiful_i he [_{VP} t_i [_{VP} saw [_{DP} t_i [_{DP} [_{D'} D [_{NP} t_i [_{NP} houses]]]]]]].

Chomsky's (1986a) ban on adjunction to arguments provides an answer (for evidence for the ban on adjunction to arguments, see also Bošković 1997, 2004a, McCloskey 1992, and Motapanyane 1994, among others). Adjunction to DP in (20) is an instance of adjunction to an argument, hence it is disallowed. Is the ban on adjunction to arguments violated in SC (19)? The answer is no, if the ban is applied derivationally, i.e. at the point of adjunction. (Murasugi & Saito 1994 make the same proposal concerning the ban on adjunction to adjuncts). Following Takahashi's (1994) approach to successive cyclicity, I assume that movement of the AP in (19) does not start until the final target of the movement enters the structure.¹⁰ At the point of adjunction the relevant element is then not an argument in (19), in contrast to (20). More precisely, the object NP in (19) becomes an argument only when it merges with the verb. However, adjunction to it takes place prior to this, hence it does not violate the derivational version of the ban on adjunction to arguments. On the other hand, under Takahashi's view of successive cyclic movement, adjunction to the direct object in (20) takes place after the direct object has been incorporated into the clausal structure (recall that the AP undergoes movement only after its target, located above IP, enters the structure, a point at which the direct object has already been merged with the verb). (20) then involves adjunction to an argument even under the derivational interpretation of the condition in question.

I now turn to additional data concerning LBE, showing how they can be accounted for under a Corver-style analysis. Notice first that LBE out of a complement of a noun, which I will refer to as *deep LBE*, is disallowed (See (21b). See also Corver 1992 for Polish and Czech.)

- (21) a. On je vidio [_{NP} [_{N'} prijatelja [_{NP} njegove majke]]].
 he is seen friend his mother
 'He saw a friend of his mother.'
 b. *Čije_i je on vidio [_{NP} [_{N'} prijatelja [_{NP} t_i majke]]]?
 whose is he seen friend mother
 'Whose mother did he see a friend of?'

¹⁰ In Takahashi's system, this is quite generally the case; successive cyclic movement does not start until the final target of movement enters the structure, contra Chomsky (1999). Takahashi's approach is revived in Boeckx (2001, 2003) and Bošković (2002a,c), where it is argued to be empirically superior to Chomsky's (1999) system. In fact, the analysis to be presented can be considered an argument in favor of this approach.

(21b) can be accounted for in the same way as English (20). Like D in (20), the higher N in (21b) projects a minimality barrier (N') for the LBE trace. We could try to void the minimality effect by adjoining the possessive to the higher NP. However, the adjunction would involve adjunction to an argument for the same reason the adjunction of AP to the direct object DP does in (20).

Interestingly, deep LBE becomes much better if the lower NP is moved outside of the higher NP. True, (22), is still somewhat degraded, but the reason for this is that extraction of genitive complements of nouns is generally not fully acceptable in SC (see Zlatić 1994), as shown in (23). What is important for our current purposes is that (22) is clearly better than (21b) in spite of the marginality of genitive NP extraction. Notice also that moving the whole higher NP remnant of deep LBE in front of the verb does not improve (21b), as shown in (24).

(22) (?)?Čije_i je on [_{NP} t_i majke]_j vidio [_{NP} prijatelja t_j]?

(23) (?)?On je [_{NP} njegove majke]_j vidio [_{NP} prijatelja t_j]?

(24) *Čije_i je on [_{NP} prijatelja [_{NP} t_j majke]]_i vidio t_i?

How can these facts be accounted for? The modified ECP analysis actually does not rule out (22), in contrast to (21b). (22) does not have to involve AP-adjunction to an argument, while (21b) does (to void the minimality effect).¹¹

I now turn to a phenomenon, discussed in Stjepanović (1998), that turns out to be relevant to LBE, namely, adjunct extraction from NP. It is well-known that English does not allow adjunct extraction out of NP (see Huang 1982, Chomsky 1986a, and Culicover & Rochemont 1992).

(25) a. Peter read [_{DP} books from that shelf].

b. *From which shelf_i did Peter read [_{DP} books t_i]?

(26) a. Peter met [_{DP} girls from this city].

b. *From which city_i did Peter meet [_{DP} girls t_i]?

Apparently, while adjuncts can be extracted out of VP in English, they cannot be extracted out of NP. Why do we have this VP/NP asymmetry? Culicover & Rochemont blame it on DP. More precisely, they give an ECP account of (25b) and (26b), on which DP blocks antecedent government of the trace left by wh-movement of the adjunct, resulting in an ECP violation.¹² Details of the analysis are not important. What is

¹¹ Notice that movement of the complement NP in (22) raises no problems with respect to the ECP assuming that its trace is lexically governed (see, however, Corver 1992).

¹² They assume the conjunctive ECP. Furthermore, they assume that NP adjuncts are adjoined to NP and that D cannot head govern. However, being the closest governor, it does not allow the verb to head govern the relevant trace. As for adjunct extraction out of VP, they assume that the closest governor, V, can head govern. Notice that adjunct extraction out of NP is also ruled out in Corver's (1992) system since in this system D would project a minimality barrier (D') for the NP-adjoined trace of the adjunct, resulting in an ECP violation.

important for our purposes is the proposal that the presence of D is responsible for the impossibility of adjunct extraction out of NP.

Significantly, Stjepanović (1998) observes that SC and Russian, which have no D (given the above tests) and allow LBE, allow adjunct extraction out of NP. Moreover, Bulgarian, which clearly has D and does not allow LBE, does not. ((27–(29) are taken from Stjepanović 1998).)

- (27) a. Petar je sreo [djevojke iz ovog grada]. (SC)
 Petar is met girls from this city
 ‘Peter met girls from this city.’
 b. Iz kojeg grada_i je Petar sreo [djevojke t_i]
 from which city is Peter met girls
- (28) Iz kakogo goroda_i ty vstrečal [devušek t_i?] (Russian)
 from which city you met girls
- (29) *Ot koj grad_i Petko sreštna [momičeta t_i?] (Bulgarian)
 from which city Petko met girls

The adjunct extraction data and the LBE data thus receive a uniform explanation under the DP/NP analysis.

An obvious question that arises now is whether LBE and the crosslinguistic variation with respect to LBE can be accounted for without appealing to the ECP, given the well-known conceptual arguments against the ECP regarding the arbitrary nature of the notion of government. In what follows I will first examine two existing non-ECP accounts of LBE (I confine the discussion to accounts that focus on languages that allow LBE) and then present new non-ECP accounts. I will eventually conclude that the phenomenon can be accounted for without employing the ECP, thus contributing to the continuing attempt to eliminate the mechanism of government from the grammar.

3. Existing non-ECP accounts of left branch extraction

3.1. *Remnant AP fronting*

Adopting Abney’s NP-as-complement-of-A analysis, Franks & Progovac (1994) present a remnant AP fronting analysis of LBE.¹³ Under this analysis, traditional AP LBE actually involves remnant movement of the AP out of which the NP complement of A has moved.

- (30) [_{AP} Crveno t_i]_j je on kupio t_j [_{NP} auto]_i.
 red is he bought car
 ‘He bought a red car.’

¹³ Franks & Progovac actually propose the analysis for what I call in section 6 extraordinary LBE, which under the remnant movement analysis involves remnant PP movement. However, Franks & Progovac do hint that the remnant movement analysis should also be applied to constructions like (30).

For Franks & Progovac, the NP *auto* right adjoins to IP. However, if this were correct we might expect the NP always to follow the adjunct in constructions like (31)–(32), which is not the case (see also (41) below).

- (31) Crveno je on kupio auto prije tri dana.
 red is he bought car before three days
 ‘He bought a red car three days ago.’

- (32) ?*Crveno je on kupio prije tri dana auto.

The fact that in (31)–(32), the NP in question must precede the adjunct provides strong evidence against the rightward movement analysis. The alternative is to assume that *auto* in (30) actually moves to the left, with remnant VP fronting (i.e. fronting of the VP out of which *auto* has moved) feeding remnant AP fronting, as a result of which *auto* ends up in a sentence final position in spite of undergoing leftward movement.¹⁴ A problem with this analysis is that constructions in which an NP complement of A clearly undergoes leftward movement are degraded, as shown in (33). This indicates that NP movement out of AP, the crucial ingredient of the remnant AP movement analysis, is not fully acceptable in SC, a fact which invalidates the remnant AP movement analysis. (See section 6 for explanation for the ungrammaticality of (33). See also that section for arguments against the remnant movement analysis of another instance of LBE.)

- (33) ?*Kuće_i je on vidio lijepo t_i.
 houses is he seen beautiful
 ‘He saw beautiful houses.’

Another problem with the remnant movement analysis is that it is not obvious how it can account for a very interesting fact concerning LBE illustrated in (34)–(35) for SC and (36) for Russian.¹⁵

- (34) a. Visoke je on vidio djevojke.
 tall is he seen girls
 ‘Tall girls, he saw.’

¹⁴ It is worth noting in this respect that LBE constructions actually sound best when the remnant of LBE precedes the verb (see Čavar & Fanselow (2000) and Bošković (2001)), a potentially significant fact.

¹⁵ Similar SC examples involving extraordinary LBE, a phenomenon discussed in section 6, are discussed in Bošković (2001), Franks (1998), Franks & Progovac (1994), and Schütze (1996). Note that fronting the remnant does not improve the unacceptable constructions, as shown by **visoke je on lijepo djevojke vidio* and **visoke je on djevojke vidio lijepo*. For the former construction, which involves double AP LBE from a raised position, see section 5 (the analysis presented in that section also excludes **visoke je on lijepo vidio djevojke*). As for the latter construction, assuming that it involves movement of *visoke djevojke* followed by LBE of *visoke*, the construction can be ruled out either because it involves non-constituent movement (if *visoke* is higher than *lijepo* prior to movement—I assume below that the adjectives are either located in multiple Specs of NP or adjoined to NP), or because it involves movement of an intermediate element that is larger than a head but smaller than a full phrase (if *visoke* is lower than *lijepo*), which is standardly assumed not to be allowed.

- b. Lijepe je on vidio djevojke.
 beautiful is he seen girls
 'Beautiful girls, he saw.'
- (35) a. *Visoke je on vidio lijepe djevojke.
 b. *Lijepe je on vidio visoke djevojke.
- (36) a. *Simpatičnye emu npravjatsja vysokie studenty.
 good-looking he-DAT likes tall students
 'He likes good-looking tall students.'
 b. Simpatičnye emu npravjatsja studenty.

Apparently, AP LBE is not possible in the presence of another AP (see, however, section 5). I will refer to the construction in question as *double AP LBE*. (37) gives the structure of (35a) under the remnant AP movement analysis.

- (37) *_[AP Visoke t_i] je on vidio t_j _[AP lijepe djevojke].

To account for this type of construction, Franks & Progovac (1994) propose that AP cannot undergo the movement that feeds remnant AP fronting. In other words, AP cannot move out of AP. The question is why. We could revive the A-over-A Principle (Chomsky 1964), which would block AP movement out of AP. However, the principle has a number of undesirable consequences. E.g., it rules out (38a–b), which involve movement of an NP out of an NP. I conclude therefore that the A-over-A Principle has to be eliminated from the grammar.

- (38) a. Who_i did he see friends of t_i?
 b. John and Mary_i, he saw friends of t_i.

Note also that although banning AP movement out of AP would suffice to account for (37), it does not say anything about (39), which does not involve AP movement out of AP.

- (39) *Visoke lijepe on gleda djevojke.
 tall beautiful he watches girls
 'He is watching tall beautiful girls.'

Under the remnant AP movement analysis, (39) can be analyzed in essentially the same way as (30), namely, as involving NP movement out of AP, followed by remnant AP fronting (the higher AP would undergo the movement). It is not clear how this derivation can be ruled out.

The most serious problem for the Franks & Progovac (1994) account of the ban on double AP LBE is raised by constructions like (40).

- (40) a. Novim_i je on _{[AP zadovaljan [t_i poslom]]}.
 new is he content job
 'He is content with his new job.'

- b. Hrabrim/svojim_i je on [_{AP} vjeran [_{t_i} vojnicima]].
 brave/his is he loyal soldiers
 ‘He is loyal to brave/his soldiers.’

In (40), the adjective uncontroversially (i.e. under anybody’s analysis) takes NP as its complement. Significantly, AP LBE from the NP complement of the adjective is possible. There seems to be no way of making a relevant distinction between (35) and (40) under the remnant AP movement analysis. Under this analysis, all the constructions in question involve a double AP LBE configuration, hence should be ruled out because they involve movement of an AP out of an AP (full AP movement out of AP in (35) and remnant AP movement out of AP in (40)), which is by hypothesis disallowed. The problem is actually more general. It is difficult to see how one can make a principled distinction between (35) and (40) in Abney’s system more generally, where the constructions in question have essentially the same structure in the relevant respects.

In addition to the problems noted above, it is not clear how several other properties of LBE can be captured under the remnant AP movement analysis. E.g., it is not clear how the relevance of the presence vs. absence of DP for LBE, the (im)possibility of adjunct extraction out of NP, which correlates with the (im)possibility of LBE, as well as the deep LBE data from section 2 can be captured under the remnant movement analysis. In section 6 I provide additional evidence against the remnant movement analysis. However, I believe that the above discussion already forces us to the conclusion that the remnant AP movement analysis cannot be maintained.

3.2. *The copy and delete analysis*

Ćavar & Fanselow (2000) propose a copy and delete (CD) analysis for some instances of LBE. I will explore here the possibility of generalizing the CD analysis to all LBE. (The reader should bear in mind that this may not have been Ćavar & Fanselow’s intention.) Under the CD analysis, the LBE example *Crveno je on auto kupio* would be analyzed as shown in (41).¹⁶

- (41) [Crveno ~~auto~~] je on [~~crveno~~ auto] kupio.
 red car is he bought

The full phrase *crveno auto* undergoes movement. The appearance of LBE arises as a result of scattered deletion in the PF component. The N is deleted in the higher copy and the A is deleted in a lower copy. It has

¹⁶ Following Ćavar & Fanselow, I am focusing the discussion in this section to examples where the “remnant” of LBE precedes the verb.

been argued on independent grounds in Bošković (2001) that scattered deletion indeed needs to be allowed (for relevant discussion, see also Nunes 1999, Roberts 1997, Schick 2000, Ticio 2001, and Wilder 1996). One question that arises under any analysis adopting scattered deletion is how to constrain application of scattered deletion. Obviously, we cannot allow it to apply freely; otherwise we would derive constructions like (42).

- (42) a. *The ~~students~~ were arrested ~~the~~ students.
 b. *~~The~~ students were arrested the ~~students~~.
 (43) cf. The students were arrested ~~the~~ ~~students~~.

Bošković (2001) (see also Nunes 1999) considers scattered deletion a last resort operation that takes place only when the full copy deletion option is blocked.¹⁷ The issue of constraining the scattered deletion option is particularly salient in the CD analysis of LBE. In (44)–(48) I give some constructions involving LBE under the CD analysis of LBE. (For additional examples raising the same problem for the CD analysis, see section 6. For discussion of complex-name constructions in (48)–(49), see Bošković 2001 and Franks 1998.)

- (44) Visoke ~~djevojke~~ je on vidio visoke djevojke.
 tall girls is he seen
 (45) *Visoke ~~lijepo~~ ~~djevojke~~ je on vidio visoke lijepe djevojke.
 tall beautiful girls is he seen
 (46) *Visoke lijepe ~~djevojke~~ je on vidio visoke lijepe djevojke.
 (47) ?*Visoke djevojke je on vidio visoke ~~djevojke~~.
 (48) a. Lava ~~Tolstoja~~ on Lava Tolstoja čita.
 Leo.acc Tolstoy.ACC he reads
 b. *Lava Tolstoja on Lava ~~Tolstoja~~ čita.
 c. *Lav ~~Tolstoja~~ on Lav Tolstoja čita.
 Leo.nom Tolstoy.ACC he reads
 d. *Lava ~~Tolstoj~~ on Lava Tolstoj čita.

¹⁷ In Bošković (2001), only PF considerations can in fact license scattered deletion. For Čavar & Fanselow, scattered deletion is licensed by the condition which requires that material with a pragmatic feature F must appear overtly in the Spec position of an F-phrase. (Part of the phrase undergoing LBE is pronounced in a lower position to satisfy the principle.) The principle in question is obviously problematic conceptually due to its stipulatory nature. Notice also that Čavar & Fanselow assume that in SC, in most cases the relevant pragmatic feature needs to be checked only in the covert component. A question arises as to why the presence on element X of a feature Y that needs to be checked only in the covert component would force pronunciation, therefore placement of X in the Y-checking position in the overt component. Čavar & Fanselow appear to make a rather strange assumption that pronouncing element X undergoing movement from A to B in A is essentially tantamount to not moving X to B at all. For them, X cannot undergo covert checking in position A if it is overtly moved from A to a higher position, an assumption that can be easily instantiated formally. However, they seem to assume that covert checking in position A somehow becomes possible if X is pronounced in A in spite of its overt movement to B, an assumption that is very difficult to justify. (Note, however, that in the version of the paper I have, Čavar & Fanselow's analysis is not fully spelled out so that it is difficult to evaluate it properly. As a result, some of the above criticism may not be well-founded.)

- (49) a. cf. Lava Tolstoja on čita.
 b. cf. Lav Tolstoja on čita.
 c. cf. ?Lava Tolstoj on čita.

The question that arises is how we can ensure that the indicated scattered deletions are allowed in the grammatical examples, and disallowed in the ungrammatical examples in (44)–(48) (see section 6 for additional examples illustrating the same problem). I know of no approach assuming scattered deletion that would have the desired result. Other questions that arise under the CD analysis is how to capture the correlation between LBE and adjunct extraction out of NP, the relevance of DP for LBE, and the deep LBE data discussed above. The data/correlations in question all seem to remain unaccounted for under the CD analysis. In light of the above discussion, I conclude that, as it is, the CD analysis cannot be maintained. In the next section I will propose two new non-ECP treatments of LBE and phenomena relevant to LBE.

4. New non-ECP analyses of left branch extraction

4.1. *The phase analysis*

In this section I present a phase-based implementation of the DP/NP analysis, in which, as in the ECP analysis, locality plays the central role.¹⁸ As a preliminary attempt at a phase analysis, let us assume that DP, but not NP, is a phase, on a par with Chomsky's (1999) proposal concerning clausal phasehood that CP, but not IP, is a phase (see also Franks & Bošković 2001). Let us furthermore assume that D cannot have the escape hatch for successive cyclic movement EPP feature. The assumptions appear to give us the desired result. Given the PIC, we are now ruling out both LBE and adjunct extraction out of DP in English.¹⁹ Both are still allowed in SC, given that the traditional NP is indeed an NP in SC. The analysis is, however, too strong when it comes to English. It undergenerates in that it rules out all phrasal movement out of DP in English, including constructions like (50).

¹⁸ Chomsky's (1999) notion of *phase* is similar to the pre-minimalist notion of *bounding node*. The basic idea is that XP can move out of a phase only if it first moves to the Spec of the phase due to the Phase-Impenetrability Condition (PIC), which says that only the head and the Spec of a phase are accessible for movement to a position outside of the phase. This movement is instantiated by giving the head of the phase the EPP property, which is satisfied by filling the Spec position. The EPP then drives movement to the Spec of the phase. After the movement, the element located in the Spec of the phase is accessible for movement outside of the phase.

¹⁹ I assume with Corver that possessives like *whose* are not constituents and that elements like *which* and *that* are heads, hence cannot undergo LBE, which is a phrasal movement.

(50) Who do you like [_{DP} [_{NP} friends of t]]?

Consider now the following revision of the phase analysis. DP is a phase and can have the escape hatch EPP feature, just like CP, which means that *who* in (50) can move through SpecDP. (I continue assuming that NP is not a phase, which holds for both English and SC.) Suppose, however, that AP movement from the NP adjoined position to SpecDP is ruled out.²⁰ This can be achieved by adopting a version of Bošković's (1994, 1997) and Saito & Murasugi's (1999) condition on chain links given in (51), which rules out movement that does not cross an XP boundary.²¹

(51) Each chain link must be at least of length 1, where a chain link from A to B is of length *n* if there are *n* XPs that dominate B but not A.

The reader is also referred to Abels (2003a,b) and Ishii (1999), where the relevant movement (movement from the position adjoined to the complement of X to SpecXP) is ruled out via Economy because it is considered to be superfluous. More generally, according to these authors,

²⁰ Kennedy and Merchant (2000) also account for the impossibility of AP LBE in English-type languages by causing the independently needed AP movement to SpecDP to result in a violation. (A PF violation in their analysis. Their analysis is actually slightly more complicated since they assume a richer structure for the traditional NP.) However, since Kennedy and Merchant focus on the impossibility of +wh-adjectival LBE, their analysis, which is based on what seems to be an accidental gap in the lexicon of English, ends up being too tightly tied to wh-movement and does not readily extend to other instances of AP LBE (i.e. the fact that other movement operations, not just wh-movement, also fail to extract adjectives out of the traditional NP in English-type languages). Furthermore, their analysis appears to rule out all wh-movement out of the traditional NP in English, including constructions like (50). The reader should, however, bear in mind that the strategy employed above (namely, causing movement to SpecDP to result in a violation) is the same strategy as the one employed by Kennedy and Merchant.

²¹ Bošković and Saito & Murasugi give slightly different formulations of the principle, which they suggest is derivable from economy, the basic idea being that the ban on superfluous steps rules out movement that is too short. The authors show that the principle has considerable motivation. Thus, Bošković (1994) appeals to the principle to rule out movement from the complement to the Spec of the same phrase. This way we can rule out movement from object to subject θ -position (complement to SpecVP), which becomes necessary once the syntactic θ -criterion is dispensed with, in accordance with minimalist guidelines. (More precisely, Bošković shows that the condition enables us to rule out ungrammatical instances of movement into θ -positions while still allowing movement into θ -positions to take place in certain well-defined configurations, in which he argues the movement indeed takes place.) Bošković (1997) also appeals to the principle to rule out movement from SpecXP to the XP-adjoined position, thus accounting for the impossibility of short-subject topicalization and short zero-subject relativization in English, which otherwise remain unaccounted for. Furthermore, under Takahashi's (1994) view of successive cyclic movement, based on the Minimize Chain Links Principle, which requires each chain link to be as short as possible, a condition like (51) is necessary to prevent the principle from forcing a phrase in an adjoined position to keep adjoining to the same node. Finally, (51) also rules out adjunction of X to its own XP and substitution of X to SpecXP (Chomsky's 1994 self-attachment), which raised a problem for Chomsky (1994).

when an element X is already located in the minimal domain of a head (see Chomsky 1993 for the definition of minimal domain) it cannot move to another position in the minimal domain of the same head, which is the case with the movement we are interested in, given that movement is a last resort operation driven by the need to create a local configuration between two elements.²²

A particularly strong case against movement that is too local is made in Grohmann (2000, 2003a,b), who develops a full-blown theory of anti-locality which rules out movement from X to Y if X and Y are too close to each other.²³ Grohmann gives a host of empirical arguments for the anti-locality hypothesis and places it within a broader theoretical context, demonstrating that it follows from Bare Output Conditions.

In short, given the above discussion, the AP is too close to move to SpecDP, movement illustrated in (52). Given the PIC, which rules out (53), this prevents AP extraction out of DP, while still allowing (50), which abstractly has the structure in (54).²⁴

(52) * $[_{DP} AP_i [_{D'} D [_{NP} t_i [_{NP} \dots$

(53) * $AP_i [_{DP} [_{D'} D [_{NP} t_i [_{NP} \dots$

(54) $[_{DP} NP_i [_{D'} D [_{NP} [N' [PP t_i$

The reader can verify that the impossibility of adjunct extraction out of NP in English can be accounted for in the same way as the impossibility of AP LBE, given that NP adjuncts are also adjoined to NP.

Turning now to SC (21)–(22), we can account for these data if we modify the assumption that NP is not a phase, i.e. if we assume that NP headed by a noun that takes a non-trace complement is a phase (see also Wurmbrand and Bobaljik 2003 for the claim that whether or not a phrase functions as a phase may depend on the structural environment in which it occurs, which means that some projections are phases only in certain contexts). The

²² Ishi uses the fact that this way we rule out movement from the position adjoined to the complement of X to SpecXP to account for the *that*-trace effect. Following Agbayani (1998), Kayne (1994), and Saito & Fukui (1998), Ishii equates SpecXP and the XP-adjoined position. A *wh*-phrase in SpecIP is then actually IP adjoined. Since it is already located in the minimal domain of C it cannot move to SpecCP, which, Ishii shows, derives the *that*-trace effect. Abels appeals to the impossibility of movement within the same minimal domain to account for the immobility of IP, among other things. (He shows that quite generally, the complement of a phase head cannot be moved, which he demonstrates can be explained given the ban on movement within the same minimal domain.)

²³ See the works cited for the precise definitions. Grohmann (2000, 2003a) does not explicitly discuss anti-locality with respect to movement within the traditional NP. (He discusses only movement in the clausal domain). However, his theory can be easily extended to the NP-domain, as shown successfully in Grohmann 2003b, Grohmann & Haegeman 2003, Grohmann & Panagiotidis 2004, and Ticio 2003). These works show that the locality/anti-locality domains of clauses have counterparts in the traditional NP.

²⁴ We are actually accounting for the impossibility of AP movement out of DP in the same way Abels (2003a,b) accounts for the impossibility of IP movement out of CP (more generally, the impossibility of movement of the complement of a phase head).

assumption immediately rules out (21b), repeated here, since the higher NP is a phase. Movement from the position adjoined to its complement is then ruled out by the PIC. (The AP (recall that the possessive is actually an adjective) cannot move to the higher SpecNP for the same reason it could not move to SpecDP in (52).)

- (55) *Čije_i je on vidio [_{NP} prijatelja [_{NP} t_i [_{NP} majke]]]?
 whose is he seen friend mother
 ‘Whose mother did he see a friend of?’

What about (22)? The improved status of (22) can be accounted for given Chomsky’s (1999) proposal that locality and the PIC are evaluated at the next phase level, which admittedly involves some look-ahead. Given this assumption, no problems arise with movement of the lower NP out of the NP in object position since at the point of evaluation, the object N does take a trace complement, hence its maximal projection is not a phase.

- (56) (?)?Čije_i je on [_{NP} t_i [_{NP} majke]]_j vidio [_{NP} prijatelja t_j]?

Notice also that LBE out of traditional A-taking-NP-as-complement constructions like (40) is readily accounted for given that AP is not a phase. ((40a) is repeated here as (57).)

- (57) Novim_i je on [_{AP} zadovaljan [_{NP} t_i [_{NP} poslom]]].
 new is he content job
 ‘He is content with his new job.’

Finally, (39) is also accounted for quite straightforwardly. The APs cannot be moved together since under the current analysis they do not form a constituent (in contrast to, e.g., the Franks & Progovac 1994 remnant movement analysis). I assume that if APs undergo separate LBEs, the construction is ruled out as a relativized minimality violation since an AP would move over an AP.²⁵ (I return to double AP LBE below.)

The phase analysis thus accounts for the full paradigm pertaining to LBE. I conclude, therefore, that it is possible to account for LBE under the DP/NP analysis without appealing to the ECP. Recall, however, that the main motivation for the minimalist drive to eliminate the ECP and, more generally, the notion of government from the grammar is the powerful nature and the arbitrariness of the mechanisms in question. Given the assumptions we were led to adopt above, the phase analysis is starting to look almost as arbitrary as the

²⁵ The same holds for the following example.

- (i) *Bogati_i skupaj_j [t_i sportisti] vole [t_j kola].
 rich expensive athletes love cars
 ‘Rich athletes love expensive cars.’

ECP analysis.²⁶ While the complexity of the data to account for may justify the theoretical complications (i.e. appeal to some arbitrary assumptions), in accordance with the minimalist drive to eliminate arbitrariness from the grammar, in the next section I will offer an alternative DP/NP analysis which does not employ either the ECP or the notion of phase. While the analysis seems to be much more principled (i.e., it relies on fewer arbitrary assumptions) than either the ECP or the phase analysis, it is, however, based on a rather radical proposal concerning crosslinguistic variation with respect to the structure of the traditional NP which will hopefully be confirmed by future work.²⁷

4.2. The AP/NP analysis

There is a great deal of controversy in the literature concerning the position of AP within the traditional NP, which was brought about by

²⁶ The charge can be levied against the phase system in general (for critical discussions of the phase system, see Boeckx & Grohmann 2004, Bošković 2002c, and Epstein & Seely 2000). It is worth noting in this respect another similarity between the phase system and the ECP system of Chomsky (1986a), namely, they both make IP special (by making it a non-phase in the phase-system and by banning adjunction to IP and exempting it from inherent barrierhood in the *Barriers* system). Chomsky (1999) does attempt to show that the way of making IP special in the phase system is principled, in contrast to the *Barriers* system, where it is clearly arbitrary. Chomsky takes propositionality to be the criterion for phasehood, which, according to him, makes CPs, but not IPs, phases. The criterion actually does not always work as desired since IPs often semantically seem to correspond to full-blown propositions. Thus, as noted in Bošković (2002c), the infinitival IP in *There seemed to have arrived someone* seems to be no less of a proposition than the embedded finite CP in *It seemed there had arrived someone* or *It seemed someone had arrived*. There is also the question of why propositionality should be the relevant criterion. In fact, given that phases are crucially involved in multiple spell-out, more precisely, in determining which chunks of structure are shipped off derivationally to the phonology and the semantics, it seems that a phonological criterion for defining phases would be as natural as a semantic criterion (e.g. a piece of structure corresponding to an intonational phrase instead of a piece of structure corresponding to a proposition.) There are of course a lot of other candidates for defining phases (e.g. binding domain, Case-domain, etc.), which emphasizes the arbitrary nature of the decision to select propositionality as the relevant criterion, which, as we have seen above, does not quite work anyway. The point of all of this is that the notion of *phase* does not seem to be much more natural than the notions of *L-marking* or *barrier*. (One argument for the superiority of the notion of phase could be that it is more comprehensive, i.e., it is involved in more phenomena, as can be seen from Chomsky's claim that non-phases are not phonologically isolable. (*Barriers* would have nothing to say about this.) However, as noted in Bošković (2002c), this particular claim cannot be maintained given that IP, a non-phase, can undergo right-node raising, as shown by *John wonders when*, and *Peter wonders why, Mary left*. (Note that, if Wexler & Culicover 1980, Kayne 1994, and Bošković in press b are right, we are dealing here with IP ellipsis rather than IP movement.)

²⁷ Admittedly, the alternative analysis is also not quite as broad in its empirical coverage as the ECP and phase analyses, a familiar situation in comparison of analyses of different order of arbitrariness/power, theoretically more arbitrary/powerful analyses often having broader empirical coverage. For one thing, the alternative analysis, which is based on a proposal concerning the position of adjectives within the traditional NP, deals strictly with AP LBE and thus has nothing to say about adjunct extraction out of NP. (The primary goal of the analysis is to account for the effect of DP on adjectival LBE, more precisely, the

the DP Hypothesis. The long-standing assumption has been that AP is dominated by NP. However, Abney (1987) argues that AP actually dominates NP. More precisely, A takes NP as its complement. A great deal of effort has been spent in the literature trying to determine which of the two approaches is correct. I would like to suggest that they are both correct, but for different languages. In particular, I would like to suggest that in English, A indeed takes NP as a complement (the AP-over-NP pattern), as argued by Abney. In SC, on the other hand, N takes AP as its Spec. (Assuming that AP is adjoined to NP would also work. I will refer to the SC pattern as the NP-over-AP pattern.)²⁸ The presence/absence of DP determines whether a language will exhibit the AP-over-NP or the NP-over-AP pattern, DP languages exhibiting the AP-over-NP pattern and NP languages exhibiting the NP-over-AP pattern. I assume that the AP-over-NP pattern is the default, i.e. it is specified as the canonical option in UG. Why is it that NP languages have to switch to the NP-over-AP option? To account for this, I make what seems to me to be a rather natural assumption, namely, that AP cannot be an argument (see also Stowell 1991:209–210). In English-type languages, the assumption

impossibility of adjectival LBE in English, in a non-stipulatory way while still in principle allowing LBE in SC-type languages.) It is, however, worth noting that Italian, which has DP and does not allow LBE, allows adjunct extraction out of NP in some contexts (thanks are due to Giuliana Giusti for very helpful discussion; see also Ticio 2003 for Spanish), a fact which puts a new spin on the adjunct extraction facts, possibly making them irrelevant to our current concerns. However, the behavior of Italian in the relevant respect is not completely clear. Thus, while the counterpart of (25b) is bad (see (ia)), (ib) is acceptable. I leave more detailed investigation of Italian, and more generally Stjepanović's adjunct extraction/DP correlation, for future research (see also Ticio 2003, who argues that the *di* phrase in constructions like (ib) is actually an argument).

- (i) a. *Di che scaffale_i Gianni ha letto [libri t_i]
of which shelf Gianni has read books
'From which shelf did Gianni read books?'
b. Di che scaffale_i Gianni ha già letto [i libri t_i]
of which shelf Gianni has already read the books

²⁸ I will not be able to examine here all the issues that arise under either the NP-over-AP or the AP-over-NP analysis. (Note also that following Chomsky 1995, I am not positing any agreement projections.) I merely reiterate Duffield's (1999:142) observation that, in the minimalist system, in which the Head Movement Constraint is relativized to the actual feature checked, adjectives are not necessarily expected to block N-to-D movement (see Bernstein 1993, Cinque 1994, Longobardi 1994 and references therein for N-movement) in AP-over-NP languages. (In the current system, X can move to head Y across head Z to check feature F if Z does not have F.)

Note that Duffield (1999) also argues that there is crosslinguistic variation with respect to the position of adjectives within the traditional NP. While the current analysis instantiates the variation as the head vs. spec/adjunct distinction (the choice between spec and adjunct being immaterial), Duffield instantiates it as the head/spec vs. adjunct distinction (the choice between head and spec being immaterial for him).

It is worth noting here that Bernstein (1993) argues that adjectives can vary with respect to whether they exhibit the NP-over-AP or the AP-over-NP pattern even within a single language. I leave detailed discussion of Bernstein's Romance data that led her to make this claim for future research.

has no relevant consequences, since DP always dominates AP. However, this is not the case in SC-type languages, where, due to the lack of DP, AP would end up functioning as an argument if the AP-over-NP pattern were employed. It follows then that whenever DP is lacking in a language, NP has to cover AP, i.e. the NP-over-AP pattern has to be employed. We thus deduce the dependence of the AP-over-NP/NP-over-AP patterns on the presence/absence of DP in a language.

Let us now instantiate the proposed analysis with respect to an actual example. Suppose we want to merge *beautiful* and *houses*. The question is which element will project. Given Chomsky's (1999) proposal that even pure Merge is subject to Last Resort (see also Hornstein 2001 and Bošković 2002a,c), either *beautiful* or *houses* has the relevant selectional feature. In English it is *beautiful*, in SC it is *houses*.²⁹ The relevant difference between English and SC is thus instantiated in lexical terms, in line with the current research effort to reduce crosslinguistic variation to lexical differences.

The AP/NP analysis gives us by far the most principled account of the impossibility of AP LBE in English. The extraction is not possible because it would involve extraction of a non-constituent (the AP is not a constituent to the exclusion of the NP in English, as shown in (58).) The non-constituency problem does not arise in SC, where the NP dominates AP (see (59)).

(58) [_{DP} D [_{AP} Adj [_{NP} N]]]

(59) [_{NP} AP N]

The different behavior of English and SC with respect to AP LBE, as well as the relevance of DP for AP LBE, is thus straightforwardly accounted for. In fact, the AP/NP analysis provides us with a more principled account of the different behavior of English and SC in the relevant respect than the alternative analyses, given the overwhelming independent support for the crucial assumption that only constituents can undergo movement.

Independent evidence for the A/N difference in the headedness of the traditional NP in English and SC would provide particularly strong evidence for the AP/NP analysis of AP LBE. There actually is independent evidence to this effect.

A strong argument for A headedness of the traditional NP in English, noted by Abney (1987), is provided by constructions like (60).

(60) too big of a house

The adjective appears to be assigning genitive Case to the following NP in (60), which is realized through *of*-insertion (see Chomsky 1986b on

²⁹ This is most naturally stated in Marantz's (2001) system, in which the categorial information of a given word comes from vocabulary items like little a and little n. In this system, the relevant difference can be stated only once as the property of these two items.

genitive Case-licensing), in accordance with the-A-taking-NP-as-complement analysis. On the other hand, in SC *A* *always* agrees in Case with the noun, which gets its Case externally from outside of the traditional NP,³⁰ indicating a Spec-Head Agreement configuration, in accordance with the N-as-the-head analysis.

Another argument regarding Case concerns the following contrast between English and SC.

- (61) The real him/*he will never surface.
 (62) a. Pravi on/*njega se nikad neće pojaviti.
 real he.NOM/him.ACC REFL never NEG+will show-up
 ‘The real him will never show-up.’
 b. Vidjeli smo pravog njega/*on.
 seen are real him.ACC/he.NOM
 ‘We saw the real him.’

Where overt case morphology appears in English, as in (61), we can see that prenominal adjectives disrupt case assignment (the pronoun bears (likely) default accusative instead of the expected nominative), which can be more straightforwardly accounted for under Abney’s analysis, where the *A* can shield the pronoun from outside case assignment as an intervening head. As (62a) shows, SC differs from English in the relevant respect, suggesting Abney’s analysis should not be applied to SC. Notice also that the case of the pronoun changes in an accusative environment (see (62b)), which indicates that we are not dealing with a default case in the SC construction under consideration (i.e., a pronoun following an adjective does not bear a default case in SC. Notice also that the unacceptable variants of (62a–b) remain unacceptable even if we use the agreeing adjectival forms (*pravog njega* in (62a) and *pravi on* in (62b).)³¹

³⁰ See, however, Franks (1995) and references therein for the case of traditional NPs containing numerals, which is irrelevant to our current concerns.

³¹ An anonymous reviewer observes that the pronoun bears nominative in the counterpart of (61) in Dutch, which should be an English-type language.

- (i) a. De echte ik/*mij bleef verborgen voor haar.
 the real I me remained hidden to her

This is actually not surprising. As noted above, the accusative in (61) is likely a default Case. It is indeed standardly assumed that accusative is the default Case in English. On the other hand, as pointed out by the anonymous referee, (ii) indicates that nominative is the default Case in Dutch (see also Schütze 2001).

- (ii) Ik/*mij intelligent?!
 I me intelligent

It is then possible that, as in English, the adjective disrupts Case assignment in Dutch (i), nominative on the pronoun in (i) being a default Case. That this is indeed the case is confirmed by Schütze’s (2001) observation that a pronoun modified by an adjective must bear nominative in Dutch in *all* syntactic positions (not just structural nominative positions), in contrast to SC.

Consider now the following ellipsis data.

- (63) *I hate political problems, but I hate social even more.
 (64) *Je déteste les problèmes politiques, mais je déteste les (French)
 I hate the problems political but I hate the
 sociaux encore plus.
 social even more
 (65) Ja mrzim političke probleme, a socijalne mrzim (SC)
 I hate political problems but social (I) hate
 još više.
 even more

Under Abney's analysis, the impossibility of eliding a noun modified by an adjective in English (63) and French (64) can be interpreted as indicating that A cannot license the ellipsis of its complement NP.³² The contrast between English and French (63) and (64) and SC (65) then provides evidence against the A-as-the-head analysis of SC.³³

³² In Bernstein's (1993) terms, A⁰ selects for an overt N. (Note that Bernstein also argues that adjectives can occur with elided NPs only in the NP-over-AP pattern. There are, however, interfering factors with some of the Romance data she discusses from our perspective (see the next note).)

³³ According to Valois (1991:191–195), there is a small group of adjectives in French that in a highly restricted set of contexts can occur with what seems to be a non-overt noun. Valois suggests that such cases should be treated differently from cases like (64). Anyway, there is a clear difference in the productivity of adjectives occurring with non-overt nouns between French and SC.

Notice also that analyzing Romance N-A order such as the one in the first conjunct in (64) as involving N-movement above the adjective, as in Cinque (1994) and Longobardi (1994) among others, does not raise any interfering factors, given Lasnik's (1999) demonstration that elements that normally have to move in overt syntax do not have to move if they remain in an ellipsis site. (Lasnik shows that a verb that normally must move outside of its VP can stay within the VP if the VP undergoes ellipsis. He also shows (with respect to VPs) that a phrase whose head moves out of it can be an ellipsis antecedent for a phrase whose head remains in place.)

It is worth noting here that Bernstein (1993) argues that NP ellipsis is possible with a number of adjectives in several Romance languages. However, she argues that NP ellipsis in such cases is licensed by special morphology, her word marker which is in Spanish and Italian phonologically realized as *o* or *a* and which is not present in English, rather than the adjective itself (the word marker takes the NP to be elided as its complement on Bernstein's analysis). This makes the cases in question irrelevant for our purposes. (Also irrelevant for our purposes are Bernstein's deadjectival nouns and the definite article + *pro* constructions, which only superficially resemble NP ellipsis constructions according to Bernstein.)

Note also that, as expected, the counterpart of (65) is acceptable in Russian (*Ya nenavižu političeskiye probl'emy, no sotsial'niye ya nenavižu yeš'o bol'she*) and unacceptable in Macedonian (*Gi mrazam političkrite problemi, no socijalnite mrazam ušte poveče*). However, my Bulgarian informants disagree on the status of the Bulgarian counterpart of (65) (*Mrazja političeskite problemi, no socialnite mrazja ošte poveče*), some, but not all of them, finding it degraded. It is possible that one of the strategies Bernstein discusses with respect to Romance, noted above, is available for the latter group of speakers (the same may hold for German and Swedish, which often allow "NP ellipsis"). In fact, in light of these strategies, the possibility of nominal ellipsis in the presence of an adjective in DP languages would not necessarily provide evidence against the current analysis. In other words, languages like German and Swedish are not necessarily problematic.

Notice also that, as the following examples from Valois (1991) show, NP ellipsis in English can take place in the presence of NP-adjuncts, in contrast to adjectival modifiers.

- (66) a. I like John's pictures from three years ago, and I also like Bill's from last year.
 b. I like John's picture by this photographer, and I also like Bill's by his sister.

This fact provides strong evidence for the AP/NP analysis, which treats SC adjectival modifiers and NP-adjuncts in English in essentially the same way – they are both covered by NP, exhibiting the NP-over-AP/adjunct pattern (recall that the NP-over-AP pattern can be instantiated by either locating adjectives in SpecNP or by adjoining them to NP), but differently from adjectives in English, which exhibit the AP-over-NP pattern, i.e. they are not covered by NP.

Abney (1987:333) observes that in English, prenominal adjectives can determine the type of the noun phrase in a way that postnominal adjectives cannot, which follows if prenominal adjectives actually head the NP. To illustrate this, consider the contrast in (67).

- (67) a. I've known a dog smarter than Fido.
 b. ??I've known a smarter dog than Fido.

When not embedded under a modal or a negative element, *know* selects non-predicative noun phrase as its object (see Bresnan 1973). The predicative nature of the prenominal comparative “percolates” to the noun phrase, in contrast to the postnominal comparative. Given that determining the features of the enclosing phrase is a property typical of heads, it follows that in English, prenominal A heads the “NP”. Significantly, SC contrasts with English in the relevant respect.

- (68) a. Znao sam pametnijeg psa od Fida.
 known am smarter dog than Fido
 ‘I've known a dog smarter than Fido.’
 b. Znao sam psa pametnijeg od Fida.

Given Abney's reasoning, these data should be interpreted as indicating that, in contrast to English, the prenominal A does not head the “NP” in SC. The data thus provide additional evidence for the NP-over-AP analysis for SC.³⁴

³⁴ Prenominal comparatives are acceptable in the context in question in Russian, as expected. However, they are also acceptable in Bulgarian, which raises a potential problem. I speculate that the different behavior of English and Bulgarian, both of which are classified as AP-over-NP languages, may follow from the fact that, as is well-known, the DP system of Bulgarian is quite different from the English DP system and/or the fact that, in contrast to English, adjectives in Bulgarian often move outside of their base-generated position within AP (see section 5).

Abney (1987:340) observes that superlatives must precede descriptive adjectives in English. (Comparatives behave like superlatives in the relevant respect.)

- (69) a. the big fancy car
 b. *the big fanciest car
 c. the fanciest big car

Abney gives a selection-based analysis of these data: The superlative takes AP as its complement, not the other way round. (Note that under Abney's analysis, multiple AP constructions involve A's taking APs as complements.) Significantly, SC differs from English in the relevant respect.

- (70) a. ?velika najskuplja kola
 big most-expensive car
 b. najskuplja velika kola

Given Abney's analysis of the English data, the contrast can be accounted for if no complementation relation is involved between the relevant elements in SC. (Note that under the NP-over-AP analysis, multiple APs are located in multiple specifiers of NP.)³⁵

Admittedly, some of the above arguments for the different behavior of English and SC with respect to the structural position of AP are not very deep and/or are based on phenomena that are not well understood. However, the sheer number of arguments (more precisely, the fact that arguments for the A-as-the-head analysis of English routinely fail in SC, where the data are exactly opposite of what is predicted under this analysis) provides evidence that the AP/NP analysis is on the right track. Probably the strongest argument for the different behavior of English and SC-type languages in the relevant respect comes from certain data concerning the ban on double AP LBE, which I have left unexplained so far. (The argument concerns a contrast between SC and Bulgarian, an English-type language.) I turn to it in the next section.

5. Double adjective left branch extraction

Recall that, as shown in (35)((35b) is repeated in (71)), adjectival LBE in multiple A-as-a-modifier constructions (i.e. double AP LBE) is disallowed, in contrast to simple adjectival LBE, as in (34), and adjectival LBE in A-as-the-head constructions, as in (40).

- (71) *Lijepe je on vidio visoke djevojke.
 beautiful is he seen tall girls
 'He saw beautiful tall girls.'

³⁵ As expected, Macedonian patterns with English in the relevant respect. My Russian and Bulgarian informants do not agree on the status of (70a) in their languages. However, most of my Bulgarian informants reject the Bulgarian counterpart of (70a), and most of my Russian informants find the Russian counterpart of (70a) acceptable.

In this section I provide an explanation for the impossibility of double AP LBE. I will continue to assume the NP-over-AP pattern for SC-type languages, instantiated through a multiple-specifiers structure, as illustrated in (72).³⁶

(72) [_{NP} AP [_{N'} AP [_{N'} N]]]

To account for the ban on double AP LBE, I appeal to McGinnis's (1998a,b) Principle of Lethal Ambiguity, which says that two elements equidistant from a target K are lethally ambiguous for attraction by K if they are featurally non-distinct.³⁷ Since multiple Specs of the same head are equidistant (see McGinnis 1998a,b), given the structure in (72), (71) involves Lethal Ambiguity.³⁸ Neither AP can then be attracted from outside of the NP in (71). The impossibility of double adjective LBE is thus accounted for. (The reader can verify that the account of (71) readily

³⁶ The analysis to be proposed can be maintained if APs are adjoined to NP in SC-type languages.

³⁷ McGinnis shows that the principle has considerable empirical motivation. Thus, it explains why Romance reflexive clitics must be generated as the external argument, with the internal argument raising to subject position, as in passive structures (see Kayne 1988, Marantz 1984 and Pesetsky 1995), evidence for which is provided by the fact that *se* occurs with the auxiliary *be* in (i), which shows that (i) involves movement from object to subject position (see Burzio 1986 and the contrast in (ii)), and the fact that in *se* constructions, the embedded "subject" in French causatives bears the object, accusative Case instead of the usual dative Case (marked by *à*; *à* + *le* = *au*) reserved for subjects, indicating that the embedded "subject" is not a real subject in the *se* construction (see (iii)).

- (i) Pierre *s'* est/*a frappé. (French)
 Pierre himself is/has hit
 'Pierre hit himself.'
- (ii) a. Pierre *t'* a/*est frappé.
 Pierre you has/is hit
 'Pierre hit you.'
- b. Pierre *était*/*avait frappé.
 Pierre was/had hit
 'Pierre was hit.'
- (iii) a. Jean *le* fait révéler *au*/**le* juge.
 Jean it makes to-reveal to + the/the judge
 'Jean is making the judge reveal it.'
- b. Jean fait *se* révéler *le*/**au* juge.
 Jean makes himself to-reveal the/to + the judge
 'Jean is making the judge reveal himself.'

The gist of McGinnis's account of the external argument requirement on *se* is the following: Suppose *Pierre* is the external argument, and *se* the internal argument in (i). Since, like other object clitics, *se* must undergo object shift (i.e. move to the accusative Case-checking position) on its way to its final S-structure site, after *se* undergoes object shift, *se* and *Pierre* are located in the Specs of the same head, namely *v*, thus giving rise to a Lethal Ambiguity configuration, which blocks further attraction of these elements. The problem does not arise if *Pierre* is the internal argument and *se* is the external argument, since *Pierre* does not undergo object shift on its way to its final S-structure position (see McGinnis 1998a,b for additional evidence for Lethal Ambiguity).

³⁸ Through agreement with the same noun (recall that an adjective and the noun it modifies agree in Case and ϕ -features), the adjectives end up agreeing with each other, which I take to mean they are featurally non-distinct.

extends to **lijepo je on visoke djevojke vidio* and **lijepo je on visoke vidio djevojke.*)

Interestingly, (71) improves significantly if *lijepo* is contrastively focused (bearing strong contrastive stress), as in the following context:

(73) A: I think that Marko said he saw ugly tall girls.

B: Ma, ne, *lijepo je on vidio visoke djevojke, ne ružne.*
 no beautiful is he seen tall girls not ugly

This is not surprising under the Lethal Ambiguity account. In the derivation in question, *lijepo* undergoes focus movement (SC is a focus-movement language, see Bošković 2002b and Stjepanović 1999), which means that it bears the [+focus] feature. It is plausible that this feature makes it featurally distinct from *visoke*, which is not contrastively focused. Since Lethal Ambiguity holds only for featurally non-distinct elements, this makes Lethal Ambiguity irrelevant to the derivation of (71) under consideration. (Below, for ease of exposition I will disregard the focus-movement derivation.)

Notice that double AP LBE is also possible when a wh-phrase is involved.

(74) *Koje je Petar novo auto upropastio?*

which is Petar new car ruined
 ‘Which new car did Peter ruin?’

This is not surprising under the current analysis, since the [+wh] feature makes the fronted adjective featurally distinct from the non-fronted adjective, just like the [+focus] feature does in (73), making Lethal Ambiguity irrelevant. In fact, given the claim made in Bošković (2002b) and Stjepanović (1999) that SC wh-phrases may undergo focus movement rather than wh-movement (in the context in question), (74) may be another instance of the saving effect of focus on double AP LBE, hence accountable in exactly the same way as (73).

It is also worth noting that the contrast between (73), where the adjective that is left-branch extracted undergoes focus movement, and (71), where the adjective that is left-branch extracted undergoes scrambling, can be interpreted as providing evidence that, as argued by Saito (1994) and Saito & Fukui (1998), among others, scrambling is not driven by feature checking, i.e. checking of some kind of a scrambling feature (see, e.g., Grewendorf & Sabel 1999, Kitahara 1997, and Sauerland 1999). If it were, the scrambling feature should make the adjectives in (71) featurally non-distinct, which would render Lethal Ambiguity irrelevant in (71), on a par with (73).

Notice also that (40), which was difficult to differentiate from (71) under Abney’s analysis of the structural position of AP, is readily accounted for since the APs are not equidistant in (40) (see Chomsky 1995 for definitions of equidistance). ((75) gives the relevant part of (40).)

(75) [AP [A' A [NP AP [N' N]]]]

The proposed analysis thus accounts for the surprising contrast between (71) and (40). Crucial to the account was the adoption of the traditional NP-over-AP structure for AP modification in SC, which provides strong evidence for the NP-over-AP analysis of adjectival modification, at least for SC. Another crucial aspect of the analysis was placing the adjectives in (40) in multiple specifiers of the *same* head. To the extent that it is successful, the analysis thus also provides evidence for this approach to adjectival modification.³⁹

Since the AP-over-NP structure for AP modification does not involve Lethal Ambiguity (in fact, the AP-over-NP analysis assigns the same structure to the traditional AP modification and the traditional A-as-the-head structures, i.e. both have the structure in (75)), the prediction is that in AP-over-NP languages, the presence of another adjective would not prevent an adjective from undergoing movement, in contrast to SC-type languages (i.e. NP-over-AP languages), where multiple adjectival modification gives rise to a Lethal Ambiguity configuration, freezing the adjectives in place. The prediction bearing out would provide strong evidence for the AP/NP analysis. However, it seems that the prediction is untestable, since adjectives appear to be immobile in AP-over-NP languages for independent reasons. Thus, they cannot undergo LBE

³⁹ The conclusion holds for the adjectives in (71) but does not necessarily have to hold for all adjectives. Given the above discussion, double adjective LBE can in fact be used as a test for determining whether various adjectival modifiers in multiple adjectival modification constructions are located in the Specs of the same head or different heads. The adjectives used in (71) belong to Quirk et al's (1972) class of general adjectives, which are more or less freely ordered with respect to each other. A question arises what happens when adjectives belonging to different classes are used in a double adjectival LBE configuration. Some constructions of this type, especially those involving a general adjective and a denominal adjective, are quite good (though generally still not fully acceptable), as shown in (ia). (Notice that denominal adjectives are placed closest to the noun; compare *neozbiljnog mašinskog tehničara* with **mašinskog neozbiljnog tehničara*. Ordering restrictions of this kind seem enforceable under either the Specs-of-different-heads or Specs-of-the-same-head analysis.)

- (i) a. ?*Neozbiljnog je on otpustio mašinskog tehničara.*
 not-serious is he fired mechanical technician
 b. **Mašinskog je on otpustio neozbiljnog tehničara.*

Given the above discussion, (ia–b) may be taken to indicate that adjectives *neozbiljnog* and *mašinskog* are located in the Specs of different heads, not the same head, with *neozbiljnog* being located in the Spec of the higher head. Alternatively, it is possible that *mašinskog tehničara* in (ia) receives a compound-like treatment. (The compound analysis for *mašinskog tehničara* would not be obligatory; in particular, it would not be applicable to constructions in which *mašinskog* is contrastively focused, undergoing focus movement.) Another possibility is that the feature make up of denominal adjectives is such that they are not featurally non-distinct from general adjectives. Since Lethal Ambiguity holds only for featurally non-distinct elements, *mašinskog* and *neozbiljnog* could then still be located in the Specs of the same head. (Under this analysis, the contrast between (ia) and (ib) could be accounted for if *mašinskog* must be located in the lower Spec and *neozbiljnog* in the higher Spec (of the same head) prior to movement, assuming that crossing of the higher Spec results in a violation.)

outside of the traditional NP for reasons discussed above. Fortunately, there is one construction where the prediction can be tested. The construction involves DP internal movement of adjectives in Bulgarian, an AP-over-NP language, which is illustrated in (76).

- (76) xubavi_i te t_i momičeta
 beautiful the girls
 ‘the beautiful girls’

Arnaudova (1996,1998), who applies Abney’s (1987) DP Hypothesis/AP-over-NP system to Bulgarian, analyzes (76) as involving A movement to D.⁴⁰ What we are interested in is what happens in double adjective constructions. Recall that in SC, adjectives in such constructions are equidistant from the target of movement, hence immobile, given the Lethal Ambiguity Principle. This is not the case in Bulgarian, an AP-over-NP language. Significantly, an adjective can undergo movement in the Bulgarian construction in question even in the presence of another adjective, which provides a confirmation of the current analysis.

- (77) xubavi_i te t_i visoki momičeta
 beautiful the tall girls
 ‘the beautiful tall girls’

Recall that Bulgarian, which does not allow LBE, patterns with English with respect to the structure of NP, more precisely, DP in the languages

⁴⁰ For different Abney-style analyses (i.e. analyses that assume the AP-over-NP structure) of Bulgarian DP, see Caink (2000), Franks (1998), and Franks & King (2000: 332–334), among others. For alternative analyses that do not assume the AP-over-NP structure, see Fowler & Franks (1994), Giusti & Dimitrova-Vulchanova (1996), Schoorlemmer (1998), Stateva (2002), and Tomić (1996), among others.

There is a controversy in the literature concerning whether movement of the adjective in (77) involves head movement (i.e. adjunction to D) or phrasal movement (i.e. movement to SpecDP). The usual tests give conflicting results, (i), where an adjective takes a PP complement, providing strong evidence for the head-movement analysis, and (ii), where an adverb precedes the adjective, for the phrasal-movement analysis.

- (i) a. kupena-ta ot Petko kniga
 bought-the by Petko book
 ‘the book bought by Petko’
 b. *kupena ot Petko-ta kniga
 c. vernij-at na Vera muž
 truthful-the to Vera husband
 ‘the husband truthful to Vera’
 d. *veren na Vera-ta muž
 (ii) a. mnogo xubavi-te knigi
 very nice-the books
 ‘the very nice books’
 b. *mnogo-te xubavi knigi

(iia) could be reconciled with the head-movement analysis by assuming, following Bošković (2001:237), that (iia) is derived by first forming a complex head *mnogo xubavi* through head movement and then moving the complex head to D (see also Arnaudova 1998, who suggests that *mnogo* undergoes separate movement to SpecDP).

in question. As a result, (77) does not involve lethal ambiguity. The fact that the AP/NP analysis provides us with a principled account of the contrast between SC and Bulgarian with respect to the mobility of an adjective in the presence of another adjective, as well as the SC internal contrast with respect to the mobility of an adjective in the presence of another adjective between traditional adjectival modification and traditional adjective-as-the-head structures, provides strong evidence for the AP/NP analysis.

6. Extraordinary left branch extraction

In this section I will discuss LBE that appears to involve non-constituent movement. I will refer to such LBE as extraordinary LBE. (78) is an example of extraordinary LBE (see the discussion below for explanation why I consider this type of construction to involve LBE).

- (78) U veliku on uđe sobu.
 in big he entered room
 'He entered the big room.'

(78) seems to involve non-constituent movement. Under no approach to the internal structure of PP and the traditional NP do the preposition and the following adjective form a constituent to the exclusion of the noun modified by the adjective. If we take the otherwise well-motivated standard assumption that only constituents can undergo movement for granted, (78) has to involve constituent movement in spite of the superficial non-constituency of the fronted element. A straightforward way of analyzing (78) in terms of constituent movement would be to assume that the construction involves remnant PP fronting, i.e. movement of the NP out of the PP, followed by fronting of the PP. This is in fact what Franks & Progovac (1994) assume (see also Abels 2003a, Ćavar & Wilder 1999, Franks 1998, and Schütze 1996).⁴¹

- (79) [_{PP} U veliku t_i]_j on uđe t_j sobu_i.

There is, however, evidence against the remnant PP movement analysis. One argument against it concerns constructions in which the preposition is modified by another element, as in (80).

⁴¹ *Sobu* would either undergo rightward movement, which is what Franks & Progovac assume, or it would undergo leftward movement with remnant VP fronting preceding remnant PP fronting. In this respect, it is worth noting that *sobu* can precede postverbal adjuncts as well as the verb itself in the construction in question, as shown in (i)–(ii) (see also the discussion of remnant AP fronting in section 3.1).

- (i) ?U veliku on uđe sobu prekjūče.
 in big he entered room two-days-ago
 (ii) U veliku on sobu uđe.

- (80) On uđe pravo u veliku sobu.
 he entered straight in big room

If extraordinary LBE involves remnant PP fronting, we would expect the P-modifier to be carried along with the rest of the PP when the movement under consideration takes place (see, however, Abels 2003a,b). However, this does not happen, as shown in (81) (see also Corver 1992 for Polish).⁴²

- (81) *Pravo u veliku on uđe sobu.

A serious problem for the remnant fronting analysis is raised by the fact that constructions in which N in the P + A + N sequence clearly undergoes movement, such as (82), are unacceptable, which indicates that the noun is immobile in the context in question. Recall that the movement of the noun outside of the PP in this context is a prerequisite for remnant PP fronting.

- (82) *Sobu on uđe u veliku.

It is worth noting that (82) can be easily accounted for under the NP-over-AP analysis. Under this analysis, movement of *sobu* cannot be phrasal. It can involve either movement of an intermediate projection (traditional X'), which is standardly assumed not to be allowed, or head movement, which would violate locality restrictions on head movement in the case in question. In fact, recall that, as shown in (33), a noun that is modified by an adjective quite generally cannot move to the exclusion of the adjective in SC, as expected under the NP-over-AP analysis, since the noun does not constitute a maximal projection to the exclusion of the adjective under this analysis.⁴³

Notice also the ungrammaticality of the following construction, which excludes another potential remnant PP fronting derivation, namely the derivation on which the AP moves out of the PP in question, which then undergoes remnant movement (see note 50 for another argument against the remnant PP movement analysis).⁴⁴

- (83) *U sobu on udje veliku.

⁴² Some speakers seem to find (81) acceptable. However, this appears to be a result of an irrelevant derivation, available for some speakers, on which *pravo* is extracted out of the PP in question. This is obvious in (i), where an auxiliary and a subject intervene between *pravo* and the rest of the PP, indicating that *pravo* is not located within the PP.

(i) (*)Pravo je (on) u veliku ušao sobu.
 straight is he in big entered room

⁴³ See also (93), which would apply to (82) but not (33). Note in this respect that (82) is worse than (33).

⁴⁴ According to Borsley & Jaworska (1988), some constructions of this type are acceptable in Polish. Corver (1992), however, gives them a derivation that does not involve remnant PP fronting.

Finally, a serious problem for the remnant PP movement analysis, noted by Sandra Stjepanović (p.c.), is raised by the fact that under this analysis, movement out of PP that precedes remnant PP fronting often involves extraction out of an adjunct, hence should be disallowed. This is particularly clear in constructions like (84), which under the remnant PP movement analysis involves movement of *studenata* out of an adjunct.⁴⁵

- (84) Zbog čijih je došao studenata?
 because-of whose is arrived students
 'He arrived because of whose students?'

An alternative to the remnant PP movement analysis is presented in Ćavar & Fanselow (2000), who give a copy and delete (CD) analysis of extraordinary LBE, on which extraordinary LBE involves full PP movement followed by an application of scattered deletion, whereby in (78) the noun is pronounced in a lower copy, with the rest of the PP pronounced in the highest copy.

- (85) [U veliku ~~sobu~~] on uđe [~~u-veliku~~ sobu].

The ungrammaticality of (81) raises a serious problem for the CD analysis.

- (86) *[Pravo u veliku ~~sobu~~] on uđe [~~pravo-u-veliku~~ sobu].

It is difficult to see how the contrast between (85) and (86) can be accounted for under the CD analysis of extraordinary LBE. A more general question that arises under this analysis is how to constrain the CD mechanism to make sure we derive only the acceptable LBEs. The question was discussed at length in section 3.2., where it was shown that it raises a very serious problem for the CD analysis (see the discussion of (44)–(48)). As an additional illustration of the problem, the ungrammatical (89), discussed below (see note 50), seems easily derivable under the CD analysis.

Another analysis of extraordinary LBE is suggested in Borsley & Jaworska (1988) (see also Corver 1992, Franks & Progovac 1994, and Franks 1998), who analyze extraordinary LBE as involving ordinary AP

⁴⁵ Note that extraction out of adjuncts is quite severely degraded in SC, as shown by (ia). (As discussed in Zlatić 1994 and demonstrated in (ib), in contrast to genitive complements, non-genitive complements of nouns can in principle be extracted in SC. Notice also that SC allows extraction out of subjects.)

- (i) a. *Čime_i je on pobegao [zbog [pretnje t_i]]?
 what.INSTR is he run-away because-of threat
 'He ran away because of the threat of what?'
 b. Čime_i ga je [pretnja t_i] uplašila?
 what.INSTR him is threat scared
 'The threat of what scared him?'

LBE. They suggest that the preposition adjoins to the adjective.⁴⁶ As a result, the preposition is affected by LBE of the AP.⁴⁷

There is also independent evidence for the ordinary AP LBE analysis of extraordinary LBE. Notice first that when the adjective is modified by an adverb, which must be located within the AP, extraordinary LBE must affect the adverb together with the adjective, as expected if extraordinary LBE indeed involves ordinary LBE of APs. This is illustrated in (87)–(88).⁴⁸

(87) U izuzetno veliku on uđe sobu.
in extremely big he entered room

(88) *U veliku on uđe izuzetno sobu.

Recall that extraordinary LBE cannot affect a modifier of the preposition (cf. (81)), in contrast to a modifier of the adjective. This also suggests that extraordinary LBE involves AP movement rather than PP movement.⁴⁹

⁴⁶ Borsley & Jaworska implement this as a restructuring operation. Corver, on the other hand, explicitly treats it as a lowering movement operation (see below for a version of the analysis that does not involve lowering). Borsley and Jaworska (1988), Corver (1992), Franks & Progovac (1994), and Franks (1998) all assume that the movement involves cliticization, more precisely, procliticization. (Corver argues that P-procliticization does not leave a trace.) Note that the preposition in (78) is indeed a proclitic. In fact, extraordinary LBE is best with proclitic prepositions. With non-clitic prepositions, it often has an intermediate status (somewhat degraded, but not fully unacceptable), as in (i), where the preposition is not a clitic. (Note that Franks & Progovac 1994 give an example of this type that is fully unacceptable.) The reader should bear in mind that nothing in the discussion below hinges on the issue of whether P-lowering is limited to proclitic prepositions, i.e. whether it involves cliticization, which I leave open here.

(i) ??Prema velikoj je Jovan trčao kući.
toward big is Jovan run house
‘Jovan ran toward the big house.’

⁴⁷ Note that under the phase analysis, which disallows movement of AP to SpecPP because it takes place within the same domain, one of the following assumptions has to be made to allow AP extraction out of PP (more precisely, not to force movement through SpecPP): (i) PP is not a phase or (ii) PP in principle can be a phase, but phases cannot be headed by traces. (This means that in the context of LBE, PP would not be a phase; see in this respect (93) below) or (iii) PP is not a phase, but it is dominated by a functional projection which in principle can be a phase (see the references in note 51). Under assumptions (ii)–(iii), but not under assumption (i), phasehood can be attributed to the traditional PP (for discussion of the phasehood of PP, see Abels 2003a,b and Bošković 2004a, in press c).

⁴⁸ Under a Borsley & Jaworska-style analysis, we are led to assume that in (87) the preposition adjoins to the adverb (see also Franks & Progovac 1994). Alternatively, it is possible that there is a null functional head above adjectives and adverbs in all APs, and that the preposition always adjoins to this head in the context of LBE. (Abney 1987 in fact argues for additional functional structure above adjectives and adverbs in APs. For Abney, a (null) Deg is present in all APs, including constructions like (78).) For ease of exposition, I ignore below this possibility, which does seem more appealing than the alternative.

⁴⁹ Note that the ungrammaticality of (i) also follows straightforwardly under the AP LBE analysis (see the discussion of (39) below example (57)).

(i) *U lijepu veliku on uđe sobu.
in beautiful big he entered room
‘He entered the beautiful big room.’

Recall that deep AP LBE (i.e. AP LBE out of a complement of N) is impossible (cf. (21b)). Significantly, extraordinary LBE patterns with AP LBE in this respect, as shown in (89a) (see also Corver 1992 for Polish). Notice also the improvement in (89c), which is on a par with (22).

- (89) a. *O kakvim_i je Jovan pročitao članak [t_i studentima]?
 about what-kind-of is Jovan read article students
 ‘About what kind of students did Jovan read an article?’
 b. cf. O kakvim studentima_i je Jovan pročitao članak t_i?
 c. ?O kakvim_i je Jovan [t_i studentima] pročitao članak?

The parallelisms provide further evidence for the AP LBE analysis of extraordinary LBE. Furthermore, it is not at all clear why (89a) is ungrammatical under the alternative remnant movement and CD analyses.⁵⁰

Notice, however, that a P-modifier cannot be left behind by extraordinary LBE (see (90)), which raises a potential problem for the AP LBE analysis of extraordinary LBE.

- (90) *U veliku on uđe pravo sobu.
 in big he entered straight room

There is, however, a principled way of accounting for (90) under the AP LBE analysis. It is plausible that, as suggested by Corver (1992) for this type of examples in Polish, *pravo* induces a locality effect for movement of the AP, along the lines of Obenauer’s (1984) pseudopacity. There is also an alternative to Borsley & Jaworska’s version of the AP LBE analysis that provides a straightforward account of (90). Instead of the preposition lowering to adjoin to the adjective, let us assume that in extraordinary LBEs like (78), the AP moves to a position c-commanding the preposition (within the traditional PP), after which the preposition adjoins to the adjective (or a null Deg see note 48). Extraordinary LBE then does not have to involve overt lowering, which has been suggested to be disallowed even in some systems that allow covert lowering (see Bošković & Takahashi 1998 for relevant discussion). We can then straightforwardly account for the ungrammaticality of (90) by assuming that *pravo* is located in the position in question, hence the blocking effect of *pravo* on extraordinary LBE.⁵¹

⁵⁰ Under the remnant movement and CD analyses, (89a) would be analyzed as shown in (i)–(ii) respectively. It is not clear how the acceptability contrast between the structures in (79) and (i) and (85) and (ii) can be accounted for under the analyses in question.

(i) *[_{PP} O kakvim t_i]_j je Jovan pročitao članak t_j studentima_i?
 (ii) *[O kakvim studentima_i je Jovan pročitao članak [_{PP} O kakvim studentima]_j]

⁵¹ The position in question could be SpecPP or the Spec of some functional projection above PP. (For arguments for the existence of such projections within the traditional PP, see Watanabe 1993, Koopman 1997, Bošković 2001, 2004a, in press c and Abels 2001, among others. The latter would be necessary under the assumptions of the phase analysis since the AP would not be able to move to SpecPP from the NP-adjoined position (see note 47).

Consider now (91) (see Corver 1992 and Giejgo 1981 for Polish examples of this type).

(91) *Veliku on uđe u sobu.

Apparently, simple AP LBE is not possible in the context of extraordinary LBE. In other words, if LBE takes place in this context, it must be the extraordinary LBE–AP cannot undergo LBE without affecting the preposition. There are two straightforward ways of accounting for (91). One possibility is to assume that P-movement into the AP is obligatory. The AP then cannot move without carrying the preposition along. The alternative is to relate the ungrammaticality of (91) to the impossibility of P-stranding in SC (see also Corver 1992 for Polish), illustrated in (92). (Recall that *u* is a proclitic, which is a potentially interfering factor. However, *prema* is not a proclitic.)

- (92) a. *Sobu on uđe u (juče).
 room he entered in yesterday
 b. *Njoj on hoda prema.
 her he walks toward
 c. On hoda prema njoj.

If for languages where it holds, the ban on P-stranding is stated as in (93), which essentially says that movement out of a PP is possible only if the PP is headed by a trace, the ungrammaticality of (91) straightforwardly follows from the ban on P-stranding (see also assumption (ii) from note 47).⁵²

- (93) Movement out of a PP is possible only if the PP is not headed
 by a lexical element.

For discussion and examples relevant to (93), the reader is also referred to Uriagereka (1988), who provides other examples (not involving PPs) where a phrase that is normally a barrier to movement ceases to be a barrier if headed by a trace (for relevant discussion, see also Boeckx 2001, 2003). Also relevant is the similarity, noted in Corver (1992), between the Slavic case under consideration and subject extraction across complementizer *še* in Hebrew.

- (94) Mi amar-ta še-halax? (Hebrew)
 who said-2sm that-left
 ‘Who did you say left?’

⁵² For recent discussion of the nature of P-stranding, see Abels (2001, 2003a,b), Bošković (2004a, in press c), and Sugisaki & Isobe (2002). Note that under the phase analysis, we may need to assume the next phase-level evaluation of (93), which would be in accordance with Chomsky’s (1999) assumptions concerning evaluation of locality of movement. (This is so under the P-raising-to-the-adjective analysis, but not under the P-lowering-to-the-adjective analysis.)

According to Shlonsky (1988), *še* lowers to the adjacent head in the syntax, similarly to P in Slavic extraordinary LBE. CP being headed by a trace, no projection of C counts as a barrier, hence subject wh-extraction does not yield a locality violation. In both the Uriagereka/Shlonsky cases and Slavic extraordinary LBE, moving away head X removes the locality problem that (a projection of) X would normally raise for movement out of XP.

Finally, I suggest appealing to Uriagereka's generalized version of (93) (i.e. the assumption that a phrase that is normally a barrier to movement ceases to be a barrier if headed by a trace) to account for the remaining problem that arises under the AP LBE analysis of extraordinary LBE, namely, the fact that, similarly to the remnant PP movement analysis, under the AP LBE analysis extraordinary LBE often involves movement out of an adjunct. Given the assumption in question, constructions like (84) are not expected to display an adjunct condition effect under the AP LBE analysis since after P-to-A movement, the adjunct out of which AP LBE takes place is headed by a trace.⁵³ Note also that the above solution to the extraction-out-of-an-adjunct problem is not available under the remnant PP movement analysis.

7. Conclusion

The above discussion has hopefully brought us closer to understanding the nature of the mysterious phenomenon of LBE, as well as the structure of the traditional NP. I have considered several accounts of crosslinguistic variation with respect to LBE. The most principled account is provided by the AP/NP analysis, on which the ban on LBE in English-type languages follows from the ban on movement of non-constituents, a problem that does not arise in SC-type languages, where LBE does not involve non-constituent movement. When it comes to the position of adjectives in the traditional NP, we have seen that there is evidence for crosslinguistic variation in the relevant respect, some languages having the NP-over-AP structure, others having the AP-over-NP structure. Which structure a language will have depends on the presence/absence of DP in the language, the lack of DP leading to the NP-over-AP structure. Obviously, I was not able to deal with all the issues concerning the structure of NP within the confines of this paper. In fact, at our present

⁵³ Note that I assume that movement out of PP must proceed via SpecPP (see Riemsdijk 1978, Bošković 2004a, in press c and Abels 2003b). As a result, turning the adjunct in (i), due to Klaus Abels (p.c.), into a phrase headed by a trace by moving the AP into SpecPP and subsequently adjoining the adjunct head to the A will not enable the wh-phrase to move out of the adjunct without a locality violation. (Alternatively, we could assume that P-to-A movement takes place only if the AP is going to move out of the PP.)

(i) *Čime; je on pobegao [PP zbog velike [pretnje ti]]?
 what.INSTR is he run-away because-of big threat
 'He ran away because of the big threat of what?'

level of understanding, whichever analysis one takes with respect to the issue of the structural status of NP/AP/DP within the traditional NP for any given language, a host of open questions will inevitably remain. I hope to return to some of them in future work.

Appendix: The scrambling analysis

In this appendix, I explore a potential alternative to the DP/NP analysis of LBE. Admittedly, the discussion below is somewhat tentative since further crosslinguistic verification, which is left for future research, is necessary before the alternative can be endorsed.

The alternative analysis is based on the conjecture that the right way to divide LBE and non-LBE languages does not depend on the presence/absence of DP, but the possibility of scrambling. More precisely, whether or not a language allows LBE depends on whether or not it allows scrambling, only scrambling languages allowing it. In this respect, notice that the Slavic languages that allow LBE, such as Russian, SC, Polish, and Czech, are all heavily scrambling languages. Regarding Bulgarian, which does not allow LBE, although Bulgarian displays some freedom of word order, its word order is noticeably more rigid than in SC, a closely related language, which I interpret as indicating Bulgarian has no scrambling. When it comes to Romance, modern Romance languages do not have scrambling and do not allow LBE. Latin, on the other hand, had scrambling and allowed LBE. English is of course another example of a non-scrambling language not allowing LBE.⁵⁴

Under the scrambling analysis, the fact that the LBE/DP correlation holds for the languages considered may be an accident, and the same may hold for the DP/NP analysis when it comes to the LBE/scrambling correlation (unless we can establish a DP/scrambling correlation, where the presence of DP would correlate with the lack of scrambling). To tease apart the two analyses, we need to look for LBE languages that have scrambling and DP, or LBE languages that do not have either scrambling or DP. I emphasize here that non-LBE languages do not provide a conclusive test since interfering factors may prevent LBE even in the absence of DP and the presence of scrambling. (See note 3. E.g., the presence of a possessive affix

⁵⁴ I am taking the term scrambling to mean extreme freedom of word order. It is worth noting that from this perspective, German might be characterizable as a non-scrambling language (though this may not be necessary under the current analysis; see the discussion below. Note that word order in German is clearly more rigid than in SC. Thus, German does not allow long-distance scrambling out of finite clauses, although movement out of finite clauses is in principle possible in German. Furthermore, the order of verbal elements in German is quite rigid and *wh*-phrases are not allowed to scramble.) Superficially, freedom of word order is characterized by gradualness. (The probable reason for this is that a number of mechanisms can at least to some extent give the appearance of free word order.) The above correlation between LBE and scrambling is based on the conjecture that languages that allow LBE will fall further on the freedom of word order scale than those that do not allow LBE.

that is not syntactically generated on the possessor can ban LBE of possessives.) As noted above, we would not have to consider one of the two correlations under consideration (the LBE/DP correlation and the LBE/scrambling correlation) an accident if we can establish a DP/scrambling correlation, where the presence of DP would correlate with the lack of scrambling, more precisely, where the lack of DP would be a prerequisite for scrambling (see Bošković 2004b for an analysis along these lines). LBE, scrambling, and the categorial status of the traditional NP would then all be correlated. I will not explore this possibility here.

It is worth noting that in tying scrambling and LBE I am essentially going back to Hale's (1983) observation that discontinuous constituency is a property of scrambling languages, given that examples of discontinuous constituency often involve LBE. The correlation between LBE and scrambling can be easily captured under base-generation analyses of scrambling such as Bošković & Takahashi (1998), which base-generates "scrambled" elements in their surface non- θ -positions and moves them to their θ -positions in LF, θ -theoretic considerations driving the movement. Given Higginbotham's (1985) θ -identification analysis of adjectives (see also his autonomous θ -marking), on which an adjective and a noun it modifies enter into a θ -relation, adjectives can also move in LF for θ -theoretic reasons. Under Bošković & Takahashi's analysis, the LBE construction *Visoke on gleda djevojke* would then have the S-structure in (95), with no relevant overt movement taking place. The adjective then undergoes lowering in LF to the position where it is interpreted (96), θ -considerations (more precisely, θ -identification) driving the movement.⁵⁵

(95) SS: *Visoke on gleda djevojke.*
 tall he watches girls

(96) LF: *On gleda visoke djevojke.*

⁵⁵ Depending on how the θ -requirement on A/N combinations is precisely stated it is actually possible that the noun would move in LF to the adjective, instead of the adjective moving to the noun, in which case the LF of (95) would be *Visoke djevojke on gleda*.

From the perspective of the scrambling analysis, (21b) can be accounted for by appealing to economy, i.e. by assuming that the adjective lowers to the closest noun with which it can undergo θ -identification. More precisely, we can assume that if an adjective can undergo θ -identification within NP1 with N1, it is not allowed to look deeper into NP1 for another N to undergo θ -identification with. (The reader should, however, bear in mind that, as discussed by Bošković & Takahashi (1998), we do not want to impose relativized minimality effects, which are defined on c-command (in contrast to the case under consideration, which involves domination), on scrambling lowering.) From this perspective, the improved status of (22) also follows since the problem that arises in (21b) noted above does not arise in (22). As for the ban on double AP LBE, the Lethal Ambiguity account of the ban can be maintained under the analysis of LBE presented in the appendix if we assume a version of Chomsky's (1995:356–357) approach to equidistance, on which an element that is in the minimal domain of a head (*visoke* in (71), the head being *djevojke*) would essentially count as equidistant with an element that is moving to the minimal domain of the same head (*lijepa* in (71)).

Bošković & Takahashi's (1998) analysis of scrambling, based on LF movement driven by θ -theoretic considerations, thus provides us with a straightforward way of capturing AP LBE, given Higginbotham's θ -identification analysis of adjectives. LBE of determiners can also be easily captured, given Higginbotham's θ -binding analysis of determiners. Θ -motivation behind LF assembling of elements affected by "LBE" is also straightforward in the case of possessives.

Notice, however, that under Bošković & Takahashi's analysis we simply need a formal reason to place the scrambled element in LF in the position where it is interpreted. Strictly speaking, the reason does not have to be θ -related. E.g., licensing the agreement relation between the adjective and the noun could also plausibly drive LF movement of the adjective. In this respect, note that in SC, the adjective and the noun agree in Case and ϕ -features (gender and number). Some evidence that this version of the Bošković & Takahashi analysis, which does not depend on Higginbotham's view of θ -relations within NP, may be on the right track is provided by discontinuous constituents from Warlpiri. Consider (97)–(98), taken from Hale (1981).

(97) *kurdu- jarra- rlu ka- pala maliki wajilipi- nyi*
 child DUAL ERG PRES DUAL dog chase NONPAST
wita- jarra- rlu.
 small DUAL ERG

'The two small children are chasing a dog.'

(98) *maliki ka- pala wajilipi- nyi kurdu wita- jarra- rlu.*
 dog PRES DUAL chase NONPAST child small DUAL ERG

The two small children is discontinuous in (97), but not in (98). Only in (97), both parts of the split NP must have the number and case endings. On the analysis under consideration, we can account for the paradigm by assuming that the number/case agreement is in principle optional in Warlpiri. However, it is forced in (97), where it is needed to drive LF assembling of the split NP under the Bošković & Takahashi analysis. The analysis under consideration thus explains why we find more morphology (i.e. richer agreement) when a noun and an adjective that modifies it are discontinuous than when they are not.

Particularly illuminating in this respect are the following examples from SC, which also exhibit the richer-agreement-when-separated pattern.

(99) a. Čičinu je on Tominu
 uncle's.FEM.ACC.SG. is he Tom's.FEM.ACC.SG.
 kolibu srušio.
 cabin.FEM.ACC.SG. torn-down
 'He tore down uncle Tom's cabin.'

- b. *Čiča je on Tominu
 uncle.MASC.NOM.SG. is he Tom's.FEM.ACC.SG.
 kolibu srušio.
 cabin.FEM.ACC.SG. torn-down
- (100) a. *On je srušio čičinu Tominu kolibu.
 b. On je srušio čiča Tominu kolibu.

(99) shows that the split of *uncle* and *Tom* is possible only when *uncle* and *Tom* (and *cabin*) agree in case and ϕ -features, although when the split does not take place, *uncle* and *Tom* cannot agree, as illustrated in (100).⁵⁶ The agreement pattern in (99) is not surprising under the analysis suggested above, where the agreement is necessary to drive LF lowering of *uncle*.

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⁵⁶ Note that nominative on *čiča* in (100b) is a default case and that *čičinu* and *Tominu* are morphologically adjectives.

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