Chapter 15

Extract to unravel: Left branch extraction in Romanian/Serbian code-switching

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Bošković (2008; 2012) argues that languages with and without articles differ considerably with respect to the structure of the nominal domain (among other differences), leading to a distinction between DP (languages with articles) and NP (article-less) languages. Namely, DP languages are proposed to have a functional layer (DP) above the NP where articles are presumed to be positioned, while lacking definite articles indicates the absence of this functional layer in a language, allowing for bare NPs. This structural difference has semantic and syntactic consequences, one of which is the (im)possibility of left branch extraction (LBE) of adjectives and adjective-like elements out of the nominal domain. Specifically, while LBE is allowed in NP languages, is it disallowed in DP languages (Bošković 2008; 2012). While (dis)allowing LBE is fairly straightforward in languages in isolation, here, I extend this test to mixed DP/NP structures resulting from Romanian/Serbian code-switching (CS). Following the DP/NP language distinction, I consider Romanian to be a DP language, disallowing LBE, and Serbian an NP language, allowing LBE. Consequentially, I apply the LBE of adjectives from internal and external arguments of the verb, with switches at various points in the derivation. I show that LBE is reliable in determining the points where CS occurs, whether we are dealing with an NP or a DP projection, but also in showing that mixing two languages may not necessarily result in a uniform system. In other words, through LBE, the structural flexibility resulting from different points of CS indicates that CS, like LBE, is highly contextual and sensitive to phases and phasal domains.

Keywords: left branch extraction, code-switching, Romanian, Serbian

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1 Introduction

Code-switching (CS) represents the alternation of elements from two languages during a single phrase, clause, or utterance (Poplack 1980; Gonzales Velásquez 1995; MacSwan 1999; Muysken 2000; among others). In this paper, the focus is on the CS in Romanian-Serbian bilinguals from a small, culturally Romanian town in the Republic of Serbia. In this paper, CS constructions, just like constructions belonging to any other natural language, are undergoing tests based on grammaticality judgements of bilingual native speakers. Specifically, here I investigate how relevant CS constructions that contain elements from Romanian (a DP language) and Serbian (an NP language) fare with respect to left branch extraction (LBE) of adjectives out of the traditional noun phrase (TNP).[1] Given that LBE is allowed in NP but not DP languages (Uriagereka 1988; Bošković 2008; 2012), the combination of elements belonging to the two parameter settings (DP/NP) has consequences on the (im)possibility of LBE in CS. More importantly, I show that LBE is a reliable test to (i) identify which parameter setting prevails in certain environments, (ii) identify points of CS, and (iii) show that CS, like LBE, is contextual and it depends on the elements that participate in the switch during a spell-out domain.

The paper is organized as follows. §2 provides the demographics, methods, and type of data used for this study. In §3, basic assumptions and relevant LBE background are introduced. §4 gives the background of the relevant CS construction to introduces the main questions addressed in this paper, and §5 investigates LBE in CS. Finally, §6 concludes the paper and offers future research directions.

For ease of exposition, I will follow the common practice of marking elements from the two languages uniformly throughout the paper; in CS examples, **Romanian** elements will be in **bold**, and *Serbian* in *italics*.

2 Data and methods

Data for this study was gathered in the course of several years. Examples found in this paper are extracted from speech produced by Romanian-Serbian bilingual speakers from a culturally Romanian town called Uzdin, in Vojvodina, Serbia. The

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[1]The term traditional noun phrase covers both NP and DP, whichever applies in a given language, assuming the so called DP/NP parameter. Under the particular approach of Bošković (2014), the TNP in languages with articles is DP, and in article-less languages it is NP. TNP is generally considered a phase, consequently, DP is a phase in DP languages, while NP is a phase in NP languages.

methods of data gathering include interviews targeting spontaneous production, elicitation, and grammaticality judgements.[2]

Uzdin is one of the several towns in Serbia where the Romanian language, culture, and customs have been highly preserved and nurtured. The author has interviewed 8 subjects, with the age mean of 27. All subjects have at least a college degree, and have attended K-8 grades in Romanian, and high school and college in Serbian. This Romanian community is highly bilingual with a lot of code-switching occurring on a daily basis.

3 Relevant background

3.1 General assumptions

There are two underlying assumptions in this paper. The first is broad, referring to the approach and analysis of CS constructions. As argued by some authors (Gonzales Velásquez 1995; Bhatia & Ritchie 1996; den Dikken 2011; Bandi-Rao & den Dikken 2014), I do not assume CS to impose restrictions that apply to CS constructions alone. Rather, given that participating languages are natural languages that adhere to UG principles, I treat CS in the same way. The second assumption is specific, concerning the language pair in question. Following Bošković (2008; 2012), I consider Romanian and Serbian to differ with respect to whether they have or lack definite articles, consequently, whether they have or lack the DP layer.

3.2 DP/NP languages and left branch extraction

According to Bošković (2008; 2012), languages with and without articles differ in a systematic way. Empirically, having the NP or the DP parameter setting set has shown to have consequences not only on the structure of the TNP, but on a number of different syntactic and semantic phenomena, as well. This has allowed for the investigation of numerous crosslinguistic differences and similarities on a structural level. Bošković (2008; 2012) presents a number of generalizations that group languages based on the presence of absence of definite articles. The one relevant for current purposes is given in (1):

(1)   Only languages without articles may allow left branch extraction.

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[2]For a more detailed overview discussing the subjects, data, and methods, I refer the reader to Petroj (in prep).

While I will only focus on the generalization in (1), I refer the reader to Bošković (2008; 2012) for a comprehensive list of generalization with discussions.

As stated, one of the tests used to capture the crosslinguistic asymmetry between DP and NP languages is LBE of adjectives and adjective-like elements out of the TNP, with the generalization that LBE may only be allowed in NP languages Bošković (2008; 2012). Starting with the Slavic language family, only Bulgarian and Macedonian disallow LBE, and these are the only two languages that have (definite) articles. In Romance, the only language that allows LBE is Latin, and this is also the only Romance language that lacks articles. A very important example that contributes to the LBE generalization is the case of Finnish, discussed in Franks (2007). Namely, Finnish is an article-less language and it allows LBE. Interestingly, as articles started to develop in colloquial Finnish, LBE constructions immediately became very marginal and unacceptable. We see a similar case of variation among a single language in Ancient Greek, where the languages belonging to two different periods pattern differently with respect to the presence of articles, and, therefore, to LBE as well. Koine Greek has articles and disallows LBE, while LBE was used productively in Homeric Greek – which lacks articles. There are a few more languages that allow LBE, and these are: Mohawk, Southern Tiwa, Gunwinjguan (Baker 1996), Hindi, Bangla, Angika, and Magahi. These are all article-less languages. [3]

Moving on to concrete examples, while LBE is disallowed in English (a DP language) (2), and in Spanish (a DP language) (3), it is allowed in Serbian (an NP language) (4):[4]

(2)   * {Expensive$_1$ / Those$_1$} he saw [$_{NP}$ t$_1$ cars].   (Bošković 2008)

(3)   a. * Supuestas$_1$ investigaba   [$_{DP}$ t$_1$ estafas].
            alleged.PL.F used.to.investigate.1SG   frauds.PL.F
            'I used to investigate alleged frauds.'   (Spanish, Riqueros 2013)

       b. * Profesionales$_1$ ofrecía   [$_{DP}$ traducciones   t$_1$].
            professional.PL.F used.to.offer.1PL   translations.PL.F
            'I used to offer professional translations.'   (Spanish, Riqueros 2013)

(4)   {*Skupa*$_1$ / *Ta*$_1$}   *je*   *vidio*   [$_{NP}$ t$_1$ *kola*].
       expensive.SG.F   that.SG.F   be.AUX.3SG seen.SG.M   car.SG.F
       'He saw {an expensive / that} car.'   (Bošković 2008)

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[3]There is an additional requirement for a language to allow LBE – and this is agreement between the noun and the adjective. This, in turn, answers the question of why Chinese, that has very poor agreement morphology, disallows LBE even though it lacks articles. I will not be concerned with this requirement in this paper.

[4]Note that LBE is not possible with non-agreeing adjectives in Serbian (see Bošković 2013).

As predicted, English (a DP language) disallows, while Serbian (an NP language), allows LBE. To account for the contrast from above, Bošković (2013; 2014) proposes a contextual approach to phases in which the highest phrase in the extended domain of a lexical head acts as a phase. NP and DP languages then differ with respect to the phasal boundaries. Specifically, NP is a phase in NP languages, while DP is a phase in DP languages. Furthermore, assuming that the edge of each phase is visible to the next phase (Chomsky 2001), i.e., it can be available for extraction and movement, the adjective then occupies significantly different positions relative to the phasal edge in NP and DP languages. This is illustrated in (5), where the adjective is at the edge the TNP phase in NP languages (5a) and extraction of the adjective is allowed, versus DP languages in (5b), where DP is the phase, and the adjective is not at the edge of the TNP phase (the TNP being DP in this case). In order to be available for movement, the adjective has to move to DP due to the Phrase Impenetrability Condition (PIC) (Chomsky 2001), but the movement is blocked by antilocality, which requires the AP movement to cross a full phrase. In the case of (5b), AP does not cross a full phrase, only a segment.
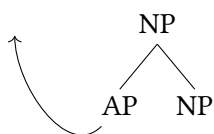
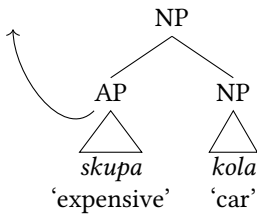(5)   a.   **NP languages**   b.   **DP languages**
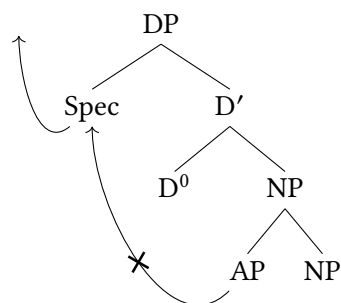
When this is applied to Romanian and Serbian, the outcome is clear. Serbian (NP) allows LBE as in (6), and Romanian (DP) disallows it, as in (7):

(6)   a.   *Vidio   je   {skupa   / ta}   kola.*
           seen.SG.M be.AUX.3SG expensive.SG.F that.SG.F car.SG.F
           'He saw {an expensive / that} car.'   (Bošković 2008)

      b.   {*Skupa*$_1$ / *Ta*$_1$}   *je   vidio   [$_{NP}$ t$_1$ *kola*].
            expensive.SG.F that.SG.F be.AUX.3SG seen.SG.M   car.SG.F
           'He saw {an expensive / that} car.'   (Bošković 2008)

(7) a. **Am** **văzut** {**scumpe** / **scumpe-le**}
 have.AUX.1SG seen.PTCP expensive.PL.F expensive-the.PL.F
 automobile.
 cars.PL.F
 'I saw {expensive / the expensive} cars.' (Petroj in prep)

b. * {**Scumpe**$_1$ / **Scumpe-le**$_1$} **am** **văzut**
 expensive.PL.F expensive-the.PL.F have.AUX.1SG seen.PTCP
 [$_{DP}$ t$_1$ **automobile**].
 cars.PL.F
 Intended: 'I saw {expensive / the expensive} cars.' (Petroj in prep)

Structurally, this looks as follows: In Serbian, the LBE of adjectives (located in SpecNP) takes place through one movement out of the NP, as in (8a). In Romanian, however, a more complex movement is required. First, in order for the adjective to reach SpecDP, the AP (that has previously merged with D^0 through Affix Hopping) has to proceed through SpecDP, which is the edge of the phase; only then would it be visible for further movement. The first movement, however, is blocked, by antilocality.[5] This is illustrated in (8b).[6]

(8) a. **Serbian (NP language)** b. **Romanian (DP language)**
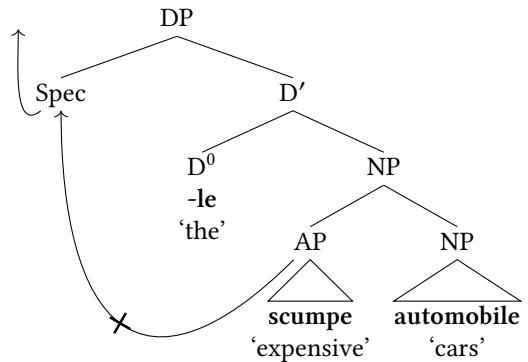
While affairs are clear in Romanian and Serbian in isolation, the mixed parameter settings in Romanian/Serbian CS poses an important question with respect to

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[5]There are accounts where Romanian APs move to SpecDP (this is why they can precede the article, see Abney 1987; Dobrovie-Sorin 1993; Ungureanu 2006; a.o.). These accounts face a problem: if movement to SpecDP is possible, APs should be allowed to move out of DPs, too.
[6]For the complete analysis of definite article being hosted by the noun or the adjective, I refer the reader to Petroj (in prep).

which setting prevails in the relevant CS constructions; DP or NP. To address these issues, I will examine LBE of adjectives in CS, starting with simple transitive constructions. However, before testing LBE, the next section offers facts about elements participating in the CS TNP that are relevant in understanding the LBE of adjectives in CS.

4 Relevant code-switching background

As mentioned, Romanian and Serbian differ with respect to the DP/NP parameter setting – Romanian being a DP (having articles) and Serbian an NP language (lacking articles).

(9) a. [$_{DP}$ **-ul**   [$_{NP}$ **examen**]]   ≈   **examen-ul**
          the.SG.M   exam.SG.M   exam.SG.M-the.SG.M
        'the exam'

  b. [$_{NP}$ *ispit*]
          exam.SG.M
        'an/the exam'

Following Bošković (2008; 2012) and the numerous generalizations that group languages according to the DP/NP parameter, Romanian and Serbian bring two clashing constructions and parameter settings interacting into combined structures. Although CS occurs on various levels (cf. Petroj in prep), the relevant construction is represented in (10):

(10) *teški*   *ispit*-**ul**
        difficult.LF.SG.M exam.SG.M-the.SG.M
        'the difficult exam'

In this construction, the elements that participate in CS are the Romanian definite article -**ul**, the Serbian noun *ispit,* and the Serbian adjective *teški.* The counterparts of Romanian and Serbian constructions are illustrated below in (11a) and (11b) respectively:

(11) a. **greu-l**   **examen**
          difficult.SG.M-the.SG.M exam.SG.M
        'the difficult exam'

  b. *teški*   *ispit*
          difficult.LF.SG.M exam.SG.M
        'the difficult exam'

Being either an NP or a DP language has additional consequences. In this case, it means different ways in which a language can express definiteness. Specifically, while Romanian expresses definiteness through definite articles on nouns (12a) or adjectives (12b), Serbian has an alternative way of obtaining definite versus indefinite interpretation. As illustrated in Table 1, Serbian has two lexical forms for adjectives: short form (SF) and long form (LF). These two forms are considered by some authors (Aljović 2002; Despić 2011; Talić 2014) to correspond to definite/specific (13a) and indefinite/non-specific (13b) interpretations, respectively.[7]

Table 1: Serbian shoft form vs. long form adjectives

	Short form	Long form
Masculine	nòv	nòv-i
Feminine	nóv-a	nòv-a:
	new.SF	new.LF

(12) a. **examen-ul**   **greu**
          exam.SG.M-the.SG.M difficult.SG.M
          'the difficult exam'

     b. **greu-l**   **examen**
          difficult.SG.M-the.SG.M exam.SG.M
          'the difficult exam'

(13) a. *teški*   *ispit*
          difficult.LF.SG.M exam.SG.M
          'the difficult exam'

     b. *težak*   *ispit*
          difficult.SF.SG.M exam.SG.M
          'a difficult exam'

What is most striking about the constructions like (10) is the combination of elements that is not found in either of the participating languages.[8] In other words,

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[7]For current purposes, I will simplify matters a bit and will consider the long vs. short form contrast to impose a definite vs. indefinite NP interpretation, respectively. For relevant discussion, see Aljović (2002); Despić (2011); Talić (2014); Stanković (2015); a.o.

[8]For a comprehensive analysis and account of the CS TNP and the interaction of Romanian definite articles, Serbian nouns, and Serbian adjectives, I refer the reader to Petroj (in prep).

the resulting structure is a combination of two definiteness-related elements – a Romanian definite article and a Serbian long-form (definiteness-imposing) adjective – in one TNP. Although coming from languages with different architectures, the elements form a cohesive and productive mixed structure. Given that both languages can express definiteness separately and that both definite elements are allowed in a single construction raises the question about the underlying structure of cases like (10). Specifically, does the resulting construction have the DP layer like in Romanian, or is it an NP construction like in Serbian?

Although having the definite article in the structure should indicate the presence of the DP layer, the fact that CS represents a mixture of (in this case) two parameter settings does not necessarily point towards the dominance of either one of the participating languages. On the one hand, the presence of the definite article may indicate that there is, in fact, a DP layer in (10), and that -**ul** is positioned in D^0. One the other, given that all three elements (D, N, and A) undergo agreement in CS (Petroj in prep), the definiteness may be licensed by the Serbian long-form adjective, and the DP layer may not exist.[9] One way to confirm that the DP layer indeed exists in this type of construction is by turning to the contextual approach to phases. Recall that this approach says that any phrase can be a phase, as long as it is the highest in its domain. As seen above, the edge of the phase is available for further actions, while the rest of the construction is frozen inside the phase. That being said, there are two possibilities regarding the status of the CS TNP: (i) if there is no DP and the highest phrase in the TNP domain is NP, the adjective is in SpecNP and it should be extractable, allowing for the possibility of LBE; (ii) if there is a DP layer present, i.e. DP is a phase, the adjective being in SpecNP would make it too deeply embedded for extraction (only SpecDP being visible as the edge of the phase); LBE, in this case, will not be allowed.

To test this, the next session focuses on the LBE from the CS TNP from internal and external arguments respectively.

5 Left branch extraction in code-switching

5.1 Left branch extraction in Romanian and Serbian

As LBE is a reliable test for identifying the DP/NP parameter setting of a natural language, the same test is applied to CS constructions that include structures like (10), repeated below as (14).

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[9]By agreement, I refer to the forms that the adjective and the article take relative to the gender of the noun.

(14) *teški*   *ispit*-**ul**
      difficult.LF.SG.M exam.SG.M-the.SG.M
      'the difficult exam'

Recall that as predicted by the generalizations in Bošković (2008), Romanian, being a DP language, disallows LBE and Serbian, an NP language, allows it. This is illustrated in (6) for Serbian and in (7) for Romanian, repeated below as (15) and (16), respectively:

(15) a. *Vidio*   *je*   {*skupa*   / *ta*}   *kola.*
          seen.SG.M be.AUX.3SG expensive.SG.F that.SG.F car.SG.F
          'He saw {an expensive / that} car.'   (Bošković 2008)

      b. {*Skupa₁*   / *Ta₁*}   *je*   *vidio*   [NP *t₁ kola*].
           expensive.SG.F that.SG.F be.AUX.3SG seen.SG.M   car.SG.F
          'He saw {an expensive / that} car.'   (Bošković 2008)

(16) a. **Am**   **văzut**   {**scumpe**   / **scumpe-le**}
          have.AUX.1SG seen.PTCP expensive.PL.F expensive-the.PL.F
          automobile.
          cars.PL.F
          'I saw {expensive / the expensive} cars.'   (Petroj in prep)

      b. * {**Scumpe₁**   / **Scumpe-le₁**}   **am**   **văzut**   [DP *t₁*
           expensive.PL.F expensive-the.PL.F have.AUX.1SG seen.PTCP
          automobile].
          cars.PL.F
          Intended: 'I saw {expensive / the expensive} cars.'   (Petroj in prep)

As seen above, facts are clear for Romanian and Serbian in isolation. In the remainder of this section, LBE of adjectives will be applied to CS TNPs from transitive constructions and from the subject.

5.2 Transitive constructions

The paradigm below starts with (17), in which CS occurs within a TNP where the verb is Romanian, the definite article is Romanian, and the noun and the adjective are Serbian. As illustrated in (17b), LBE out of this TNP is disallowed. In (18), the verb is still Romanian, but even a fully Serbian TNP fails the LBE test. Interestingly, when the Romanian verb is replaced by its Serbian counterpart in (19), LBE improves drastically. Interestingly, while the Serbian verb *can* take a DP

complement in (20a), extraction of the adjective is blocked in (20b), confirming that **-ul** may indeed point towards the existence of the DP layer.[10]

(17) a. **Am** **trecut** *teški* *ispit*-**ul**.
      have.AUX.1SG passed.PTCP difficult.LF.SG.M exam.SG.M-the.SG.M
      'I passed the difficult exam.'

  b. * *Teški*₁ **am** **trecut** [t₁ *ispit*-**ul**].
      difficult.LF.SG.M have.AUX.1SG passed.PTCP exam.SG.M-the.SG.M
      'I passed the difficult exam.'

(18) a. **Am** **trecut** *teški* *ispit*.
      have.AUX.1SG passed.PTCP difficult.LF.SG.M exam.SG.M
      'I passed the difficult exam.'

  b. * *Teški*₁ **am** **trecut** [t₁ *ispit*]
      difficult.LF.SG.M have.AUX.1SG passed.PTCP exam.SG.M
      Intended: 'I passed the difficult exam.'

(19) a. **Am** *položila* *teški* *ispit*.
      have.AUX.1SG passed.SG.F difficult.LF.SG.M exam.SG.M
      'I passed the difficult exam.'

  b. ? *Teški*₁ **am** *položila* [t₁ *ispit*].
      difficult.LF.SG.M have.AUX.1SG passed.SG.F exam.SG.M
      'I passed the difficult exam.'

(20) a. **Am** *položila* *teški* *ispit*-**ul**.
      have.AUX.1SG passed.SG.F difficult.LF.SG.M exam.SG.M-the.SG.M
      'I passed the difficult exam.'

  b. * *Teški*₁ **am** *položila* [t₁ *ispit*-**ul**].
      difficult.LF.SG.M have.AUX.1SG passed.SG.F exam.SG.M-the.SG.M
      Intended: 'I passed the difficult exam.'

Based on the above discussion, I take (dis)allowing LBE to indicate the presence or absence of the DP layer. The ungrammaticality of (18b) and (20b) then indicates that any Romanian element in the VP domain forces DP-hood on the object. What is particularly interesting here is that although the entire TNP is in Serbian, LBE still cannot take place. This suggests that although no Romanian D element is present overtly, there is still a DP projection here, which is not the case in (19),

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[10]I would like to thank an anonymous reviewer for noticing the incomplete paradigm and pointing out the relevance of the example in (19).

where LBE improves drastically with a Serbian verb introduced in the structure. Additionally, the paradigm in (17)–(20) confirms that regardless of the verb being Romanian or Serbian, the presence of a Romanian element in the object position will always have the DP layer.

Given that both Romanian and Serbian verbs can occur and take either a Romanian or a Serbian complement in CS, data from above indicates that Romanian verbs must take a DP complement even in CS as in (21a), while a Serbian verb can take either an NP complement as in (19b), or a DP complement, as in (21b).

(21) a. **Am**　　　　**trecut**　　　{**examen-ul**　　　/ *ispit*-**ul**　　　　　/
　　　　　have.AUX.1SG passed.PTCP examSG.M-the.SG.M　examSG.M-the.SG.M
　　　　　*ispit}.
　　　　　exam.SG.M
　　　　　(Intended:) 'I passed {the exam / the exam / an/the exam}.'

　　　b. **Am**　　　　*položila*　　　{**examen-ul**　　　/ *ispit*-**ul**　　　　　/
　　　　　have.AUX.1SG passed.SG.F　examSG.M-the.SG.M　examSG.M-the.SG.M
　　　　　ispit}.
　　　　　exam.SG.M
　　　　　'I passed {the exam / the exam / an/the exam}.'

We then have the generalization in (22):[11]

(22)　Romanian verbs must take a DP complement, while Serbian verbs can take either a DP or an NP complement.

I will now test the LBE of adjectives out of a ditransitive construction. Examples in (23) and (25) represent fully Serbian sentences with the LBE of the possessor out of the indirect object (IO) in (23b) and direct object (DO) in (25b). As expected, Serbian being an NP language, LBE is allowed in both cases. In contrast, when a Romanian object is introduced into the structure in (24) and (26), LBE out of the Serbian object in (24b) and (26b) leads to ungrammaticality.[12]

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[11]The pattern of certain elements allowing DP or NP arguments seems to extend beyond the VP domain, specifically, with respect to CS of conjuncts and coordinated structures. I refer the reader to Petroj (in prep) for more examples and more detailed explanation.

[12]**Pe** in (24) is a dummy preposition assigning the accusative to its complement. It is comparable to the Spanish *a,* illustrated in (i).

　　　(i)　Lo　　　　　vimos　a Juan.
　　　　　him.CL.ACC.M saw.1PL A Juan
　　　　　'We saw John.'　　　　　　　　　　　　　　　　　(Spanish; Jaeggli 1986)

(23) a. *Moja drugarica predstavlja svom prijatelju*
my.NOM friend.NOM introduce.3SG her.POSS.REFL.DAT friend.DAT
Jovana.
JovanACC
'My friend introduces Jovan to her friend.'

b. *Svom₁ moja drugarica predstavlja*
her.POSS.REFL.DAT my.NOM friend.NOM introduce.3SG
[NP t₁ *prijatelju*] [NP *Jovana*].
friend.DAT Jovan.ACC
'My friend introduces Jovan to her friend.'

(24) a. *Moja drugarica predstavlja svom prijatelju*
my.NOM friend.NOM introduce.3SG her.POSS.REFL.DAT friend.DAT
pe Jovan.
PE Jovan
'My friend introduces Jovan to her friend.'

b. * *Svom₁ moja drugarica predstavlja*
her.POSS.REFL.DAT my.NOM friend.NOM introduce.3SG
[NP t₁ *prijatelju*] [DP **pe Jovan**].
friend.DAT PE Jovan
Intended: 'My friend introduces Jovan to her friend.'

(25) a. *Moja drugarica šalje svoju knjigu mom*
my.NOM friend.NOM send.3SG her.POSS.REFL.ACC book.ACC my.DAT
bratu.
brother.DAT
'My friend sends her book to my brother.'

b. *Svoju₁ moja drugarica šalje* [NP t₁ *knjigu*]
her.POSS.REFL my.NOM friend.NOM send.3SG book.ACC
[NP *mom bratu*].
my.DAT brother.DAT
'My friend sends her book to my brother.'

(26) a. *Moja drugarica šalje svoju knjigu*
my.NOM friend.NOM send.3SG herPOSS.REFL.ACC book.ACC
fratelui meu.
brother.DAT my
'My friend sends her book to my brother.'

b. * *Svoju*₁   *moja*   *drugarica* *šalje*   [NP 1 *knjigu*]
    her.POSS.REFL.ACC my.NOM friend.NOM send.3SG   book.ACC
    [DP **fratelui**   **meu**].
     brother.DAT my
    Intended: 'My friend sends her book to my brother.'

(24) and (26) show that when one object is in Romanian and the other in Serbian, LBE is not allowed even when the LBE is attempted out of the TNP that contains Serbian elements only. This is especially interesting since LBE was allowed once a Serbian verb was introduced into the structure in (19). (24) and (26) indicate that any Romanian element (not just the verb) in the *v*P/VP domain blocks LBE. With respect to the DP/NP status, it seems like both objects are DPs when one object is in Romanian. These examples then indicate that no structural mixing regarding the categorical status is allowed between the objects in a double object constructions (where one object would be an NP and one object a DP); if one object is a DP, both must be DPs. Consequently, if *v*P is considered a phase, the following generalization can be made:[13]

(27) No mixing of the categorical status of the TNP within a spell-out domain, where the spell-out domain is a phasal complement.

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[13]An anonymous reviewer pointed out an interesting question about the generalization in (27), namely, that having a Romanian low/VP-adjunct after a Serbian ditransitive construction like the one in (i) might reveal additional (counter)evidence for the structure of mixing within the spell-out domain. While the sentence in (i.b) is only marginally acceptable, the subjects reported challenges in processing the sentence, rather than in grammaticality, which can be assigned to prosodic factors of a fully Serbian LBE construction. I leave CS of adjuncts for future research.

(i) a. *Moja*   *drugarica* *šalje*   *svoju*   *knjigu*   *mom*
    my.NOM friend.NOM send.3SG her.POSS.REFL.ACC book.ACC my.DAT
    bratu   **cu** **avion-ul**.
    brother.DAT with plane.SG.M-the.SG.M
    'My friend sends her book to my brother via plane.'

   b. ? *Svoju*₁   *moja*   *drugarica* *šalje*   [NP t₁ *knjigu*]   [NP *mom*
     herPOSS.REFL.ACC my.NOM friend.NOM send.3SG   book.ACC   my.DAT
     bratu]   **cu** **avion-ul**.
     brother.DAT with plane.SG.M-the.SG.M
     'My friend sends her book to my brother via plane.'

5.3 Subject

Given that having a Romanian element in either IO or DO blocks LBE from the other object (even when the other object is entirely in Serbian) it is important to test the extent of influence of the Romanian DP on the rest of the structure.

In the examples below, (28) represents a fully-Serbian example, with the possessor being extracted from the subject in (28b). This being a fully Serbian construction, LBE is allowed.

(28) a. *Tvrdiš   da moja   drugarica predstavlja   Petru*
        claim.2SG that my.NOM friend.NOM introduce.3SG Petar.DAT
        Jovana.
        Jovan.ACC
        'You claim that my friend introduces Jovan to Petar.'

    b. *Moja*₁   *tvrdiš   da* [NP t₁ *drugarica*] *predstavlja*   [NP *Petru*]
        my.NOM claim.2SG that   friend.NOM introduce.3SG   Petar.DAT
        [NP *Jovana*].
            Jovan.ACC
        'You claim that my friend introduces Jovan to Petar.'

Interestingly, when a Romanian element is introduced as the DO in (29) and as the IO in (30), LBE out of a fully-Serbian Subject is permitted in both cases, as in (29b) and (30b).

(29) a. *Tvrdiš   da moja   drugarica predstavlja   Petru   **pe Jovan**.*
        claim.2SG that my.NOM friend.NOM introduce.3SG Petar.DAT PE Jovan
        'You claim that my friend introduces Jovan to her friend.'

    b. *Moja*₁   *tvrdiš   da* [NP t₁ *drugarica*] *predstavlja*   [NP *Petru*]
        my.NOM claim.2SG that   friend.NOM introduce.3SG   Petar.DAT
        [DP **pe Jovan**]
            PE Jovan
        'You claim that my friend introduces Jovan to her friend.'

(30) a. *Tvrdiš   da moja   drugarica šalje   svoju*
        claim.2SG that my.NOM friend.NOM send.3SG her.POSS.REFL.ACC
        *knjigu   **fratelui   meu**.*
        book.ACC brother.DAT my
        'You claim that my friend sends her book to my brother.'

b. *Moja*₁   *tvrdiš*   *da*   [_NP_ t₁ *drugarica*] *šalje*
my.NOM claim.2SG that   friend.NOM send.3SG
[_NP_ *svoju*   *knjigu*]   [_DP_ **fratelui**   **meu**].
    her.POSS.REFL.ACC book.ACC   brother.DAT my
'You claim that my friend sends her book to my brother.'

These data contrast with (24) and (26) where the introduction of a Romanian internal argument blocked LBE out of the other internal argument. In contrast, LBE out of the subject is not affected by CS in the internal arguments of the verb. Based on these examples, the following generalizations can be made:

(31)   A Romanian internal DP argument forces DP-hood to the internal argument of the verb, but not to the external one.

(32)   No mixing of the categorical status of the TNP within a spell-out domain, where the spell-out domain is a phasal complement.

Notice also that a Romanian external DP argument does not force DP-hood on a Serbian internal argument, as indicated by the possibility of LBE in (33):

(33)   a.   **Elev-ul**   **a**   *položio*   *teški*
       student.SG.M-the.SG.M have.AUX.3SG passed.SG.M difficult.LF.SG.M
       ispit.
       exam.SG.M
       'The student passed the difficult exam.'

     b.   ? *Teški*₁   **elev-ul**   **a**   *položio*
       difficultLF.SG.M student.SG.M-the.SG.M have.AUX.3SG passed.SG.M
       [_NP_ t₁ *ispit*].
          exam.SG.M
       'The student passed the difficult exam.'

# 6 Conclusions and further research

Due to the DP/NP difference between Romanian and Serbian, LBE has proven reliable in determining the points where CS may occur, but also in showing that mixing two languages may not necessarily result in a homogenous DP or NP system. In other words, this variant of CS shows flexibility when it comes to elements that are switched, but also regarding what parameter setting will prevail depending on when CS occurs in the derivation. When it comes to the interaction between Romanian and Serbian elements, the following generalizations hold:

1. Romanian verbs must take a DP complement, while Serbian verbs can take either a DP or NP complements.

2. A Romanian internal DP argument forces DP-hood onto the internal argument of the verb, but not onto the external one.

Importantly, LBE has also shed light on the flexibility of the CS construction to navigate through parameters.

3. No mixing of the categorical status of the TNP is allowed within a spell-out domain, where the spell-out domain is a phasal complement.

We can assume then that the *v*p/VP spell-out domain may look something like (34), whereby CS below the *v*P-level affects the entire phasal domain, but not the area above it:

(34)

$$vP$$

S v'

v^0 VP

IO V'

V^0 DO
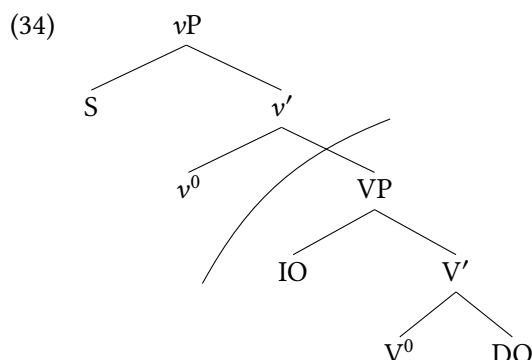
Finally, more research needs to be done to correctly predict the points of CS in other langauges with different spell-out domains/phasal boundaries in order to unravel the rules and constraints, and identify the exact points of CS.

Abbreviations

ACC	accusative		NOM	nominative
AUX	auxiliary		PTCP	participle
CL	clitic		PL	plural
DAT	dative		POSS	possessive
F	feminine		REFL	reflexive
LF	long form		SG	singular
M	masculine		SF	short form

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