

Extended Projection Principle (/EPP) in Serbian: A Cross-Theoretical Perspective

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1. Introduction

- In this talk I will discuss the EPP in (a) clauses with overt subjects, (b) clauses with *pro* subjects and (c) clauses with fronted locatives in Serbian language from the perspective of Minimalist Program and Distributed Morphology.

a) Assuming that only finite verb agrees with nominative subject in SpecTP I will focus my attention on mono-clausal forms with overt subjects and morphologically complex tenses (1), as well as morphologically non-complex tenses (2):

(1) Marija je svirala klavir.
Marija-NOM sg.f. AUX.sg play-PTCP.sg.f. piano-ACC
'Marija was playing the piano'

(2) Marko čita novine.
Marko-NOM sg.m. read-PRS. sg.m. newspapers-ACC
'Marko is reading the newspapers'

b) While nouns perfectly match the participle in respect to ϕ -features, agreement patterns are more problematic when it comes to pronoun subject in first and second person singular, since Serbian, like Russian, possess non-contrastive gender in these structures:

(3) Ja sam lep- \emptyset [MASC]
1sg. be-PRS. 1sg. beautiful-sg.m.
'I am beautiful'

(4) Ja sam lep-a [FEM]
1sg. be-PRS. 1sg. beautiful-sg.f.
'I am beautiful'

(5) Ti si lep- \emptyset [MASC]
2sg. be-PRS. 2sg. beautiful-sg.m.
'You are beautiful'

(6) Ti si lep-a [FEM]
2sg. be-PRS. 2sg. beautiful-sg.f.
'You are beautiful'

c) Serbian is **full *pro*-drop language** (in terminology of Alexiadou & Carvalho 2017) or **consistent *pro*-drop language** (in Holmberg's 2010 terminology). Like in other *pro*-drop

languages such as Finnish, Marathi (examples adopted from Holmberg 2010: 4), finite verb is sufficient as an answer to yes/no questions:

- (7) a. – Luki-ko Tarja sen kirjan? *Finish*
Read-Q Tarja that book
‘Did Tarja read that book?’
b. – Luki.
read
‘Yes.’
- (8) a. – Tara-ni pustak vaache-li? *Marathi*
Tara-ERG book read-Q
‘Did Tara read the book?’
b. – ho, vaache.
yes read
‘Yes.’
- (9) a.– Čita li Ana knjigu sada? *Serbian*
read-PRS. li-Q Ana-NOM book-ACC now
‘Is Ana reading a book now?’
b. – Čita.
read-PRS.
‘Yes’

In mono-clausal forms with morphologically non-complex tenses omission of subject in Serbian language shows similar syntactical behaviour as in Italian (examples adopted from Radford 2006):

- (10) a. Maria parla francese. *Italian*
Maria speaks French
‘Maria speaks French’
b. Parla francese.
speaks French
*speaks French / (She) speaks French.
- (11) a. Marija govori francuski. *Serbian*
Maria speaks French
‘Maria speaks French’
b. Govori francuski.
speaks French
*speaks French / (She) speaks French.

In full *pro*-drop languages V-raising always satisfies the EPP (Alexiadou and Anagnostopoulou 1998; Alexiadou and Carvalho 2017).

Furthermore, with morphologically complex tenses and participles that include reflexive morpheme:

- ✓ V-movement
- ✓ Clitic (auxiliary verb that functions as a clitic and reflexive morpheme) moves to the second position

d) Fronted locatives occur both in clauses with overt subjects and clauses with *pro* subjects:

(12) **U torbi** Jelena nosi laptop.
in bag-LOC Jelena-NOM carry-PRS. laptop
 ‘Jelena carries a laptop in a bag’

(13) **U torbi** nosi laptop.
in bag-LOC carry-PRS. laptop
 ‘(He/She) carries a laptop in a bag’

Goals:

- to determine the main means of satisfying EPP in Serbian
- to place Serbian language in Alexiadou and Anagnostopoulou 1998 typology
- to place Serbian language in Fukuda et al. 2016 typology
- to present new data that supports an idea that Serbian has TP and DP projections

Roadmap:

- Theoretical background
- Basics of Serbian clausal structure (word-order, feature [D], verbal morphology, TP)
- Nominative case in clauses with overt subjects
- Underspecification
- *pro*-subjects
- Fronted locatives

2. Theoretical background

- **Extended Projection Principle** has been examined extensively in English (see Chomsky 1982; Chomsky 1995; Collins 1997; Chomsky 2000; Lasnik 2003; among others), Germanic, Celtic, Arabic, Romance, Greek (Alexiadou and Anagnostopoulou 1998); Japanese (Fukuda et al. 2016); Hungarian (Kiss 2002); Finish (Holmberg 2001; Holmberg & Nikanne 2002; Holmberg 2005).
- **Principle P:** Obligatory insertion of the NP α follows from the fact that the constructions illustrated require subjects for some structural reasons; call it the principle *P*.
- Principle *P*:
 - does not derive from θ theory nor
 - does *P* derive from considerations of subcategorization
- The principle P, plainly, is the structural requirement that certain configurations [...] must have subjects (Chomsky 1981: 25-27).

- **Extended Projection Principle:** “The requirement that a clause have a subject position is independent of the Projection Principle; these two notions are conceptually quite closely related; I will henceforth refer to the Projection Principle along with the requirement that clauses have subjects as the Extended Projection Principle” (Chomsky 1982: 10).
 - **Minimalism.** As Lasnik (2001) explains, “Chomsky (1995) as part of his general featured-based theory, suggests a somewhat different interpretation of the EPP requirement. [...] the EPP reduces to a strong feature of a functional head high in the clausal structure (causing the relevant feature to raise), combined with a PF-based generalized pied-piping requirement (causing the residual constituent to raise) (Lasnik 2001: 357).
 - “Each CFC also allows an extra Spec beyond its s-selection: **for T, the property of allowing an extra Spec is the Extended Projection Principle (EPP)**. By analogy, we can call the corresponding properties of C and *v* *EPP-features*, determining positions not forced by the Projection Principle” (Chomsky 2000: 102).
 - Chomsky 2000 claims that the EPP-feature of T might be universal, while for the phase heads *v*/C, it varies parametrically among languages. (Chomsky 2000: 109)
 - The EPP can be satisfied by: (i). Merge of expletive, (ii). Merge of associate, (iii). Merge of α closer to T than the associate. (Chomsky 2000: 126)
 - Bailyn (2004) claims that IP Inversion constructions in Russian: (i) OVS, (ii) locative inversion, (iii) adversity impersonals, (iv) PP inversion, (v) bad-health verbs, (vi) dative experiencers, (vii) quotative inversion should be considered as EPP-driven movements.
 - As Alexiadou and Anagnostopoulou (1998) elucidate “EPP feature can be checked by more categories than proposed in Chomsky (1995). This, however, does not mean that anything can check the EPP feature [...] (Alexiadou and Anagnostopoulou 1998: 520).
 - Typology of EPP (Fukuda et al. 2016: 20)
- ✓ Traditional EPP - only an agreeing subject can satisfy the requirement (the EPP has to be satisfied by a DP or expletive in the subject position)
 - ✓ Inclusive EPP - allows for any constituent to satisfy it

3. Serbian basics

Word-order:

- Dominant: SVO
- Other possible neutral word-orders: SV, VS (in certain types of clauses), VO
- Non-neutral word-orders: OV, SOV, VSO, VOS, OSV, OVS
- Slavic micro-typology: according to SSWL database dominant word-order is SVO, while others are grammatical but always associated with focus

Feature [D]:

- Locus of specificity
- *pro*-drop languages have [+D] verbal agreement (Alexiadou and Anagnostopoulou 1998)

DP Projection:

- Universality of DP projection has been a subject of vibrant debate in generative literature so far.
- **Analysis 1:** absence of articles, as the most typical representatives of the category D, leads to absence of DP projection in article-less languages (see Zlatić 1997; Trenkić 2004; Bošković 2005, 2008, 2009, 2012, Bošković & Gajevski 2011; Bošković & Şener 2014; Despić 2011; Kovačević & Pupezin 2015; Todorović 2016).
- **Analysis 2:** considering DP as a hierarchically organized unit, researchers argue for its presence in both article and article-less languages, notwithstanding the absence of overt articles (Progovac 1998; Engelhardt, Trugman 1998; Peretsvaig 2007, 2013; Лютикова, Перельцавайг 2015b; Polinsky 2016).
- **Analysis 3:** a language can project DP, but not always (see Tasseva-Kurktchieva and Dubinsky (2018) for Bulgarian; Lyutikova and Pereltsvaig (2015a) for Tatar)
- Bošković (2012) claims that absence of DP implies absence of TP and EPP in Serbian, since DP expresses parallelism with clausal level.

Possible source of [D] feature in Serbian:

System of tenses (Ивић 1958):

- **Morphologically complex tenses:** (1) Perfect, (2) Pluperfect, (3) Future 1, (4) Future 2; **structure:** auxiliary verb + participle
- **Morphologically non-complex tenses:** (1) Present, (2) Aorist, (3) Imperfect; **structure:** main verb only

Alexiadou and Anagnostopoulou (1998) show that verbal agreement affixes in the Greek paradigm have exactly the same status as the pronouns in the English paradigm:

<i>English</i>		<i>Greek</i>	
I love	we love	agapo	agapame
you love	you love	agapas	agapate
he loves	they love	agapa	agapane

Complex tenses

Table 1: Morphologically complex tenses – basic verbal morphology

	Perfect	Pluperfect	Future 2	[GENDER]
1sg. <i>ja</i>	sam igra- o sam igra- la	sam bio igra- o sam bila igra- la	budem igra- o budem igra- la	[MASC] [FEM]
2sg. <i>ti</i>	si igra- o si igra- la	si bio igra- o si bila igra- la	budeš igra- o budeš igra- la	[MASC] [FEM]
3sg. <i>on</i> <i>ona</i> <i>ono</i>	je igra- o je igra- la je igra- lo	je bio igra- o je bila igra- la je bilo igra- lo	bude igra- o bude igra- la bude igra- lo	[MASC] [FEM] [NEUT]

1pl. <i>mi</i>	smo igra- li smo igra- le	smo bili igra- li smo bile igra- le	budemo igra- li budemo igra- le	[M/??] [FEM]
2pl. <i>vi</i>	ste igra- li ste igra- le	ste bili igra- li ste bile igra- le	budete igra- li budete igra- le	[M/??] [FEM]
3pl. <i>oni</i> <i>one</i> <i>ona</i>	su igra- li su igra- le su igra- la	su bili igra- li su bile igra- le su bila igra- la	budu igra- li budu igra- le budu igra- la	[M/??] [FEM] [NEUT]

Table 2: Morphologically complex Future 1

1sg. <i>ja</i>	ću igrati	∇
2sg. <i>ti</i>	ćeš igrati	∇
3sg. <i>on</i> <i>ona</i> <i>ono</i>	će igrati će igrati će igrati	∇
1pl. <i>mi</i>	ćemo igrati	∇
2pl. <i>vi</i>	ćete igrati	∇
3pl. <i>oni</i> <i>one</i> <i>ona</i>	će igrati će igrati će igrati	∇

Non-complex tenses

- N. Todorović presents three types of verbal conjugation (*a*-conjugation, *i*-conjugation, *e*-conjugation) that differentiate depending on the thematic vowel in the stem (-*a*-, -*i*-, -*e*-) (Todorović 2016: 251).
- Gender underspecification evident in each paradigm.

Table 3: Present

	<i>a</i> -paradigm	<i>e</i> -paradigm	<i>i</i> -paradigm	[GENDER]
1sg. <i>ja</i>	igra- m	kaže- m	voli- m	∇
2sg. <i>ti</i>	igra- š	kaže- š	voli- š	∇
3sg. <i>on</i> <i>ona</i> <i>ono</i>	igra-∅ igra-∅ igra-∅	kaže-∅ kaže-∅ kaže-∅	voli-∅ voli-∅ voli-∅	∇
1pl. <i>mi</i>	igra- mo	kaže- mo	voli- mo	∇
2pl. <i>vi</i>	igra- te	kaže- te	voli- te	∇
3pl. <i>oni</i> <i>one</i> <i>ona</i>	igra- ju igra- ju igra- ju	kaž-∅- u kaž-∅- u kaž-∅- u	vol-∅- e vol-∅- e vol-∅- e	∇

- Following Todorović's proposal for present tense, we can present three types of verbal conjugation (*a*-conjugation, *e*-conjugation, *u*-conjugation) that differentiate depending on the thematic vowel in the stem (-a-, -i-, -u-) in aorist:

Table 4: Aorist

	<i>a</i> -paradigm	<i>e</i> -paradigm	<i>u</i> -paradigm	[GENDER]
1sg. <i>ja</i>	igra- h	vide- h	ču- h	∇
2sg. <i>ti</i>	igra-∅	vide-∅	ču-∅	∇
3sg. <i>on</i>	igra-∅	vide-∅	ču-∅	∇
<i>ona</i>	igra-∅	vide-∅	ču-∅	
<i>ono</i>	igra-∅	vide-∅	ču-∅	
1pl. <i>mi</i>	igra- smo	vide- smo	ču- smo	∇
2pl. <i>vi</i>	igra- ste	vide- ste	ču- ste	∇
3pl. <i>oni</i>	igra- še	vide- še	ču- še	∇
<i>one</i>	igra- še	vide- še	ču- še	
<i>ona</i>	igra- še	vide- še	ču- še	

Table 4a: Aorist 2 (-*sti* and -*ći* suffixes)

[examples adopted from Пипер, Клајн 2014]

	- <i>sti</i> suffix	- <i>ći</i> suffix	[GENDER]
1sg. <i>ja</i>	sret- oh	podig- oh	∇
2sg. <i>ti</i>	sret- e	podig- e	∇
3sg. <i>on</i>	sret- e	podig- e	∇
<i>ona</i>	sret- e	podig- e	
<i>ono</i>	sret- e	podig- e	
1pl. <i>mi</i>	sret-osmo	podig- osmo	∇
2pl. <i>vi</i>	sret-oste	podig- oste	∇
3pl. <i>oni</i>	sret- oše	podig- oše	∇
<i>one</i>	sret- oše	podig- oše	
<i>ona</i>	sret- oše	podig- oše	

Table 5: Imperfect

[examples adopted from Пипер, Клајн 2014: 171-172]

- čita-ti (*to read*); ljubiti (*to kiss*); sede-ti (*to sit*); tonu-ti (*to drown*)

	<i>a</i> -paradigm	<i>i</i> -paradigm	<i>e</i> -paradigm	<i>u</i> -paradigm	[GENDER]
1sg. <i>ja</i>	čita- h	ljubl- ah	seđ- ah	tonj- ah	∇
2sg. <i>ti</i>	čita- še	ljubl- aše	seđ- aše	tonj- aše	∇
3sg. <i>on</i>	čita- še	ljubl- aše	seđ- aše	tonj- aše	∇
<i>ona</i>	čita- še	ljubl- aše	seđ- aše	tonj- aše	
<i>ono</i>	čita- še	ljubl- aše	seđ- aše	tonj- aše	
1pl. <i>mi</i>	čita- smo	ljubl- asmo	seđ- asmo	tonj- asmo	∇
2pl. <i>vi</i>	čita- ste	ljubl- aste	seđ- aste	tonj- aste	∇
3pl. <i>oni</i>	čita- hu	ljubl- ahu	seđ- ahu	tonj- ahu	∇
<i>one</i>	čita- hu	ljubl- ahu	seđ- ahu	tonj- ahu	
<i>ona</i>	čita- hu	ljubl- ahu	seđ- ahu	tonj- ahu	

- There is one special form of future tense. Non-complex Future 1 consists of an auxiliary verb that is added directly to the √ROOT. In this case occurrence of overt subjects is

not possible. This is a unique form that requires obligatory *pro* and blocks overt nominative:

Table 6: Non-complex Future 1

	<i>a</i> -paradigm	<i>i</i> -paradigm	<i>e</i> -paradigm	<i>u</i> -paradigm	
1sg. (<i>ja</i>)	pisa-ću	nosi-ću	vide-ću	ču-ću	∇
2sg. (<i>ti</i>)	pisa-ćeš	nosi-ćeš	vide-ćeš	ču-ćeš	∇
3sg. (<i>on</i>)	pisa-će	nosi-će	vide-će	ču-će	∇
(<i>ona</i>)	pisa-će	nosi-će	vide-će	ču-će	
(<i>ono</i>)	pisa-će	nosi-će	vide-će	ču-će	
1pl. (<i>mi</i>)	pisa-ćemo	nosi-ćemo	vide-ćemo	ču-ćemo	∇
2pl. (<i>vi</i>)	pisa-ćete	nosi-ćete	vide-ćete	ču-ćete	∇
3pl. (<i>oni</i>)	pisa-će	nosi-će	vide-će	ču-će	∇
(<i>one</i>)	pisa-će	nosi-će	vide-će	ču-će	
(<i>ona</i>)	pisa-će	nosi-će	vide-će	ču-će	

- Having this in mind, we can conclude that Serbian language has **strong agreement morphology** (4-6 different suffixes). Therefore, verbal agreement is [+D].
- In several previous accounts to the phenomenon of clausal structure in Serbian, authors pointed out that Serbian language lacks TP projection (see Bošković 2012; Todorović 2016, among others).
- Bošković's analysis is based on author's well-known NP/DP parameter. Taking the NP/Clause parallelism hypothesis, on the one hand, and NP/DP parameter, on the other hand, author concludes that the structure of clause is poorer in NP languages than in DP languages, since noun phrase is poorer in NP languages than in DP languages (Bošković 2012).
- Todorović (2016) points out that Serbian is a no-TP language since tense morphology actually denotes agreement markers, that are added directly to the stem (Todorović 2016: 250-251). Presence of temporal morphology is an indication of the presence of TP.
- TP analysis (Halupka-Rešetar 2011)

Question:

- **If TP exists in Serbian, what occupies T?**

Possible solution:

- T is filled with an auxiliary verb if one of the morphologically complex (/compound) tenses occurs, with a modal or phase verb in complex structures with finite verbs, or with the main verb if morphologically non-complex tenses occur (V-raising). Regardless of the tense, finite verb always agrees with nominative subject.
- Verbal suffixes function as (1) tense markers and (2) agreement markers simultaneously.
- Distributed Morphology (DM) offers potentially successful explanation of this claim. Namely, **fusion** is a post-syntactic operation of the PF component in which independent terminal nodes fuse and become a single terminal node for Vocabulary Insertion (Halle and Marantz 1993, Halle and Marantz 1994, Halle 1997, Marantz 2006).
- Fusion of two terminals [tense + agreement] into a single node. It is important to note that 'agreement terminal' is complex unit (φ -features).

- Despite strong agreement morphology verbal affixes should not be considered as perfect agreement markers. Evidence for this comes from mismatches in gender agreement registered in Future 1 and all non-complex tenses (Present, Imperfect, Aorist).

4. Analysis

4.1. Clauses with overt subjects

- In this section I will discuss five properties of VS(O) orders proposed by Alexiadou and Anagnostopoulou (1998) in order to place Serbian in the typology of *pro*-drop languages.

1) There is no overt expletive in Romance and Greek (examples adopted from Alexiadou and Anagnostopoulou 1998: 492):

(14) a. Juan leyo el libro. *Spanish*
 Juan read the book.
 b. Leyo Juan el libro.

(15) a. O Petros pandreftike tin Ilektra. *Greek*
 Peter married Ilektra.
 ‘Peter married Ilektra.’

 b. pandreftike o Petros tin Ilektra.
 married Peter Ilektra
 ‘Peter married Ilektra.’

✓ No overt expletive in Serbian:

(16) a. Ognjen vozi bicikl. *Serbian*
 Ognjen-NOM sg.m. ride-PRS. 3.sg. bicycle-ACC
 ‘Ognjen rides a bicycle’

b. Vozi Ognjen bicikl.
 ride-PRS. 3.sg. Ognjen-NOM sg.m. bicycle-ACC
 ‘Ognjen rides a bicycle’

(17) a. Devojčica jede sladoled. *Serbian*
 girl-NOM sg.f. eat-PRS. 3sg. ice cream-ACC
 ‘A girl eats an ice cream’

b. Jede devojčica sladoled.
 eat-PRS. 3sg. girl-NOM sg.f. ice cream-ACC
 ‘A girl eats an ice cream’

- Note that VSO word order is not ungrammatical, but it is not neutral. While VS order is possible with unaccusative predicates, VSO order with accusative object is not commonly used.

2) SVO/VSO alternation in embedded contexts in Greek (examples adopted from Alexiadou and Anagnostopoulou 1998: 495):

(18) i idisi oti (o Petros) episkeftike (o Petros) tin Ilektra. *Greek*
 the news that Peter visited Peter Ilektra
 ‘The news that Peter visited Ilektra’

(19) a. istina da je Jovan stigao *Serbian*
 truth that AUX-3sg. Jovan-NOM arrive-PTCP. 3sg.m.
 ‘The truth that Jovan arrived’

b. istina da je stigao Jovan
 truth that AUX-3sg. arrive-PTCP. 3sg.m. Jovan-NOM
 ‘The truth that Jovan arrived’

Adverbs can rise to the highest position in embedded clause:

(20) a. činjenica da Marija stiže **sutra** *Serbian*
 fact that Marija arrive-PRS. 3sg. tomorrow
 ‘The fact that Marija arrives tomorrow’

b. činjenica da **sutra** stiže Marija

c. činjenica da **sutra** Marija stiže

d. činjenica da stiže **sutra** Marija

e. činjenica da Marija **sutra** stiže

✓ SVO/VSO alternation in embedded contexts in Serbian

3) In Greek postverbal subjects occur with all eventive predicates, transitives and intransitives, alike (Alexiadou and Anagnostopoulou 1998: 495):

(21) efige o Petros. *Greek (unaccusative)*
 left Peter
 ‘Peter left.’

(22) epekse o Petros. *Greek (unergative)*
 played Peter
 ‘Peter played’

(23) ektise i Maria to spiti. *Greek (transitive)*
 built Mary house
 ‘Mary built the house’

(24) Stigla je Marija. *Serbian (unaccusative)*
 arrive-PTCP. sg.f. AUX-3sg. Marija
 ‘Marija arrived’

(25) Napisao je Jovan knjigu. *Serbian (accusative)*
 write-PTCP. sg.m. AUX-3sg. Jovan-NOM book-ACC

‘Jovan wrote a book’

- ✓ There is no intransitivity constraint.

4) VS orders in NSLs do not display and DR effects (Alexiadou and Anagnostopoulou 1998: 512):

(26) diavase ena pedi/kathe pedi to vivlio *Greek*
 read a child/every child book
 ‘A/every child read a book.’

(27) Čita dete/svako dete knjigu. *Serbian*
 read child/every child book
 ‘A/every child read a book.’

- ✓ Serbian do not show DR effects.

5) In Greek VSO orders the subject is VP internal. Moreover, Greek has the following word-order: auxiliary – aspectual adverb – participle – light manner adverb – subject (Alexiadou and Anagnostopoulou 1998: 496)

(28) a. an chi idhi diavasi_j [VP [kala [VP o Petros t_j to mathima]]] *Greek*
 if has already read well Peter the lesson
 ‘If Peter has already read the lesson well.’

b. *an chi idhi o Petros_i diavasi_j [VP [kala [VP t_i t_j to mathima]]]

(29) Serbian allows VP-external subjects:

- ✓ Ako je već Petar pročitao dobro lekciju.
 if AUX-3sg. already Petar read-PTCP. 3sg.m. well lesson
 ‘If Petar has already read the lesson well’

- ✓ Ako je Petar već pročitao dobro lekciju.

- ✓ Ako je Petar već dobro pročitao lekciju.

- % Ako je već pročitao dobro Petar lekciju.

- * Ako Petar je već pročitao dobro lekciju.

- ✓ Ako Petar ponekad nauči brzo lekciju.
 if Petar sometimes learn-PRS. 3sg. fast lesson
 ‘If Peter sometimes learns the lesson fast’

- ✓ Ako Petar ponekad brzo nauči lekciju.

- ✓ Ako Petar ponekad nauči brzo lekciju.

- ✓ Ako ponekad Petar nauči brzo lekciju.

- % Ako ponekad nauči brzo Petar lekciju.

Table 7: Subject properties [adopted from Alexiadou and Anagnostopoulou 1998: 499]

	Overt Expletive	DR effects	VP internal subjects	Intransitivity
Icelandic	+	+	–	–
English	+	+	+	+

Greek	–	–	+	–
Celtic	–	–	–	–
Serbian	–	–	– (!)	–

Assuming that our previous discussion is on the right track, we can present the following proposal:

- Full *pro*-drop languages are not a coherent group, as it has been observed for partial *pro*-drop languages (Alexiadou and Carvalho 2017).
- As two full *pro*-drop languages, Serbian and Greek share various properties. However, in Slavic languages SVO order is dominant while VSO order is always associated with focus. Unlike Greek, Serbian allows external subjects.
- Serbian language has TP with overt subject in SpecTP.
- Overt subject must be in nominative case.
- Over subject shows obligatory agreement with finite verb both in complex and non-complex tenses.
- Source of nominative: T
- Verbs have a strong [+D] feature by virtue of strong agreement morphology. As Fukuda et al (2016) demonstrate, the EPP on T is parasitic on this D feature.
- Feature checking: verb in T – nominative subject.

(30) Jovan je čitao knjigu. *Past*
 Jovan-NOM sg.m. AUX 3sg. read-PTCP. sg.m. book
 ‘Jovan was reading a book’

(31) Jovan je bio čitao knjigu *Pluperfect*
 Jovan-NOM sg.m. AUX 3sg. be-PTCP. sg.m. read-PTCP. sg.m. book
 kada je Marija ušla u sobu.
 when AUX 3sg. Marija- NOM sg.f. enter-PTCP. sg.f. PREP. room
 ‘Jovan was reading a book when Maria entered the room.’

(32) Teodora spava. *Present*
 Teodora-NOM sg. f. sleep-PRS 3sg.
 ‘Teodora is sleeping’

(33) Ja ću ići u pozorište sutra. *Future 1*
 I AUX.1sg go-INF. PREP. theater tomorrow
 ‘I will go to the theater tomorrow.’

4.3. Underspecification

- Despite strong agreement morphology verbal affixes should not be considered as perfect agreement markers.
- Mismatches in gender agreement registered in Future 1 and all non-complex tenses (Present, Imperfect, Aorist) so far.
- Adjectival inflection cross-linguistically (French and Russian examples adopted from Bobaljik, lecture notes):

(34) a. (Jean) il est intelligent.
 (John) he is intelligent-[Ø]
 ‘John is intelligent.’

French

b. (Marie) elle est intelligent-e / *intelligent
 (Maria) she is intelligent-[FEM] / intelligent-[Ø]
 ‘Maria is intelligent.’

(35) a. (Vanja) on bolen.
 (John) he sick-[Ø]
 ‘John is sick.’

Russian

b. (Masha) ona bol’n-a / *bolen
 (Maria) she sick-[FEM] / sick-[Ø]
 ‘Maria is sick.’

(36) a. (Jovan) on je pametan. [MASC]
 (Jovan) he is smart-[Ø]
 ‘Jovan is smart’

Serbian

b. (Ana) ona je pametn-a. / *pametan
 (Ana) she is smart-[FEM] / *pametan [Ø]
 ‘Ana is smart’

- While third person pronoun agrees with an adjective (34), in first and second person pronoun gender is not contrastive in Russian:

(37) a. ja bol’n-a I sick-FEM ‘I am sick’
 b. ja bolen-Ø I sick-MASC ‘I am sick’

[adopted from Bobaljik 2015: 2]

Table 8: Non-contrastive gender in Serbian

	[SG]	[PL]
[MASC]	Ja sam pametan. I-1sg be-1.sg PRS. smart-[Ø] sg ‘I am smart’	Mi smo pametn-i. We-1pl be-1pl PRS. smart-[MASC] pl ‘We are smart’
[FEM]	Ja sam pametn-a. I-1sg be-1.sg PRS. smart-[FEM] sg ‘I am smart’	Mi smo pametn-e. We-1pl be-1pl PRS. smart-[FEM] pl ‘We are smart’
[MASC]	Ti si pametan. You-2sg be-1.sg PRS. smart-[Ø] ‘You are smart’	Vi ste pametn-i. You-2pl be-2pl PRS. smart-[MASC] pl ‘You are smart’
[FEM]	Ti si pametn-a. You-2sg be-1.sg PRS smart-[FEM] sg ‘You are smart’	Vi ste pametn-e. You-2pl be-2pl PRS. smart-[FEM] pl ‘You are smart’

- This type of mismatch in Distributed Morphology is called **underspecification**. Realizational approach of DM explains the competition one: many assuming existence of three different lists (table below).
- Compared with the approach of classical European structuralism embodied in Saussurean tradition, DM differ in three respective senses:

Table 9: DM vs. Traditional Morphology

[according to Bobaljik 2015]

Distributed Morphology	Traditional Morphology
✓ a list of the syntactic atoms, manipulated by (and thus accessed by) the syntax, in the construction of complex terminal nodes	✓ a list of the minimal meaningful units of grammar or building blocks of words
✓ a list of vocabulary items that spell out (morpho)-syntactic structures	✓ a list of the minimal pairings of form (sound) and function (meaning)
✓ a list of the idiosyncratic meanings of individual pieces in particular contexts	✓ a list of the non-compositional aspects of the meaning of words/morphemes in particular contexts

- Mismatches between the abstract nodes of the syntactic atoms and the nodes that are spelled out by vocabulary items (Bobaljik 2015: 2) cause underspecification in languages like Russian and Serbian.

Questions that arise:

- If underspecification occurs systematically in non-complex tenses and adjectival predicates, what is the role of auxiliary verb?
- It is important to note that auxiliary verb is exactly the same for masculine and feminine gender.
- How to further investigate participle suffixes and verb suffixes?

4.4. Clauses with *pro* subjects

- As Alexiadou and Anagnostopoulou (1998) elucidates full pro-drop languages “satisfy the EPP via verb raising because they have verbal agreement morphology with the categorial status of a pronominal element. From this it follows that: (i) preverbal subjects are not in A-position and (ii) VSO orders never involve a covert expletive (Alexiadou and Anagnostopoulou 1998: 494).

(38) Stigli smo u pozorište na vreme.
 arrive.PTCP. pl. AUX-1pl. at theatre-LOC on time
 ‘(We) arrived at the theatre on time’

(39) Čitam knjigu.
read-PRS. 1sg. book-ACC
'(I) am reading a book'

(40) Učićeš nemački sutra ujutru.
learn-FUT. 2sg. German tomorrow morning
'You will be learning German tomorrow morning'

- Note that typical word-order in clauses with overt subjects is: subject-auxiliary-participle
- Word-order in clauses with *pro* subjects: participle-auxiliary (38) or participle-reflexive pronoun:

(41) Speaker A: Marija se vratila?
Marija-NOM. REFL. MORPH. return-PTCP. sg.f.
'Has Maria returned?'

Speaker B: Da, vratila se.
Yes, return-PTCP. sg.f. REFL. MORPH.
'Yes, she has returned'

Question: Is this movement associated with V-raising as a main way of satisfying the EPP or is it phonologically-driven?

4.6. Locatives

- It is well-known that in clauses with *pro*-subjects EPP requirement is satisfied by V-raising (Alexiadou & Carvalho 2017).
- Fronted locative forms are usual in Serbian:

(42) U pozorište smo stigli na vreme.
at theatre-LOC AUX-1pl. arrive.PTCP. pl. on time
'(We) arrived at the theatre on time'

(43) U svojoj sobi čitam knjigu.
in my room read-PRS. 1sg. book-ACC
'(I) am reading a book in my room'

(44) U ponedeljak ćeš učiti nemački.
on Monday AUX.2sg. learn-INF. German
'You will be learning German on Monday'

- However, in *pro*-drop languages locatives only have a discourse function, i.e. they do not satisfy the EPP of this type of language (Alexiadou and Carvalho 2017: 53).
- Even in one special structure with *pro* subject and fronted locative form, that would easily lead us to the conclusion that Serbian could satisfy EPP in multiple ways, EPP requirement do not display inclusive characteristics.
- For the purposes of the further discussion, let me pay attention to analysis of locatives in partial and full *pro*-drop languages proposed in Alexiadou & Carvalho (2017), that can shed a new light to relation between "subject-typology" and EPP. In this research, authors examine the role of locatives in two partial *pro*-drop languages, Finnish and

Brazilian Portuguese, on the one hand, and in one full *pro*-drop language, Greek, concluding that locatives show different syntactic behaviour even in a group of mutually similar languages. As authors point out, one of the crucial differences between Finnish and Brazilian Portuguese lies in the use of locatives in null impersonals. While in Brazilian Portuguese, the mentioned elements behave as arguments, in Finnish they show expletive-like behaviour.

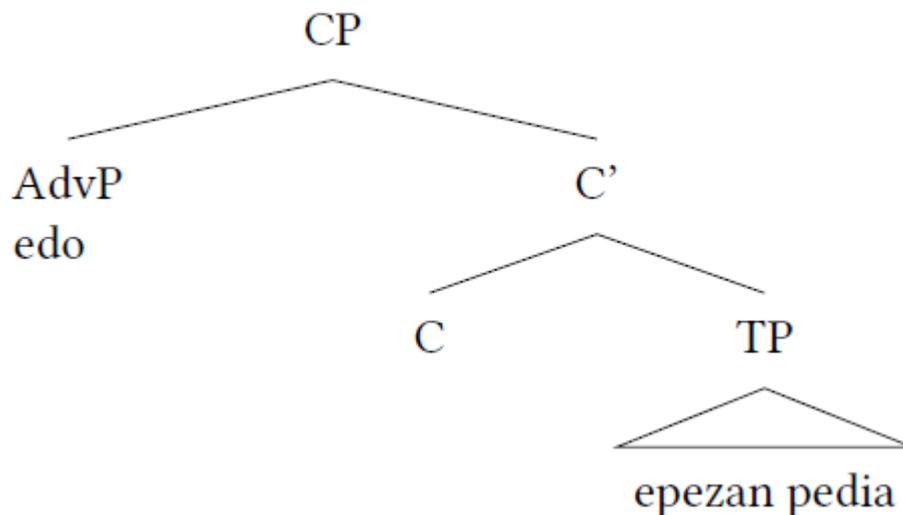
- This inconsistency within a group of partial *pro*-drop languages, authors explain in terms of the INFL: “BP can specify 3rd non-referential person with a locative feature in INFL, hence locatives can be arguments and expletives in this language. In Finnish, locatives satisfy the EPP, i.e. are pure expletives, as T bears no specification for location regardless of time or person specification.” (Alexiadou & Carvalho 2017: 61).
- Contrary, in Greek, as a full *pro*-drop language, V-raising is considered as the main way of satisfying the EPP (Alexiadou & Carvalho 2017). Therefore, in structures like (27) locative is situated in CP, where it is associated with focus role:

(45) Greek (Alexiadou & Carvalho 2017: 54)

edo epezan pedia prosektika / me ti hristi bala / epitudes
 here played:3PL child:PL carefully / with the golden ball / on purpose
 ‘Children play here carefully / with the golden ball / on purpose’

As diagram (46) illustrates, locative form *edo* in Greek is outside TP:

(47) Locative in CP (Alexiadou & Carvalho 2017: 55)



- Recall that Serbian is a full *pro*-drop language, hence it should show similar syntactical behaviour as Greek.

4.6.1. Locatives in coordinate clauses

- In clausal coordination with *pro* subjects in both clauses illustrated in (29), locative form *na reveru* (‘on lapel’) occupies the initial position in the second conjunct. Despite the fact that the absence of an overt subject could lead to the conclusion that locative form satisfies EPP, which would mean that Serbian allows both inclusive and traditional EPP,

I am more inclined to believe that locative form occupies CP, whereas EPP is satisfied by V-raising:

(48) Serbian

Govorio je jakim ruskim akcentom a na reveru
 speak-PTCP.3sg.m. AUX sg. strong Russian accent-INSTR and on lapel-LOC

je nosio Nahimovski orden.
 AUX sg. wear-PTCP. 3.sg.m. Nakhimov Order-ACC

‘He was speaking with strong Russian accent and he was wearing the Order of Nakhimov on lapel’

- However, I consider this example as slightly controversial. In the first conjunct with *pro*-subject EPP is satisfied by V-raising:

(i) Govorio je jakim ruskim akcentom
 speak-PTCP.3.sg.m. AUX sg. strong Russian accent-INSTR

but in the second conjunct occurs order typical for clauses with overt subject (AUX-PTCP):

(ii) na reveru je nosio Nahimovski orden.
 on lapel-LOC AUX sg. wear-PTCP. 3.sg.m. Nakhimov Order-ACC

- If we try to eliminate locative form and keep the existing order, coordinated structure will be ungrammatical:
 *Govorio je jakim ruskim akcentom i je nosio Nahimovski orden.
- In this case, V-raising is necessary in the second conjunct in order to ensure grammaticality:

Govorio je jakim ruskim akcentom a
 speak-PTCP.3.sg.m. AUX sg. strong Russian accent-INSTR and

nosio je Nahimovski orden.
 wear-PTCP. 3.sg.m. AUX sg. Nakhimov Order-ACC

‘He was speaking with strong Russian accent and he was wearing the Order of Nakhimov’

- From the analysis presented, a question arises: *If in the second conjunct locative form is outside TP, why then does the form with locative blocks word order typical for clauses with pro?*
- Additionally, this example is controversial from a semantic point of view. Conjunction (/coordinator) *a* is used in both conjoined and disjointed coordination, despite its preference for disjointed forms. In example (28) only possible reading is conjoined. However, if locative form would be omitted coordinated structure will be semantically infelicitous, since *speaking with Russian accent* and *wearing the Order of Nakhimov*, according to our encyclopaedic knowledge, should not be mutually exclusive.

5. Conclusion

- In clauses with overt subjects the EPP is satisfied by strong [+D] feature on T. The EPP on T is parasitic on D feature.

- Serbian language has a DP projection, although it is possible that in several cases DP cannot be projected.
- In clauses with overt nominative subjects, nominative that has D is checked by T, hence the EPP is satisfied directly.
- Strong agreement morphology allows Serbian to satisfy the EPP via V-raising.
- V-raising is obligatory in clauses with *pro*-subjects. In this case the EPP is satisfied indirectly.
- There is a possibility that full *pro*-drop languages are not a coherent group. Further partition is caused by word-orders, both dominant and possible.
- Serbian language satisfies the EPP in traditional sense, since any constituent cannot satisfy it. Fronted elements, i.e. locatives, are focalized and situated in CP.

ABBREVIATIONS

1, 2, 3	first, second, third person
sg.	singular
pl.	plural
MASC/m.	masculine
FEM/f.	feminine
NEUT	neutral
NOM	nominative
ACC	accusative
INSTR	instrumental
LOC	locative
AUX	auxiliary verb
PTCP	participle
PRS	present
FUT	future
INF	infinitive
PREP	preposition
REFL.MORPH.	reflexive morpheme

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