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Anja Šarić

NOMINALIZATIONS, DOUBLE GENITIVES AND POSSESSIVES

EVIDENCE FOR THE DP-HYPOTHESIS IN SERBIAN

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Anja Šarić

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Deda Koki i Simoni.

None of them is here now. One not anymore, and one not yet.

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Acknowledgment

I promised myself I would finish this dissertation before I leave Germany and move back to Serbia. I am happy to report I have honored this promise. Well, almost... It is my last day here in Frankfurt and right now I am sitting in front of *Rotunde* (I have a selfie to prove it!), contemplating the very final part of my concluding chapter. I've been staring at the headline for a good hour now, and it's been staring right back at me. Looking at this word **conclusion**, I can't help but think of my writing of these last few concluding sentences as the end of an era. I started reminiscing about the past three years and all the people that came (back) into my life or just passed through, and most importantly – those who stayed. Without them I wouldn't be where I am right now. So, yes, I am writing the acknowledgments before having finished with the actual work. So here it goes.

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This book is a revised version of my PhD thesis.

1 Introduction

The underlying question behind any attempt at investigating a particular phenomenon in whichever of the world's languages is a rather straightforward one: what are the building blocks of the human language? In other words, which aspects of the human language are innate in the Chomskyan sense, and are part of the Universal Grammar (UG). In this dissertation, I address the issue of the universality of the Determiner Phrase (DP) projection by looking at a rather peculiar behavior of nominalizations in Serbian,¹ which has been taken as evidence against the DP projection in this language.

Literature on the universality of the DP projection has been divided between two opposing camps – those who claim for it to be present cross-linguistically, i. e. universally (e. g. Progovac, 1998; Stanković, 2013, 2014; Bašić, 2004 for Serbian; Leko, 1999 for Bosnian; Caruso, 2013 for Croatian; Rappaport, 1998, 2000 for Polish; Engelhardt & Trugman, 1998; Pereltsvaig, 2001 for Russian, among others) and those who argue that it is parameterized (e. g. Zlatić, 1997, 1998; Willim, 2000; Bošković, 2008a et seq.). More specifically, the proponents of the parametrized DP hypothesis argue that languages without articles do not project the DP layer. These languages fall under the umbrella term of NP languages. My aim here is to look at Serbian – a well-researched articleless language (i. e. NP language) in this respect. I focus on the so-called double adnominal genitive constructions, which have been argued not to be possible in NP languages, yet we find them in Serbian. I argue that in order to account for the existence of these constructions in Serbian, it is crucial for the DP layer to be present.

However, I want to point out that I do not want to claim that showing that Serbian projects the DP layer entails that DP indeed is a universally present category, although that would be a desirable outcome. Instead, my goal in this dissertation is to show that DP hypothesis must be assumed in an articleless language like Serbian (and possibly other (Slavic) languages lacking overt articles) and that this outcome has welcoming consequences. Moreover, this research should serve as a hint that the universality of the DP projection should not be quickly rejected, at least not based on the double-genitive data from Serbian.

¹ The reason I refer to the language under scrutiny as Serbian, and not Serbo-Croatian or Bosnian/Serbian/Croatian, which are the labels commonly found in the literature, is a quite practical one. Namely, as the constructions in question receive rather mixed acceptability judgments from the native speakers, and I have only consulted speakers of the Serbian variety, I consider it unjustified and possibly inaccurate to refer to it by any other name, as it is quite possible that speakers of the Croatian and/or Bosnian variety would not share the judgments with the consulted speakers of the Serbian variety.

1.1 Object of investigation and research questions

To my knowledge, very little attention in the literature on DP in Serbian has been given to the distribution and the syntactic make-up of arguments within the nominal domain, specifically, to the double adnominal genitive constructions. This lack of solid research might as well be due to Bošković's (2008a) adnominal genitives parameter, which predicts for these constructions to be out in Serbian.

- (1) **Adnominal genitives parameter:** Languages without articles do not allow transitive nominals with two genitives (Bošković, 2008a: 116).²

Bošković builds this generalization on the observation of Willim (2000) that English (2a), German (2b), Catalan (2c) and Arabic (2d), all of which are article languages, allow double genitive constructions with transitive nominals. In contrast, Polish (3 a-e), Russian,³ Czech and Latin,⁴ all of which are articleless languages, disallow this. Consider examples from Willim (2000: 332).

- (2) a. John's reconstruction of an 18th-century French village
 b. Hannibals Zerstörung der Stadt
 'Hannibal's destruction of the city'
 c. l'avaluació de la comissió dels resultats
 the.evaluation of the committee of.the results
 'the committee's evaluation of the results'
 d. taxiib-u al-ruumaan-i il-kartaaz-a
 destruction-NOM DEF-Romans-GEN of-Carthage-GEN
 'the Roman's destruction of Carthage'

2 This generalization does not extend to possessives, which are, according to Bošković essentially adjectives and as such do not require for their case to be assigned under the same mechanisms as that of nouns. Furthermore, possessives and genitives cannot be subsumed in Serbian. Genitive is a full-fledged instance of case, and possessive is not. Nouns in the possessive form get case from the external assigner. I address the issue of possessives in chapter 6, where I argue that they are in fact exponents of D, and not adjectives.

3 Certain nominals in Russian actually do allow double genitives. I discuss the case of Russian later on in the thesis.

4 Latin seems to have allowed double genitives with eventive nouns (Giusti and Oniga, 2007).

- (1) omnium expectatio visendi Alcibiadis
 everybody.GEN.PL expectation.NOM.SG to.see.GER.GEN Alcibiadis.GEN.SG
 'everybody's expectation to see Arcibiadis'

- (3) a. odkrycie Ameryki przez Kolumba
discovery America.GEN by Columbus.ACC
'the discovery of America by Columbus'
- b. *odkrycie Ameryki Kolumba
discovery America.GEN Columbus.GEN
- c. *odkrycie Kolumba Ameryki
- d. *Kolumba odkrycie Ameryki
- e. *Ameryki odkrycie Kolumba

Willim (2000) suggests that the fact that these constructions are available in certain languages, points to the conclusion that the reason they are disallowed in Polish cannot be due to a semantic constraint, i. e., due to the lack of an available theta-role within nominalizations and the necessity of expressing the external theta-role via a semantically contentful preposition (*by* in English, *durch* in German etc.). Instead, Willim concludes that double-genitive constructions are ill-formed in Polish "as a result of a morphological requirement that cannot be met within the nominal complex" (2000: 333). More specifically, as genitive case must be licensed and identified within the projection of the noun (Chomsky, 1986a; Longobardi, 1996), Willim attributes the ill-formedness of the Polish examples to the lack of the DP layer in that language: without the DP layer, only one argument can be in the correct licensing relation for the assignment of the genitive case.

Bošković (2008a: 116) further illustrates the phenomenon with the contrast between German and Polish.

- (4) a. Hannibals Eroberung Roms
Hannibal.GEN conquest Rome.GEN
'Hannibal's conquest of Rome'
- b. *podbicie Rzymu Hannibala
conquest Rome.GEN Hannibal.GEN
intended: 'Hannibal's conquest of Rome'

The genitive case on the complement of the deverbal noun (i. e. the theme argument: *Rome*) in both (4a) and (4b) comes from the deverbal noun itself. The genitive case on the agent argument (i. e. *Hannibal*) comes from the head D. According to Bošković, as the linearly second genitive (i. e. the agent genitive) is assigned in the DP projection, the lack of the DP layer in NP languages blocks the second genitive argument.

The double genitive construction in (4a) in German – a language with articles – is thus perfectly well formed, since *Hannibal* gets genitive case from D. In

contrast, the same construction is unacceptable in Polish (4b) – an articleless language, since there is no D to assign case to *Hannibal*. Analogously, the same construction is predicted to be out in Serbian. Serbian does not have articles, hence it has no DP layer. Therefore, in the absence of D, the second genitive argument should not be assigned case. This prediction is borne out to a certain extent, as native speakers of Serbian generally do not accept (5a). Instead, they prefer the version in which the external argument is in the possessive form (5b). However, the construction becomes perfectly well-formed once the proper name is made complex (5c).⁵

- (5) a. ??/* osvajanje Rima Hanibala
 conquest Rome.GEN Hannibal.GEN
 ‘Hannibal’s conquest of Rome’
- b. Hanibalovo osvajanje Rima
 Hannibal.POSS conquest Rome.GEN
 ‘Hannibal’s conquest of Rome’
- c. osvajanje Rima Hanibala Barke
 conquest Rome.GEN Hannibal.GEN Barca.GEN
 ‘Hannibal Barca’s conquest of Rome’

A legitimate question one could very well ask is why is the German example in (4a) compared to the Serbian example in (5a) and not the one in (5b), since linearly, they seem more comparable. (4a) and (5b) are incompatible for the reasons pertaining to the categorial status of possessive forms in Serbian.⁶ According to the contra DP camp, possessives do not have a DP status in Serbian, but are analyzed as adjectives, and as such do not require licensing in the same way as full-fledged DPs do. In chapter 6, I re-evaluate the categorial status of Serbian possessives and I show that they do in fact have a certain amount of D flavor and should be analyzed as exponents of D. Although possessives show mixed behavior between that of adjectives and DPs, the fact that in certain respects they do behave like DPs (e. g. binding or coordination) goes to suggest that DP should be postulated in Serbian.

⁵ The majority of my informants judge (5a) as unacceptable, although a small number of them marks it as marginal. However, there is a clear difference in the acceptability judgments between (5a) and (5c), where all the informants judged (5c) as well-formed. In chapter 3, I discuss in more detail the acceptability judgments of double genitive constructions.

⁶ Helmut Weiß (p.c.) points out to me that *Hannibals* in (4a) is actually not a morphological genitive case, but presumably more comparable to the Serbian possessive construction. This distinction between possessives and genitives, as I will argue in this thesis, is irrelevant with respect to the existence of the DP layer, as I show that they both are DPs.

Apart from agents expressed as complex proper names like the one in (5c), agents expressed with adjectivally modified nouns (6a) also render these constructions grammatical, whereas bare nouns (6b) elicit mixed acceptability judgments from the native speakers, although the majority marks them as ill-formed.⁷

- (6) a. osvajanje Rima velikog generala
conquest Rome.GEN great.GEN general.GEN
'great general's conquest of Rome'
- b. ??/* osvajanje Rima generala
conquest Rome.GEN general.GEN
intended: 'general's conquest of Rome'

However, there is a clear difference in the acceptability judgments between examples with simple proper names (5a) and bare count nouns (6b) on the one hand, and the ones with pronouns on the other. The examples involving pronouns are unanimously judged as ill-formed.

- (7) *osvajanje Rima njega
conquest Rome.GEN he.GEN
intended: 'his conquest of Rome'

It should be noted that the ill-formed genitive examples become perfectly well-formed once the agent is expressed in a possessive form, as already shown in (5b).

- (8) a. generalovo osvajanje Rima
general.POSS conquest Rome.GEN
'general's conquest of Rome'
- b. njegovu osvajanje Rima
his.POSS conquest Rome.GEN
'his conquest of Rome'

Interestingly, it is precisely the well-formed genitive examples that do not have possessive counterparts. Namely, for independent reasons, possessive formation in Serbian is disallowed with complex nouns.⁸ In these cases, the adnominal genitive construction is used to express the intended meaning.

- (9) a. *veliki generalova armija
great general.POSS army
intended 'great general's army'

⁷ Generally, the informants who like (5a) also like (6b), and vice versa – those who do not like (5a) also do not like (6b).

⁸ I address the possessive formation in Serbian in chapter 6.

- b. armija velikog generala
 army great.GEN general.GEN
 ‘great general’s army’
- (10) a. *veliki generalovo osvajanje Rima
 great general.POSS conquest Rome.GEN
 intended ‘great general’s conquest of Rome’
- b. osvajanje Rima velikog generala
 conquest Rome.GEN great.GEN general.GEN
 ‘great general’s conquest of Rome’

Based on these data, an ad hoc conclusion would be that genitive agents are in a complementary distribution with the possessive agents: whenever possessive is unavailable, speakers use the genitive form to express agents of derived nominals. It would thus seem that the speakers use the otherwise ill-formed genitive agents to circumvent the flaw in the system. However, agents of derived nominals can also be expressed with the *od strane phrase* (the equivalent of the English *by phrase*) (11a), which is used in passive constructions (11b).

- (11) a. osvajanje Rima od strane (velikog) generala/
 conquest Rome.GEN from side great.GEN general.GEN
 Hanibala (Barke)
 Hannibal.GEN Barca.GEN
 ‘the conquest of Rome by the (great) general/ Hannibal (Barca)’
- b. Rim je osvojen od strane Hanibala.
 Rome.NOM is conquered from side Hannibal.GEN
 ‘Rome was conquered by Hannibal.’

The possibility of expressing agents of derived nominals with the *od strane phrase* makes it unlikely for genitive agents to be a sort of a last resort option for expressing agents in the absence of the appropriate possessive construction. It thus seems that these genitive-agent constructions (i. e. double genitive constructions) are made available for independent reasons, and as such require attention in their own right.

Moreover, the difference between nominalizations and passives lies in the possibility of expressing agents in the genitive case. While, as we have seen, agents in nominalizations can be expressed as either *od strane phrase* or as a genitive phrase; agents in passive constructions can only be expressed with the *od strane phrase* and never with the genitive phrase (12a). Agents in passives cannot be expressed with possessives either (12b). The fact that neither genitives nor

possessives can be used in passives, points to the conclusion that they may in fact be quite similar in certain aspects.

- (12) a. *Rim je osvojen Hanibala/ velikog generala.
Rome.NOM is conquered Hannibal.GEN/ great.GEN general.GEN
intended: ‘Rome was conquered by Hannibal/ the great general.’
- b. *Rim je osvojen Hanibalov/ generalov.
Rome.NOM is conquered Hannibal.POSS/ general.POSS
intended: ‘Rime was conquered by Hannibal/ the general.’

It thus seems that whatever licenses the *od strane phrase* in passive constructions, is also present in nominalizations. On the other hand, whatever licenses the second genitive argument (i. e. assigns case to the agent) in nominalizations is absent in passive constructions. Additionally, whatever licenses the possessive form in nominalizations is not there in passive constructions.

Another point of comparison can be drawn from the so-called picture nouns like *fotografija* ‘photograph’. Adopting the terminology from Rappaport (1998), who follows Grimshaw’s (1990) generalizations, I refer to nouns like *fotografija* ‘photograph’ as result nouns, and what I have so far called nominalizations (e. g. *osvajanje* ‘conquest’), I sometimes also refer to as process nouns. Result nouns allow for the agent argument to be expressed either as a genitive phrase or as a possessive, but crucially not as a by-phrase.

- (13) a. Markova fotografija Frankfurta
Marko.POSS photograph Frankfurt.GEN
‘photograph of Frankfurt belonging to Marko/ by Marko’
- b. fotografija Frankfurta Marka Kostića
photograph Frankfurt.GEN Marko.GEN Kostić.GEN
‘photograph of Frankfurt by Marko Kostić/belonging to Marko Kostić’
- c. *fotografija Frankfurta od strane Marka Kostića
photograph Frankfurt.GEN from side Marko.GEN Kostić.GEN
intended: ‘photograph of Frankfurt by Marko Kostić’

Taking into account result nominals, process nominals, and passive constructions, the distribution of the different forms in which the agent argument can be expressed is thus the following: possessives and genitives are compatible with result and process nominals, but not with passives; and the *od strane phrase* is compatible with process nominals and passives, but not with result nouns. It thus seems that whatever licenses possessives and genitives is absent from passive constructions, and whatever licenses the *od strane phrase* is absent from result nominals.

Table 1.1: Licensing of different forms of agents.

Agent	Result nouns	Process nouns	Passives
POSSESSIVE	✓	✓	X
GENITIVE	✓	✓	X
OD STRANE	X	✓	✓

Similar observations regarding the realization of the agent argument have been made for Russian, another articleless language within the Slavic language family, with the crucial difference being the inability of expressing the agent as genitive in process nominals (14b). While result nouns allow for the external argument to be expressed in the genitive case (14a), in process nouns, it must be expressed in the instrumental case (15a), which is, interestingly, the way in which the external argument is expressed in passives (15b). Consider the Russian data (Rappaport, 1998).

- (14) a. fotografija krest'jan Smirnova
 photograph peasants.GEN Smirnov.GEN
 'the photograph of the peasants of Smirnov'
- b. *fotografirovanie krest'jan Smirnova
 photograph peasants.GEN Smirnov.GEN
 intended: 'Smirnov's photographing of the peasants'
- (15) a. fotografirovanie krest'jan Smirnovym
 photograph peasants.GEN Smirnov.INST
 'Smirnov's photographing of the peasants'
- b. krest'yane fotografiruyutsya Smirnovym
 peasants.NOM photographed Smirnov.INST
 'peasants are photographed by Smirnov'

As we have seen already for Serbian, the well-formedness of (5c), (6a) and (13b) shows that derived nominals with two genitive arguments are allowed in this language and automatically renders Bošković's adnominal genitives parameter in (1) inapplicable to it. Additionally, in light of the Russian data, it could also be concluded that the adnominal genitives parameter does not hold for Russian either (but cf. (14b)). As a matter of fact, Polish – another Slavic language without articles – behaves in the same way as Russian.⁹ The agent of result nouns must be in

⁹ I thank Marcin Wągiel for the Polish data.

the genitive case and the *by phrase* which is used in passives (16c) is disallowed (16a). With process nouns, on the other hand, the agent must be expressed as a *by phrase*, and genitive is disallowed (16b).

- (16) a. fotografia mieszkańców Kazimierza Benedykta
 photograph inhabitants.GEN Kazimierz.GEN Benedykt.GEN
 Dorysa/ *przez Benedykta Dorysa
 Dorys.GEN/ through Benedykt.ACC Dorys.ACC
 ‘the photograph of inhabitants of the Kazimierz town of Benedykt Dorys’
- b. fotografowanie mieszkańców Kazimierza *Benedykta
 photograph inhabitants.GEN Kazimierz.GEN Benedykt.GEN
 Dorysa/ przez Benedykta Dorysa
 Dorys.GEN/ through Benedykt.ACC Dorys.ACC
 ‘photographing of inhabitants of the Kazimierz town of Benedykt Dorys’
- c. Mieszkańcy Kazimierza są fotografowani przez
 inhabitants.NOM Kazimierz.GEN are photographed.NOM through
 Benedykta Dorysa.
 Benedykt.ACC Dorys.ACC
 ‘Inhabitants of the Kazimierz town are photographed by Benedykt Dorys.’

The existence of these constructions in these three articleless languages raises a number of interesting questions, all to a greater or lesser extent related to the existence of the DP layer.

The central question pertains to case. This question is two-fold. First, there is the question of what licenses the genitive agent argument, and in relation to this, whether what I have called *agent* so far in these constructions is a full-fledged argument of the nominal. Additionally, the possibility of expressing the agent with the Serbian equivalent of the English *by phrase* which is optionally used to express the agent theta role makes the story even more interesting. Taking into account the Case Filter and the Visibility Condition, the agent genitive must be case marked in order for it to be visible for theta-marking. Relating this more directly to the DP hypothesis, Longobardi (1994) has argued extensively that nominal expressions have to be DPs in order to be able to function as arguments. The question then becomes what is it that Case-marks the agent genitive, in turn making it visible for the theta-marking.

The second question pertaining to case relates to its morphological instantiations. Namely, how does the agent genitive acquire genitive morphology. More

specifically, whether the agent surfaces in the genitive form because this has been assigned to it by a designated head (possibly D), or whether it does so due to something else, or whether it is just this particular language's way of spelling out nominals that do not get specified for case in the course of the derivation (i. e. default case).

When it comes to morphological processes, the formation of possessive forms certainly deserves proper attention. The restrictions that Serbian imposes on possessive formation is also interesting from the perspective of the DP hypothesis. The contra DP camp, primarily led by Bošković, argues that Serbian possessives are essentially adjectives, and as such do not allow adjectival modification (adjectives cannot be modified by adjectives). However, the categorial status of Serbian possessives is far from clear as they seem to exhibit behavior typical for both adjectives and D-like elements.

Another interesting question pertains to the observed word order: deverbal noun → object → subject. Note that Serbian is an extremely free word order language, yet the adnominal genitive constructions like (5c) and (6a) have a very strictly fixed word order. In relation to this, the contrasts in (5) and (6) with respect to the acceptability judgments of simple/complex proper names and modified/bare nouns requires addressing.

Finally, putting the Serbian data into a bigger picture, the question arises with respect to the consequences that the existence of these constructions has on the DP hypothesis. In this dissertation, I address, among others, the questions I raised above. In what follows, I argue that postulating a DP layer in the extended projection of the noun in Serbian is essential for accounting for the phenomena at hand.

Thus, in this dissertation, based on evidence from the categorial status of possessives, argumenthood in the nominal domain, the morpho-syntactic structure of nominalizations, and the assignment of the genitive case, I argue for the postulation of the DP layer in Serbian.

1.2 Thesis outline

This thesis is composed of seven chapters, apart from this one, each of them dealing with different aspects of the questions under investigation.

Chapter 2 introduces the background literature with respect to the DP hypothesis. The chapter is subdivided into three sections. In section 2.1, I introduce the basic assumptions behind the DP hypothesis, together with the motivation for its postulation. In section 2.2, I discuss the DP hypothesis in Serbian, by addressing the debate between the two opposing camps – namely, those that argue for the presence of the DP in Serbian versus those who claim for it to be missing in this

language. Section 2.3 deals with some basic assumptions with regards to case assignment, which is one of the central questions of this thesis.

Chapter 3 illustrates the data relevant for the discussion I develop in the rest of the thesis. It consists of two subparts. Section 3.1 deals with different types of adnominal genitives in Serbian. In section 3.2, I report on two questionnaires I administered to native speakers of Serbian in order to confirm their judgments. The first questionnaire is about double genitive constructions and the second one about possessives.

Chapter 4 examines the double genitive constructions with respect to argumenthood. In section 4.1, I briefly summarize the account of Longobardi (1994), who argues that nominal expressions have to be DPs in order to function as arguments. This conclusion is reached through comparison between Italian and English; the difference between the two being that in Italian N to D raising is overt, and in English it is covert. In section 4.2, I summarize the account of Kovačević (2014), who was, according to my knowledge, the first one who observed that arguments in the nominal domain in Serbian follow Longobardi's predictions. In section 4.3, I revisit and modify observations and conclusions reached in Kovačević and in section 4.4, I propose that Serbian behaves like English in that it utilizes covert N to D raising.

Chapter 5 deals with the assignment of genitive in nominals. The chapter consists of 3 sections. Section 5.1 deals with the nature of the adnominal genitive case in Serbian and illustrates that it is an instance of structural case. In sections 5.2 and 5.3, I first describe two different accounts for double genitive constructions in Russian, and I then apply it to Serbian data. In 5.2, I present the analysis of Rappaport (1998), which, in line with the Traditional Case Theory, assumes a DP layer in order to account for the occurrence of the second genitive. Although the analysis is quite plausible, it nevertheless fails to offer a unified account of Russian and Serbian data, which would be a rather desirable outcome. Hence, in 5.3, I introduce a novel framework developed by Pesetsky (2013), which has a rather unorthodox treatment of case, but within which, nevertheless, the two languages can receive a unified account.

Chapter 6 concentrates on the questions regarding possessive forms. More specifically, their categorial status. The chapter is divided into four sections. Section 6.1 deals with the process behind possessive formation and the debate whether this is an instance of a derivational or an inflectional process. In section 6.2, I re-evaluate the evidence for the adjectival and the DP treatment of Serbian possessives and I conclude that they should be treated as exponents of D. In 6.3, I examine the cases of Russian possessives within the two frameworks introduced in chapter 5 – Rappaport (1998) and Pesetsky (2013). In 6.4, I apply and

slightly modify Pesetsky's account for Russian possessive forms and I propose an analysis for Serbian possessives.

Chapter 7 puts all the pieces of the puzzle together and offers an analysis of the constructions introduced in chapters 1 and 2. It is divided into two sections. Section 7.1 deals with the morpho-syntax of nominalizations, within the framework of Distributed Morphology and it provides evidence for different functional layers that they have. In section 7.2, I spell out the actual analysis for nominalizations involving double genitives, possessives and the *od strane phrase*.

Conclusions are drawn in chapter 8. The goal of this thesis is two-fold. Firstly, it aims to account for the double genitive constructions; and secondly, it aims to re-evaluate the DP hypothesis in Serbian in light of the existence of these constructions. Therefore, the final chapter puts the conclusions reached in this thesis into a bigger picture and discusses the consequences it has on the DP hypothesis. It also summarizes the questions that are left for future work.

2 Background literature

In this chapter, I give a brief overview of the DP hypothesis debate with a special focus on Serbian. I first present some general assumptions regarding the postulation of the DP layer cross-linguistically (section (2.1)), after which I turn specifically to the debate for Serbian (section (2.2)). Lastly, I discuss the issue of case assignment in the nominal domain, which has been linked to the DP layer (section (2.3)).

2.1 The DP hypothesis

The idea that the nucleus of nominal expressions (NEs) is something other than the noun itself has been around since the early '70s and can be traced back to the work of Jackendoff (1972). The earliest indications of a DP-flavored projection started with the works of Hogg (1977), Brame (1981, 1982) and Szabolcsi (1983), while the ones to actually make explicit proposals are, beside Abney (1987), authors like Szabolcsi (1987) or Olsen (1989), among others.

The idea behind the DP hypothesis is that there is more to nominal expressions than what is encoded in the noun heading it, just like there is more to clauses than the verb itself. In his influential work *Barriers*, Chomsky (1986a) proposed that functional elements like auxiliaries project to the phrasal level in the same fashion as lexical elements like nouns and verbs do. Chomsky applied his newly developed structure to verbs, which were thus proposed to be dominated by functional categories of inflection (IP) and complementizer (CP), forming an extended projection of the verb in the sense of Grimshaw (1991). Following the same line of reasoning, the proponents of the DP hypothesis argue that just like VP is dominated by a number of functional projections, so is NP – one of those projections being DP.

Ever since Abney's (1987) dissertation, much attention in the literature has been devoted to the analyses of nominal expressions cross-linguistically. Specifically, attempts have been made to show whether the DP hypothesis can be extended to languages without articles.¹⁰ Fundamentally, the DP hypothesis suggests that NPs project a functional layer on top of them, termed Determiner Phrase (DP). In other words, the introduction of the projection of D, which takes an NP complement, shifts the central role in the nominal complex from the noun to the

10 See, among others Pereltsvaig (2007) for Russian, Veselovská (2014) for Czech, Rutkowski (2002) for Polish and Bošković (2008b) for Serbian.

determiner sitting in D. The exponents of D are thus seen as heads in their own right, and no longer as specifiers of noun phrases.

In languages like English or German, articles are analyzed as heads of the DP projection. Apart from creating a position to host articles, the introduction of the DP layer created a much desired parallelism between the nominal complex and the clausal domain. Namely, just like VPs have a functional shell surrounding them, so do NPs. Under this view, the DP projection is seen as the counterpart of the TP or the CP projection in the clausal domain.¹¹

The proposed universality of the DP hypothesis has been challenged with languages without articles. The presence of the DP layer in such languages became a burning question for linguists working particularly on Slavic¹² languages. The question became whether these languages project the DP layer, or whether they lack it altogether. The underlying, and by all means a more intriguing question pertains to the universality of the DP layer: whether the functional DP projection is universally present and projects on top of NPs cross-linguistically, and whether it is, as such, a part of the UG, or whether it is the source of variation among languages in that it only projects in languages which have articles.

Looking at an articleless language like Serbian will not only shed some light on the structure of the nominal complex in a language without articles, but it will also offer some hints regarding the UG and the architecture of language, and ultimately lead to our better understanding of language acquisition and linguistic computation.

2.1.1 Motivation for the DP hypothesis

Alexiadou, Haegeman and Stavrou (2007) provide a systematic overview of types of evidence employed to postulate functional projections in the clausal domain, which could be extended to the nominal one. I briefly summarize some of the motivation behind the postulation of functional projections as given in the introductory chapter of their book, and I discuss the motivation behind the DP hypothesis.

Functional categories have been postulated based on three different types of evidence, which are very often mutually connected and thus hard to discriminate. These are semantic, morphological, and syntactic or distributional evidence.

Semantically, it is clear that, plainly speaking, the semantic core of the sentence lies in the verb itself. Whether the sentence describes an action of singing,

¹¹ It has been suggested that the DP–TP and DP–CP parallelism is subject to cross-linguistic variation (Horrocks & Stavrou, 1987).

¹² Slavic languages like for instance Polish, Czech, Russian or Serbian do not have articles.

dancing or jogging, is clear from just looking at the verb. However, in order to have the overall meaning of the sentence, the information provided solely by the verb is simply not enough – some sort of temporal reference is needed. This need for temporal reference, which is not an inherent property of the verb itself, has lead linguists to postulate a special head, namely T head, which takes VP as its complement and projects into a TP. Additionally, following the claims of Higginbotham (1987), based on Chomsky's (1986a) distinction between arguments and propositions (i. e. non-arguments), that only arguments can have theta-roles, the state of affairs in the clause is relatively straight forward: TP is a proposition and it becomes an argument only when it is introduced by the CP projection.

Similarly, the meaning of NEs cannot be determined simply by looking at nouns in isolation, because they reveal very little, unless it is known what extralinguistic entity they refer to. Since referentiality is not an inherent property of nouns, just like temporal information is not an inherent property of verbs, it is not unnatural to assume that there is a designated head on top of the NP, which is responsible precisely for the reference assignment. And indeed, the head D has been generally taken to be the position in which referentiality is assigned (e. g. Löbel, 1989; Stowell, 1989; Longobardi, 1994). Moreover, authors like Szabolcsi (1987), Abney (1987) or Longobardi (1994) suggest that the same argument – proposition difference is applicable in the nominal domain where NPs correspond to TPs in that they do not constitute arguments, and DPs correspond to CPs and do constitute arguments.

The morphological argument pertains to the fact that verbs can have inflectional morphemes marking them with, for instance, mood, tense, aspect or voice, each presumably corresponding to a designated functional head. Similarly, Alexiadou and Stavrou (1998) and Alexiadou (2001) argue that in Greek, nominals show aspectual morphology, therefore hinting to some aspectual functional projection in the extended projection of N.¹³

Abney (1987) gives evidence from Yup'ik, a Central Alaskan Eskimo language in which the same agreement morphology is observed between the verb and its subject, and the noun and its possessor. Similar behavior has been noted previously by Szabolcsi (1983) for Hungarian, where nouns and verbs follow the same agreement patterns. In the nominal complex, the possessor is marked for case, and the head noun (i. e. the possessee) agrees in person and number with the possessor. Similarly, in the clause, the subject is case-marked and the verb agrees in

13 In chapter 7, I show morphological evidence for different functional projections in Serbian nominalizations.

person and number with the subject. Based on the Hungarian data Szabolcsi proposes that this kind of NEs should be represented on a par with clauses, as some sort of IPs. Following this line of reasoning, Abney (1987) coins the DP hypothesis, suggesting for it to be the nominal counterpart of the clause.

Lastly, V-raising in French can be viewed as an example of syntactic or distributional evidence for functional projections. Emonds (1978) and Pollock (1989) argue that the observed word order differences between French and English can be accounted for by the differences with respect to verb movement that the respective languages exhibit. Namely, while in English adverbs precede the verb, in French they generally appear after the verb. Pollock suggests that the universal underlying word order is adverb – verb, and that the verb – adverb order observed in French is the result of the verb raising and crossing over the adverb. Since the verb in French seems to occupy a position different from its base one, a landing site in the form of a functional projection has to be assumed in order to host it.

Similar observations have been made in the nominal domain with respect to adjective – noun ordering. For example, while in English adjectives are normally found on the left of the noun, in Romance languages, they tend to appear on the right of the noun.¹⁴ Following the same line of reasoning, evidence that N can take more than one position in a NE hints that there must be a functional projection above the NP, in which the moved N can land.

Finally, as the clause is in the generative frameworks traditionally seen as consisting of three different layers – VP, TP and CP – each of which adds to the overall meaning of the sentence and each of which can be, at least in certain theories, in turn decomposed into even more functional projections, it is not unnatural to assume that there are at least some functional projections in the nominal domain.

The introduction of the functional DP layer was particularly helpful for the analysis of deverbal nouns, which presumably exhibit the same argument structure as the verbs they are derived from. Following the VP-Internal subject Hypothesis of Sportiche (1988) and Koopman and Sportiche (1991), arguing that both internal and external arguments of verbs are generated VP-internally, with the subject subsequently raising to the specifier position of the IP, similar analysis can be proposed for NEs. Namely, that the external argument of the noun is merged in the specifier position of the noun phrase (possibly raising to the SpecDP position) and that the internal argument is merged as a complement of the head noun.

14 It should be noted that adjectives in English do not appear exclusively before the noun, nor do they obligatorily follow it in Romance languages (see Cinque (2010) for a detailed discussion). However, precisely this variation within languages can also serve as a hint that at least some movement operations occur in the nominal domain, in turn motivating the existence of functional projections hosting them.

As we have seen, reasons for postulating a functional projection above the NP are numerous, and the consequences are welcoming from both syntactic and semantic perspectives. However, the two linguistic levels are more often than not intertwined, which makes it hard to discern where one ends and the other begins. Hence, most of the existing arguments regarding the postulation of the DP projection in an articleless language are in relation to the interface between these two linguistic levels.

In a very influential paper, Longobardi (1994) builds on Abney's (1987) work on the DP hypothesis and formulates a generalization according to which in order to function as arguments, nominal expressions have to be DPs.¹⁵ Additionally, when it comes to computing reference, DP plays a crucial role in the nominal complex, much the same as TP and CP have in the domain of the clause. DP, or more specifically the head D, has been standardly assumed to link its complement (i. e. NP) to the discourse context, or to the non-linguistic context (i. e. an extralinguistic entity) by virtue of the referential index that it carries. Therefore, if the main function of D is to establish reference, it would not be unreasonable to assume for the DP projection to be a part of the language universals. Thus, showing that the DP hypothesis can be maintained in a language without articles has welcoming effects on language acquisition and learnability, as well as the computational system.

From the perspective of acquisition and learnability, a child needs to detect which functional categories (if any) are present in her language and only then associate particular features to respective categories. Assuming that a functional layer is universally present above the nominal complex, a child acquiring her mother tongue only needs to determine the feature-specification of this category, which is essentially what the child does when acquiring the properties of clauses. This outcome is much more efficient and by all means less costly and time-consuming in the process of language acquisition, than having to first detect the functional category and only then resolve its feature-specification.

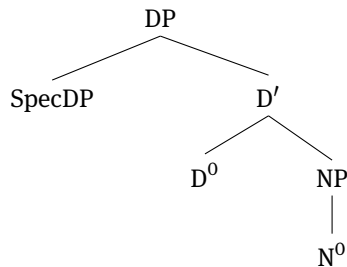
When it comes to computing reference, if we take DP to be subject to parametric variation, then we would have to posit that certain languages, like for instance Serbian, compute reference in a completely different manner (Bašić, 2004). What follows from this is that different grammars have different computational systems, which is not a welcome stipulation if we want to maintain the existence of the UG. What is more, to postulate that a language like Serbian does not have the DP layer,

¹⁵ Longobardi (1994) is discussed in more detail in chapter 4 as it sets the stage for the analysis that I develop there.

and hence computes reference for nominals via a different computational system, would suggest that speakers of Serbian have to employ two different strategies in order to compute reference for nominals on the one hand and clauses on the other. This is by no means a desirable stipulation.

Following up on the work of Brame (1982) and Szabolcsi (1983), Abney (1987) thus proposes the reanalysis on NEs and coins the so-called DP hypothesis. Under the DP hypothesis, the nucleus of the NE lies in the determiner heading the phrase which takes the noun as its complement, as illustrated in (17) and is seen as the extended projection of the lexical head in the nominal domain, i. e. the noun.

(17)



In short, D has been primarily attributed the following characteristics. (i) It is the locus of the semantic-pragmatic notion of definiteness. (ii) It is responsible for the reference assignment, i. e. turning a predicate into a syntactic argument by anchoring it to the extralinguistic entity. (iii) It serves as a case assigner.

The question, however, remains whether these properties are inherent qualities of the functional head D per se, or whether they come with the actual lexical realizations of the head D. If it is the lexical realization of the head D, i. e. the definite article, as such, inherently endowed with these properties, the question becomes how the interpretation of bare nouns in an article language like English is accounted for, and more importantly, how it is accounted for in languages that lack articles altogether.

However, if we assume that it is the structural DP projection, and not the overt material sitting in it, responsible for these properties, the question of reference assignment to articleless nominals becomes superfluous. If the existence of the DP layer is universal and not motivated by the need of articles to have hosts specifically devoted to them, the make-up of the nominal domain of a full-fledged article language like English would not differ much from that of an articleless language like Serbian.

2.2 DP in Serbian

Having briefly discussed the motivation behind the DP hypothesis and its importance for theories of language, together with the questions that arise with respect to articleless languages, in this section I present the existing theories pertaining to the nominal domain of Serbian. I do not discuss in detail any of the accounts at this point, but I merely point out their main arguments so as to provide the reader with a taste of what is out there and to set the stage for what is to follow.

2.2.1 Arguments against DP in Serbian

Corver (1992) was among the first ones to propose that articleless languages such as Serbian do not project the DP layer. Apart from the possibility of Left Branch Extractions (LBEs),¹⁶ Corver takes co-occurrence of determiners (stacking) and relatively free word order in Slavic languages (Serbian, among others) to suggest that determiners in those languages (i. e. demonstratives) are adjectival in nature, concluding thus that these languages lack the DP projection.

Zlatić (1997) rejects the DP hypothesis for Serbian for several reasons. First, all determiner-like elements (e. g. demonstratives) are optional and articles are absent altogether. Second, determiners show gender, number and case agreement with the head noun, in the same manner as adjectives. And third, the position of a determiner in the nominal complex is not fixed. She suggests that determiners in Serbian should be treated as NP adjuncts, possessives as specifiers of NPs (because they follow determiners in a default, neutral word order), and adjectives as adjuncts adjoined to the N' level.

Trenkić (2004) offers data from second language acquisition as evidence for the lack of the DP projection in Serbian. Namely, adult speakers of Serbian learning English as a foreign language seem to omit articles more often with nouns

¹⁶ Ross (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 NPs.

- (1) *Whose_i did you see [t_i father]?
- (2) *Which_i did you buy [t_i car]?
- (3) *That_i he saw [t_i car].
- (4) *Beautiful_i he saw [t_i houses].
- (5) *How much_i did she earn [t_i money]?

modified with adjectives than with unmodified nouns. Trenkić argues that the reason for this is that in their native language, Serbian speakers treat determiner-like elements as adjectives. This assumption, however, can go in the opposite direction, namely that in Serbian, adjectives can serve a determiner function, and that this is why Serbian learners of English tend to omit articles with nouns modified by adjectives. In other words, the presence of the adjective is enough to fulfill the need for some exponent of D.¹⁷

Despić (2011) finds evidence for the lack of the DP layer in binding phenomena. Namely, he considers phases as binding domains (following Lee-Schoenfeld, 2008). Considering that DP is a phase, and NP is not, Despić illustrates that the behavior of possessives and R-expressions hints that the nominal complex of Serbian does not constitute a phase, hence it must be an NP.¹⁸

- (18) * *Njegov_i najnoviji film je zaista razočarao Kusturicu_i.*
 his latest movie is really disappointed Kusturica

Since the sentence in (18) involves an NP and not a DP, it is not a phase and therefore there is nothing preventing the possessive *njegov* ‘his’ to bind the R-expression *Kusturicu*, violating thus the Principle C of the Binding Principles. Not even when a demonstrative, which is typically considered as an exponent of D, is introduced does the example become acceptable under the intended reading (i. e. Kusturica was disappointed by his own latest movie):

- (19) * *Ovaj njegov_i najnoviji film je zaista razočarao Kusturicu_i.*
 this his latest movie is really disappointed Kusturica

Despić concludes that possessors and other determiners are NP adjuncts in Serbian, and that the Serbian nominal phrase does not project the DP layer.

To sum up, authors advocating for the lack of the DP layer in Serbian largely base their claims on the following arguments.¹⁹

17 Esther Rinke (p.c.) points out to me that it cannot be taken for granted that the behavior of L2 learners is explained exclusively on the basis of cross-linguistic influence. Instead, it could be the case that the observed patterns have more to do with the UG than the L1.

18 However, based on LBE data, Bošković (2010) argues that NP constitutes a phase in Serbian, as it has the same blocking effect as DP has in a language like English.

19 Bošković (2008a) gives a list of parameters in which languages with articles (i. e. DP languages) differ from languages without articles (i. e. NP languages, in his theory). Apart from those discussed in this thesis, these are: negative raising, superiority in multiple wh-fronting, adjunct extraction, etc. However, to go into details and showcase each of these for Serbian is beyond the scope of this work. The interested reader is referred to Bošković and references therein.

1. Serbian has no overt articles.
2. All nominal modifiers are essentially adjectives.
3. Ordering of the nominal modifiers with respect to the head noun is free.
4. Serbian allows LBEs.

2.2.2 Arguments for DP in Serbian

In the previous section I have laid out the main line of argumentation of the contra DP camp. In this section, I first re-evaluate the four points made in the summary of the previous section and I then list some of the arguments for assuming the DP projection in Serbian.

First, as the opposing camp argues, since articles are seen as instantiations of D in languages like English and German, it is not unnatural to assume that languages without articles like Serbian do not project the DP layer, as there is nothing to motivate its existence. In other words, there is nothing (overt) that requires the DP position to sit in. However, to assume that a language lacks the DP layer based on the observation that it has no overt material that requires its existence faces some empirical and theoretical problems. Namely, even in a language like English, a null D has to be postulated in some instances (e. g. plural and mass nouns (Longobardi, 1994)). Hence, to dismiss the DP hypothesis for Serbian because it has no articles seems to be a rather premature conclusion.

Second, all prenominal elements in Serbian – demonstratives, indefinite determiners and possessives – pattern with adjectives in that they show agreement with the head noun in phi-features and case, and moreover they can be stacked, which is not possible in English.

- (20) a. *nekog mog dosadnog druga*
 some.M.SG.GEN my.M.SG.GEN boring.M.SG.GEN friend.M.SG.GEN
- b. *nekom mom dosadnom drugu*
 some.M.SG.DAT my.M.SG.DAT boring.M.SG.DAT friend.M.SG.DAT
- c. *some my boring friend

The behavior of demonstratives and possessives illustrated in (20) indeed does show that they have particular similarities with adjectives and that in certain respects they behave alike. Namely, that they take the same morphological suffixes as adjectives. Nonetheless, it does not necessarily follow that they constitute a uniform category and that hence Serbian lacks the DP projection. After all, arti-

cles in German show agreement with the noun they modify, yet I am not aware of any analysis in which they are treated as adjectives.²⁰

If demonstratives and possessives are truly adjectives in Serbian, we would then expect to see a ‘within-category’ stacking, since adjective stacking is allowed even in a language like English. Serbian should therefore allow stacking of two possessives or two demonstratives, since this would in principle be a case of stacking of two adjectives. However stacking two within-category elements yields an ill-formed output. Two possessives (21c) and two demonstratives (21d) cannot be stacked.

- (21) a. old white computer
 b. stari beli kompjuter
 old.M.SG.NOM white.M.SG.NOM computer.M.SG.NOM
 ‘old white computer’
 c. *moj tvoj kompjuter²¹
 my your computer
 d. *taj onaj kompjuter
 this that computer

Additionally, Caruso (2013) illustrates that Serbian determiners, unlike adjectives, have selectional features showing sensitivity to number features towards the nouns they select.²² For example, indefinite determiners like *svaki* ‘each’ and *jedan* ‘a/one’ select for singular nouns. Consider the following examples from Caruso (2013: 145).²³

- (22) a. jedna studentkinja/ *studentkinje
 one.F.SG student.F.SG student.F.PL
 b. svaka slika/ *slike
 each.F.SG picture.F.SG picture.F.PL

20 Helmut Weiß (p.c.) points out to me how inflectional morphemes of the German definite article and of strongly inflected adjectives are mostly the same and that does not mean that articles are adjectives nor that adjectives are determiners.

21 Note that the intended meaning here is that the computer in question belongs both to me and to you, i. e. we share it.

22 It is known that certain English determiners have selectional features. Galasso (2001) offers a systematic overview of English selective determiners: for example *the* modifies both singular and plural nouns, *enough* modifies plural and non-count nouns, *several* modifies plural and count nouns, *much* modifies singular non-count nouns and *a* modifies only singular count nouns.

23 Caruso uses Croatian forms of nouns for a female student – *studentica.SG/studentice.PL* whereas I here use the Serbian ones.

Caruso notes that although the indefinite determiner *jedan* generally modifies singular count nouns, it can also appear with plurals. She attributes this behavior to its ability to inflect for plural number. In Šarić (2014) and Klockmann and Šarić (2015), we argue that numerals in Serbian do not form uniform categories, but belong to some intermediate ones, resembling both nouns and adjectives in certain respects. However, numeral 1 in Serbian, under the analysis developed there, is essentially an adjective, hence it is no surprise that it shows this dual behavior with respect to number features. Leaving aside the indefinite determiner/numeral ‘one/a’, the indefinite determiner ‘each’ does exhibit selectional properties as it indeed is restricted to singular nouns.

Caruso also shows that quantifiers like *nekoliko* ‘several’, *mnogo* ‘many’, *malo* ‘little’ and similar ones select for plural nouns or mass nouns. What is more, these elements assign genitive case to their nominal complements.²⁴

- (23) a. *nekoliko olovaka/ *olovke*
 several pencil.GEN.PL pencil.GEN.SG
 b. *malo mleka*
 little milk.MASS.GEN

Caruso (2013) concludes from this that these determiners cannot be treated on a par with adjectives because adjectives generally do not exhibit selectional properties of this kind nor are assumed to be case-assigners. Caruso goes on to propose that these elements should be treated as heads in their own right, which at some point in the derivation occupy the D position (either via base-generation or movement).

The third argument regarding the free ordering of nominal modifiers goes hand in hand with the second one. Consider the varieties of the example in (24), all of which are perfectly well-formed in Serbian (25).

- (24) *neko mog dosadnog druga*
 some my boring friend
- (25) a. *neko dosadnog mog druga*
 some boring my friend
 b. *mog nekog dosadnog druga*
 my some boring friend
 c. *mog dosadnog nekog druga*
 my boring some friend

²⁴ See Strobel & Weis (2017) for the analysis of the German counterparts of these quantifiers, which have originally been nouns taking genitive attributes as complements.

- d. dosadnog nekog mog druga
boring some my friend
- e. dosadnog mog nekog druga
boring my some friend

This freedom in modifier ordering has been taken as a hint that there are no exponents of D among the nominal modifiers in Serbian. A demonstrative, which has been analyzed as occupying some position within the DP (either the head or the specifier position), should not be permitted to appear in a position following the adjective, if it is indeed an exponent of D. Hence, advocates against the DP hypothesis propose that all the modifying elements in Serbian (i. e. demonstratives and possessives) should be treated as adjectives.

However, this seemingly non-rigid word order is related to the information structure of the sentence. Namely, there is only one underlying default word order: the one in which the determiner is linearly the first element (24); all the other versions (25) have a specific information structure and cannot be uttered in an out-of-the-blue context. They should thus be analyzed as an information structurally driven movement. The moved elements require designated landing sites within the left periphery of the nominal complex which subsequently motivates the existence of the functional DP projection in Serbian.

Finally, the fourth and probably the most convincing argument against the DP hypothesis in Serbian pertains to the possibility of LBEs. Ross (1986) notices that leftmost elements in an NP (determiners, possessives and attributive adjectives) cannot be moved to some higher position in the clause in languages such as English or Dutch. This, however, is possible in Serbian.²⁵

- (26) a. *Whose did you borrow book?
- b. Čiju si knjigu pozajmio?
 whose aux book borrowed
 ‘Whose book did you borrow?’

Corver (1992) spells out the reasons for the ban on extraction in English and Dutch. First, determiners cannot extract because they are heads and thus cannot land in the SpecCP, which is a position suitable for phrases. Secondly, possessors cannot be extracted because they would involve extraction of a non-constituent, which is disallowed. Finally, adjectives cannot be extracted because of the Empty Category Principle (ECP). Namely, D' serves as a minimality barrier preventing the trace of

²⁵ Example (26) illustrates the extraction of a possessor wh-phrase in Serbian. Other elements that can undergo extraction in Serbian are demonstratives and adjectives.

the moved element to be properly antecedent-governed. On the other hand, Corver (1992) argues that in a language like Serbian, which does not have articles, adjectives can be extracted without violating the ECP because there is no DP projection, and therefore no minimality barrier. Additionally, Corver accounts for the possibility of demonstrative and possessive extraction by treating them on a par with adjectives.

However, Bašić (2004) offers an alternative analysis which accounts for the phenomenon illustrated in (26b) while still maintaining the DP hypothesis. Under the analysis of Bašić (2004), no extraction from the nominal domain is involved in deriving the word order in (26b). Instead, she argues that what seemingly looks like LBE, is in fact a type of remnant movement, similar to Franks and Progovac's (1994) analysis of PP splits, triggered by some rules of the information structure of the sentence.²⁶ Crucially, Bašić argues, the fronted string of elements is necessarily focused, but the noun is not. For example, in the sentence in (26b), only the *wh*-word *čiju* 'whose' is focused, and the noun *knjigu* 'book' is not. The derivation of the sentence in (26b) under the analysis proposed in Bašić (2004) roughly proceeds in the following manner: First, the noun *knjigu* vacates the noun phrase so as to avoid falling into the focused material, and moves to a position preceding the verb, and only then does the remnant front and land into some focus position in the left periphery of the clause.

Although the approach of Bašić was met with some positive criticism, and similar proposals have been laid out previously for Czech (cf. Veselovská (1995)), it remains somewhat unclear why English-type languages do not employ a similar mechanism. However, to go into detail and expand the analysis of Bašić is beyond the scope of this work. Nevertheless, one of the perks of Bašić's proposal is undoubtedly the possibility of accounting for LBEs in Serbian while still maintaining the DP hypothesis. Additionally, it makes use of information structure mecha-

26 Serbian allows for a prepositional phrase to be split:

- (1) U zelenu je Ana ušla sobu.
 into green aux Ana room entered
 'Ana entered into the green room.'

Franks and Progovac (1994) assume the structure in which the NP *soba* 'room' is a complement of A in the AP *zelena soba* 'green room'. Under their approach, split XPs are derived by remnant movement. The NP first moves out of the PP and right-adjoins to the TP, and then the remnant PP moves to SpecCP. Both movement steps have to occur because of the Scope Preservation Principle, according to which the surface word order should respect the relative scope as much as possible. Therefore, if the noun moves, the PP has to undergo movement as well.

nisms, which might as well be the cause of the word order flexibility in the nominal complex.

Additional evidence that the pro DP camp takes for the existence of the DP projection in Serbian pertains to the pronoun – proper name asymmetry, existence of long form adjectives (which presumably carry the meaning of definiteness) and certain restrictions imposed by determiners.

Progovac (1998) argues that pronouns in Serbian surface in the D position in the overt syntax,²⁷ whereas proper names stay in their base positions. Progovac observes the apparent noun/pronoun asymmetry in Serbian; namely that a noun has to follow the modifying adjective, whereas a pronoun has to precede it.

- (27) a. I samu Mariju to nervira.
and alone Marija that irritates
- b. *I Mariju samu to nervira.
and Marija alone that irritates
- c. *I samu nju/ mene to nervira.
and alone her/ me that irritates
- d. I nju/ mene samu to nervira.
and her/ me alone that irritates

Assuming that the difference in the adjectival ordering with respect to pronouns and proper names lies in the fact that the two occupy different positions in the nominal expression – proper names are in N, whereas pronouns are in D, Progovac (1998) concludes that the nominal domain in Serbian projects the DP layer.

However, in his dissertation, Despić (2011) argues that the word *sama* ‘alone’ is not a felicitous choice for illustrating the proposed asymmetries because in these examples *sama* is seen more as an intensifier rather than a regular attributive adjective, and that as such occupies some distinct position in the structure. Nonetheless, consider examples with the adjective *sirota* ‘poor’, which is a typical instance of an attributive adjective.

- (28) a. I sirotu Mariju to nervira.
and poor Marija that irritates
- b. *I Mariju sirotu to nervira.
and Marija poor that irritates

²⁷ Progovac (1998) argues that pronouns in Serbian cannot be base-generated in D, like Longobardi (1994) argues for Italian. This is so because pronouns in Serbian show overt morphology which is not present on the noun. They show heavier agreement (much like adjectives), which Progovac takes to be a reflex of their moving through all the projections between their base-position in N, to their landing site in D, collecting agreement morphology along the way.

- c. *I sirotu nju/ mene to nervira.
and poor her/ me that irritates
- d. I nju/ mene sirotu to nervira.
and her/ me poor that irritates

The behavior of *sirota* ‘poor’ follows the pattern of *sama* ‘alone’ confirming thus the conclusion of Progovac (1998).

Leko (1999) and Aljović (2002), and more recently Stanković (2014) find support for the DP hypothesis in the existence of the so-called long form adjectives. Serbian adjectives in certain forms show long/short distinctions, which has been taken to be a marker of definiteness. Long-form²⁸ adjectives imply definiteness, whereas short-form ones carry the meaning of indefiniteness.

- (29) plavi/ plav auto
blue_{long} blue_{short} car.M.SG
‘the/ a blue car’

Following Cinque’s analysis of adjuncts (i. e. that they are universally ordered specifiers of separate functional projections), Leko (1999) illustrates how, contrary to the claim of the opposing side (against the DP hypothesis), prenominal modification in Serbian is, as a matter of fact, subject to a relatively strict ordering constraint. Additionally, the existence of long form adjectives, which presumably express definiteness, hints that they move to the SpecDefP.²⁹ Leko notices how demonstratives are (arguably) the leftmost elements in the Serbian nominal complex, and as they have been argued to occupy SpecDP universally (Giusti, 1992), Serbian must project the DP layer on top of NP so as to create place for these elements.

Aljović (2002) argues that the DP layer can, but need not be projected on top of NPs in Serbian. She analyzes long adjectives as being located in SpecDP, with their long suffix being the result of Spec-head relationship with the head D. On the other hand, short adjectives are, under her analysis, adjoined to the extended projection of N – NumP. Thus, the DP layer is present with the long-form adjectives, but not with the short-form ones.

Stanković (2014) argues for a third type of adjectival modification in Serbian, apart from Cinque’s (2010) direct and indirect modification. This third adjectival type includes Serbian adjectives like *navedeni/pomenuti* ‘mentioned’ and

²⁸ The long form adjectives consist of a root and the suffix which is a relic of the old South Slavonic definite adjective ending (Lyons, 1999).

²⁹ Lyons (1999) assumes the functional projection above the NP to be the host for definiteness markers, hence he terms it Definiteness Phrase.

izvesni/određeni ‘certain’. Stanković notices that these adjectives show behavior similar to that of determiners: they always precede other adjectives (also those in comparative and superlative forms), they prefer the long-adjective form, and they seem to block LBE. Stanković concludes that there must be a functional projection resembling DP on top of the nominal complex.

In a recent work, Kovačević (2014) takes a stance in-between the two opposing sides and proposes that the DP layer in Serbian projects as a last resort. He follows Longobardi’s (1994) generalization that only DPs can serve as arguments, and NPs cannot. Next he observes how the distribution of arguments in the nominal domain of Serbian follows generalizations laid out in Longobardi (1994): null D is structurally licensed to lexically governed positions, and null D is restricted to plural and mass nouns. For example, only complex nominals can surface as agents of deverbal nouns, while theme arguments can surface bare (null D is licensed because it is lexically governed by the deverbal noun). This, however, does not hold for the clausal domain where complexity of the nominal does not seem to have an effect on its distribution. Kovačević proposes that the D layer is never present in Serbian, unless there is a specific need for it. In other words, he argues that nominal expressions are never arguments in the overt syntax, unless merging them as arguments is the only way to preserve the derivation. Only when nominal expressions need to be merged as arguments in the overt syntax does the D-layer get inserted on top of the NP. He then links argumenthood and theta-role assignment with case inflections, arguing how in languages with a rich case morphology, nominal expressions need not be arguments in the syntax and subsequently need not project the DP layer. In other words, he treats theta-roles as morphosyntactic features expressed in the forms of case inflections which nominals are already specified with while in the numeration.

Following Bošković and Takahashi’s (1998) proposal to account for scrambling in Japanese, Kovačević argues that nominal expressions are base-generated as TP adjuncts (scrambled), and eventually undergo LF lowering into theta positions. Considering that agents bear nominative, themes accusative and patients dative case, the system can automatically sort out which nominal to lower to which theta-position. Conversely, with deverbal nouns, both arguments (agent and theme) bear genitive case and the system does not have a mechanism to decide which nominal to lower to which theta-position. Hence, the DP layer kicks in as a last resort, enforcing argumenthood onto the nominal expressions when they serve as arguments of other nouns.³⁰

30 I address the account of Kovačević with respect to arguments of nouns in more detail in chapter 4.

2.3 Case

In this section, I briefly outline some general theoretical machinery behind assignment/checking of case that I employ throughout this thesis. Specifically, I present the assumptions behind case assignment/ case checking, as it plays the most prominent role in the different analyses I develop throughout this dissertation. I then connect the theory of case to the nominal domain, specifically the DP layer.

Case theory represents a unique module within the Generative Grammar, which deals with the distribution of the nominal phrases based on the Case Filter. The Case Filter requires for each overtly realized DP argument to be case marked (Chomsky, 1981). Chomsky further connects the Case Filter with the Visibility Condition and Theta Criterion, stating how an element must be case marked in order to become visible for theta marking (Chomsky, 1981, 1986b).

In the Government and Binding (GB) model, there are two instances of case assignment – structural and inherent. Structural case depends solely on government – it is assigned in specific structural configurations (head-complement or specifier-head configuration). For instance, a verb assigns structural accusative case to its nominal complement and finite T (or INFL) assigns structural nominative case to the element in its specifier (i. e. the subject).

Inherent case, on the other hand, depends on theta role assignment and carries the information regarding the nature of the thematic role (e. g. dative case for goals or instrumental for instruments etc.). Moreover, case is considered inherent if it's assignment is an inherent property of a particular element. For example, certain verbs in German assign cases other than structural accusative to their complements. They are already in the lexicon specified as such that they assign, for instance, dative to the element bearing the theta role of goal.

In the Minimalist Program (e. g. Chomsky, 1992, 1995), inherent and structural cases differ with respect to feature (un)interpretability, these being the driving forces behind the transformations in Minimalism. Lexical items are considered to be consisting of a bundle of features with which they enter the derivation. These features are either inherently valued (i. e. they are specified in the lexicon) or unvalued. For example, nouns are considered to be entering the derivation with their phi-features inherently valued, but their case features unvalued (e. g. *girl* [gender: feminine, number: singular, case: u]). The value for case is then acquired throughout the course of the derivation as the consequence of Agree. The difference between valued and unvalued features correlates with the distinction between interpretable and uninterpretable features. Interpretable features are those features that play a role in the semantic interpretation, whereas uninterpretable features do not.

Another way of treating case is to assume that DPs already enter the derivation with the appropriate case values and that the appropriateness of these values is checked derivationally (e. g. Hornstein, Nunes & Grohmann, 2005). In other words, the notion of assignment is replaced by the notion of checking, but the same general mechanism applies. Namely, case must be checked in the appropriate configuration. The advantage of this approach is that it allows for case checking to be postponed until LF. This is a welcoming consequence, as covert, i. e. LF, movement is considered to be less costly than the overt movement in the syntax. This is formalized in Chomsky's (1993, 1995) *Procrastinate* principle. According to the principle *Procrastinate*, covert movement is favored over overt movement, because covert movement does not have to pied-pipe phonological features, which have been sent to the PF interface by Spell-Out. The overt/covert movement is regulated by feature strength. Strong features must be checked locally, meaning that movement must happen in the syntax. Checking of the weak features, on the other hand, can be delayed until after Spell-Out.

In chapter 5, I first make an attempt at accounting for the Serbian data within the Traditional Case Theory, by adopting the approach developed in Rappaport (1998) for the parallel data in Russian. I then introduce a rather novel framework, which departs from the traditional view of case. This is a theory of case developed in Pesetsky (2013) for Russian, but, due to a high level of similarity between the two languages, it can very easily be applied to Serbian as well. What is more, this novel approach to case will prove to be more suitable for the data at hand, as it offers a unified account for Serbian and Russian.

2.4 Chapter summary

In this chapter, I have summarized the main arguments for the postulation of the DP projection and I have briefly presented the stance of the two opposing camps when it comes to the DP hypothesis in Serbian.

The contra DP side mainly relies on the absence of articles, free ordering of the nominal modifiers and their adjective-like behavior, and the possibility of LBEs to postulate that Serbian does not project the DP layer. On the other hand, the pro DP side refutes the contra arguments by showing that demonstratives cannot be treated as a uniform category with adjectives as they exhibit certain behaviors atypical for adjectives – they have selectional properties and they seem to be able to assign case. In relation to this, the variation in word order seems to be triggered by the information structural rules of the sentence. The information structure – or more precisely, focus – has been employed in the analysis of LBEs, too. Additionally, the pro-DP camp is further subdivided into two sub-camps: one side argues

that the DP projection is always present in the extended projection of the noun in Serbian, while the other side has a more relaxed view and assumes for the DP layer to be present whenever it is syntactically needed.

All in all, both camps offer valid arguments in reasoning for their views on the nominal domain in Serbian. In what follows, I make references to the arguments laid out in this chapter with respect to the issue at hand – the existence of double genitive constructions in Serbian.

3 Data

Genitive is by far the most complicated case in Serbian, both in terms of function and in terms of meaning. However, to illustrate in detail the many uses of genitive is beyond the scope of this work. In this chapter, I only briefly present the types of genitives in Serbian (section (3.1)), and I focus more on the adnominal genitives and their characteristics. I then present the data I collected from the native speakers of Serbian, regarding both the adnominal genitive constructions and possessives (section (3.2)). Since the data in question is rather peculiar in that it is subject to considerable variability in acceptability judgments among native speakers, I conducted a survey to confirm the acceptability of these constructions. The reason I did not opt for a corpus search of the constructions under investigation is because, as I have said, these are rather peculiar and not unanimously liked by all native speakers of Serbian, and as such they do not occur very frequently.

3.1 Types of adnominal genitives in Serbian

Antonić (2005) provides a very detailed description of the genitive case in Serbian. Following AntoniĆ (2005), Đurić (2009: 69) summarizes the functions and meanings of the Serbian adnominal genitives.

Functions and meanings of the adnominal genitives in Serbian

1. Subject genitive

- agent: *pevanje ptica*.GEN ‘singing of the birds’
- pseudoagent: *vedrina neba*.GEN ‘clarity of the sky’

2. Object genitive

- deverbal nouns: *iskrcavanje robe*.GEN ‘unloading of goods’
- agentive nouns: *upravnik pozorišta*.GEN ‘theater manager’

3. Explicative genitive

- semantic complement: *primer hrabrosti*.GEN ‘an example of courage’

4. Partitive genitive

- genitive of quantification: *tri knjige*.GEN ‘three books’

5. Possessive genitive

- ownership: *knjiga moga*.GEN *prijatelja*.GEN ‘my friend’s book’

6. Genitive of qualification

- genitive with an obligatory determiner: *čovek sede*.GEN *brade*.GEN ‘grey-bearded man’
- genitive with the preposition *od*: *žena od ukusa*.GEN ‘a woman of taste’

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- genitive with superlative meaning: *auto godine*.GEN ‘the car of the year’
- equative genitive: *osmeh Mona Lize*.GEN ‘Mona Lisa’s smile’

One of the syntax-semantics interface questions regarding the adnominal genitive constructions pertains to the argument structure – i. e. the thematic roles adnominal genitives bear. In order to be able to discuss the theta roles of genitives, the theta grid of different types of nouns in Serbian has to be discussed first. Following Grimshaw (1990) and Zlatić (1997), Đurić (2009: 89) classifies nouns according to their ability and obligatoriness to take arguments (the provided examples are mine).

1. Argument taking nouns

- complex event nominal → theme: *opisivanje* ‘describing’
opisivanje događaja ‘describing of the event’
- relational noun → inalienable possessor: *brat* ‘brother’
brat moje drugarice ‘my friend’s brother’

2. Quasi-argument taking nouns

- result nominal → agent, theme: *opis* ‘description’
opis utakmice sportskog komentatora ‘description of the game by the sports anchor’
- adjectival nominalization → experiencer: *sreća* ‘happiness’
sreća moje dece ‘my children’s happiness’
- picture nouns → alienable possessor, agent: *knjiga* ‘book’
knjiga Dostojevskog univerzitetske biblioteke ‘the University library’s book by Dostoyevsky’
- noun → alienable possessor: *mačka* ‘cat’
mačka moje komšinice ‘my neighbor’s cat’

Đurić (2009: 89) illustrates the differences with respect to the argument obligatoriness with two deverbal nouns: (30a) takes an obligatory argument, and (30b) takes an optional argument (i. e. quasi-argument).³¹

- (30) a. Rešavanje *(postavljenog zadatka) trajalo je čitav sat.
solving given problem lasted aux whole hour
‘The solving of the given problem lasted for a whole hour.’
- b. Rešenje (postavljenog zadatka) se nalazi u udžbeniku.
solution given problem aux is in textbook
‘The solution of the given problem is in the textbook.’

³¹ The examples are from Mrazović and Vukadinović (1990: 289)..

Complex event nominals (30a), unlike result nominals (30b), have obligatory complements (Zlatić, 1997). The agent argument, on the other hand, is optional in both cases (Đurić 2009: 89).

- (31) a. (Jovanovo) rešavanje *(problema) je uvek brzo.
 John's solving problem is always fast
 'John's solving of the problem is always fast.'
- b. (Jovanovo) rešenje (problema) je uvek brzo.
 John's solution problem is always fast
 'John's solution of the problem is always fast.'

Within the discussion of thematic relations, a word is in order regarding the thematic hierarchy – a principle of argument hierarchy based on their prominence.³² The thematic hierarchy in the nominal domain is as follows (Cinque, 1980; Longobardi, 2001)³³:

- (32) Possessor→Agent→Experiencer→Goal/Cause/Location→Theme

The implications of the thematic hierarchy on the linearization of the constituents basically place all the prenominal possessive forms higher than the postnominal possessive forms (i. e. the *of*-constructions in English and the adnominal genitive in Serbian). Consider the examples from Đurić (2009: 91–92).

- (33) a. the enemy's destruction of the city
 b. *the city's destruction of the enemy
 c. the destruction of the enemy
 d. the destruction of the city
 e. the enemy's destruction
 f. the city's destruction

Because of the realization of a thematically higher role, in (33a), 'the enemy' gets an agent interpretation, while the infelicity of (33b) stems from the fact that the theme argument is realized higher than the thematically more prominent agent

³² See Grimshaw (1990); Longobardi (2001); Rappaport (2005) for some syntactic applications of the thematic hierarchy on the linear ordering, possessor pronominalization or possessor extraction.

³³ The hierarchy is based on the clausal domain, with the exception of the added Possessor (both alienable and nonalienable).

role.³⁴ If there is only one possessive form (either pre- or postnominal), the interpretation is free, provided that it is semantically plausible. Thus in (33e)–(33f), the argument can be interpreted as either bearing the theta role of agent or theme. The same applies to possessors, where the possessor is the highest thematic role.

- (34) a. John's (Poss) portrait of Aristotle (Th) by Rembrandt (Quasi-ag).
 b. John's (Poss/Quasi-ag) portrait of Mary.
 c. *moj* (Poss/Quasi-ag) portret Jovana Popovića (Quasi-ag/Th)
 my portrait Jovan Popović
 'my portrait of Jovan Popović/ Jovan Popović's portrait by me.'
 d. **moj* (Th/Quasi-ag) portret Jovana Popovića (Quasi-ag/Poss)
 my portrait Jovan Popović
 intended meaning: 'my portrait by Jovan Popović/ Jovan Popović's
 portrait of me.'

According to Đurić, (34d) is infelicitous because the interpretation under which *moj* 'mine' refers to the person who is in the portrait would imply that the theme argument is realized higher than the possessive/ quasi-agent (i. e. *Jovan Popović*). However, my informants (and myself) can get the intended reading in (34d). As a matter of fact, this is the only way to express the intended meaning. Consider the alternatives, all of which are ruled out for independent reasons.

- (35) a. **Jovanov Popovićev portret mene.*
 Jovan.POSS Popović.POSS portrait me.GEN
 b. **portret mene Jovana Popovića.*
 portrait me.GEN Jovan.GEN Popović.GEN

The example (35a) is out because possessive cannot be formed out of a complex noun. (35b) is out because pronouns are disallowed from double genitive constructions altogether (36).

- (36) **portret nje/njega/njih Jovana Popovića*
 portrait her/him/them.GEN Jovan.GEN Popović.GEN

However, pronouns are perfectly acceptable as complements of nouns, as long as they are the only genitive forms.

34 Notice that (33b) is perfectly felicitous under the reading in which the enemy is being destroyed by the city. 'The city' is thus bearing the agent theta role, while 'the enemy' bears the theta role of theme.

- (37) Jovanov portret mene/nje
 Jovan.POSS portrait me/her.GEN

One of the implications of the thematic hierarchy is the observation that deverbal nouns made out of transitive verbs cannot express both the subject and the object by means of the adnominal genitive. Only one of the arguments can be expressed via adnominal genitive (Zlatić, 1997).

- (38) a. opis Amerike (Theme)
 description America.GEN
 ‘description of America’
- b. opis ovog studenta (Agent)
 description this.GEN student.GEN
 ‘description by this student’
- c. *opis ovog studenta(Agent) Amerike (Theme)
 description this.GEN student.GEN America.GEN
 intended meaning: ‘this student’s description of America’

However, Zlatić does not acknowledge the fact that once the order of the arguments is swapped, the construction becomes perfectly grammatical.

- (39) opis Amerike ovog studenta
 description America.GEN this.GEN student.GEN
 ‘this student’s description of America’

Assuming that the thematic hierarchy is correct, in order to account for the example in (39), one would have to think of alternative solutions. For example, that the quasi-agent theta role does not belong in the thematic hierarchy.

Having briefly discussed the cases of adnominal genitives found in the literature on Serbian, I now turn to my own data.

3.2 Questionnaires

In this section, I present the questionnaires I conducted regarding the double genitive and the possessive constructions. As I have suggested in the introductory chapter, the link between genitives and possessives is important as they are mutually exclusive in the external argument position of nominalizations. In what follows, I present the results of the genitive and the possessives questionnaires in turn.

3.2.1 Genitives

The purpose of this questionnaire was to check native speakers' acceptability judgments of constructions involving nominalizations. The nominalization was kept constant across conditions, and the type of the external argument was varied. There were five conditions in total. The external argument is in bold.

- (40)
1. nominalization + theme.GEN + **bare count noun.GEN**
 2. nominalization + theme.GEN + **modified count noun.GEN**
 3. nominalization + theme.GEN + **simple proper name.GEN**
 4. nominalization + theme.GEN + **complex proper name.GEN**
 5. nominalization + theme.GEN + **pronoun.GEN**

The examples of the five conditions are the following.³⁵

- (41)
1. **Bare count noun:**
osvajanje Rima **general**
conquest Rome.GEN general.GEN
 2. **Modified count noun:**
osvajanje Rima **velikog/ onog/ kraljevog/**
conquest Rome.GEN great.GEN/ that.GEN/ king.POSS-GEN/
njegovog general
he.POSS-GEN general.GEN
 3. **Simple proper name:**
osvajanje Rima **Hanibala**
conquest Rome.GEN Hannibal.GEN
 4. **Complex proper name:**
osvajanje Rima **Hanibala Barke**
conquest Rome.GEN Hannibal.GEN Barca.GEN
 5. **Pronoun:**
osvajanje Rima **njega**
conquest Rome.GEN he.GEN

The following nominalizations were tested for each of the five conditions.

³⁵ I do not specify the well-formedness of the constructions at this point. I discuss the acceptability of each condition in the following section.

- (42) osvajanje Vimblodona (nemačke) teniserke/ Štefi
 conquest Wimbledon.GEN (German.GEN) tennis-player.GEN/ Steffi.GEN
 (Graf)/ nje
 (Graf.GEN)/ she.GEN
 ‘the winning of Wimbledon by the (German) tennis player/ Steffi (Graf)/ her’
- (43) pevanje britanske himne (operske) pevačice/ Kristine
 singing British.GEN anthem.GEN opera.GEN singer.GEN/ Christine.GEN
 (Rajs)/ nje
 (Rice.GEN)/ she.GEN
 ‘the singing of the British national anthem by the (opera) singer/ Christine (Rice)/ her’
- (44) iskrcavanje robe (pogonskih) radnika/ Marka
 unloading cargo.GEN power.GEN workers.GEN/ Marko.GEN
 (Markovića)/ njega
 (Marković.GEN)/ he.GEN
 ‘the unloading of the cargo by the (power) workers/ Marko (Marković)/ him’
- (45) zaključivanje ugovora (generalnih) direktora/ Marka
 sealing contract.GEN (managing.GEN) director.GEN/ Marko.GEN
 (Markovića)/ njega
 (Marković.GEN)/ he.GEN
 ‘the sealing of the contract by the (managing) directors/ Marko (Marković)/ him’
- (46) pokretanje postupka (državnog) tužioca/ Marka
 starting proceedings.GEN (district.GEN) attorney.GEN/ Marko.GEN
 (Markovića)/ njega
 (Marković.GEN)/ he.GEN
 ‘the starting of the proceedings by the (district) attorney/ Marko (Marković)/ him’
- (47) vraćanje duga (zaduženih) stranaka/ Marka
 returning debt.GEN (indebted.GEN) parties.GEN/ Marko.GEN
 (Markovića)/ njega
 (Marković.GEN)/ he.GEN
 ‘the returning of the debt by the (indebted) parties/ Marko (Marković)/ him’

- (48) uzgajanje stoke (srpskih) poljoprivrednika/ Marka
breeding livestock.GEN (Serbian.GEN) farmers.GEN/ Marko.GEN
(Markovića)/ njega
(Marković.GEN)/ he.GEN
'the breeding of the livestock by the (Serbian) farmers/ Marko (Marković)/
him'
- (49) proizvodnja pšenice (vrednih) seljaka/ Marka
production wheat.GEN (hard-working.GEN) farmers.GEN/ Marko.GEN
(Markovića)/ njega
(Marković.GEN)/ he.GEN
'the production of wheat by the (hard-working) farmers/ Marko
(Marković)/ him'
- (50) potpisivanje sporazuma (visokih) funkcionera/ Marka
signing agreement.GEN (high.GEN) officials.GEN/ Marko.GEN
(Markovića)/ njega
(Marković.GEN)/ he.GEN
'the signing of the agreement by the (high) officials/ Marko (Marković)/
him'
- (51) ispitivanje kvaliteta vode (vodećih) hidrologa/
examination quality.GEN water.GEN (leading.GEN) hydrologists.GEN/
Marka (Markovića)/ njega
Marko.GEN (Marković.GEN)/ he.GEN
'the examination of the water quality by the (leading) hydrologists/ Marko
(Marković)/ him'
- (52) analiziranje/ analiza berze (istaknutih) stručnjaka/
analyzing/ analysis stock-market.GEN (prominent.GEN) experts.GEN/
Marka (Markovića)/ njega
Marko.GEN (Marković.GEN)/ he.GEN
'the analyzing/ the analysis of the stock market by the (prominent)
experts/ Marko (Marković)/ him'
- (53) procenjivanje/ procena državnog prihoda (iskusnih)
estimating/ estimation state.GEN revenue.GEN (experienced.GEN)
analitičara/ Marka (Markovića)/ njega
analysts.GEN/ Marko.GEN (Marković.GEN)/ he.GEN
'the estimating/ the estimation of the state revenue by the (experienced)
analysts/ Marko (Marković)/ him'

- (54) proslavljanje/ proslava pobjede (stručnog) štaba/
 celebrating/ celebration victory.GEN (expert.GEN) staff.GEN/
 Rafaela (Nadala)/ njega
 Rafael.GEN (Nadal.GEN)/ he.GEN
 ‘the celebrating/ the celebration of the victory by the (coaching) staff/
 Rafael (Nadal)/ him’
- (55) pronalazak elektriciteta (velikog) naučnika/ (Nikole)
 discovery electricity.GEN (great.GEN) scientist.GEN/ (Nikola.GEN)
 Tesle/ njega
 Tesla.GEN/ he.GEN
 ‘the discovery of electricity by the (great) scientist/ (Nikola) Tesla/ him’

3.2.1.1 Methodology

Both indirect and direct method was used in gathering the data. The informants were presented with the acceptability judgment task followed by an interview. 25 informants completed the questionnaire. All informants are native speakers of Serbian, living in Serbia. None of the informants are dialect speakers.³⁶

The informants were asked to judge the phrases from 1 to 4, 1 being acceptable and 4 being unacceptable. Value 1 was interpreted as well-formed, 2 was marked with one question mark (?), 3 with two question marks (??) and 4 was marked with an asterisk (*). Whenever an informant marked the sentence with 4 (*) or 3 (??), they were asked to change the sentence so that it becomes well-formed. The examples were presented in a larger context, as parts of full sentences. For exposition purposes, in the previous section, I presented only the phrases in question, without the context.

3.2.1.2 Results and discussion

In this section I discuss the acceptability judgments of the five conditions and I exemplify it on two randomly selected nominalizations – *osvajanje* ‘conquest’ and *pronalazak* ‘discovery’. I chose to discuss two randomly selected examples in detail, in order to showcase more precisely the informants’ judgments, but also to illustrate “the saving technique”, i. e. the utilization of possessive forms and *od strane phrases* to express the external arguments of nominalizations.

³⁶ By dialect speakers, in this case, I refer to speakers of the South-Eastern varieties of Serbian, which have Macedonian influence (a DP language with articles), and have been argued to be DP languages.

I do not discuss separately the other examples that were tested as their acceptability judgments comply with the results from the two discussed examples with respect to what type of arguments they take.

The overall acceptability judgments are presented in table (3.1). In the remainder of this section, each condition is further discussed for the two selected nominalizations.

Table 3.1: Acceptability judgments – summary.

Condition	well-formed	ill-formed
Bare count noun		X
Modified count noun	X	
Simple proper name		X
Complex proper name	X	
Pronoun		X

Condition 1: Bare count nouns

Informants generally strongly dislike bare count nouns. Seven and eight informants marked (56a) and (56b) with two question marks, and seventeen and fourteen with an asterisk, respectively.³⁷

- (56) a. ??/* *osvajanje Rima generala*
 conquest Rome.GEN general.GEN
 intended: ‘general’s conquest of Rome’
- b. ??/* *pronazak elektriciteta naučnika*³⁸
 discovery electricity.GEN scientist.GEN
 intended: ‘scientist’s discovery of electricity’

³⁷ I give the summary of these results at the end of this section.

³⁸ Three informants judged 56b, but not 56a, as well-formed. When asked to comment on the contrast between the two examples, they explained that they interpreted the noun *naučnika* in (56b) as plural – the discovery of electricity was a joint effort, involving more than one scientist (interestingly, they did not feel that the conquest of Rome was a joint effort of more than one general).

This ambiguity comes into play as the majority of count nouns exhibit syncretism between the singular and the plural form in the genitive case. In order to remove the ambiguity, an additional example was provided on spot. The noun *glumac* ‘actor’ does not exhibit syncretism in the genitive case. Informants starred the example with the noun in the singular and accepted the one with the noun in the plural.

The majority of the informants fixed the phrase with the possessive and only a small number of them used the *od strane phrase*.

- (57) a. generalovo osvajanje Rima
 general.POSS conquest Rome.GEN
 ‘general’s conquest of Rome’
- b. osvajanje Rima od strane generala
 conquest Rome.GEN from side general.GEN
 ‘the conquest of Rome by the general’
- (58) a. naučnikov pronalazak elektriciteta
 scientist.POSS discovery electricity.GEN
 ‘scientist’s discovery of electricity’
- b. pronalazak elektriciteta od strane naučnika
 discovery electricity.GEN from side scientist.GEN
 ‘the discovery of electricity by the scientist’

Condition 2: Modified count nouns

All informants unanimously accepted examples with nouns modified by adjectives, demonstratives and possessives.³⁹

- (59) a. osvajanje Rima velikog/ onog/ kraljevog/
 conquest Rome.GEN great.GEN/ that.GEN/ king.POSS-GEN/
 njegovog generala
 he.POSS-GEN general.GEN
 ‘great/ that/ king’s/ his general’s conquest of Rome’
- b. pronalazak elektriciteta velikog/ onog/ kraljevog/
 discovery electricity great.GEN/ that.GEN/ king.POSS-GEN/
 njegovog naučnika
 he.POSS-GEN scientist.GEN
 ‘great/ that/ king’s/ his scientist’s discovery of electricity’

-
- (1) a. *imitacija poznatih ličnosti glumca
 imitation known.GEN persons.GEN actor.SG.GEN
 intended: ‘actor’s imitation of celebrities’
- b. ?imitacija poznatih ličnosti glumaca
 imitation known.GEN persons.GEN actor.PL.GEN
 ‘actors’ imitation of celebrities’

³⁹ This, however, does not mean that the *od strane phrase* as the agent is ill-formed. The possessive, on the other hand, is out.

Condition 3: Simple proper names

Examples with simple proper names received the most mixed judgments. Out of 25 informants, only 2 marked (60a) and (60b) with one question mark, 10 marked (60a) and 13 (60b) with two question marks, and 13 marked (60a) and 10 (60b) with an asterisk.

- (60) a. ??/* osvajanje Rima Hanibala
 conquest Rome.GEN Hannibal.GEN
 intended: ‘Hannibal’s conquest of Rome’
 b. ??/* pronalazak elektriciteta Tesle⁴⁰
 discovery electricity.GEN Tesla.GEN
 intended: ‘Tesla’s discovery of electricity’

Out of 23 informants who marked (60a) and (60b) with either a star or two question marks, 18 fixed both examples with a possessive, and 5 of them did so with the *od strane phrase*.⁴¹

- (61) a. Hanibalovo osvajanje Rima
 Hannibal.POSS conquest Rome.GEN
 ‘Hannibal’s conquest of Rome’
 b. osvajanje Rima od strane Hanibala
 conquest Rome.GEN from side Hannibal.GEN
 ‘the conquest of Rome by Hannibal’
 (62) a. Teslin pronalazak elektriciteta
 Tesla.POSS discovery electricity.GEN
 ‘Tesla’s discovery of electricity’
 b. pronalazak elektriciteta od strane Tesle
 discovery electricity.GEN from side Tesla.GEN
 ‘the discovery of electricity by Tesla’

Condition 4: Complex proper names

When it comes to complex proper names, informants in general accepted the examples. Out of 25 informants, only 3 informants marked (63a) and (63b) with one

⁴⁰ This example is starred in Leko (1989: 35).

⁴¹ Informants were later asked whether there is a difference in meaning between the example with the possessive and the one with the *od strane phrase*. The majority of informants said that in possessive examples *Hannibal* is more prominent when compared to *od strane* examples.

question mark. Additionally, 3 other informants marked (63a) with two question marks. Two of them fixed the phrase by using the possessive form, and one informant used the *od strane phrase*.

- (63) a. osvajanje Rima Hanibala Barke
conquest Rome.GEN Hannibal.GEN Barca.GEN
'Hannibal Barca's conquest of Rome'
- b. pronalazak elektriciteta Nikole Tesle
discovery electricity.GEN Nikola.GEN Tesla.GEN
'Nikola Tesla's discovery of electricity'
- (64) a. Hanibal Barkino osvajanje Rima⁴²
Hannibal.NOM Barca.POSS conquest Rome.GEN
'Hannibal Barca's conquest of Rome'
- b. osvajanje Rima od strane Hanibala Barke
conquest Rome.GEN from side Hannibal.GEN Barca.GEN
'the conquest of Rome by Hannibal Barca'

Condition 5: Pronouns

All speakers were unanimous in judging examples involving pronouns as ill-formed.

- (65) a. *osvajanje Rima njega
conquest Rome.GEN he.GEN
intended: 'his conquest of Rome'
- b. *pronalazak elektriciteta njega
discovery electricity.GEN he.GEN
intended 'his discovery of electricity'

Twenty-three speakers fixed the phrases by using the possessive form of the pronoun. Two informants used the *od strane phrase* instead of possessives for both examples.

- (66) a. njegovu osvajanje Rima
his conquest Rome.GEN
'his conquest of Rome'

⁴² Generally, complex proper names cannot form possessives. However, with some foreign names, like for example Hannibal Barca, this is possible. I discuss possessive formation in more detail in chapter 6 .

- b. osvajanje Rima od strane njega
conquest Rome.GEN from side he.GEN
'the conquest of Rome by him'
- (67) a. njegov pronalazak elektriciteta
his discovery electricity.GEN
'his discovery of electricity'
- b. pronalazak elektriciteta od strane njega
discovery electricity from side he.GEN
'the discovery of electricity by him'

The results of the questionnaire are summarized in table (3.2) for the *osvajanje Rima* 'conquest of Rome' examples, and in (3.4) for the *pronolazak elektriciteta* 'discovery of electricity' examples. Note that only those speakers who marked the examples with two question marks or an asterisk were asked to fix the example, hence the numbers in the last two columns (*poss* and *od strane*) combined equal the numbers of the two preceding columns (?? and *) combined.

Table 3.2: Acceptability judgments for 'conquest of Rome'.

Judgments	✓	?	??	*	Poss	od strane
Modified count noun	25	0	0	0	0	0
Complex proper name	19	3	3	0	2	1
Simple proper name	0	2	10	13	18	5
Bare count noun	0	1	7	17	21	3
Pronoun	0	0	0	25	23	2

Table 3.3: Acceptability judgments for 'discovery of electricity'.

Judgments	✓	?	??	*	Poss	od strane
Modified count noun	25	0	0	0	0	0
Complex proper name	22	3	0	0	0	0
Simple proper name	0	2	13	10	18	5
Bare count noun	3	0	8	14	21	1
Pronoun	0	0	0	25	23	2

Based on the gathered acceptability judgments, I treat examples involving pronouns as ill-formed, together with simple proper names and bare singular count nouns. Examples with complex proper names and modified nouns, I treat as well-formed, although there is some variability among speakers.

Table 3.4: Acceptability judgments – summary.

Acceptability	well-formed	ill-formed
Modified count noun	X	
Complex proper name	X	
Simple proper name		X
Bare count noun		X
Pronoun		X

3.2.1.3 Additional questionnaire

Another set of examples was on a different occasion presented to 11 other native speakers of Serbian. These examples included a proper name or a common noun, which sounds quite odd in the possessive form. Additionally, the examples also included a count noun which also sounds rather odd in the possessive form. In these cases, speakers in general prefer the adnominal genitives, although these should be ill-formed due to the fact that they are bare.

- (68) a. ??Čomskijeva knjiga
Chomsky.POSS book
intended: ‘Chomsky’s book’
- b. knjiga Čomskog
book Chomsky.GEN
‘Chomsky’s book’
- (69) a. ??/* lingvistina knjiga
linguist.POSS book
intended: ‘linguist’s book’
- b. knjiga lingviste
book linguists.GEN
‘linguist’s book’

The additional questionnaire with these particular examples was administered in order to try to enforce genitive with simple proper names and bare count nouns, which are generally judged as ill-formed. Indeed, informants showed a much higher acceptance rate for these examples. Out of 11 informants, 5 marked (70a) as well-formed and 6 marked it with one question mark. All 11 informants judged (70b) as well-formed.

- (70) a. ?analiza rečenične strukture Čomskog
analysis sentential.GEN structure.GEN Chomsky.GEN
‘Chomsky’s analysis of sentential structure’

- b. analiza rečenične strukture lingviste
 analysis sentential.GEN structure.GEN linguist.GEN
 ‘linguist’s analysis of sentential structure’

It thus seems that the non-availability of the possessive form indeed makes the genitives acceptable.⁴³

Having discussed the data regarding genitives, I now turn to possessives, which show a rather peculiar behavior, but for which the acceptability judgments are rather straightforward.

3.2.2 Possessives

As previously suggested, Serbian seems to impose certain restrictions on possessive formation when it comes to their complexity. Namely, possessives in Serbian cannot be modified, which Zlatić (2000) suggests to be due to the fact that the possessive marker has to attach to the stem of the word and not the whole phrase. Bošković, on the other hand, attributes this ban on modification to the adjectival nature of these elements. In any case, it is certain that possessives do not allow adjectival modification. However, they seem to allow certain modification, crucially not adjectival.

In this section I discuss the type of constructions that can appear as possessives in Serbian, that were checked with 10 native speakers of Serbian. Since the possessive data is rather uncontroversial, 10 informants were enough to confirm my own judgments. All the answers were unanimous. I first illustrate all of these constructions and then offer tentative explanations for the observed restrictions.

Bare singular nouns produce well-formed possessives (71a), whereas bare plurals yield ungrammatical outputs (71b). Modified nouns are also unacceptable (71c).

43 Nevertheless, it should be noted that the examples in (70a–70b) are also well-formed with the *by-phrase*.

- (1) a. ?analiza rečenične strukture od strane Čomskog
 analysis sentential.GEN structure.GEN from side Chomsky.GEN
 ‘Chomsky’s analysis of sentential structure’
- b. analiza rečenične strukture od strane lingviste
 analysis sentential.GEN structure.GEN from side linguist.GEN
 ‘linguist’s analysis of sentential structure’

- (71) a. *sestrina* *soba*
 sister.SG.POSS room
 ‘sister’s room’
- b. * *sestre* *soba*
 sisters.PL.NOM room
 intended: ‘sister’s room’
- c. * *moja/ *starija* *sestrina* *soba*
 my.POSS/ older.NOM sister.POSS room
 intended: ‘my/ older sister’s room’

Pronouns make perfectly well-formed possessives.

- (72) *njena* *soba*
 her room
 ‘her room’

Simple proper names consisting of either first name (73a) or last name only (73b) are allowed.

- (73) a. *Markova* *soba*
 Marko.POSS room
 ‘Marko’s room’
- b. *Petrovićeva* *soba*
 Petrović.POSS room
 ‘Petrović’s room’

A combination of a first and last name is out. Interestingly enough, the combination of last and first name outputs a perfectly well-formed possessive, however not unrestrictedly.

- (74) a. * *Markova* *Petrovićeva* *soba*
 Marko.POSS Petrović.POSS room
 intended: ‘Marko Petrović’s room’
- b. * *Marko* *Petrovićeva* *soba*
 Marko.NOM Petrović.POSS room
 intended: ‘Marko Petrović’s room’
- c. * *Markova* *Petrović* *soba*
 Marko.POSS Petrović.NOM room
 intended: ‘Marko Petrović’s room’

- d. Petrović Markova soba
Petrović.NOM Marko.POSS room
'Petrović Marko's room'
- e. * Petrovićeva Markova soba
Petrović.POSS Marko.POSS room
intended: 'Petrović Marko's room'
- f. * Petrovićeva Marko soba
Petrović.POSS Marko.NOM room
intended: 'Petrović Marko's room'

Note that the only grammatical example involving a first and last name combination is the one where the first name follows the last name and only the first name takes the possessive suffix (74d). All other combinations are out: possessive first name + possessive last name (74a), first name + possessive last name (74b), possessive first name + last name (74c) and possessive last name + possessive first name (74e).

Another seemingly complex construction that can take a possessive form is a combination of a proper name and a kinship term, or a term denoting a certain profession or occupation.^{44 45}

- (75) a. baba/ tetka/ mama/ seka/
grandma.NOM/ aunt.NOM/ mum.NOM/ sister.NOM/
prija Anina soba
mother-in-law.NOM Ana.POSS room
'grandma/ aunt/ mum/ sister/ mother in law Ana's room'
- b. deda/ tata/ teča/ bata Tomina soba
grandpa.NOM/ dad.NOM/ uncle.NOM/ bro.NOM Toma.POSS room
'grandpa/ dad/ uncle/ bro Toma's room'

The full forms of nouns 'father' and 'brother' – *otac* and *brat* are disallowed in possessive compounding.

- (76) * otac/ *brat Tomina soba
father.NOM/ brother.NOM Toma.POSS room
intended: 'father/ brother Toma's room'

44 Zlatić (2000) notes in footnote 3 how certain kinship terms form a compound producing elements such as *baba-Mara* 'grandma Mara' which for the purposes of possessive formation act as one word. However, Zlatić does not note the restrictions on these compound formations.

45 Weiß (1998) shows that in Bavarian, the combination of a proper name and a kinship term (e. g. *d'Tante Anne* 'aunt Anne') also form a complex noun with the proper name as head which determines the phi-features of the complex noun.

Compounds consisting of a profession and a proper name are also allowed, but with certain restrictions: the longer the profession word, the lower the acceptability of the compound.

- (77) a. majstor/ doktor/ mesar/ pekar/
 repairer.NOM/ doctor.NOM/ butcher.NOM/ baker.NOM/
 mlekar Tomina soba
 milkman.NOM Toma.POSS room
 ‘repairer/doctor/butcher/baker/milkman Toma’s room’
- b. ? profesor Tomina soba
 professor.NOM Toma.POSS room
 ‘professor Toma’s room’
- c. * veterinar Tomina soba
 veterinarian.NOM Toma.POSS room
 intended: ‘veterinarian Toma’s room’
- d. * analitičar Tomina soba
 analyst.NOM Toma.POSS room
 intended: ‘analyst Toma’s room’

That the length of the first part in the compound (i. e. the profession term) plays a role in the acceptability of the possessive compound is supported by the examples involving female profession terms. Namely, possessive compounds involving profession terms in feminine forms are slightly degraded when compared to the same forms in the masculine gender (77a). This is because the formation of feminine profession terms requires an extra syllable marking feminine gender.

- (78) ? doktorka/ ?pekarka/ ?mlekarka Anina soba
 doctor.F.NOM/ baker.F.NOM/ milkmaid.F.NOM Ana.POSS room
 ‘doctor/ baker/ milkmaid Ana’s room’

Similarly to the masculine examples, profession terms in the feminine form which have a greater number of syllables do not form grammatical compounds in the possessive form.

- (79) * učiteljica/ *analitičarka Anina soba
 teacher.F.NOM/ analyst.F.NOM Ana.POSS room
 intended: ‘teacher/ analyst Ana’s room’

Note, however, that the length of the proper name does not influence the grammaticality of the possessive compound.

- (80) a. baba/ tetka Aleksandrina soba
 grandma.NOM/ aunt.NOM Aleksandra.POSS room
 ‘grandma/aunt Aleksandra’s room’
- b. deda/ tata Tomislavova soba
 grandpa.NOM/ dad.NOM Tomislav.POSS room
 ‘grandpa/dad Tomislav’s room’

To sum up, to this point it has been well-established that possessives in Serbian are restricted to single word elements, irrespective of their length. These are either bare singular nouns or pronouns, simple first or last names or compounds formed from a last and a first name, or a kinship/profession term and proper name which have been suggested to form a single element. As I have illustrated, compound-formation is not unrestricted. In the remainder of this section I discuss the restrictions on possessive formation.

In order to start disentangling the peculiarities behind possessive formation with compounds, it is vital to determine whether the constructions in question really form compounds which behave as a single unit. Consider the behavior of such constructions in non-possessive environments.

- (81) a. Baba Ana se javila na telefon.
 grandma Ana.NOM REFL answered on telephone
 ‘Grandma Ana picked up the phone.’
- b. Pozvali smo baba Anu.
 called-we are grandma Ana.ACC
 ‘We called grandma Ana.’
- c. Pričali smo sa baba Anom.
 talked-we are with grandma Ana.INST
 ‘We talked with grandma Ana.’

Note that the compound *baba Ana* ‘grandma Ana’ indeed behaves like a single unit, as the partial declension paradigm in (81) shows: case inflections appear only once in the nominal expression. In other words, the kinship term seems to be frozen in form and not affected by case morphology. Only the proper name (i. e. the second part of the compound) declines. Now compare this behavior with the behavior of the nominal expression such as *učiteljica Ana* ‘teacher Ana’.

- (82) a. Učiteljica Ana se javila na telefon.
 teacher Ana.NOM REFL answered on telephone
 ‘Teacher Ana picked up the phone.’

- b. Pozvali smo *učiteljica/ učiteljicu Anu.
called-we are *teacher.NOM/ teacher.ACC Ana.ACC
‘We called teacher Ana.’
- c. Pričali smo sa *učiteljica/ učiteljicom Anom.
talked-we are with *teacher.NOM/ teacher.INST Ana.INST
‘We talked with teacher Ana.’

The nominal expression *učiteljica Ana* ‘teacher Ana’ behaves differently from the compound *baba Ana* ‘grandma Ana’ in that the former requires both parts of the expression to decline for case, whereas the latter does not. Furthermore, declining both parts of the compound like *baba Ana* yields degraded outputs.⁴⁶

It thus follows from the data that compounds like *baba Ana* indeed behave like single units, and should be analyzed as such. Expressions like *učiteljica Ana*, on the other hand, do not behave like single units and are thus disallowed from appearing as possessives. The question that arises naturally is where do these differences stem from. In other words, why is it that an expression like *baba Ana*, but not *učiteljica Ana* is considered as a single unit.

There thus seem to be two conditions that the first member of the compound has to fulfill in order to be able to form a single unit with the proper name that it is attached to.

1. The first member of the compound must not be heavy (i. e. it must not exceed a certain number of syllables).
2. The first member of the compound must end in a vowel or vocalic *r*.

The first condition thus rules out examples such as *učiteljica Ana* ‘teacher Ana’ or *analitičar Toma* ‘analyst Toma’. The second condition rules out examples such as *otac Toma* ‘father Toma’ or *brat Toma* ‘brother Toma’, which although consisting of only two and one syllable, respectively, are out because they end in consonants.

Consider the following as supporting evidence that the consonant/vowel distinction plays a role in compound formation. Namely, the noun *kum* ‘godfather’ in Serbian ends in a consonant *m*. When forming a compound with a proper name, especially in particular case forms, as well as in the possessive forms, certain speakers tend to insert an extra vowel between the two compounds. Hence, instead of *?kum Tomina soba* ‘godfather Toma’s room’, they would produce *kuma Tomina soba*. However, this strategy cannot be extended to expressions such as

⁴⁶ Some speakers treat these as marginally acceptable, but for the majority, these examples are significantly degraded, especially when compared to the examples like those in (82).

analitičar where an extra vowel does not save the compound formation – **analitičara Tomina soba*. It thus seems as the final vowel acts as a linking element, gluing together the two parts of the compound.⁴⁷

The next peculiarity that requires addressing is the possibility of using a last name + first name combination in the possessive form, but crucially not the first name + last name combination, which is the neutral ordering of proper name elements in Serbian. Consider the partial declension paradigm for both constructions.

- (83) a. Marko Petrović se javio na telefon.
Marko.NOM Petrović.NOM REFL answered on telephone
'Marko Petrović picked up the phone.'
- b. Pozvali smo *Marko/ Marka Petrovića.
called-we are *Marko.NOM/ Marko.ACC Petrović.ACC
'We called Marko Petrović.'
- c. Pričali smo sa *Marko/ Markom Petrovićem.
talked-we are with *Marko.NOM/ Marko.INST Petrović.INST
'We talked with Marko Petrović.'
- (84) a. Petrović Marko se javio na telefon.
Petrović.NOM Marko.NOM REFL answered on telephone
'Petrović Marko picked up the phone.'
- b. Pozvali smo ??/*Petrovića/ Petrović Marka .
called-we are ??/*Petrović.ACC/ Petrović.NOM Marko.ACC
'We called Marko Petrović.'
- c. Pričali smo sa */??Petrovićem/ Petrović Markom.
talked-we are with Petrović.INST/ Petrović.NOM Marko.INST
'We talked with Marko Petrović.'

Notice that first name + last name combination in (83) patterns with *učiteljica Ana* in (82), whereas last name + first name combination patterns with *baba Ana* in (81). In other words, first name + last name combination and last name + first name combination differ in that the former does not constitute a single unit, whereas the latter does so. It is thus not unexpected that it is precisely the last name + first name compound that appears as a possessive.

⁴⁷ Some other examples where a linking vowel serves the purpose of gluing together two parts of the compound are *gluvonem* 'deaf-mute' – *gluv*_{deaf}-*o*-*nem*_{mute} or *severoistok* 'north-east' – *sever*_{north}-*o*-*istok*_{east}.

A tentative explanation for this peculiarity might be sought in the diachronic development of last names in Slavic. It is a well-known fact that Slavic last names are most commonly formed by adding a possessive suffix to a given name or an occupation. As an example, a Serbian last name like *Petrović* is derived from the first name *Petar*, meaning literally ‘Petar’s son’. Similarly, the last name *Kovačev* is derived from the noun *kovač* ‘blacksmith’, which translates into ‘a blacksmith’s descendant’. Adding an extra suffix *-ić* to *Kovačev* gives *Kovačević*, which carries diminutive meaning – ‘a young descendant of a blacksmith’. In this sense, the last name could be seen as some form of a title, much in the same sense as occupation or kinship terms. It is thus not unusual that when the last name precedes the given name, the same order being reflected in occupation/kinship compounds, the expression behaves like a single unit.⁴⁸ On the other hand, when the last name follows the given name, it behaves like a postposed adjective, restricting the choice of possible referents for the nominal expression. It therefore follows that first name + last name combinations are disallowed from possessive environments because they do not count as a single unit. Note that profession + name compound does not work in the possessive form when the order is reversed (i. e. name + profession), speaking thus in favor of the proposed analysis.

- (85) *Toma pekareva kola
Toma.NOM baker.POSS car
intended meaning: ‘baker Tom’s car’

Note, however, that the ill-formedness of (85) is not due to the inability of the noun *pekar* ‘baker’ to form a possessive.

- (86) pekareva kola
baker.POSS car
‘Baker’s car’

Another peculiarity regarding possessives is the inability of plural nouns to take the possessive form. Assuming that the adjectival nature of possessive forms in Serbian surfaces with their phi features being unvalued when they enter the derivation, this inability might not be unexpected. Baker (2003) proposes that categories can be distinguished based of their feature specifications, whereby nouns enter the derivation with all their features valued, and adjectives enter the derivation with all of their features unvalued, and depend on another element to assign

48 Note, however, that in the case of last name + first name compounds, the last name is not in any way restricted: it does not need to end in a vowel, and it does not need to be of certain syllable length.

value to their features. If possessives are indeed adjective-like in the sense that they do not have any inherent features, the values that they acquire reflect the agreement with the head noun that they modify. In other words, the plural feature on the possessive is thus the reflex of agreement, and not the inherent property of the possessive itself.⁴⁹ However, if this were the case, then it should be expected that plural possessive forms exist in cases where they modify plural nouns (Esther Rinke, p.c.), yet they do not. Hence, it is unlikely for possessives to be treated on a par with adjectives in this respect. The unavailability of possessives to be formed out of plural nouns should thus be sought elsewhere.

3.3 Chapter summary

To summarize, in this chapter I have first briefly discussed the adnominal genitives in Serbian as presented in the existing literature, where it is assumed that constructions with two genitives are ill-formed. However, as I have shown in section 3.2.1, double genitive constructions are rather ubiquitous in Serbian. Native speakers do not like them only in cases where the possessive counterpart is available. It can thus be concluded that the second genitive is in complementary distribution with the possessive form. This claim is supported by the fact that native speakers accept genitive versions of simple proper names and unmodified common nouns in cases where possessives sound odd (usually borrowings), which are otherwise almost always judged as unacceptable. As far as possessive formation is concerned, I have shown that these are restricted to single units. In other words, the possessive form can in fact consist of two separate words, but these are in the case of possessive formation treated as a single unit.

Having presented the data, the questions raised in the introductory chapter become even more relevant. Namely, it is now clear that double genitive constructions with deverbal nominals do exist in Serbian, and require proper attention. The case assignment in these constructions has been linked to the existence of the DP layer, which led primarily Bošković and Zlatić to reject their well-formedness in Serbian. However, as we have seen, this conclusion is premature, as they under certain conditions form felicitous outputs, and as such require an analysis that accounts for the observed behavior. Moreover, possessive forms require attention in their own right, since their relevance for the topic at hand is two-fold. First, they seem to be mutually exclusive with genitives in the constructions under scrutiny.

⁴⁹ This approach does not complement the analysis proposed by Zlatić (2000), whereby possessives have two sets of features – concord and index. However, to try and account for the ban on plural nouns in the HPSG framework is beyond the scope of this work.

Secondly, their categorial status in Serbian is still unclear – are they really adjectives, as authors like Bošković argue, or are they more D-like. In what follows I address these questions.

4 Argumenthood

In this section, I discuss the realization of both internal and external arguments of deverbal nominals, when these are expressed as genitives. I build on the work of Kovačević (2014), which has been briefly introduced in chapter 2. Kovačević was the first who noticed that arguments in the nominal domain in Serbian follow the general rules laid out in Longobardi (1994) with respect to the licensing of bare nominals. Having not been the main focus of his analysis, Kovačević does not work out the details of the account, and leaves open the questions pertaining to the N to D raising, which are central to Longobardi's proposal.

In what follows, I first briefly summarize the influential work of Longobardi (1994) which posits that all nominal expressions need to be DPs in order to function as arguments (section 4.1). I then discuss Kovačević (2014) and the data presented there (section 4.2). In section 4.3, I then revisit the data and offer an analysis to account for it. The analysis relies on the presence of the DP layer in the extended projection of the noun in Serbian.

4.1 Longobardi (1994)

Longobardi (1994) notices that, in Italian, a count noun in the singular form cannot appear bare in any of the standardly assumed argument positions (subject, object, object of a preposition, and inverted subject of unaccusatives and unergatives). Instead, it has to be introduced by some kind of determiner (most frequently an article, but also a quantifier or a demonstrative). Nonetheless, in a non-argument position (vocatives, exclamations or nominal predication), a singular count noun can occur without any form of determination. This led Longobardi to conclude that nominal expressions need to be DPs in order to function as arguments.

The question that arises naturally is what constitutes a DP. According to Longobardi, to be a DP means to have the D position filled at some point in the derivation (i. e. overtly or covertly). The point in the derivation at which the importance of the occupation of the D position comes into play is language specific and subject to cross-linguistic variation. The D position can be filled in several ways: (i) by base-generation (of overt material), (ii) by movement, or (iii) by a null element.

Base-generation means that certain elements are merged, i. e. base generated, in the D position. Specifically, those are definite articles and pronouns. It is quite clear why definite articles are assumed to be base-generated in the D position. After all, it is precisely the lack of this category that has led linguists to propose that

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articleless languages lack the DP projection altogether. Pronouns, on the other hand, require at least a brief justification.

Syntactically speaking, Longobardi shows that pronouns in Italian, but also in English, must precede adjectives, suggesting that they occupy D positions universally. Pronouns are not lexical nouns in that they do not by default have denotational meaning. Rather, they are functional elements that get reference assignment either contextually or deictically and get their phonological forms through the person features they are endowed with. Therefore, the assumption that they are base-generated as heads of a functional DP projection, or at least that their projection includes the DP follows naturally.

As opposed to pronouns, proper names, and in some instances common nouns, end up in the D position through movement, or in Longobardi's terms – N-raising. This movement operation can either occur overtly (i. e. before Spell-Out) or covertly (i. e. at LF). For example, consider the behavior of proper names in Italian, which undergo N-raising overtly (Longobardi, 1994: 623).

- (87) a. Il mio Gianni
the my Gianni
- b. *mio Gianni
my Gianni
- c. Gianni mio
Gianni my
- d. Il Gianni mio
the Gianni my

Adjectives in Italian may occur either in the prenominal position (i. e. between D and N), or in a postnominal position, but crucially they can never precede D. In (87a) and (87d), the adjective precedes and follows the noun, respectively. The noun is in the N position and the article is in D. The difference between (87b) and (87c) is in the position of the noun – in (87b) the noun is in N, which renders the phrase ill-formed, whereas in (87c) it has raised to D. On the other hand, in a language like English, which does not generally pair proper names with articles, and which allows prenominal modification only, Longobardi assumes that the proper name raises to D covertly, at LF.

- (88) a. young Jane
- b. *Jane young

In some instances, the D position is occupied by a null element – Null D. However, the distribution of Null Ds is by no means unrestricted. Null D has to be structurally licensed: it has to be governed by a lexical category. In other words, Null

D is restricted to the internal argument (theme argument) position which is governed by the verb (89c). Null D cannot appear with subjects (external arguments) because this position does not fulfill the proper government requirement (89b). In addition, Null D is restricted to mass nouns and plural forms of count nouns, and cannot appear with singular counts (89d). Semantically, Null D by default assigns existential interpretation to the NP it takes as an argument (89a). Consider examples from Italian (Longobardi: 1994: 613–616).

- (89) a. Bevo sempre vino./ Mangio patate.
 drink.I always wine/ Eat.I potatoes
 ‘I always drink wine.’/ ‘I eat/am eating potatoes.’
- b. *Acqua viene giù dalle colline.
 water comes down from.the hills
- c. Viene giù acqua dalle colline
 comes down water from.the hills
- d. *Ho invitato studente
 Have.I invited student.SG

Consider next the English counterparts to the Italian examples (Alexiadou, Haegeman & Stavrou, 2007: 2014).

- (90) a. I drink wine with my dinner./ I never eat potatoes.
 b. Water was running down the mountains.
 c. There was water running down the mountains.
 d. *I have invited student.

The well-formedness of (90b) shows that in English, bare nouns can in fact also appear in non-governed positions. According to Longobardi, the difference with respect to behavior of bare nouns and proper names in Italian and English can be accounted for with two principles and the points at which they apply in the respective languages.

1. Null D has a default existential interpretation.
2. An empty head (i. e. Null D) must be lexically governed.

The two principles apply at different points throughout the derivation in the two languages. In Italian, the principles apply at Spell-Out, whereas in English they apply at LF. This leads to a parametric variation between the two languages: N raises to D in the syntax in Italian, but not in English. In more Minimalist terms, some feature F on D is strong in Italian and requires local checking, hence movement is overt, whereas the same feature is weak in English, allowing checking at the distance and subsequent covert movement.

Interpretatively, the two positions – N and D – are associated with different semantics. The N position is related to universal concepts and has a kind-referring denotation. The D position determines the particular designation of the whole DP. This can be achieved either by means of assigning reference to a single individual object, or by means of operator – variable dependencies. For instance, the specific reading of common nouns is achieved via binding of a variable, which ranges over the extension of the kind referred to by the N position, by the operator sitting in D. Specific definite reading of determinerless proper names, on the other hand, is achieved through raising of the proper name to D, and leaving the foot of the chain – the N position – uninterpreted. Apart from proper names, in English, common nouns, too, undergo N-raising. In this case, they have a generic interpretation as they create a chain with the N position, but unlike with proper names, it is the foot of the chain that gets interpreted.

Having laid out the basics of Longobardi's (1994) analysis regarding the distribution of bare nouns, the question becomes whether the same analysis can be extended to languages without articles. As I have argued in the introductory chapter, assuming the universality of the DP projection has welcoming consequences. Hence, showing that the distributions of bare nouns noted in Longobardi (1994) for languages with articles, i. e. Italian and English, follows the same pattern in an articleless language would also be a positive outcome. The question that arises immediately is what the exponents of D could be in such a language. In other words, if we take that Null D and raising of proper names, and base-generation of pronouns in D are available, the question becomes if there is something else that can substitute for the lack of articles? That is, if any other category can be taken as an exponent of D?

4.2 Kovačević (2014)

Following Antonić (2005), who gives a descriptive overview of the distribution of what she calls genitive subjects in the nominal domain of Serbian, Kovačević (2014) notices that the distribution of arguments of a noun follows Longobardi's (1994) generalizations.⁵⁰

50 Note that Longobardi bases his generalizations on the distribution of arguments in the clausal domain and does not extend it to the nominal one. Kovačević discusses the distribution of arguments in the clausal domain of Serbian and concludes that they do not follow Longobardi's generalizations, which in turn leads him to propose that they do not function as arguments in the syntax.

Kovačević notes that the external argument of a noun⁵¹ cannot appear bare as it yields an ungrammatical string (91a). The grammaticality of the phrase can however be rescued if the external argument is introduced by an adjective (91b). Consider the contrast between the examples in (91) from Kovačević (2014: 48).

- (91) a. *slika glumice slikara
 painting actress.GEN painter.GEN
 intended: ‘the painter’s painting of an actress’
- b. slika glumice engleskog slikara
 painting actress.GEN English.GEN painter.GEN
 ‘the English painter’s painting of an actress’

Next, he observes how mass and plural count nouns can appear bare in argument positions (Kovačević, 2014: 49).

- (92) a. opis amebe naučnika
 description amoeba.GEN scientist.GEN.PL
 ‘the scientists’ description of the amoeba’
- b. udar vazduha je odneo sve pred sobom
 strike air.GEN is carry everything front self
 ‘a strike of air blew away everything (in front of itself)’

Kovačević acknowledges that mass nouns are not the best candidates for external theta-roles, yet he suggests that the noun *vazduha* ‘air’ in (92b) can arguably be understood as an agent of *udar* ‘strike’, showing that bare mass nouns can be used as agent arguments of other nouns.

When it comes to proper names and pronouns, Kovačević argues that they exhibit behavior distinct from that observed in Italian. Namely, that both of these categories are base-generated in the N position and that none of them undergo N-raising. In other words, both proper names and pronouns stay in their situ positions, i. e. the head of the NP, and they do not move to D. *Prima facie*, this might sound rather unintuitive, but for the sake of the argument developed in Kovačević (2014), let us for a moment assume that this is correct. The author assumes that precisely this lack of raising is what yields the examples in (93) from Kovačević (2014: 49–52) with proper names and pronouns ungrammatical.

⁵¹ Kovačević uses *picture* nouns and Result Nominals (in terms of Grimshaw (1990)) to illustrate the distribution of nominal arguments. In this chapter I follow Kovačević and I stick with Result Nominals. The same generalizations can be extended to Event Nominals.

- (93) a. * analiza kapitalizma Marksa
 analysis capitalism.GEN Marx.GEN
 ‘Marx’s analysis of capitalism’
 b. * analiza kapitalizma njega
 analysis capitalism.GEN he.GEN
 intended: ‘his analysis of capitalism’

Realizing a proper name as a complex phrase containing a combination of a first and a last name, yields (93a) grammatical (Kovačević, 2014: 49).

- (94) analiza kapitalizma Karla Marksa
 analysis capitalism.GEN Karl.GEN Marx.GEN
 ‘Karl Marx’s analysis of capitalism’

Kovačević suggests that the grammaticality of (94) can be accounted for under the assumption that the left-most element in the proper name complex is generated in D. Additionally, he applies Russell’s (1905) *referring proper name* versus *denoting proper name* distinction, arguing that in Serbian simple proper names give denotation to elements, while the introduction of the second element and makes the phrase complex and gives it reference.

Kovačević (2014: 53) concludes the section by showing that determinerless NPs can indeed appear in non-argument positions as stated in Longobardi (1994). For example, adjuncts can appear as bare singular count nouns.

- (95) ubistvo tajnog agenta pištoljem
 murder secret.GEN agent.GEN gun.INSTR
 ‘the secret agent’s murder by a gun’

Kovačević sums up by concluding that the generalizations made in Longobardi (1994) are borne out in the nominal domain in Serbian. However, they cannot be extended to the domain of the clause, as complexity of the noun phrase does not have an effect on its distribution. He then goes on to suggest an analysis for the clausal domain, while still maintaining Longobardi’s generalization that nominal elements have to be DPs in order to function as arguments.

In short, Kovačević assumes that in the majority of cases, noun phrases in the clausal domain are not DPs, therefore they do not have argument status. Kovačević proposes that the D layer is never present in Serbian, unless there is a specific need for it. In other words, he argues that NEs are never arguments in the overt syntax, unless merging them as arguments is the only way to preserve the derivation. Only when NEs need to be merged as arguments in the overt syntax does the D-layer get inserted on top of the NP. He then links argumenthood and theta-role

assignment with case inflections, arguing how in languages with a rich case morphology (e. g. Serbian) NEs need not be arguments in the syntax and subsequently need not project the DP layer. In short, he treats theta-roles as morphosyntactic features expressed in the forms of case inflections which nominals are already specified for while in the numeration. Following Bošković and Takahashi's (1998) proposal to account for scrambling in Japanese, Kovačević argues that nominal expressions are base-generated as TP adjuncts (scrambled), and eventually undergo LF lowering into theta-positions. Considering that agents bear nominative, themes accusative and patients dative case, the system can automatically sort out which nominal to lower to which theta-position. Conversely, with transitive nominals both arguments (agent and theme) bear genitive case and the system does not have a mechanism to decide which nominal to lower to which theta-position. Hence, the DP layer kicks in as a last resort, enforcing argumenthood onto the nominal expressions.

Although the approach of Kovačević manages to capture the apparent differences between the two domains, it nevertheless raises a number of interesting questions. First, the problem appears with passive constructions like (96).

- (96) Knjiga je kupljena.
 book aux bought
 'The book is bought.'

In (96) the subject noun *knjiga* 'book' bears nominative case, even though it serves the theta-role of the theme argument. Under Kovačević's account, the subject in (96) would be read by LF as an agent and not a theme argument. Secondly, it is unclear how focus is derived under the proposed approach. Presumably, Serbian has a preverbal focus position:

- (97) Marko ANI daje časove sintakse.
 Marko.NOM Ani.DAT give classes.ACC syntax.ACC
 'Marko is giving syntax classes to Ana (and not to Mary).'

If nominal expressions in (97) are merged as TP adjuncts, the question becomes how is it that a contrastively focused element (i. e. *Ana*) ends up overtly in a preverbal position.⁵² Finally, verbs like *naučiti* 'teach', when used as a three place predicate have a choice of assigning either accusative and dative (98a) to its internal arguments (i. e. direct and indirect object) or alternatively accusative and

⁵² The problem can be overcome if one assumes focus to be a PF phenomenon (i. e. PF movement), but this is not made explicit in Kovačević (2014).

accusative (98b). Double accusative constructions pose problems for the analysis of Kovačević.

- (98) a. Ana je Maju naučila mnogim stvarima.
 Ana.NOM aux Maja.ACC taught many.DAT things.DAT
 ‘Ana taught Maja many things.’
- b. Ana je Maju naučila mnogo stvari.
 Ana.NOM aux Maja.ACC taught many.ACC things.ACC
 ‘Ana taught Maja many things.’

Having shown some of the general problems of Kovačević’s analysis, it is crucial to note that when concluding that the arguments of nouns behave in line with the Longobardian generalizations, the author does not spell out what exactly this means for Serbian. Longobardi (1994) made the generalizations based on the data from English and Italian and possibly extended it further to other Germanic and Romance languages, respectively. How data from Slavic languages, in this case Serbian, fit these generalizations is an open question. Does Serbian behave in an English-like manner, or Italian-like, or whether it behaves in a whole new manner? In the remainder of this section I do exactly this – I examine the distribution of arguments with transitive nominals and I propose that they behave in a manner much similar to English.

4.3 The data revisited

Having briefly laid out Longobardi (1994) and the proposal of Kovačević (2014), in this section, I reexamine the data presented in the previous sections and I offer some new examples with regards to the realization of arguments in the nominal domain of Serbian and Longobardi’s (1994) generalizations. I first address the cases of the external argument and then move on to the internal one.

The data presented in this section is based on acceptability judgments of 11 native speakers of Serbian who were presented the data devoid of any context in the form of newspaper headlines. An interesting observation emerges with respect to the acceptability judgments of examples in which the external argument is realized as a bare singular count noun, or as a simple proper name. The bare noun and the proper name used in this questionnaire are *lingvista* ‘linguist’ and *Čomski* ‘Chomsky’ – which, as I have discussed in chapter 3, sound rather odd in the possessive form, and native speakers do not like them very much.

4.3.1 External arguments

The external argument of a transitive nominal can be realized as a singular count noun.

- (99) ? analiza rečenične strukture lingviste
 analysis sentence.GEN structure.GEN linguist.GEN
 ‘analysis of sentential structure by a linguist’

The interpretation of the phrase in (99) when uttered out of the blue is generic – linguists’ analysis of sentence structure as opposed to, for instance, philosophers’. Note, however, the question mark – 3 out of 11 native speakers find the phrase in (99) questionable. The phrase becomes much better after the noun *lingvista* ‘linguist’ is modified by an adjective (100).

- (100) analiza rečenične strukture srpskog lingviste
 analysis sentence.GEN structure.GEN Serbian.GEN linguist.GEN
 ‘analysis of sentential structure by a Serbian linguist’

It is crucial to note here that the interpretation is still generic, or at the very least indefinite: Serbian linguists’ analysis of sentence structure as opposed to German linguists’ one. If, on the other hand, the subject noun is introduced by a demonstrative or a possessive (101), the interpretation becomes definite.

- (101) analiza rečenične strukture mog/onog lingviste
 analysis sentence.GEN structure.GEN my/that.GEN linguist.GEN
 ‘analysis of sentential structure by my/that linguist’

The same holds for plural count nouns in the external argument position. Bare and adjectivally modified ones have a generic interpretation, while those introduced by a possessive or demonstrative, crucially have a definite interpretation.

- (102) a. analiza rečenične strukture lingvista
 analysis sentence.GEN structure.GEN linguists.GEN
 ‘analysis of sentential structure by linguists’
 b. analiza rečenične strukture srpskih lingvista
 analysis sentence.GEN structure.GEN Serbian.GEN linguists.GEN
 ‘analysis of sentential structure by Serbian linguists’
 c. analiza rečenične strukture mojih/onih lingvista
 analysis sentence.GEN structure.GEN my/those.GEN linguists.GEN
 ‘analysis of sentential structure by my/those linguists’

The fact that both with singular and plural count nouns the interpretation stays generic after the noun has been modified by an adjective, but that it necessarily becomes definite once a demonstrative or a possessive is introduced, hints that these categories cannot be treated as a uniform category as suggested by the proponents of the NP analysis of Serbian (see section 2.2.1).

Proper names are allowed to appear as an external argument of transitive nominals. As previously suggested, the phrase is better-formed when the proper name is complex.

- (103) a. ?analiza rečenične strukture Čomskog
 analysis sentence.GEN structure.GEN Chomsky.GEN
 ‘analysis of sentential structure by Chomsky’
- b. analiza rečenične strukture Noama/profesora
 analysis sentence.GEN structure.GEN Noam/professor.GEN
 Čomskog
 Chomsky.GEN
 ‘analysis of sentential structure by Noam Chomsky’

Interestingly, pronouns cannot appear in external argument positions. All of the informants unanimously judged (104) as out.

- (104) *analiza rečenične strukture nje
 analysis sentence.GEN structure.GEN her.GEN
 intended: ‘analysis of sentential structure by her’

4.3.2 Internal arguments

When it comes to the internal arguments of transitive nouns, the state of affairs is quite similar to that of the external arguments, with some, at first glance, unexpected interpretative differences. Namely, while the distribution and interpretation of singular count nouns patterns to that of the external argument (bare and adjectivally modified singular nouns have a generic interpretation, and demonstrative and possessive-modified one has a definite interpretation), (105) the situation with plural count nouns is somewhat different (106).

- (105) a. analiza rečenice srpskih lingvista
 analysis sentence.GEN serbian.GEN linguists.GEN
 ‘analysis of a sentence by Serbian linguists’
- b. analiza proste rečenice srpskih lingvista
 analysis simple.GEN sentence.GEN serbian.GEN linguists.GEN
 ‘analysis of a simple sentence by Serbian linguists’

- c. analiza moje/te rečenice srpskih lingvista
analysis my/that.GEN sentence.GEN serbian.GEN linguists.GEN
'analysis of my/that sentence by Serbian linguists'
- (106) a. analiza rečenica srpskih lingvista
analysis sentences.GEN serbian.GEN linguists.GEN
'analysis of sentences by Serbian linguists'
- b. analiza prostih rečenica srpskih lingvista
analysis simple.GEN sentences.GEN serbian.GEN linguists.GEN
'analysis of simple sentences by Serbian linguists'
- c. analiza mojih/tih rečenica srpskih lingvista
analysis my/that.GEN sentences.GEN serbian.GEN linguists.GEN
'analysis of my/those sentences by Serbian linguists'

The interpretation with a bare plural count noun (106a) and a plural count noun modified by an adjective (106b) is existential – i. e. there exist some (simple) sentences that are analyzed by Serbian linguists. This interpretation is not consistent with that of singular count nouns in the internal argument position (105) or with plural count nouns in the external argument position (102), both of which are generic.

As expected, proper names are allowed as internal arguments, and pronouns are banned, just like is the case with the external arguments.

- (107) a. analiza Čomskog srpskih lingvista
analysis Chomsky.GEN serbian.GEN linguists.GEN
'analysis of Chomsky by Serbian linguists'
- b. * analiza njega srpskih lingvista
analysis he.GEN serbian.GEN linguists.GEN
intended: 'analysis of him by Serbian linguists'

4.4 N to D raising in Serbian

In this section I first summarize the observations made in sections 4.3.1 and 4.3.2 regarding the distribution, complexity and interpretation of arguments of transitive nominals. I then put it in the framework of Longobardi (1994) and state the observations that will ultimately lead to a prospective analysis of the nominal domain of Serbian.

Table 4.1: Interpretation of the arguments of nouns.

Argument	External	Internal
Singular count N	Generic	Generic
Sg count N+adj	Generic	Generic
Sg count N+poss/dem	Definite	Definite
Plural count N	Generic	Existential
Pl count N+adj	Generic	Existential
Pl count N+poss/dem	Definite	Definite
Proper name	Definite	Definite
Pronouns	x	x

As can be seen from the table, the only inconsistencies pertain to the existential (as opposed to generic) interpretation of bare plurals and adjectivally modified plurals in the internal argument position, and ban of pronouns from both external and internal argument positions. In the remainder of this chapter, I give an account of the data using the Longobardian framework.

Recall from section 4.1 the two principles suggested by Longobardi (1994) to account for Italian and English data. (i) Null D has a default existential interpretation; and (ii) Null D must be lexically governed. Adding to this the proposal that, in order to refer to kinds (i. e. generic interpretation), nouns must be in the N positions in the syntax (Longobardi, 1994), I suggest that NEs in Serbian (at least when arguments of nouns) behave largely like English ones, in that the principles (i) and (ii) apply at LF.

Being typologically a [+argumentative, +predicative] language in Chierchia's (1998) *Nominal Mapping Parameter's* terms, an articleless language like Serbian allows for bare arguments to occur freely, and to, depending on a context, have either generic, definite or indefinite meaning. Hence, it is no surprise that this kind of interpretative variation is exactly what we see in Serbian data. Notice that both singular and plural count nouns – bare and adjectivally modified – yield a generic interpretation when realized as an external argument. When introduced by a demonstrative or possessive, the interpretation is crucially definite. Note, however, that neither bare singular nor bare plural nouns can have an existential interpretation, which is what we would expect if we posited some sort of a Null D in those configurations. Taking into account Longobardi's (1994) principle that Null D has to be lexically governed, it is no surprise that we do not find it with bare nouns in subject positions. What is more, this is precisely the reason why we cannot have existential interpretation in those cases. Instead, in cases with bare nouns, and nouns modified by adjectives, we have generic interpretation. I propose that the reason for this is that at the point of Spell-Out, the noun is crucially

still in N – it's base position – and only covertly (i. e. at LF) moves to D to substitute for the Null element and ultimately save the governing requirement, necessarily yielding a generic interpretation. In this light, Longobardi (1994: 642) writes:

[...] predicative licensing of NPs must be satisfied at S-Structure, universally preventing bare common nouns from substituting into D before such a level. This leaves open the possibility that as a result of LF movement not only proper names but also determinerless common nouns may undergo raising to D, once they have satisfied the predicative licensing in the N position at S-Structure. In this sense, we can expect LF movement to raise even more types of head nouns to D than the syntactic movement visible in Italian. Hence, it comes as no surprise that English bare plurals and mass nouns may occur in non-lexically governed positions and are not necessarily confined to the existential interpretation [...]

In the cases where the noun is modified by an adjective, possibly only the adjective, or the whole adjective + noun construction raises to the DP projection. On the other hand, possessives and demonstratives, yielding definite interpretation, can be seen on a par with the definite article. They might as well be full-fledged exponents of D, but unlike the definite article which is merged directly as a D head, possessives and demonstratives end up in DP via movement from their base-positions below the DP (cf. Alexiadou, Haegeman & Stavrou, 2007)

The situation with internal arguments is somewhat different, and at first glance maybe unexpected. While singular nouns exhibit the same interpretation as they do when serving as external arguments, plural nouns differ, but only bare and adjectivally modified. Namely, bare plural count nouns and adjectivally modified plural count nouns serving as an internal argument of a transitive nominal yield existential interpretation. This observation is in fact consistent with Longobardi's (1994) principles. Namely, Null D, yielding an existential interpretation, is precisely restricted to internal argument positions (i. e. lexically governed position).⁵³

Moreover, Null D is restricted to mass and plural nouns, hence only plurals can have an existential interpretation, but not singulars, which is precisely what we find in Serbian data. Finally, just like with the external argument, pronouns are disallowed in the internal argument position, too.

The data thus confirms that just like in English and Italian, in Serbian, too, Null D can occur with internal arguments only and is restricted to plurals (and

53 Recall that in English, Null D can also appear with external arguments because “the government condition” applies at LF, at which point the noun itself raises to D, in order to save the derivation. Since the D position is now filled, the interpretation is no longer existential. On the other hand, this does not happen with Null D in the object position, since the government condition is fulfilled, hence we have the default existential interpretation.

mass nouns). In addition, I suggest that Serbian behaves much like English in that it makes use of LF movement rather than movement in the syntax. Finally, the data gives hints with respect to the categorial status of nominal modifiers. Adjectives, determiners and possessives cannot be treated as a uniform category, as suggested by the ‘contra DP camp’ (see section 2.2.1). If it were the case that all these elements belong to one and the same category, then the observed interpretative differences would not be expected. The only puzzling question left pertains to the exclusion of pronouns from both internal and external argument positions.

Kovačević (2014) accounts for the ban of pronouns by adopting the analysis of Progovac (1998) and modifying it by the analysis of Despić (2011) (see section 2.2.1 for the summaries of the respective analyses). In short, Kovačević takes that pronouns are base-generated in N and actually fail to raise to D. In this way, D remains empty and cannot be read by the interfaces causing the derivation to crash and yielding ungrammatical outputs. However, it is quite unnatural to treat functional elements like pronouns on a par with lexical nouns as they differ in various respects. Specifically, pronouns are not denotational by default, and need to be in the D position at least at some point in the derivation in order to become referential. Moreover, as I have shown, pronouns in fact must be treated as elements located higher than adjectives, so the analysis of Kovačević does not seem satisfactory. Instead, I propose that the explanation pertaining to the ban of pronouns should be sought elsewhere. One possibility might be that the ban on pronouns is due to the fact that pronouns make prototypical cases of possessives – i. e. all pronouns have their possessive counterpart, and as I have suggested previously, the availability of the adnominal genitive seems to be in the complementary distribution with the availability of the possessive form. Putting it simply, the strategy seems to be the following: if you can express an argument of a deverbal nominal in the possessive form, do so; otherwise use the genitive form.

- (108) a. njegovo osvajanje Vimblodona
 he.POSS conquest Wimbledon.GEN
 ‘his winning of Wimbledon/ the winning of Wimbledon by him ’
- b. *osvajanje Vimblodona njega
 conquest Wimbledon.GEN he.GEN
- (109) a. *veliki šampionovo osvajanje Vimblodona
 great champion.POSS conquest Wimbledon.GEN
- b. osvajanje Vimblodona velikog šampiona
 conquest Wimbledon.GEN great.GEN champion.GEN
 ‘the winning of Wimbledon by the great champion

Since personal pronouns do not show any restrictions when it comes to their abilities to take possessive forms, it is not surprising that they cannot appear in the genitive forms in the constructions in question.⁵⁴

4.5 Chapter summary

In this chapter I have built upon the proposal of Kovačević (2014), who was the first to notice that the distribution of nominal arguments in Serbian follows generalizations laid out in Longobardi (1994). Based on the observed distribution of arguments, and the interpretative differences with respect to the external/internal argument distinction, I have suggested that Serbian behaves much like English in that it makes use of covert, i. e. LF movement to D and that the two principles that regulate the cross-linguistic differences – (i) the default existential interpretation of Null D; and (ii) the government condition of the Null D – both apply at LF.

This analysis has two advantages. First, it maintains the generalization that in order to function as arguments, nominal elements have to be DPs, which is the approach widely accepted in the literature. Secondly, this approach resorts to LF movement, which is in the current linguistic theory preferable to syntactic movement. Recall from section (2.3) that covert movement is less costly than overt movement, since covert movement, unlike overt movement, does not have to pied-pipe phonological features, which have been previously sent to PF (Chomsky's (1993, 1995) *Procrastinate Principle*).

54 This, however, does not mean that personal pronouns cannot take genitive forms at all. They in fact can, but crucially not in constructions under investigation. Otherwise, they are able to take genitive forms.

- (1) Sećam se njega.
 rememeber-I refl he.gen
 'I remember him.'

5 Genitive assignment in result and process nominals

As we have seen in the previous chapters, Serbian allows double genitive arguments with transitive nouns. More specifically, both process (110a) and result (110b) nominals (terminology from Rappaport (1998)) take both internal and external genitive arguments.

- (110) a. proizvodnja pšenice vrednih seljaka
production wheat.GEN hard-working.GEN farmers.GEN
'the production of wheat by the hard-working farmers'
- b. fotografija Frankfurta Marka Kostića
photograph Frankfurt.GEN Marko.GEN Kostić.GEN
'photograph of Frankfurt by Marko Kostić'

Russian is another language without articles that does not comply with Bošković's adnominal genitives parameter. Although, not as free as Serbian, Russian does allow two genitive arguments with certain types of nouns. Specifically, result nouns allow two genitive arguments (111), whereas process nominals generally do not (112). With process nominals, the external argument is in the instrumental case (113). Consider the data from Rappaport (1998).

(111) **Result nouns – well-formed double genitives**

- a. fotografija krest'jan Smirnova
photograph peasants.GEN Smirnov.GEN
'the photograph of the peasants of Smirnov'
- b. tablica élementov Mendeleeva⁵⁵
table elements.GEN Mendeleev.GEN
'the table of the elements of Mendeleev'
- c. interpretacija poéma Šklovskogo
interpretation poem.GEN Shklovskij.GEN
'the interpretation of the poem of Shklovskij'

(112) **Process nominals – ill-formed double genitives**

- a. *fotografirovanie krest'jan Smirnova
photographing peasants.GEN Smirnov.GEN
intended 'Smirnov's photographing of the peasants'

⁵⁵ Example from Padučeva (1984).

- b. *otkrytie periodiceskogo zakona Mendeleeva
 discovering periodic.GEN law.GEN Mendeleev.GEN
 intended: ‘Mendeleev’s discovery of the periodic law’

(113) **Process nominals – well-formed instrumental**

- a. ispolnenie romansa pevicej
 performance romance.GEN singer.INST
 ‘the performance of the romance by the singer’
- b. ctenie proizvedenija avtorom
 reading work.GEN author.INST
 ‘reading of the work by the author’

In this chapter I present two analyses that account for the Russian data. One is the analysis of Rappaport (1998), which is developed in the traditional Case Theory. The other analysis is based on Pesetsky’s (2013) work on Russian case morphology. The former analysis is fully developed in Rappaport and here I only briefly report on it. The latter is not explicitly proposed in Pesetsky’s (2013) monograph, but can be developed from the general machinery that Pesetsky proposes. Crucially, both analyses assume the DP projection. After the discussion of the Russian data, I examine the Serbian data within these two frameworks.

This chapter is organized as follows. In section (5.1) I present evidence behind the claim that the adnominal genitive case in Serbian is an instance of structural case, and not inherent case, as it is generally assumed. In section (5.2) I discuss the analysis of Rappaport for Russian, and I then apply it to Serbian data. I do the same in section (5.3) for Pesetsky.

5.1 The nature of the adnominal genitive case in Serbian

As we have seen, complements of nouns in Serbian bear genitive case. Consider the following examples where complements of *drugarica* ‘friend’, *haljina* ‘dress’ and *prezentacija* ‘presentation’ all bear genitive case.

- (114) a. Sreo je drugaricu svoje sestre.
 met.he AUX friend.ACC his.GEN sister.GEN
 ‘He met his sister’s friend.’
- b. Pozajmila je haljinu moje majke.
 borrowed.she AUX dress.ACC my.GEN mother.GEN
 ‘She borrowed my mother’s dress.’

- c. Prisustvovali smo prezentaciji gostujućih govornika.
 attended.we AUX presentation.DAT invited.GEN speakers.GEN
 ‘We attended the presentation of the invited speakers.’

The question becomes what is the nature of this adnominal genitive case – whether it is an instance of inherent case, as is generally assumed, or whether it is actually an instance of structural case.

Looking at data from English for example, where nouns cannot be followed by nominal complements, or assign case to the complements they do not theta-mark, it could be concluded that nouns, unlike verbs, cannot be structural case assigners. Rather, they are seen as inherent case assigners (Chomsky, 1986b). Consider the following examples (Zlatić, 1997: 204).

- (115) a. donation of money to hospitals
 b. *donation money to hospitals
- (116) a. John believes Mary to be a good linguist.
 b. *John’s belief of Mary to be a good linguist.

In Serbian, on the other hand, as we have seen, nouns can in fact take nominal complements. As a matter of fact, the Serbian equivalent of (115b) shows that Serbian nouns are proper case assigners (Zlatić, 1997: 205).

- (117) a. donacija novca bolnicama
 donation money.GEN hospitals.DAT
 ‘donation of money to hospitals’
- b. donirati novac bolnicama
 donate.INF money.ACC hospitals.DAT
 ‘to donate money to hospitals’

The deverbal noun in (117a) takes two arguments: the theme argument *novca* ‘money’ in the genitive case, and the goal argument *bolnicama* ‘hospitals’ in the dative case. The related verb in (117b) takes the same two arguments, with the difference in case-marking of the theme argument – *novac* ‘money’ is in the accusative case. Thus the structural accusative became genitive in the nominalization, while the oblique case (i. e. dative) remained constant. Consider next how nominative case also becomes genitive in nominalizations (Zlatić, 1997: 207).

- (118) a. protest ovog studenta
 protest this.GEN studenta.GEN
 ‘a protest by this student’

- b. Ovaj student protestuje.
 this.NOM student.NOM protests
 ‘This student is protesting.’

The meaning of the adnominal genitive *ovog studenta* ‘this student’ corresponds to the subject of (118b) in the nominative case. However, according to Zlatić, it is impossible to express both agent and theme arguments as genitives in the context of nominalizations. Instead, the theme argument is expressed as genitive, and the agent is expressed as a possessive (Zlatić, 1997: 208).

- (119) Jovanov opis Amerike
 John.POSS description America.GEN
 ‘John’s description of America’
- a. *opis Jovana Amerike
 description John.GEN America.GEN
- b. *opis Amerike Jovana
 description America.GEN John.GEN

Although the example in (119b) is indeed ill-formed, the conclusion that nouns in general cannot take two genitive arguments is false, as we have seen throughout this thesis.

Zlatić (1997: 208) goes on to show that the ill-formedness of (119b) is not unexpected, as the parallel construction is also disallowed in English: both agent and theme cannot be expressed with *of* phrases.

- (120) a. the shooting of the hunters (agent)
 b. the shooting of the deer (theme)
 c. *the shooting of the hunters of the deer

Another observation that Zlatić (1997: 209) makes is that genitive must be adjacent to the head noun. Other case-forms do not show this sensitivity with respect to adjacency (5.1).

- (121) a. opis Amerike od strane ovog studenta
 description America.GEN from side this.GEN student.GEN
 ‘the description of America by this student’
- b. *opis od strane ovog studenta Amerike
 description from side this.GEN student.GEN America.GEN
- (122) a. donacija novca bolnicama
 donation money.GEN hospitals.DAT
 ‘donation of money to hospitals’

- b. *donacija bolnicama novca
 donation hospitals.DAT money.GEN
- (123) a. pretnja lopovu zatvorom
 threat thief.DAT prison.INST
 ‘a threat of imprisonment to the thief’
- b. pretnja zatvorom lopovu
 threat prison.INST thief.DAT

Zlatić then raises the questions of why genitive must be adjacent and why two genitives are disallowed. She claims that the genitive case assigned by the noun is an instance of structural case, and all other cases (e. g. dative, instrumental) are instances of inherent case. On this assumption, Zlatić (1997: 214) claims that the adjacency condition is to be expected: “any two items [...] must be ordered with respect to each other in such a way that an NP bearing structural case precedes all other phrasal elements.” This precedence rule also accounts for the ban on two genitives: assuming that both of these are structural and cannot both be adjacent at the same time.

Although the account of Zlatić seems quite reasonable, it is nevertheless false. First, as we have already seen nominalizations can in fact appear with two genitives. Secondly, when it comes to the question of adjacency of the genitive-marked word, the situation becomes a bit blurry once we look at the noun *pretnja* ‘threat’ as a ditransitive noun. Namely, the verb ‘to threaten’ is a three-place predicate.

- (124) Šef policije je pretio lopovu zatvorom.
 chief.NOM police.NOM aux threaten thief.DAT prison.INST
 ‘The chief of police threatened the thief with imprisonment.’

When the agent argument, which is in this case the only argument in the genitive case, is expressed in the nominalization, it need not be adjacent to the head noun.⁵⁶

- (125) a. pretnja lopovu šefa policije
 threat thief.DAT chief.GEN police.GEN
 ‘a threat to the thief by the chief of police’

⁵⁶ The nominalization can presumably also express all three arguments, but the native speakers find this hard to process.

- (1) ??pretnja lopovu zatvorom šefa policije
 threat thief.DAT prison.INST chief.GEN police.GEN
 ‘a threat of imprisonment to the thief by the chief of police’

- b. pretnja zatvorom šefa policije
 threat prison.INST chief.GEN police.GEN
 ‘a threat of imprisonment by the chief of police’

Under the assumption that the genitive case on the agent – ‘chief of police’ – is assigned by something other than the head noun – ‘threat’ – the adjacency condition does not need to be met.

Bošković (2010), just like Zlatić (1997), analyzes the genitive case in nominalizations as an instance of structural case, more specifically, as the counterpart of the accusative case assigned by verbs. He therefore refers to it as structural case (on a par with accusative), as it is the standard case that nouns assign to their complements, and as such, it need not be specified in the lexicon. However (again similarly to verbs which in Serbian occasionally assign case other than accusative, i. e. lexical/inherent case), nouns can in some instances assign other cases to their complements, like for instance instrumental.

- (126) Uplašile su je njegove pretnje smrću.
 scared aux aux his.ACC threats.ACC death.INSTR
 ‘She was scared by his death threats.’

Bošković uses evidence from the genitive of quantification to show that the adnominal genitive is indeed an instance of structural case. Numerals in Serbian exhibit a peculiar behavior with respect to nouns they take as complements. Namely, these nouns are in the genitive case, and depending on the numeral in question, either in the singular or in the plural form. I illustrate this in the remainder of this section.

Franks (1994) argues that genitive of quantification in Serbian (i. e. genitive assigned by the numerals) is an instance of inherent case. Babby (1987), Franks (1994) and Bošković (2006) argue that, unlike structural case, which may remain unassigned, inherent case on the other hand must be assigned. So, for instance, when structural and inherent case compete for case assignment to a single caseless noun, inherent case wins and the derivation is successful even though structural case remained unassigned. However, when two inherent case assigners compete over a single noun, the derivation crashes because in any case one instance of inherent case remains unassigned. This scenario happens when a numeral (which is an inherent case assigner) occurs as a complement of a verb which is also lexically specified for case, i. e. when we have an instance of two inherent case assigners. Consider the examples from Bošković (2010: 18).

- (127) a. On pomaže ljudima.
 he helps people.DAT

- b. *On pomaže pet ljudima.
he helps five people.DAT
- c. *On pomaže pet ljudi.
he helps five people.GEN

The verb *pomagati* 'to help' assigns inherent dative case to its complement. The numeral *pet* 'five' assigns inherent genitive to its complement. In (127b) and (127c) there is a conflict between the verbal inherent case and the numeral inherent case which produces an ungrammatical output, regardless of how the conflict is resolved (i. e. in (127b) the verb wins, and in (127c) the numeral wins).

However, when structural and inherent case compete, the conflict is resolved by the assignment of the inherent case.

- (128) a. On savetuje ljude.
he advises people.ACC
- b. On savetuje pet ljudi.
he advises five people.GEN
- c. *On savetuje pet ljude.
he advises five people.ACC

Similarly to verbs assigning inherent case (127), nouns assigning inherent case cannot occur with genitive of quantification either. This is because two inherent cases are competing for one noun, and one of them must remain unassigned.

- (129) a. pomaganje ljudima
helping people.DAT
- b. *pomaganje pet ljudi
helping five people.GEN
- c. *pomaganje pet ljudima
helping five people.DAT

The noun *pomaganje* 'helping' in (129a) assigns inherent dative to its complement. The numeral *pet* 'five' assigns inherent genitive. Both (129b) and (129c) are ill-formed because two inherent case assigners are in competition over a single noun, and regardless of how the conflict is resolved, one instance of case always remains unassigned.

Hence, if the adnominal genitive is indeed an instance of structural case, in principle, it should be possible for it to be overridden by an instance of inherent case, like say a quantificational genitive. Bošković (2010:19) provides examples which support this idea. Namely, in Serbian, numerals 2, 3 and 4 differ from numerals 5 and above in that in the former case, the noun always gets genitive singular, whereas with numerals 5 and above, the noun must get genitive plural.

- (130) a. opis knjiga
 description book.GEN.PL
- b. opis tri knjige
 description three book.GEN.SG
- c. *opis tri knjiga
 description three book.GEN.PL

In (130a), the complement of the noun *opis* 'description' gets structural genitive case from the noun itself. In (130b), on the other hand, 'book' gets inherent case from the numeral. If it were the case that the genitive comes from the noun (i. e. an instance of inherent case), we would not expect for the 'book' to be in the singular. Thus, the genitive of quantification overrides the structural adnominal genitive. Notice that having 'book' in the genitive plural form as in (130a), where it receives inherent case from the noun, makes the phrase ungrammatical (130c).

Based on this evidence, Bošković concludes that the adnominal genitive in Serbian is an instance of structural case, which will be a crucial piece of information when we try to apply the Rappaport (1998) style analysis to Serbian data.

5.2 Rappaport (1998)

In this section, I first present the analysis of Rappaport (1998) for the adnominal genitive constructions in Russian, and I then apply the same general mechanisms to the Serbian data.

5.2.1 Russian result nominals

As we have seen, Russian allows double genitives with simple result nominals (Rappaport, 1998: 11).

- (131) fotografija krest'jan Smirnova
 photograph peasants.GEN Smirnov.GEN
 'the photograph of the peasants of Smirnov'

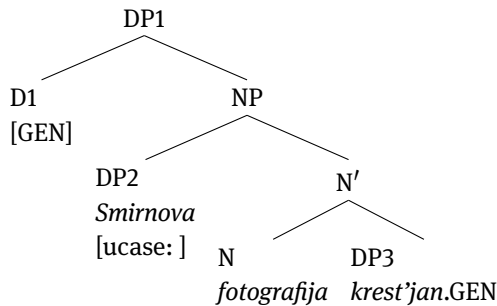
Rappaport argues that the genitive case on the first adnominal, i. e. the complement of the head noun (*krest'jan*), is an instance of inherent case for two reasons: first, the source of the thematic role and the source of case are the same; and secondly, because the choice of case marking is actually related to the theta role in question. The natural question then becomes what licenses and case-marks the second genitive argument?

The second adnominal genitive can be interpreted as either the agent or the possessor. Namely, in (131) *Smirnov* can be either the owner or the maker of the photograph depicting the peasants. Although agents and possessors are not mutually exclusive (i. e. a photograph depicting X, taken by Y and belonging to Z), a third adnominal genitive is impossible.

- (132) **fotografija krest'jan Smirnova Ivanova*⁵⁷
 photograph peasants.GEN Smirnov.GEN Ivanova.GEN

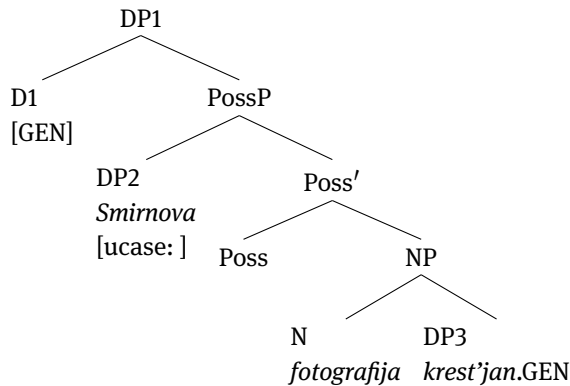
Rappaport concludes that although the source of the thematic roles of agent and possessor differ (possessor role is not a part of the argument structure of the head noun, hence it must be assigned by something else), something must rule out their coexistence – namely, case. Agents and possessors compete for one and the same source of genitive case. (132) is out because there is only one source of the genitive case (apart from the inherent case of the theme argument) – D. To account for the possibility of two interpretations – (quasi)-agent and possessor – while maintaining a single source for the genitive case, Rappaport proposes the two structures:

- (133) *Agentive interpretation*



Under the agentive interpretation, the head noun *fotografija* takes two arguments – agent and theme. The theme argument is merged as a complement of the head noun, already (inherently) valued for genitive case. The agent argument is merged as the specifier of N, with an unvalued case feature. The case feature of the agent argument is valued by the functional category D via Agree.

⁵⁷ (132) is hard to parse, hence the unacceptability. However, argument-wise, it should be possible, and indeed under the analysis I develop at the end of this work, examples like (132) are possible from the syntactic side, but are nevertheless out for processing reasons.

(134) *Possessor interpretation*

Under the possessor interpretation, Rappaport assumes a functional projection Poss(essor) (analogous to *v*), which assigns a theta-role to its specifier, but crucially, it does not assign case. In this construction, as in the agent interpretation, the internal argument is inherently case-marked by the head noun and the possessor is case-marked by D. If a triple adnominal genitive is attempted (132), the derivation crashes because both SpecN and SpecPoss compete for a single case source.

5.2.2 Russian process nominals

Process nominals, unlike result nominals, do not allow two genitive arguments. But before I turn to Rappaport's analysis of these constructions, a word is due regarding the general behavior of these nominalizations.

Both the subject (135a) and the object (135b) positions in process nominals are expressed in the genitive case (Rappaport, 1998: 26).

- (135) a. nastuplenie zimy
 arrival winter.GEN
 'the arrival of winter'
- b. priem ranenyx
 reception wounded.GEN
 'the reception of the wounded'

In some instances, the adnominal genitive case can result in ambiguity (Rappaport, 1998: 27).

- (136) *vozvrašcenie detej*
 return children.GEN
 ‘the return of the children’

Under one interpretation, ‘the children’ are interpreted as the agent of returning (the children have returned). Under the alternative interpretation, ‘the children’ are interpreted as the theme of returning (the children have been returned by someone). The question that arises naturally is whether these represent one or two syntactic positions. Rappaport (1998: 28) concludes that they must represent one single syntactic position since they cannot co-occur.

- (137) a. **fotografirovanie krest’jan Smirnova*
 photographing peasants.GEN Smirnov.GEN
 intended ‘Smirnov’s photographing of the peasants’
 b. **otkrytie periodiceskogo zakona Mendeleeva*
 discovering periodic.GEN law.GEN Mendeleev.GEN
 intended: ‘Mendeleev’s discovery of the periodic law’

The examples in (137) are ungrammatical because there is only one adnominal position available with process nominals – that of the subject. Object interpretation is the result of passivization within the NP (Veyrenc, 1972; Revzin, 1973). In order to avoid double genitives, the agent can be expressed in the instrumental case, like in passives (Rappaport, 1998: 28).

- (138) a. *ispolnenie romansa pevcej*
 performance romance.GEN singer.INST
 ‘the performance of the romance by the singer’
 b. *ctenie proizvedenija avtorom*
 reading work.GEN author.INST
 ‘reading of the work by the author’

However, there are certain well-formed double genitive constructions with process nominals (Rappaport, 1998: 32-33).

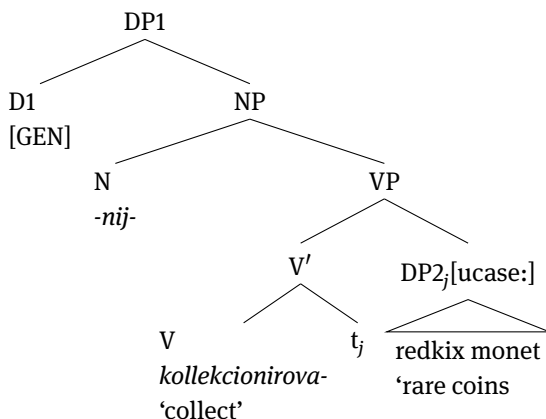
- (139) *lišenie brata nasledstva*
 depriving brother.GEN inheritance.GEN
 ‘depriving brother of (his) inheritance’

The difference between the well-formed example in (139) and the ill-formed ones in (137) is related to inherent case: the verb underlying the nominal in (139) takes genitive complements. Therefore, *brata* is inherently marked with genitive, just like complements in (140) are inherently marked with instrumental and dative.

- (140) a. *podražanie rodiťeljam detej*
 imitation parents.DAT children.GEN
 ‘the parent’s imitation of the children’
- b. *nedovol’stvo žizn’ju detej*
 dissatisfaction life.INST children.GEN
 ‘the children’s dissatisfaction with life’

Engelhardt and Trugman (1998, 2000) propose a passive-like analysis of process nominalizations:

- (141) a. *kollekcijirovanie redkix monet*
 collecting rare.GEN coins.GEN
 ‘collecting of the rare coins’
- b.



In examples like (141a), VP is selected by the noun in the form of a nominalization suffix which is itself selected by D. Passive applies within the VP, raising the theme DP to SpecV, from where it covertly raises to SpecD, where it gets case (Engelhardt and Trugman, 1998, 2000).

Thus, process nominals, unlike result nouns, lack nominal roots, and as a result, do not have the ability to assign inherent genitive case to their complements. The only source of structural case in process nominals is D, hence only one argument can appear with genitive. The theme argument receives genitive case from D, and the agent must therefore be expressed in the instrumental case.

5.2.3 Serbian result and process nominals

Recall the analysis of Rappaport (1998) for Russian double adnominal genitives: with result nouns, the head noun (i. e. the result noun itself) assigns inherent genitive case to its internal argument, and the head D assigns the second genitive case to the external argument. Process nominals cannot occur with two genitive arguments because they lack the ability to assign inherent genitive case to their internal arguments because they are not “underlyingly” nouns, i. e. they lack nominal roots. They cannot assign structural case either, because they are “passivized”. There is only one source of structural case in process nominals – D – hence only one argument can appear in the genitive case. The other argument is then expressed in the instrumental case. Let us now try and apply this kind of approach to Serbian data.

Serbian result nouns behave in the same fashion as Russian ones, and can thus be analyzed in the same way.

- (142) fotografija Frankfurta Marka Kostića
 photograph Frankfurt.GEN Marko.GEN Kostić.GEN
 ‘photograph of Frankfurt by Marko Kostić/belonging to Marko Kostić’

Frankfurt gets inherent genitive case from *fotografija* ‘photograph’, and *Marko Kostić* gets structural genitive from D.

Serbian process nominals, on the other hand, behave differently from their Russian counterparts: unlike in Russian, process nominals in Serbian do allow two genitive arguments.

- (143) iskrucavanje robe pogonskih radnika
 unloading cargo.GEN power.GEN workers.GEN
 ‘the unloading of the cargo by the powerworkers’

Assuming, on a par with Russian, that the agent argument *pogonskih radnika* ‘power workers’ receives structural genitive case from D, the question now becomes what the source of the genitive case for *robe* ‘cargo’ is. The only way to go about answering this question is to assume that the process nominal *iskrucavanje* ‘unloading’ assigns case to its complement. This case can either be inherent or structural. As we have seen at the beginning of this chapter, genitive assigned by nominals in Serbian cannot be an instance of inherent case, since when it is overridden by the inherent case assigned by numerals the derivation still converges. If it were the case that the genitive assigned by nominals is inherent in nature, the derivation involving numerals would crash, as one of the two inherent cases (either that of the numeral, or that of the noun) would remain unassigned (Bošković, 2006).

Structural case, on the other hand, is equally unlikely. Namely, as it was hinted in the introductory chapter, and as it will further be discussed in the next chapter, process nominals in Serbian exhibit a number of passive-like behaviors (Bašić, 2010), hence, on a par with Russian, they should not be able to assign structural case, as the result of this “passivization”.⁵⁸

Finally, one could very well assume that (267) is just an elided version of (144).

- (144) *iskrcavanje robe od strane pogonskih radnika*
 unloading cargo.GEN from side power.GEN workers.GEN
 ‘the unloading of the cargo by the powerworkers’

If it were the case that *pogonskih radnika* ‘power workers’ in (267) is actually underlyingly *od strane pogonskih radnika*, with the ellipsis of *od strane*, then it would be expected that the same kind of ellipsis could potentially happen in passives, where the agent is expressed with the *od strane*-phrase. However, this is not the case, as agents in passive constructions cannot be expressed as bare genitives.

- (145) *Roba je iskrcana *(od strane) pogonskih radnika.*
 cargo.NOM aux unloaded from side power.GEN workers.GEN
 ‘The cargo was unloaded by the powerworkers.’

I thus conclude that it is highly unlikely that the bare genitive agent in nominalizations is an instance of ellipsis, because if it were, then we would have to account for the fact that this cannot happen in passives.

To sum up, under the framework of Rappaport, Russian and Serbian cannot receive a unified account. In the remainder of this chapter, I discuss a rather novel approach to case, which will prove to be more suitable for the data at hand.

5.3 Pesetsky (2013)

In this section I apply the approach developed in Pesetsky (2013) to the data introduced at the beginning of this chapter. However, due to the novelty and the considerable distinctiveness of this approach from the traditional treatment of Case, a brief motivation and justification of this view of case is in order. Therefore, in this section, I first explain the general mechanisms of Pesetsky’s approach and only then I apply it to the relevant data.

⁵⁸ The question can also be reversed: if Serbian process nominals do in fact assign structural genitive to their complements, why cannot Russian ones do the same?

5.3.1 Reduction of Russian cases to part of speech categories

Pesetsky (2013) makes a point in noticing that the current theory of syntax does not make reference to traditional case categories anywhere outside the Case theory itself. Case categories give instructions to morphology regarding which suffixes it needs to provide, and as such serve as mediators between the two linguistic levels: syntax and morphology. This is not a desirable outcome, as one of the goals of the theory of grammar is to get rid of the in-between levels and to minimize the complexity of the system (Pesetsky, 2013: 5). Pesetsky proposes that Russian cases are not independent categories, but are actually affixal realizations of the various parts of speech. In other words, cases are just morphological instantiations of parts of speech categories.

(146) **Reduction of Russian case to part-of-speech categories (Pesetsky, 2013: 7)**

- Genitive = N
- Nominative = D
- Accusative = V
- Obliques = P

Under this approach then, a genitive marked word is simply a stem with a suffix of category N; a nominative marked word is a stem with an affix of category D;⁵⁹ accusative of category V and oblique (dative, instrumental, locative or prepositional) with an affix of category P. This kind of case could be seen as parallel to lexical case in Traditional Case Theory. Another way lexical elements acquire case is through feature assignment, which is then parallel to structural case assignment in Traditional Case Theory. The two mechanisms are formalized in (147).

(147) **Two paths by which part-of-speech suffixes end up on words (Pesetsky, 2013: 8):**

1. **Lexical assignment:** From the point of view of the syntax, every noun can be described as born genitive, every verb born accusative, every determiner born nominative and every preposition born oblique. (Genitive is the spell-out of N, nominative of D, etc.)

⁵⁹ This approach presupposes that Russian, although an articleless language, does project the DP layer – otherwise, it would never show nominative morphology.

2. Feature Assignment

- (a) Copying: When X merges with Y, forming [x XY], the grammatical features of X are immediately copied onto Y...
- (b) ...and realized as morphology on all lexical items dominated by Y.⁶⁰

Thus, if every noun is actually a category neutral root to which a categorizing morpheme of type N is added, then if a noun does not get any other case assigned in the course of the derivation, this noun will always surface in the form [[root]Ngen]. In other words, it will have the form of what traditional descriptions call genitive case. This means that genitive case does not necessarily have to be assigned by FA; instead, it might be the noun's original form – the form in which it entered the derivation, or what Pesetsky calls “a primeval state”.

(148) Primeval genitive conjecture (Pesetsky, 2013: 9)

Ngen categorizes a Russian root as a noun (in the lexicon).

Based on data involving the comparison between English, French and Russian compounds, Pesetsky argues that there really is a hidden genitive in all Russian nouns (Pesetsky, 2010). In an English compound such as a *computer repair*, the dependent member – *computer* is a bare NP and not a DP: **a [the computer] repair*; *a [Bronx apartment]* vs. **a [the Bronx] apartment*.⁶¹ The fact that the dependent member is a bare NP is crucial for Pesetsky, because that means that it does not have the DP layer above the NP, which would, under his approach, automatically trigger nominative morphology. Consider the French (in bold) and Russian (in italics) counterparts of some of the English compounds.

- (149) a. ‘bus stop’ **ostanovka** *avtobusa* *l’arret de bus*
 stop bus.GEN station of bus

60 This is the first version of Feature Assignment. Pesetsky modifies this throughout the monograph. The final version of FA rule is the following:

(1) Feature Assignment (Pesetsky, 2013: 99)

- a. When α merges with β , forming [$_{\alpha} \alpha \beta$], if α has satisfied its complement requirement, and is designated as a feature assigner for β , its prototype $\alpha \cdot$ is immediately merged with β , forming [$_{\alpha} \alpha [\beta \alpha \cdot \beta]$].
- b. A prototype $x \cdot$ is realized adjacent to the smallest available element dominated by its sister.

However, for the purposes of the discussion developed in this and the following chapters, I will stick to the simpler version of FA, since it is enough to explain the data under investigation.

61 The noun *Bronx* even requires definite article – *I grew up in *(the) Bronx*.

- b. ‘subway station’ **stancija (moskovskogo) metro** *station de metro*
 station Moscow.GEN subway station of subway
- c. ‘car rental’ **arenda avtomašiny** *location de voiture*
 rental automobile.GEN rental of car
- d. ‘wax museum’ **muzej voska** *musee de cire*
 museum wax.GEN museum of wax

All three languages use the same construction for the examples in question – a compound. English and French show the absence of D on the dependent member of the compound. Additionally, Russian and French show genitive case and preposition *de*, respectively, on the dependent member. For Pesetsky, this is evidence that the default form of a bare noun (i. e. without the DP layer) is genitive.

However, since Pesetsky considers Russian nouns to be DPs, a nominative marked word should be the result of merging D to an NP whose head bears primeval Ngen, followed by copying of Dnom morphology onto the terminals of that NP. Nevertheless, the surface form of nominative nouns in Russian shows no evidence of Ngen suffix inside Dnom. To account for this, Pesetsky proposes that Russian is a case-stacking language “behind the scenes”. The One-Suffix Rule is responsible for the fact that overt case stacking is not visible in Russian.

- (150) **The One Suffix Rule (Pesetsky, 2013: 11)**⁶²
 Delete all but the outermost suffix.

Pesetsky develops this case machinery on the examples of paucal constructions in Russian, which exhibit number and case mismatches. I now briefly present Pesetsky’s account for these constructions, as it will be necessary for the analysis of the adnominal constructions later on.

(151) **Paucals in the nominative environment (Pesetsky, 2013: 1)**

et-i posledn-ie dv-a krasiv-yx stol-a
 these-NOM.PL last-NOM.PL two-M.NOM beautiful-GEN.PL table-GEN.SG

‘these last two beautiful tables’

62 This is later replaced by the One Prototype Rule:

(1) **The One-Prototype Rule (replaces the One-Suffix Rule)**

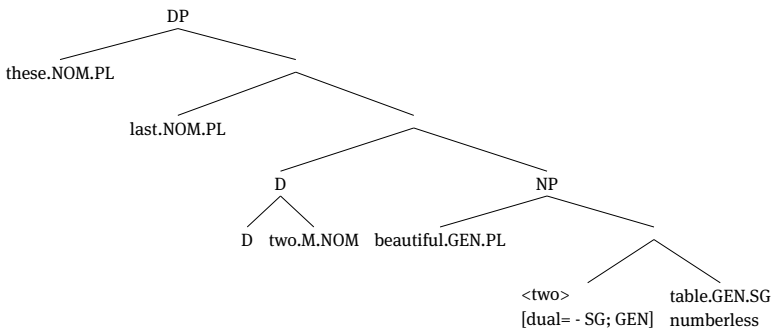
In the configuration $[_{\beta}n x [_{\beta}n y \dots \beta \dots]]$ (order irrelevant), where x and y are the realization of prototypes, delete y .

As is the case with the final version of Feature Assignment, the One Prototype Rule is not necessary for the data that I discuss in this work. Therefore, I stick to the One Suffix Rule.

In (151), there is a number mismatch between the modifiers and the head noun, and a case mismatch between pre-numeral modifiers + numeral complex, and the head noun + the post-numeral modifier complex.

The crucial assumption that Pesetsky makes to account for the paucal constructions is that paucal *dva* ‘two’ (and other paucal numerals – 2, 3 and 4) are in fact not numerals, but free instances of number (i. e. as a phi-feature on nouns). A paucal supplies number specification for an NP that would otherwise have entered the derivation as a property of the head noun. Paucals like 2, 3 and 4 are actually markers for dual, trial and quadral number (i. e. [-singular]).

(152)



The derivation is along the following lines. A numberless noun ‘table’ in its primeval genitive form is merged with ‘two’ – a free-standing instance of number. Next, the adjective ‘beautiful’ is merged with its phi-features unvalued. It probes down and agrees with the first goal it encounters – the numeral, which values its features as [case:genitive] and [number:plural⁶³].⁶⁴ In the next step, the fully built NP is merged with D. At this point, the merger of D should trigger the assignment of nominative morphology to everything it merged with, i. e. ‘two beautiful table’. However, this does not happen as these elements retain their genitive morphology. Pesetsky argues that the assignment of nominative morphology by D cannot happen at this point because the complementation requirement of D has not yet been satisfied: only an element whose complementation requirement has been met qualifies as a feature assigner. The complementation requirement of D has not been met in the sense that the element sitting in D requires a complement

⁶³ The value is actually -SG, but I use plural here for the ease of exposition.

⁶⁴ The numeral has previously acquired genitive by virtue of the fact that it has merged with the noun which bears primeval genitive.

of its own. This is satisfied once the number moves to D. In the next step, ‘two’ raises to D – an instance of what Pesetsky calls undermerge. Merger of D with NP did not satisfy D’s complementation requirement, hence it could not assign nominative to the NP. Conversely, the undermerge of ‘two’ satisfies D’s complementation requirements and D now qualifies as a feature assigner and can assign nominative morphology to whatever it merges with. Nevertheless, at this point, D cannot assign nominative to the NP because another Merge operation has intervened, i. e. that of the number. Hence, exactly as predicted, the number surfaces with nominative morphology, but everything below it surfaces in the primeval genitive form. Consequently, pre-numeral modifiers bear nominative morphology since once D has satisfied its complementation requirement, all elements that merge with D receive nominative morphology. D assigns new nominative morphology only to the new complement formed by Num to D movement leaving its former complement untouched and genitive. Modifiers of D get nominative because merger of α to any projection of an element with genitive assigns genitive to α . More formally, if H has an affix to assign, it assigns this affix to each element with which it merges once its complementation requirements have been satisfied.

Next, Pesetsky considers the examples where the paucal DP is merged with a preposition – a new morphology assigning head (e. g. dative), which does not have a second complementation requirement in the sense of D. Pesetsky predicts that in those cases, P should be able to assign morphology to all terminal elements of that DP, consequently making the case/agreement mismatches disappear. This prediction is borne out (Pesetsky, 2013: 32).

- (153) (k) dv-um xoroš-im stol-am
 to two-DAT.PL good-DAT.PL table-DAT.PL
 ‘to two beautiful tables’

Pesetsky explains the plural number morphology on the noun (the noun is singular, i. e. numberless in paucal constructions not headed by P, such as (151)) by assuming that it acquired it through agreement with P. He suggests that prepositions bear an uninterpretable number feature which is unvalued.⁶⁵ This feature receives its value by P probing down and agreeing with the closest number (NBR) bearing element – the paucal, which sets its value to [-singular]. “The process of realizing the features of P that have been affixed to N (as well as those affixed to A and NBR) will thus take into account not only the properties P that distinguish among dative, prepositional, and instrumental cases, but also the feature [-singular]” (Pesetsky, 2013: 32).

⁶⁵ This is later revised in the light of prototypes. However, for the purposes of the discussion developed here, it is not necessary to go into details and explain the prototype theory.

(154) **How the NBR specification of case morphology is determined (Pesetsky, 2013: 33)**

Morphology assigned by α to β under FA reflects

- a. the NBR value of β if β is valued for NBR, and
- b. the NBR value of α otherwise.

The adnominal constructions might pose a problem for Pesetsky's theory as it is. The complements of head nouns are in the genitive case, although these are in fact DPs and not bare NPs, and as such, they should bear nominative morphology.

(155) **Adnominal genitives in the nominative environment (Pesetsky, 2013: 82)**a. **Possessor**

krasivy-y stol [_{DP} molod-ogo
 beautiful-M.NOM.SG table-NOM.SG young-M.GEN.SG
 akter-a]
 actor-GEN.SG

'the young actor's beautiful table'

b. **Complement**

poln-oe uničtoženi-e [_{DP} bol'sh-ogo
 complete-N.NOM.SG destruction-NOM.SG big-M.GEN.SG
 gorod-a]
 city-GEN.SG

'the complete destruction of the big city'

The genitive morphology on the bracketed DPs can either be an instance of primeval genitive, or it can be externally assigned by another noun. Pesetsky shows that the latter must be the case, because every element in the DP, including the paucal and pre-paucal modifiers and demonstratives, bears genitive morphology.

(156) **Paucal adnominal genitive DPs in the nominative environment (Pesetsky, 2013: 83)**a. **Possessor**

krasivy-y stol [_{DP} et-ix posledn-ix
 beautiful-M.NOM.SG table-NOM.SG these-GEN.PL last-GEN.PL
 dvu-x molod-yx akter-ov]
 DUAL-GEN young-GEN.PL actor-GEN.PL

'these last two young actors' beautiful table'

Pesetsky concludes that the feature assignment to the terminal elements of an adnominal DP is being blocked when the source of this morphology is any element other than N (or projection of N) with which the adnominal DP was merged. He proposes that the assignment across a DP boundary is restricted to the element with which that DP merged. This is regulated by Spell-Out of a phase (Pesetsky, 2013: 88).

(159) **Timing of operations relevant to Spell-Out of a phase Φ**

Step 1: The syntax constructs Φ .

Step 2: Merge (α , Φ).

Step 3: FA applies.

Step 4: Spell-Out applies to Φ (freezing it for further applications of FA).

In other words, as soon as the adnominal DP gets merged with N, this N assigns genitive morphology to all the elements of the adnominal, triggering the Spell-Out of the adnominal. From this point on, all the elements in the adnominal are frozen in the genitive form, and this form will not be affected by future applications of feature assignment. Similarly, in the examples with prepositions, the merger of the preposition with the DP triggers immediate assignment of the particular oblique case to all terminal nodes of that DP, after which the phase is spelled-out. Hence, when a prepositional phrase is merged as a complement of N, N cannot assign genitive morphology to the DP headed by the preposition, because these have already undergone Spell-Out and are now frozen on form and insensitive to any further feature assignment.

Having laid out the fundamentals of Pesetsky's proposal, in the next sections I offer an account for Russian result and process nominals, introduced at the beginning of this chapter.

5.3.2 Russian result nominals

As already mentioned, Russian result nouns appear with two genitive arguments.

(160) **Result nouns**

- a. fotografija krest'jan Smirnova
 photograph peasants.GEN Smirnov.GEN
 'the photograph of the peasants of Smirnov'
- b. interpretacija poéma Šklovskogo
 interpretation poem.GEN Shklovskij.GEN
 'the interpretation of the poem of Shklovskij'

The first genitive – that of the internal argument – is assigned, as Pesetsky argues, when the adnominal DP is merged with the head noun, which bears primeval genitive. The question becomes what assigns genitive morphology to the second argument – the agent/possessor. There are three ways a noun can end up with genitive morphology: (i) it is in its primeval genitive form (it is spelled-out in the form it entered the derivation in, because feature assignment did not apply, i. e. nothing has overwritten it); (ii) it has acquired genitive morphology through feature assignment from another noun (the same way as the internal argument of nouns); and (iii) through a genitive assigning preposition.

5.3.2.1 Genitive assigning prepositions

It is an undeniable fact that Russian has prepositions which seem to assign genitive morphology to their complements. Pesetsky acknowledges that this is a rather undesirable fact which does not comply with his claim that cases should be identified with syntactic categories.

In order to account for the existence of such prepositions, Pesetsky points out how “these prepositions are transparently complex, consisting of an independently attested preposition (typically *v* ‘in’, *na* ‘on’, or *po* ‘along’) followed by a morpheme that independently occurs as a noun and bears its own case suffix” (2013: 92). Consider the examples he provides.

- (161) a. *v-vidu* ‘in view of’ (<‘in view-PREP.SG’)
 b. *v-mesto* ‘instead of’ (<‘into place-ACC.SG’)
 c. *vo-krug* ‘around’ (<‘into circle-ACC.SG’)
 d. *na-sčet* ‘concerning’ (<‘onto account-ACC.SG’)

In other examples, which do not contain an independently occurring noun, Pesetsky (2013: 92) argues there is “a case suffix that allows it to be parsed as a probable noun.” On the examples *v-nutri* ‘inside (locative)’ and *v-nutr* ‘inside (directional)’, Pesetsky observes how the second component is one and the same morpheme – *nutr* ‘interior’ – the difference being the morphology that it bears in the two relevant examples. In *v-nutri* ‘inside (locative)’, it bears locative, and in *v-nutr* ‘inside (directional)’, it bears “the kind of morphology expected of direct objects” (Pesetsky, 2013: 92). He points out that even though the word *nutr*⁶⁶ is not often used in

⁶⁶ *Po-zadi* ‘behind’ receives an analysis along the same lines: it consists of “an independently occurring preposition and the Pprep (prepositional case) form of a class 3 noun *zad*’ that does not otherwise exist, but shares a root with a large number of words that are used independently – and there are other examples as well” (Pesetsky, 2013: 92).

contemporary Russian, the analysis he offers is correct as it makes the following semantic distinction between the two examples.

- (162) a. [_{PP} v_P [_{NP} *nutr-i* DP]]
 b. [_{DirP} Dir⁶⁷_V [_{DP} v_P *nutr-*'DP]]

Pesetsky suggests that an analysis along these lines might in fact be extended to all other prepositions that govern genitive case.

- (163) a. *pro-tiv* 'against, opposite from'
 b. *o-kolo* 'near'
 c. *po-sle* 'after'

Pesetsky suggests that the material before the hyphen is a preposition, even though the material after the hyphen is otherwise unknown.⁶⁸ He offers support for this analysis by showing that, in other cases, what seems like a monomorphemic preposition can be paraphrased as P + N. A preposition like *krome* 'except', is used as commonly as the P + N construction *za isključeniem* 'with the exception of'. Both of *krome* and *za isključeniem* have genitive DP complements. Directional prepositions denoting 'motion from' uniformly take a genitive DP: *iz* 'from', *ot* 'from', and *s* 'down from'. Pesetsky suggests that there is a head *Dir* (direction), which takes a null noun that carries the meaning of "exclusion", and this noun assigns *Ngen* to its complement (Pesetsky, 2013: 93).

- (164) [_{Dir_V} [_{Complement-set-of_N} DP]]⁶⁹

Pesetsky concludes the discussion regarding genitive assigning preposition by speculating that prepositions such as *bez* 'without', *dlja* 'for', *do* 'up to', *mimo* 'past', *u* 'at, by, belonging to' might receive the same analysis: a null nominal component which is responsible for the assignment of *Ngen*.

Coming back to the issue of the assignment of genitive morphology to agent/possessor of result nouns like *fotografija krest'jan Smirmova*, I conclude that it is most likely assigned by the head noun itself, in the same manner it is assigned to

⁶⁷ *Dir*(ection) is analyzed as "abstract go" (Noonan 2010: 169) – crucially assigning accusative because it belongs to the category of V. This is what Pesetsky adopts for accusative assigning prepositions.

⁶⁸ Vasmer's (1986) etymological dictionary suggests that diachronically there in fact is a connection between *kolo* of *okolo* and *koleso* 'wheel', and between the *xsle* of *posle* and the root found in words for 'follow' and 'trace' (*sled*) (Pesetsky, 2013, endnote 7, chapter 8).

⁶⁹ Conceivably, this noun is overt in the preposition *v-ne* 'outside' (thus perhaps more literally: 'in the complement set of'), which also requires a genitive DP (Pesetsky, 2013, endnote 8, chapter 8).

the complement. Namely, it is highly unlikely that agent/possessor genitives are instances of primeval genitives, as these are analyzed as DP, and D would overwrite the genitive morphology. Additionally, paucal constructions in adnominal positions show a homogeneous pattern, which again goes to show that genitive is unlikely to be primeval. If the genitive did not get assigned from an outside source (i. e. if it were primeval), the paucal constructions would show a heterogeneous pattern. The option of having a preposition assigning genitive would be equally unlikely. If Pesetsky's analysis of genitive-assigning prepositions is on the right track, one would have to posit not only a null noun, but also a null preposition, taking the agent/possessor as a complement. Finally, there is nothing preventing the head noun from assigning genitive to both of its arguments, since they are both merged within the NP. In the example (160a), *fotografija* enters the derivation as genitive. Next *krest'jan* is merged as nominative (since it is a DP), but this is overwritten by genitive from *fotografija* as soon as feature assignment applies. Next, *Smirmova* is merged at N' level, triggering assignment of genitive to itself, and overwriting its nominative in the process. Finally the whole phrase merges with D, and *fotografija* gets nominative morphology from D.

5.3.3 Russian process nominals

Process nominals, unlike result nouns, do not take two genitive arguments. Instead, their external argument is in the instrumental case.

- (165) a. *ispolnenie romansa pevicej*
 performance romance.GEN singer.INST
 'the performance of the romance by the singer'
- b. *ctenie proizvedenija avtorom*
 reading work.GEN author.INST
 'reading of the work by the author'
- (166) [_{DP} [_{NP} [_{N'} *ctenie*.NOM [_{DP} [_{NP} *proizvedenija*.GEN]]]] [_{PP} [_{DP} [_{NP} *avtorom*.INST]]]]]

The analysis of process nominals seems rather straight forward. In (165b) *ctenie* enters the derivation as genitive. *Proizvedenija* merges with *ctenie* as a DP with nominative morphology. Although a DP, i. e. phase, *proizvedenija* is only spelled-out once feature assignment applies, assigning genitive to *proizvedenija* (from *ctenie*). *Proizvedenija*, now with genitive morphology, is spelled-out. Next, *avtorom* merges with *ctenie*. *Avtorom* first has genitive morphology, which gets overwritten by nominative (once this becomes DP), but is spelled-out only after it merges

with (silent) P with instrumental morphology. At this point it is too late for genitive morphology from *ctenie* to end up on *avtorom* because it is already spelled-out and hence inaccessible to further feature assignment. Finally the whole thing *ctenie proizvedenija avtorom* gets merged with D and only the head noun – *ctenie* – gets nominative morphology.

However, a problem for this analysis is the fact that nominalizations like *ispolnenie* and *ctenie* are analyzed as containing verbal material, and as such should theoretically assign accusative morphology by default. There are two possible ways to go about this problem. First, one could argue that since Pesetsky forms his analysis on the premise that cases are morphological instantiations of parts of speech, and since these nominalizations are nominals – their internal structure is reminiscent of that of verbs/clauses, but their distribution is that of regular nouns. Thus, the short answer would be, even if they had something verbal in them, that would not trigger the assignment of accusative, because their part of speech category is N. A longer, but probably more plausible answer would be to assume that there in fact is a legitimate V, but feature assignment of accusative cannot happen for some reason. In the remainder of this section I develop the analysis of process nominals, with the assumption that they have a legitimate V in their internal structure, but nevertheless, accusative is not assigned.

5.3.3.1 Accusative in passives and unaccusatives

Process nominalizations in Russian look like passives, as their external argument is expressed in the same manner in both constructions – with instrumental case. Consider Pesetsky’s analysis of passives (and unaccusatives). In unaccusatives and passives, the DP that initially merges with V (and subsequently raises to T) generally bears nominative morphology.

(167) Nominative (Pesetsky, 2013: 72)

a. Passive

[Ét-a krasiv-aja lamp-a] byl-a
 this-F.NOM.SG beautiful-F.NOM.SG lamp-NOM.SG was-F.SG
 kuplen-a včera.
 bought-F.SG yesterday

‘This beautiful lamp was bought yesterday.’

b. Unaccusative

Bol’s-aja rek-a rastajal-a.
 big-F.NOM.SG river-NOM.SG melted-F.SG

‘The big river melted.’

Although the DPs in (167) seem to meet the requirements for accusative assignment in their initial positions, Pesetsky suggests that feature assignment is nonetheless blocked. Moreover, once they have raised presumably to SpecTP, they do not get any morphology there either.⁷⁰ Nominative morphology on the DPs in question is thus there “not because some external element has assigned it, but because no external assigner of distinct morphology has erased it” (Pesetsky, 2013: 72). Pesetsky explains the failure of feature assignment by tying it to *Vergnaud-licensing*, which is essentially the term he uses for what is otherwise known as the Case Filter (the original terminology being inappropriate for the theory he develops). The rule is formalized in (168).

(168) **Feature Assignment and licensing (Pesetsky, 2013: 73)**

FA applies to DP only in the position in which it is Vergnaud-licensed.

In essence, what the rule states is that DPs in unaccusatives and passives do not satisfy the licensing requirements first postulated by Vergnaud (2006) and later developed by Burzio (1981, 1986) and Chomsky (1981) in that they are not in a position which is Vergnaud-licensed, i. e. they are not Case-licensed. Taking into account the rule in (168), in cases where a DP is Vergnaud-licensed (i. e. DP complements of transitive verbs), the morphology on that DP will then reflect the morphology of the assigner. On the other hand, when the DP is not in a Vergnaud-licensed position, feature assignment cannot apply (in accordance with (168)) and the morphology on the elements of that DP will reflect the morphology they received from D.⁷¹

Coming back to the cases of process nominals, due to their similarities with passives, I argue that the lack of accusative morphology in nominalizations is due to the rule in (168). At this point, however, another problem arises: namely, the point at which the internal argument is spelled-out. If nominalizations are “born” from verbs and have V within their internal structure (but this V does not assign accusative, for the same reasons it does not assign it in passives/unaccusatives), the merger of the adnominal DP with V, should trigger Spell-Out of that DP, according to the rule in (159). However, this is not a desirable outcome, as this timing of

70 In traditional configurational case theories, T assigns nominative case to subjects of transitive verbs and objects of passives and unaccusatives. However, under Pesetsky’s approach nominative morphology can only be assigned to the elements of a DP by D itself.

71 Pesetsky next observes how this state of affairs supports the claims of Schütze (1997, 2001) that nominative case in Russian is the default case in the sense of morphology: it is assigned to the elements of a nominal to which no other case morphology has been assigned, but crucially it cannot save a DP from violating the Case Filter. Pesetsky points out how crucially, Schütze divorces licensing from morphological case realizations, which is essentially what he does as well, concluding thus that their views are complementary.

the Spell-Out would result in the DP being spelled-out with nominative morphology. A way to go about this is to postulate that merger can only trigger the Spell-Out of a phase if the phase is in a Vergnaud-licensed position; in the same fashion as feature assignment. Pesetsky actually reaches the same conclusion, but on the examples of small clause constructions.

(169) **Small clause construction (Pesetsky, 2013: 89)**

Ja sčitaju [’et-u lamp-u] krasiv-uj.
I consider this-F.ACC.SG lamp-ACC.SG beautiful-F.INSTR.SG

‘I consider this lamp beautiful.’

Assuming that the subject of the small clause raises into the higher VP in order to get Vergnaud licensed, and only then undergoes Spell-Out, then it’s accusative (and not nominative) morphology is well accounted for. Accusative morphology is assigned when the small clause subject is merged with the higher V, after which the DP gets spelled-out.

Similarly, in the cases of process nominalizations, I propose that the reason we find genitive morphology on the internal argument is because the Spell-Out of the complement DP of the nominalization is delayed until the merger of N takes place, at which point the adnominal DP is Vergnaud licensed, and at the same time assigned genitive morphology, with which it gets spelled-out. The derivation of (165b) would thus look like the following: The DP *proizvedenija* gets merged with nominative morphology as a complement of “V-part of *ctenie*”. At this position, feature assignment of accusative cannot happen, because *proizvedenija* is not in a Vergnaud-licensed position. Moreover, the Spell-Out of *proizvedenija* cannot happen either, for the same reason. Spell-Out of *proizvedenija* is delayed until it is re-merged with the “N-part of *ctenie*”. At this position, *proizvedenija* is Vergnaud-licensed, and first feature assignment applies, rewriting its nominative morphology with genitive, immediately triggering the Spell-Out of the DP. In the next step, the agent *avtorom* is merged as a PP with a silent P, assigning instrumental morphology to its complement DP and triggering its Spell-Out. Finally, the whole phrase is merged with D, which assigns nominative morphology to the head noun *ctenie*, but not to any of its arguments, which have already undergone Spell-Out, and their forms are now frozen for further feature assignment.

5.3.4 Serbian result and process nominals

Recall now the analysis of the Russian data within Pesetsky’s (2013) framework. The two genitive arguments of result nouns receive genitive case from the head

noun itself via Feature Assignment, which overwrites their nominative, after which they are both sent to Spell-Out and from then on are frozen in the genitive form, hence insensitive to further FA. Complements of process nominals receive the genitive case under the same mechanism – through FA from the head noun. The agent argument, on the other hand, is merged as a PP, with a null P, which assigns instrumental to it through FA.

Serbian result nominals behave in the same manner as their Russian counterparts, in that they take two genitive arguments, hence the analysis for Russian can be extended to Serbian data, as well.

- (170) *fotografija* Frankfurt Marka Kostića
 photograph Frankfurt.GEN Marko.GEN Kostić.GEN
 ‘photograph of Frankfurt by Marko Kostić/belonging to Marko Kostić’

The head noun *fotografija* ‘photograph’ enters the derivation as genitive; next *Frankfurt* is merged as nominative, since it is a DP. As soon as the merger takes place, FA follows, assigning genitive morphology from the head noun to *Frankfurt*, overwriting its nominative in the process. After FA takes place, the phase is sent to Spell-Out and is from then on frozen in the genitive form. Next, *Marko Kostić* is merged as nominative, which is overwritten by genitive as soon as FA applies, triggering the Spell-Out of the phase. Finally, the whole phrase merges with D which triggers the assignment of nominative to the head noun *fotografija* ‘photograph’. *Frankfurt* and *Marko Kostić* are not affected by D, i. e. they do not get nominative morphology, because they have already been spelled-out and are therefore frozen in form and insensitive to any future FA.

Let us now consider the case of Serbian process nouns, which differ from their Russian counterparts since they do take two genitive arguments.

- (171) *ispitivanje* kvaliteta vode (od strane) istaknutih
 examination quality.GEN water.GEN (from side) prominent.GEN
stručnjaka
 experts.GEN
 ‘the examination of the water quality by the prominent experts’

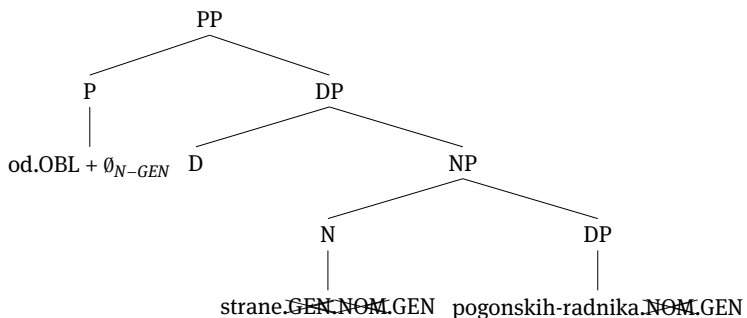
Process nouns can within Pesetsky’s framework receive a unified analysis with result nouns, when it comes to the double genitive cases. In (171), the internal argument *kvaliteta vode* ‘water quality’ is merged as a DP with nominative morphology with the head noun *ispitivanje* ‘examination’. As soon as the merger takes place, FA applies, assigning genitive morphology to the DP after which it is sent to Spell-Out in the genitive form. Next, *istaknutih stručnjaka* ‘prominent experts’ is merged within the projection of the head noun, FA applies, and the phase is spelled-out with genitive morphology, which it acquired from the head noun. When D

is now merged on top of everything, only *ispitivanje* ‘examination’ receives nominative morphology from it, as both *kvaliteta vode* ‘water quality’ and *istaknutih stručnjaka* ‘prominent experts’ have already been spelled-out in their genitive forms.

Let us now consider the cases where the agent argument is expressed as a PP *od strane* ‘from side’. In these cases, the internal argument gets genitive case from the head noun under the same mechanisms as in all other cases. The genitive on the agent, on the other hand, requires an explanation.

Od strane pogonskih radnika is a PP, where a complex preposition *od strane* (lit. ‘from side’) takes a complement in the genitive case. Now, recall that under Pesetsky’s approach, prepositions are instantiations of oblique case, which they assign to the material they merge with. It would thus be expected for *pogonskih radnika* ‘powerworkers’ to be in one of the oblique cases, and not in the genitive case. However, since in this case, the complex preposition *od strane* has in itself the noun *strane* ‘side’, the genitive case on *pogonskih radnika* is actually expected. Namely, the noun *strane* assigns it to the DP *pogonskih radnika* as soon as the two merge. However, the noun *strane* is itself marked for genitive case, and must have it assigned from somewhere. Adopting Pesetsky’s proposal that prepositions that superficially look like they assign genitive in fact have a null noun which does so (see section (5.3.2.1), I propose that the preposition *od* here has a null nominal element which assigns genitive morphology to *strane*. The structure of the PP *od strane pogonskih radnika* would thus look like the following.

- (172) a. *od strane pogonskih radnika*
 from side.GEN power.GEN workers.GEN
 b.



Since the data under investigation can be accounted for more properly with The Case Morphology approach, for the rest of this thesis I adopt the framework developed in Pesetsky (2013).

5.4 Chapter summary

In this chapter I presented Rappaport's (1998) and Pesetsky's (2013) account of Russian nominals and their arguments. In short under Rappaport, simple result nominals can occur with two adnominal genitives: the complement of the noun is inherently marked as genitive, and the agent/possessor receives structural genitive case from D. On the other hand, process nominals, unlike simple nominals, do not assign inherent genitive case to their complements because they lack nominal roots and their verbal roots are passivized (Engelhardt and Trugman, 1998, 2000). The only source of the structural genitive case in process nominals is D; hence, double adnominal genitives with process nominals are disallowed because two caseless elements are competing for one source of case. The only instances where double genitives are allowed with process nominals is when the verb underlying the nominal takes a genitive complement by selection (i. e. when the genitive on the complement is an instance of inherent case). However, the same analysis cannot be extended to Serbian data. Namely, if we accept that the reason why Russian process nominals cannot assign genitive to their complements, then we do not have the means to account for the fact that they seem to do so in Serbian.

Under Pesetsky, Russian cases are not independent categories, but merely affixal realizations of various parts of speech: Genitive = N, Nominative = D, Accusative = V, Oblique = P. Thus, a genitive marked word is a stem to which a morpheme of the category N has been attached, a nominative marked word is a stem with an affix of category D and so on. Accordingly, a noun can acquire specific morphology by merging with a particular part of speech: a noun will be spelled-out with nominative morphology when it merges with D, or with accusative morphology when it merges with V, etc. A noun will thus surface with genitive morphology either because (i) no other morphology has been assigned to it (it is in its "primeval genitive form"); or (ii) because it has been merged with another noun which has overwritten its existing morphology and assigned genitive. Pesetsky shows that adnominal genitives are instances of (ii), whereby head nouns assign genitive morphology to items merged with them. Under Pesetsky's approach, Russian and Serbian can receive a unified account. Hence, I adopt Pesetsky's framework for the rest of this thesis.

6 Possessives

Possessive constructions in Serbian deserve attention in their own right, as their behavior raises a number of interesting questions. First, their categorial status is still unclear: are they adjectives or DPs? Secondly, recall that the native speakers' main argument for rejecting constructions like (173a) with the adnominal genitive is the existence of the same construction with the possessive form (173b).

- (173) a. *osvajanje Rima Hanibala/ generala
conquest Rome.GEN Hannibal.GEN general.GEN
'Hannibal's/ general's conquest of Rome'
- b. Hanibalovo/ generalovo osvajanje Rima
Hannibal.POSS general.POSS conquest Rome.GEN
'Hannibal's/ general's conquest of Rome'

However, as already pointed out, possessive formation is not available in certain cases; for example with modified nouns.

- (174) *veliki/ ovaj generalovo osvajanje Rima
great.NOM/ this.NOM general.POSS conquest Rome.GEN
intended: 'great/ this general's conquest of Rome'

In those cases, using the adnominal genitive construction is the only way to express the intended meaning.

- (175) osvajanje Rima velikog generala
conquest Rome.GEN great.GEN general.GEN
'great general's conquest of Rome'

In this chapter, I discuss the processes behind possessive formation (6.1), which suggest that the category of possessives in Serbian is somewhere in-between nominal and adjectival. I then re-examine the evidence regarding the categorial status of possessives from both morphological and syntactic perspectives, and I conclude that there is ample evidence for treating them as exponents of D (6.2). Next, I discuss two analyses of Russian possessives; namely, that of Rappaport (1998) (section 6.3.1) and that of Pesetsky (2013) (section 6.3.2), both of which treat Russian possessives as DPs. In section (6.4), I extend Pesetsky's analysis of Russian possessives to Serbian.

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6.1 Possessive formation

The one thing all authors agree upon is that possessives in Serbian are formed by adding the suffix *-in* (feminine) or *-ov* (masculine) to stems of (animate) nouns. The newly created possessive form then gets an additional inflectional agreement suffix determined by the environment in which it appears.

- (176) a. *sestrina knjiga*
*sestr*_{stem} + *in*_{possessivesuffix} + *a*_{agreementforfemininesingular} *knjiga.F.SG*
 ‘sister’s book’
- b. *generalova vojska*
*general*_{stem} + *ov*_{possessivesuffix} + *a*_{agreementforfemininesingular} *vojska.F.SG*
 ‘general’s army’

Corbett (1987) points out how possessives in Serbian (and other Slavic languages) pose a problem for theories of morphology. Namely, morphology treats inflectional and derivational processes as two distinct entities. The problem in Serbian is that the possessive inflection exhibits dual behavior: with respect to syntax (e. g. binding) it behaves like an inflectional process, whereas in other respects (e. g. class membership change) it behaves like a derivational one.

- (177) a. *generalovo_j uništenje sebe_j/ svoje_j karijere*
general.POSS destruction himself/ his.own career
 ‘general’s destruction of himself/ his own career’
- b. **italijansko_j uništenje sebe_j*
italian destruction themselves
 intended: ‘Italians’ destruction of themselves’

The possessive in (177a) can bind an anaphor, whereas the adjective in (177b) cannot, hence in this respect the possessive exhibits a noun-like behavior. On the other hand, possessives show concord with the noun, hinting thus to the class-membership change from nominal to adjectival.

Zlatić (2000) accounts for this dual behavior of Serbian possessives by proposing that these elements are syntactically adjectives, but semantically nouns.⁷² Wechsler and Zlatić (1998, 2000) and Kathol (1999) entertain the idea that nominals are specified with two sets of agreement features: morphosyntactic – concord features and semantic – referential index features. Concord is the

⁷² Zlatić works in the HPSG framework, which is different from the general framework adopted in this dissertation. However, for the purposes of the present discussion, the general idea behind Zlatić’s analysis is adopted in order to showcase the core of the idea.

feature of the syntactic head, while index pertains to the semantic content of the nominal.

For instance, a noun like *knjiga* ‘book’ is a referring expression, and as such it is specified with both types of features.

CONCORD: number [1]sg, gender[2]f and case:nom

INDEX: number[1], gender[2] and person:3rd.

Thus, the number and gender values for concord and index match in this case, as is the case with most nouns (Zlatić, 2000).

On the other hand, non-referential elements like adjectives only have morphosyntactic concord features (which they acquire from the noun that they modify) and lack index features altogether. Zlatić (2000) proposes that being referential, Serbian possessives have both types of features, but that the values for these features do not match, as is generally the case with nouns. She captures the fact that possessives exhibit both nominal and adjectival behavior by proposing that they are syntactically adjectives, but semantically nouns. In other words, possessives show concord with the noun that they modify in the same manner as modifying adjectives do, but they also carry a set of index features which they inherited from the noun that they are derived from.

Consider this mechanism at work in the following example where the coreferential pronoun agrees with the index and not the concord features of the possessive (Zlatić, 2000: 183).

- (178) Ovo su žen-in-i, kaput-i. Ona_j ih je kupila
 this are woman-POSS-M.PL coat-M.PL she.F.SG them aux bought
 juče.
 yesterday
 ‘These are woman’s coats. She bought them yesterday.’

The possessive form *ženini* ‘woman.POSS.M.PL’ agrees with the masculine plural noun *kaputi* ‘coats’, hence bearing also a masculine and a plural feature. However, the index features of the possessive form *ženini* are [feminine, singular] as the noun underlying the possessive form is *žena* ‘woman’ which is itself specified with features [feminine, singular]. If the pronoun *ona* ‘she’ agreed with the concord features of the possessive, its surface form would be *oni* ‘they.masculine’ as the feature bundle would be [gender:masculine, number:plural]. Instead, the pronoun agrees with the index features of the possessive, and is spelled-out as feminine singular.⁷³

⁷³ Here, the masculine pronoun *on* ‘he’ would also be ok, but it would not have any reference to the previous sentence. In other words, it would need for some other extralinguistic entity to

Zlatić thus concludes that possessive formation in Serbian falls under the derivational morphological processes whereby the appropriate possessive affix is combined with the noun producing an adjective as an output. This newly formed possessive adjective then enters into further agreement relations which are characterized as instances of inflectional morphology.⁷⁴ Zlatić (2000: 188) illustrates the different morphological processes in the following manner.

(179) [_A [_A [_N noun stem] poss affix] infl agr affix]

Notice that the possessive derivation precedes inflectional affixation. Evidence for this ordering of morphological processes comes from indeclinable nouns like certain foreign proper names in Serbian.

- (180) a. Razgovarala sam sa Anom.
Spoken.I aux with Anna
'I spoke with Anna.'
- b. Anina knjiga
Anna.POSS book
'Anna's book'
- (181) a. Razgovarala sam sa *Inesom/ Ines.
Spoken.I aux with Ines
'I spoke with Ines.'
- b. Inesina knjiga
Ines.POSS book
'Ines' book'
- c. Čitala sam Inesinu knjigu.
Read.I aux Ines.POSS book
'I read Ines' book.'

A proper name like *Ines* is indeclinable in Serbian, and appears in the same form in all case environments, i. e. it does not acquire any case morphology (181a). However, once the noun gets possessive inflection and presumably transforms into an adjective (181b), it suddenly becomes declinable (181c). Zlatić (2000) thus concludes that the possessive suffix is not a simple inflectional suffix, but a derivational one, which is not unnatural since the possessive suffix does not attach to the whole phrase, or even the lexical item in its full form, but rather to the stem.

refer to. Instead, when the feminine pronoun is used as the subject of the second sentence, it refers back to the possessive pronoun in the previous sentence, although due to the fact that the possessive modifies a masculine noun *kaputi* is in the masculine form.

74 Possessives agree with the modified noun in case features assigned by an external assigner.

Corbett (1995) entertains a similar idea whereby possessive affixation in Slavic languages is similar in nature to *Suffixaufnahme*. The defining characteristics of *Suffixaufnahme* is “for nouns in attributive relation to agree with their head noun in case” (Plank, 1990:1039). If possessive affixation is indeed an instance of *Suffixaufnahme*, possessive would thus be marked for (genitive) case due to its relation with the head noun, and it would on top of it receive additional case marking from the outside environment. This would mean that the possessive receives double inflectional case marking. Corbett (1995: 2712) takes Upper Sorbian as an example language.

- (182) Jan-ow-a knih-a
 Jan-POSS-F.SG.NOM book.F.SG.NOM
 ‘Jan’s book’

In the form *Janowa* the suffix *-a* is an instance of case agreement with the noun *knih-a*. The question that arises is whether the suffix *-ow* is indeed an instance of case morphology, especially since it is not a usual (genitive) case marker. The genitive marker is the suffix *-a*.

- (183) ? kniha Jan-a
 book.F.SG.NOM Jan-SG.GEN
 ‘Jan’s book’

In other words, the possessive formation can be the result of either of the two processes.

1. Jan._N - ow._{INFL} -a._{INFL}
2. Jan._{N-ROOT} -ow._{DERIVATION} -a._{INFL}

The same is true for Serbian.

- (184) a. Jovan-ov-a knjig-a
 John-POSS-F.SG.NOM book-F.SG.NOM
 ‘John’s book’
- b. ?knjig-a Jovan-a
 book-F.SG.NOM John-SG.GEN

The question that arises is what the status of the possessive marker is; that is, whether the possessive formation is a derivational or inflectional process, which in turn raises the question of whether these constructions are nominal or adjectival in nature.

6.2 Categorical status of possessives

In this section I discuss the nature and syntactic category of possessive elements in Serbian, as well as their distribution. Specifically, I address the question of whether Serbian possessives should be analyzed as exponents of D, or as adjectives and I discuss their distribution.

The standardly assumed analysis of the nature and syntactic category of possessive elements suggests that cross-linguistically they fall either in the category of D, or in the category of adjectives.

Bošković (2004, 2005 and subsequent works) and Zlatić (1997, 1998) argue that possessives are adjectives in Serbian based on the characteristics that they exhibit. First, based on the partial paradigm, Bošković shows that possessives morphologically behave like adjectives (Bošković, 2009).

- (185) a. *mojim* *nekim* *visokim*
 my.POSS.PL.INSTR some.F.PL.INSTR tall.F.PL.INSTR
 devojkama
 girls.F.PL.INSTR
- b. *mojih* *nekih* *visokih* *devojaka*
 my.POSS.PL.GEN some.F.PL.GEN tall.F.PL.GEN girls.F.PL.GEN

Secondly, in Serbian possessives can occur as predicates in copular constructions (186), which is the environment typical for adjectives, yet they fail to do so in languages like English where they are considered to be exponents of D (Bošković, 2009: 195).

- (186) a. *Ova knjiga je moja.*
 this book is my
- b. **This book is my*

Thirdly, unlike in English, modifiers in Serbian can be stacked, exhibiting thus another adjectival property (Bošković, 2005: 6).

- (187) a. *ta moja slika*
 that my picture
- b. **that my picture*

Fourth, the word order within the nominal expression in Serbian is relatively free compared to English. This again speaks in favor of the adjectival analysis of Serbian possessives since adjectives display a relatively free word order (Bošković, 2005: 7).

- (188) a. Jovanova skupa slika
 John.POSS expensive picture
 ‘John’s expensive picture’
 b. skupa Jovanova slika
 expensive John.POSS picture
 ‘John’s expensive picture’
- (189) a. John’s expensive picture.
 b. *expensive John’s picture
- (190) a. Tall angry man
 b. Angry tall man

The final argument for an adjectival analysis of Serbian possessives comes from the impossibility for their modification. Namely, Serbian possessives cannot be modified by other possessives, or adjectives. This behavior is quite expected under the adjectival analysis since adjectives cannot be modified by other adjectives (Bošković, 2005: 7).

- (191) *Moj bratov prijatelj spava.
 my brother’s.NOM friend.NOM sleeps

Based on these facts, Bošković concludes that possessives, which are in languages like English analyzed as exponents of D, should be analyzed as adjectives in Serbian. The reasons why Bošković insists on the adjectival analysis of possessives are the following. First, not being exponents of D, possessive-adjectives do not require the DP projection to host them. In turn they also do not require case assignment under the same mechanisms that nominal expressions do. Finally, under the adjectival analysis, possessive extraction in Serbian can be accounted for under the adjectival extraction analysis proposed by Corver (1990, 1992).

In short, Corver accounts for the ban on extraction in English and Dutch in the following manner: Determiners cannot be extracted because they are heads and as such cannot land in the SpecCP which is reserved for phrases. Possessives cannot extract because their extraction would involve movement of a non-constituent. Finally, adjectives cannot extract in Dutch and English because of the ECP – D is a minimality barrier which prevents proper government of the trace of the extracted element. In contrast to English, if Serbian possessives (and demonstratives) are adjectives, and Serbian does not project the DP layer, there is no minimality barrier, hence possessive LBE is possible (Bošković, 2002).

However, despite the rather convincing evidence offered by Bošković, the categorial status of Serbian possessives (and demonstratives) is far from clear. Taking

for example German, where articles overtly show phi-agreement with the noun (e. g. *der Vater* vs. *die Mutter*), the morphological argument weakens significantly. To my knowledge, no analysis of German nominal domain treats articles as adjectival elements. Additionally, in certain case forms in Serbian, even nouns take this ‘adjectival morphology’ suggesting that these morphological bits are a property of all nominal elements and not adjectives per se.

- (192) a. *neka* *njena* *nova* *knjiga*
 some.F.SG.NOM her.F.SG.NOM new.F.SG.NOM book.F.SG.NOM
- b. *nekom* *njenom* *novom* *knjigom*
 some.F.SG.INSTR her.F.SG.INSTR new.F.SG.INSTR book.F.SG.INSTR
- c. *neke* *njene* *nove* *knjige*
 some.F.SG.GEN her.F.SG.GEN new.F.SG.GEN book.F.SG.GEN

Additionally, unlike adjectives in Serbian, possessives do not show a definite/ indefinite distinction. For example, an adjective like *zelen* ‘green’ has an additional long form *zeleni*. This additional piece of morphology, *-i*, has traditionally been analyzed as a marker of definiteness (but cf. Aljović (2002), who claims this is a marker for specificity). Possessives, on the other hand do not have long forms in the sense of adjectives. Furthermore, possessives do not have comparative and superlative forms, like adjectives do (e. g. *zeleniji* ‘greener’, *najzeleniji* ‘the greenest’).

When it comes to the syntactic environments in which possessives can appear, Bošković’s argument is that possessives can appear as predicates in copular constructions in Serbian, but not in English because they are adjectives in the former and Ds in the latter. However, the fact that *my* cannot be used predicatively in English might not necessarily entail that possessives are disallowed from predicative positions altogether. Instead, the *my/mine* opposition in English is a weak/strong opposition and predicative positions require the strong possessive form (Cardinaletti, 1998).

Moreover, in a recent paper, LaTerza (2015) challenges the adjectival treatment of possessives (and determiners) and offers counter evidence with respect to copular constructions. Namely, LaTerza (2015) points out how in (186), repeated here as (193a), Bošković glosses the pronominal possessive *moja* as a possessive adjective “my” and not as a possessive pronoun “mine”, when crucially, pronominal possessive adjectives and pronouns are syncretic in Serbian (193b).

- (193) a. Ova knjiga je moja.
 this book is my
 ‘This book is mine.’

- b. Moja knjiga je na stolu.
 my book AUX on table
 ‘My book is on the table.’

On the other hand, English in some cases makes a morphological difference between the possessive adjective and the pronoun (e. g. *my, your, our* vs *mine, yours, ours*), allowing only possessive pronouns to appear in copular constructions (LaTerza, 2015: 91).

(194) *This book is **my**.

(195) This book is **mine**.

LaTerza, however, notices that in certain cases, even English exhibits syncretism between the possessive pronouns and the possessive adjective, as is the case with the third person masculine.

(196) This book is **his**.

(197) **His** book is on the table.

In line with Bošković’s reasoning, it could then be argued that the element used in (196) is in fact an adjective. LaTerza (2015) concludes that this would be highly unlikely. Instead, for English, it is commonly stated that possessive adjectives and pronouns sometimes exhibit syncretism. Additionally, Macedonian – a DP language – also has syncretic pronouns and possessive adjectives (LaTerza, 2015: 91).

(198) a. Ova knjiga e moja.
 this book is my
 ‘This book is mine.’

- b. Moja knjiga e na masata.
 my book AUX on table
 ‘My book is on the table.’

LaTerza (2015) points out that based on the detected syncretism, Bošković’s argument built on copular constructions is inconclusive as the possessive element in these constructions might as well be realized as a possessive pronoun, which happens to be syncretic with the possessive adjective.

The argument pertaining to stacking of adjectives also faces some problems in that it can be interpreted in a completely opposite light. Namely, the fact that within Serbian nominal expressions one can stack a demonstrative on top of an adjective may as well indicate that these elements occupy different positions in

the extended projection of the noun. Moreover, if possessives are indeed adjectives in Serbian, it would be expected that the language allows multiple possessives within one NE, as we can have more than one adjective modifying a noun. However, this is not the case.

- (199) a. visoka plava zelenooka devojka
 tall blonde green-eyed girl
 b. *Jovanova Markova devojka⁷⁵
 John's Mark's girl

The fact that (199a) is ungrammatical in Serbian suggests that possessives cannot be equated with adjectives.

Moreover, a number of DP languages also allow for modifier-stacking. For example, demonstratives can co-occur with possessives in Hungarian (200a), Macedonian (200b), Bulgarian (200c) and German (200d).⁷⁶

- (200) a. **Peter ezen/azon** kalapja
 Peter.POSS this/that hat
 'Peter's this/that hat'
 b. **ovie** dve **moi** knigi
 these two my books
 'these two books of mine'
 c. **tezi** dve **moi** knigi
 these two my books
 'these two books of mine'
 d. **diese meine** Bücher
 these my books
 'these books of mine'

Data from these DP languages considerably weakens Bošković's stacking argument.

When it comes to word order flexibility, it is true that in Serbian it is quite high. However, none of the authors who offer the free word order argument take into account the fact that there is only one default neutral word order, and all the

⁷⁵ Note that the ungrammaticality of (199a) does not come from the fact that the possessive is being modified which is disallowed in Serbian. The intention here is to modify the noun twice, i. e. the girl belongs to both John and Mark.

⁷⁶ All the examples are as quoted in LaTerza (2015) – Hungarian from Abney (1987: 173), Macedonian and Bulgarian from Dimitrova-Vulchanova and Tomić (2009: 11).

other ones carry specific semantic weight, thus suggesting that they are actually derived and in most cases driven by some rules of information structure in order to express focus.

- (201) a. Ona moja žuta ruža je procvetala.
 that my.POSS yellow rose aux bloomed
 ‘That yellow rose of mine has bloomed.’
- b. Žuta ona moja ruža je procvetala.
 yellow that my.POSS rose aux bloomed
 ‘That yellow rose of mine has bloomed (and not the red one).’

Another property of possessives that Bošković takes as evidence for their adjectival status is their inability to be modified (191). LaTerza (2015) cites examples from two Slavic languages without articles (i. e. NP languages) – Upper Sorbian (202a) and Slovak (202b) – which allow for their pronominal possessives to be modified.⁷⁷ Note that according to Bošković, possessives in NP languages are adjectives and should thus disallow modification.

- (202) a. **mojeho mužova** sotra
 my husband’s sister
 ‘my husband’s sister’
- b. **našho dobrého susedova** záhrada
 our good neighbor’s garden
 ‘our good neighbor’s garden’

Moreover, a Serbian dialect which has articles – timočko-lužnički – and is presumably classified as a DP language, does not allow for the modification of pronominal possessives, even though it is predicted to allow it (Stanković, 2013).

- (203) * **moe drugarovo** kuče
 my friend.POSS dog
 intended meaning: ‘my friend’s dog’

The data thus show that the nature of the possessive elements cannot be determined based on their modificational ability.

Furthermore, with respect to binding, Serbian possessives show nominal properties. They are able to bind reflexives (Zlatić, 1997; Bašić, 2004: 23).

⁷⁷ LaTerza (2015: 101) cites Corbett (1987: 303) for Upper Sorbian and Cowper and Hall (2010: 12) for Slovak.

- (204) Petar_i je slušao Marijino_j opisivanje svoje_j/_{*i} majke.⁷⁸
 Peter aux listened Mary's description self's mother
 'Peter listened to Mary's description of her mother.'

Not even referential adjectives can act as syntactic subjects binding a reflexive in the object position.

- (205) a. John's destruction of himself
 b. ??the American destruction of themselves

Moreover, possessives can be antecedents of anaphoric pronouns, while adjectives cannot.

- (206) a. Htela sam da pozajmim Aninu_j haljinu, ali ona_j nije htela
 wanted.I aux to borrow Anna.POSS dress but she not want
 da mi je da.
 to me it give
 'I wanted to borrow Anna's dress, but she wouldn't give it to me.'
 b. *Kupila sam italijanske_j cipele. Jesi li nekada bio tamo_j?
 Bought.I aux Italian shoes. have aux ever been there
 'I bought a pair of Italian shoes. Have you ever been there?'

If possessives are indeed adjectives, then the binding behavior that they exhibit is left unaccounted for.

Finally, an NP in the genitive case is treated as syntactically parallel to a possessive pronoun.⁷⁹

- (207) a. Ovo su moja i moje žene kola.
 this aux my.POSS and my.POSS-GEN wife.GEN car
 'This is my and my wife's car.'

78 The noun *opisivanje* 'description' is a complex nominal, and as such it has been argued to have verbal functional projections embedded, with possessives acting as subjects (Alexiadou, 2001; Schoorlemmer, 1995). Therefore, at some point in the derivation, the possessive must function as a subject, which binds the reflexive. On the other hand, with simple nominals, the reflexive must be bound by the clausal subject (Bašić, 2004: 21).

- (1) Petar_i je pročitao Marijiju_j knjigu o sebi_i/_{*j}.
 Peter aux read Mary's book about self
 'Peter read Mary's book about herself.'

79 The examples are Serbian versions of Russian examples from Rappaport (2000: 13). Russian and Serbian behave the same in this respect.

- b. Ovo nije moj prsten, nego moga oca.
 this not my.POSS ring but my.POSS-GEN father.GEN
 ‘This ring is not my, but my father’s.’

Adjectives cannot be coordinated with genitives.

- (208) *Ovo su nemačka i moje žene kola.
 this aux German and my.POSS-GEN wife.GEN car

Adjectives cannot be coordinated with possessives either.

- (209) *Ovo su nemačka i moja kola.
 this aux German and my.POSS car

In sum, based on the presented evidence, I conclude that there is no reason why possessive forms in Serbian should not be treated as exponents of D. Although they indeed do exhibit certain adjectival behavior, as we have seen, this is also the case with possessives in languages in which they are analyzed D elements. Moreover, as I have shown in this section, under the adjectival treatment of possessives, phenomena such as binding or coordination would be very hard to explain.

6.3 Possessives in Russian

Before proceeding to the analysis of Serbian possessives, I first present two analyses of Russian possessives, within the two frameworks discussed in the previous chapter; namely, that of Rappaport (1998) and Pesetsky (2013). Crucially, both authors treat Russian possessives as DPs, which enter the derivation already marked for case. For these authors, the possessive marker in Russian is an inflection for case, and not a derivational suffix.⁸⁰

6.3.1 Possessives in Rappaport’s (1998) framework

Russian possessives are derived by adding the suffix *-ov* or *-in* to pronouns or nouns. The class of nouns that has the ability to form a possessive is rather restricted: they must be animate, singular, definite and a head and not a phrase (Rappaport, 1998). Possessives behave like adjectives in the sense that they undergo concord, but they nevertheless exhibit a number of characteristic normally

80 Possessive pronouns are known to be related to genitive DPs in other languages as well. This is the case in German, for example, where the possessive pronouns go back to genitive forms of the personal pronouns (cf. Weiß, 2012).

associated with nouns and not adjectives. For instance, unlike adjectives (210b), as shown above, possessives can be antecedents of pronominal and anaphoric pronouns (210a) (Chvany, 1977, as cited in Rappaport, 1998: 17).

- (210) a. Ja xotel vzjat' knigu Lizy/Lizinu knigu, no ona mne ee ne dala.
'I wanted to take the book of Lisa/Lisa's book, but she [i. e., Lisa] didn't give it to me.'
- b. *Vanja privez čudnye amerikanskije sapogi. Kstati, vy tam byvali?
(‘Vanya brought wonderful American boots; incidentally, have you ever been there [i. e., to America]?’)

Additionally, possessives can be antecedents of reflexive pronouns contained in the same NP (6.3.1), whereas relational adjectives derived from nouns cannot (6.3.1) (Rappaport, 1986, 1998: 17).

- (211) a. Ja videl [vaš_i portret svoix_i detej].
'I saw [your_i portrait of your_i children].'
- b. On čital [moju_i stat'ju pro sebja_i].
'He read [my_i article about myself_i].'
- (212) a. On_i rasskazal [amerikanskij_i anekdot pro sebja_{i,*j}].
'He told [an American joke about himself/*America].'
- b. On_i kupil [avtorskij_i ékzempljar u sebja_{i,*j}].
'He bought [an author's copy at his own place/*at the author's place].'

Based on this data, Rappaport raises the question of the licensing position of possessives. Namely, if possessives were essentially adjectives, how could they be licensed in SpecN or SpecPoss positions. SpecN and SpecPoss are positions occupied by genitive nominals, and not by adjectives, which are traditionally analyzed as adjuncts. Rappaport goes on to propose that possessives are actually “hidden” or “covert” genitive DPs, as they “function in parallel with genitive nominal phrases in category and case” (Rappaport, 1998: 17). Consider the evidence in favor of genitive view of Russian possessives.

In similes the preposition *kak* ‘like, as’ introduces a nominal, which agrees in case with the standard of comparison (213a–213c). When a possessive pronoun is used in the same construction, the complement of the preposition is a genitive-marked nominal (213d) (Rappaport, 1986, 1998: 18).

- (213) a. On leti kak ptica.
'He.NOM flies like a bird.NOM.'

- b. On *menja* ub' et kak *muxu*.
'He will kill *me*.ACC like a *fly*.ACC.'
- c. Pomogaju *emu* kak *bratu*.
'I am helping *him*.DAT like a *brother*.DAT.'
- d. [*Vaša* pervaja zadača, kak *Evropejcev*, budet...
'[*Your*.POSS first task as *Europeans*.GEN] will be...'

Additionally, possessives can be replaced with genitive pronominal forms to enforce contrast with the noun (Padučeva, 1984, as cited in Rappaport, 1998: 18).

- (214) a. On stavit pod somnenie vašu kompetentnost' (*kompetentnost' vas).
'He is placing your competence (*the competence of you.GEN) in doubt.'
- b. On stavit pod somnenie kompetentnost' vas kak *biografa*.
'He is placing your competence as a biographer [lit., 'the competence of you.GEN as a *biographer*.GEN'] in doubt.'

Moreover, appositive nominals, referring to possessive pronouns are in the genitive case as well.

- (215) Ja ničego ne pisala radi, tak skazat', svoej žizbi, žizni *menja*, *Marii Veniaminovny*. [letter to *Novyj mir*, 1969]
'I wrote nothing for the same of, that is to say, my own life, the life of *me*, *Marija Veniaminovna*.

Lastly, in coordinated structures, genitive NPs are treated as syntactically parallel to possessive pronouns.

- (216) a. Éto *moja* i *moej ženy* mašina.
'This is my and my wife's car.'
- b. Éto kol'co ne *moe*, a *otca*.
'This ring is not *mine*, but (*my*) *father's*.'
- c. Ja *Mjatleva Ivana*, a ne *tvoja*, bolvana. (from a poem)
'I am the puppet of *Ivan Mjatlev*.GEN, not *yours*.'

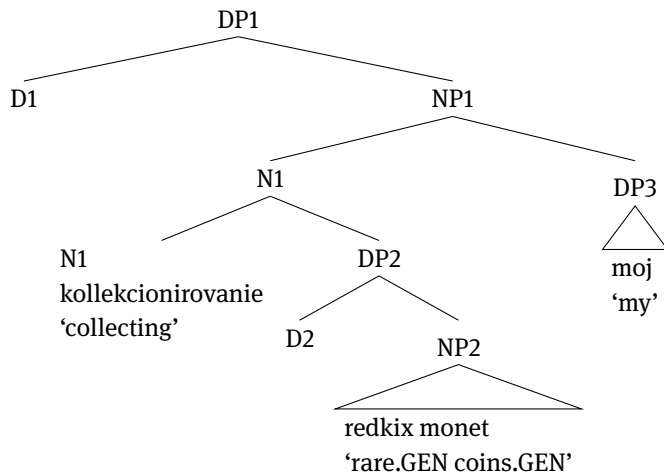
An additional piece of evidence that possessives should be treated on a par with genitive-marked nominals comes from a set of complex possessives in Russian, where the possessive is formed only from the second part of the compound, and the first part is in the genitive case.

- (217) a. teti Mašiny deti
 ‘aunt.GEN Masha’s child’
 b. Mar’i Ivanovnin dom
 ‘Maria.GEN Ivanovna’s home.’

Rappaport concludes that Russian possessives are referential and syntactically parallel to genitive nominals, but still behave like adjectives in terms of concord. He analyzes them as genitive DPs, parallel to their corresponding adnominal genitives. The adjectival behavior, he ascribes to the post-syntactic morphological processes, whereby a set of features, which head these DPs – [number, animacy, definiteness] are spelled out appropriately. More specifically, the feature set [singular, animate, definite, genitive] is generally spelled out as *-in* or *-ov*, with a rather substantial amount of suppletion for pronouns.

Recall from the previous chapter that possessives can serve as agents of process nominals. Under the proposal of Rappaport, this is only possible if they are inherently case marked – in other words, if they do not require a structural case assigner, as there is only one source of structural genitive in process nominals.

- (218) a. moe kollekcionirovanie redkix monet
 ‘my collection of rare coins’
 b.



Building up on the theory that possessives are “covert/hidden” genitive DPs, Rappaport proposes that they do not acquire case throughout the derivation, instead

they already enter the derivation with genitive case. Crucially, in (233) they do not compete with *redkix monet* for case from D.

6.3.2 Possessives in Pesetsky's (2013) framework

Pesetsky, just like Rappaport, argues that Russian possessives are not adjectives, but actually genitive nominals. Furthermore, Pesetsky proposes that Russian possessives actually represent cases of overt case stacking. In this section, I present Pesetsky's argumentation supporting the proposal that possessives are in fact DPs. I first briefly review the case of possessives in Lardil – a well-known case-stacking language, which serves as a basis for Pesetsky's proposal regarding possessives in Russian.

6.3.2.1 Case stacking in Lardil – possessives

In Lardil, genitive morphology on the possessor co-occurs with morphology that is assigned later in the derivation (Pesetsky, 2013: 103).

- (219) a. Ngada derlde [marun-ngan-i wangalk-i].
 I break boy-GEN-ACC boomerang-ACC
 'I broke the boys boomerang.' (Richards, 2007, 2013, 49ex. (20a))
- b. Ngada latha karnjin-i [marun-ngan-ku maarn-ku].
 I spear wallaby-ACC boy-GEN-INSTR spear-INSTR
 'I speared the wallaby with the boy's spear.' (Richards, 2007, 2013, 43ex. (3a))

However, in the cases of possessors within possessors, the leftmost element does not case-stack (Pesetsky, 2013: 106).

- (220) a. Ngada derlde [[marun-ngan thabuji-kan-ku]
 I break boy-GEN-(*ACC) older.brother-GEN-ACC
 wangalk-i].
 boomerang-ACC
 'I broke the boy's older brother's boomerang.' (Richards, 2007, 2013, 50ex. (24))
- b. Ngada kurri-kun [[kiin-nga bidngen-ngan-in] karnan-in
 I.NOM see-ACTUAL that-GEN-(*ACC) woman-GEN-ACC tall-ACC
 kambin-in].
 son-ACC
 'I saw that woman's tall son.' (Klokeid, 1976, 525 ex. (142))

Pesetsky introduces the following two rules in order to account for the Lardil data.

(221) **Genitive Haplology Rule (Pesetsky, 2013: 105)**

$\text{Ngen} \rightarrow \emptyset _ \text{Ngen}$

(222) **Phasal interactions with feature assignment in Lardil (Pesetsky, 2013: 107)**

Genitive-marked DP interacts as a phase with FA. [Other DPs and relative clauses do not.]⁸¹

Genitive Haplology is basically a rule that deletes a genitive suffix, when it is adjacent to another genitive suffix, and Phasal Interactions is a rule by which genitive DPs in Lardil have a phase status and are spelled-out immediately after the application of FA.

Consider the rules at work on the example in (220a), where the DP [*boy*-GEN *older.brother*-GEN-ACC *boomerang*-ACC] is a complement of a verb assigning accusative.

First the DP *boy* merges as a possessor with N *older.brother*. *Older.brother* assigns genitive morphology to the DP *boy*, overwriting its nominative and immediately undergoes Spell-Out⁸² in accordance with (6.3.2.1). The morphology of *boy* is now frozen as genitive and cannot be overwritten. Any new morphology must be added at a phrasal level.

Step 1. [_{NP} [_{DP} boy.NOM.GEN] [_N *older.brother*.GEN]]

Next, D merges with the NP *boy's older brother* and assigns nominative. Nominative morphology is assigned as a phrase level morphology to *boy*-GEN and as word level affix to *older.brother*-GEN, overwriting the genitive morphology on *older.brother*, but crucially not on *boy* because it has already undergone Spell-Out.

Step 2. [_{DP} D [_{NP} [_{DP} boy.NOM.GEN].NOM [_N *older.brother*.GEN.NOM]]]

This DP now merges with *boomerang*-GEN which assigns genitive to *boy's older brother*. The One Suffix Rule deletes nominative and Genitive Haplology deletes genitive on *boy*. The possessive DP spells-out and is frozen.

⁸¹ The cases of relative clauses and non-genitive DPs are beyond the scope of this work. The reader is referred to chapter 9 in Pesetsky (2013). For the purposes of the present discussion, it is important for genitive DPs in Lardil to behave like phases. This is in line with Richards' (2010) view under which (in some languages) genitive DPs (or in Richards' terminology – KPs) are phases.

⁸² For exposition purposes, I underline the chunks that undergo Spell-Out.

Step 3. [_{NP} boomerang.GEN [_{DP} D [_{NP} [_{DP} boy.NOM.GEN].NOM.GEN [_N older.brother.GEN.NOM.GEN]]]

Next D is merged and nominative is assigned phrasally to the possessive DP and affixedly to *boomerang*, deleting its primeval genitive.

Step 4. [_{DP} D [_{NP} boomerang.GEN.NOM [_{DP} D [_{NP} [_{DP} boy.NOM.GEN].NOM.GEN [_N older.brother.GEN.NOM.GEN]]].NOM]

Finally, when the whole D is merged with V, accusative will be affixed phrasally to *boy's older brother*, deleting the nominative suffix; and at a word level to *boomerang*. In sum, case affixes stacked outside genitive morphology, despite their affixal status, are phrase-level realizations of bits assigned by the rule of feature assignment.

Step 5. [_{VP} V [_{DP} D [_{NP} boomerang.GEN.NOM.ACC [_{DP} D [_{NP} [_{DP} boy.NOM.GEN.NOM.GEN] [_N older.brother.GEN.NOM.GEN]]].NOM.ACC]

6.3.2.2 Phrase-level realizations of the feature assignment – the case of French

To account for the Lardil data, Pesetsky suggests that feature assignment can apply not only to individual words within a phrase, but also to a phrase as a whole, in which case, the realization of the feature assignment will manifest itself only once per phrase – either as an affix to the rightmost element of the phrase, or as a free standing morpheme. For example, Pesetsky argues that French and English morphemes, *de* and *of*, respectively, might be instances of genitive assigned by the feature assignment (which is in Russian attached to every element of the DP) which get attached to the adnominal DP as a whole, i. e. phrasally. In other words, *de* and *of* are free-morpheme instances of genitive morphology.

(223) Nonmorphological N in French? (Pesetsky, 2013: 98)

la table_N [_{DP} de_N [ces deux jeunes acteurs]]
 the table of these two young actors

Essentially thus, Russian, being a language with overt case morphology, allows realization of feature assignment as word-level morphology. On the other hand, French, for example, mostly lacks the ability to realize feature assignment on a word-level; instead it realizes it on the maximal-projection level. If “primeval Ngen” is an element assigned in the lexicon “a Russian root like *akter* ‘actor’ merges in the lexicon with N genitive to form the noun *akter* – GEN. Because Russian is a language with word-level case morphology, the features (if not over-written by additional case suffixes) will be realized as morphology on the noun:

akter-a ‘actor-Ngen’. On the other hand, in a language like French, which supposedly lacks the general ability to realize features at the word level, but realizes them phrasally instead, when Ngen is added to a root like *acteur* ‘actor’ to form a noun, it will not be realized as a word-level case affix – but as *de* prefixed to NP. In fact, it is precisely the case that French *de* is found prefixed to NPs when primeval genitive shows up in Russian. “If French is simply Russian minus the ability to realize an Ngen morphology as morphology on a lexical item, but with the ability to realize it on a maximal projection, the realization of Ngen on the head of an NP will be an NP-level occurrence of *de*” (Pesetsky, 2013: 100).

- (224) a. beaucoup [_{NP} de_N jeunes acteurs]
 many of young.PL actor.PL
 ‘many young actors’
 b. mnogo [_{NP} molod-yx akter-ov_N]
 many young-GEN.PL actor-GEN.PL

The addition of D to a nonquantificational NP should suppress *de* in French, much in the same way it suppresses genitive morphology in Russian.

(225) **French Quant construction in a nominative environment (Pesetsky, 2013: 101)**

- a. ces D [_{NP} D de_N jeunes acteurs]
 these - of young.PL actor.PL
 ‘these young actors’
 b. éti D [_{NP} molod-yx_N-ye_D akter-(ov_N)-y_D]
 these young-(GEN.PL)-NOM.PL actor-(GEN.PL)-NOM.PL
 ‘these young actors’

6.3.2.3 Phrasal application of FA – case stacking in Russian possessives

There is a special set of possessive forms in Russian that are formed from certain Russian proper names and nouns identifying people by family relations. These words are formed by the addition of the suffix *-in* (occasionally *-ov*) to a nominal base, which is followed by case morphology (Pesetsky, 2013: 111).

- (226) a. tet-in-a knig-a
 aunt-SUFFIX-F.NOM.SG book-NOM.SG
 ‘auntie’s book’
 b. k Maš-in-omu dom-u
 to Masha-SUFFIX-M.DAT.SG house-DAT.SG
 ‘to Masha’s house’

If the morpheme labeled ‘suffix’ is viewed as an instance of genitive morphology (and not as an adjectivizer, which is the typical view), then these examples are Russian counterparts of Lardil examples: they show overt case-stacking, in which a word-level genitive suffix on a possessor noun is followed by a second, phrase-level, case suffix. Pesetsky suggests that *-y* can be analyzed as an allomorph of the typical genitive suffix *-in*, which occurs in case-stacking contexts only. Parallel to Lardil, the One-Suffix Rule does not apply here because the possessor has already been spelled-out, after it had received genitive morphology from the possessee.

First, the possessor DP *aunt* merges with N *book* and *book* assigns genitive morphology to *aunt*, overwriting thus its nominative morphology and triggering Spell-Out.

Step 1. [_{NP} [_{DP} aunt.NOM.GEN] [_N book.GEN]]

Aunt-GEN *book*-GEN now merges with D – D assigns nominative to *book* on a word level, deleting the genitive morphology; it also assigns nominative to *aunt*-GEN, but only on a phrase level. Moreover, it does not delete genitive because the possessor DP has already been spelled-out and its genitive morphology thus cannot be overwritten.

Step 2. [_{DP} D [_{NP} [_{DP} aunt.NOM.GEN].NOM [_N book.GEN.NOM]]

If possessive forms in (226) are indeed instances of case-stacking, then in cases where they are parts of a larger phrase, the genitive morphology on other elements should be in the regular genitive form (i. e. with the suffix *-in*, and only the right-most element should bear the special allomorphic genitive, *-y* (Pesetsky, 2013: 112). This, indeed, is the case.

- (227) a. Tet-i Maš-in-y det-i žili
 aunt-GEN.SG Masha-SUFFIX-NOM.PL child-NOM.PL lived
 družno.
 harmoniously
 ‘Aunt Masha’s children lived harmoniously.’
- b. Inogda djadja Jura i babuška [...] tolkovali [...] pro
 sometimes uncle Yura and Grandma chat about
 djad-i Jur-in-u dočk-u.
 uncle-GEN Yura-SUFFIX.FEM.ACC.SG daughter-ACC.SG
 ‘Sometimes uncle Yura and grandma chat about Yura’s daughter.’

The DP *aunt* is merged with N *Masha*; feature assignment applies and *aunt* gets genitive morphology, triggering its immediate Spell-Out and freezing it thus in the genitive form.

Step 1. [_{NP} [_{DP} aunt.NOM.GEN] [_N Masha.GEN]]

Teta-GEN *Masha*-GEN is then merged with D. D assigns nominative morphology to *Masha* on the word-level, deleting its primeval genitive. D assigns nominative to *aunt* on the phrasal level, without having the ability to delete its genitive suffix.

Step 2. [_{DP} D [_{NP} [_{DP} aunt.NOM.GEN].NOM [_N Masha.GEN.NOM]]

Next the whole DP *tetka Masha* is merged with N *children*-GEN. N assigns genitive to *Masha*-NOM on the word-level, deleting its nominative morphology; and genitive to *aunt* on the phrasal level deleting its nominative, but also deleting itself because of Genitive Haplology Rule. The DP *aunt Masha* is now spelled-out.

Step 3. [_{NP} [_{DP} D [_{NP} [_{DP} aunt.NOM.GEN].NOM.GEN [_N Masha.GEN.NOM.GEN]] children.GEN]

Finally, the whole NP *aunt*-GEN *Masha*-GEN *children*-GEN is merged with D. D assigns nominative to *children* on a word level and nominative to the DP *aunt Masha* on the phrasal level, attaching thus only to the rightmost element of the DP – *Masha*. Therefore, *aunt* surfaces with the regular genitive morphology, *Masha* surfaces with “the stacking version of the genitive morphology”, plus the nominative morphology; and *children* surfaces with the nominative suffix.

Step 4. [_{DP} D [_{NP} [_{DP} D [_{NP} [_{DP} aunt.NOM.GEN].NOM.GEN [_N Masha.GEN.NOM.GEN]].NOM children.GEN.NOM]]

Pesetsky offers supporting evidence for his stacking analysis of Russian possessives by showing how Upper Sorbian, which allows a wider variety of elements as the first member of the complex possessives, behaves exactly as predicted.

- (228) a. *moj-eho* *brat-ow-e* *džěč-i*
 my-M.GEN.SG brother-SUFFIX-NOM.PL child-NOM.PL
 ‘my brother’s children’
 (Corbett, 1987: 300 ex. (1))
- b. *w naš-eho* *nan-ow-ej* *chěž-i*
 in our-M.GEN.SG father-SUFFIX-FEM.LOC.SG house-LOC.SG
 ‘in our father’s house’
 (Corbett, 1986: 1008 ex. (41))
- c. *Son-in-eho* *nan-ow-y* *přečel*
 Sonja-SUFFIX-M.GEN.SG father-SUFFIX-M.NOM.SG
 ‘Sonja’s father’s friend’
 (colloquial, not uniformly accepted; Toops, 2008: 404)

- d. star-eje žon-in-a drast-a
 old-F.GEN.SG woman-SUFFIX-F.NOM.SG dress-NOM.SG
 'old woman's dress'

In conclusion, Pesetsky argues for the nominal view of Russian possessives, whereby they are genitive marked DPs, and crucially not adjectives.

6.4 Serbian possessives in Pesetsky's framework

As we have seen in the previous section (6.2), there is ample evidence for treating Serbian possessive forms as exponents of D rather than adjectives. We have also seen that Pesetsky (2013) treats possessive elements in Russian as genitive DPs (6.3.2). What is more, he proposes that possessive formation in Russian is an overt instance of case-stacking, whereby what has been otherwise called "possessive suffix" is actually an allomorphic realization of genitive case, which appears exclusively in stacking environments. In this section, I extend Pesetsky's analysis of Russian possessives to Serbian.

On a par with Russian, I propose that Serbian "possessive suffixes" *-in* and *-ov* are actually genitive case-markers, which appear in stacking environments. Consider the step by step analysis of the phrase *tetina knjiga* 'aunt's book', which can receive the exact same analysis as its Russian counterpart.

- (229) tet-in-a knjig-a
 aunt-GEN.NOM book-NOM
 'auntie's book'

The possessor DP *aunt* merges with N *book* and *book* assigns genitive to *aunt*, overwriting its nominative morphology and triggering Spell-Out.

Step 1. [_{NP} [_{DP} aunt.NOM.GEN] [_N book.GEN]]

Next, *aunt*-GEN *book*-GEN merges with D, which assigns nominative to *book* on a word level, deleting the genitive morphology; and nominative to *aunt*-GEN on a phrase level. However, genitive on *aunt* cannot be deleted, since it has been spelled-out already and its genitive cannot be overwritten. Instead, what we see on *tetina* 'auntie's' is genitive on the word level, realized as an allomorph (*-in*) of the regular genitive morphology (*-e* in this case), and nominative on the phrase level.

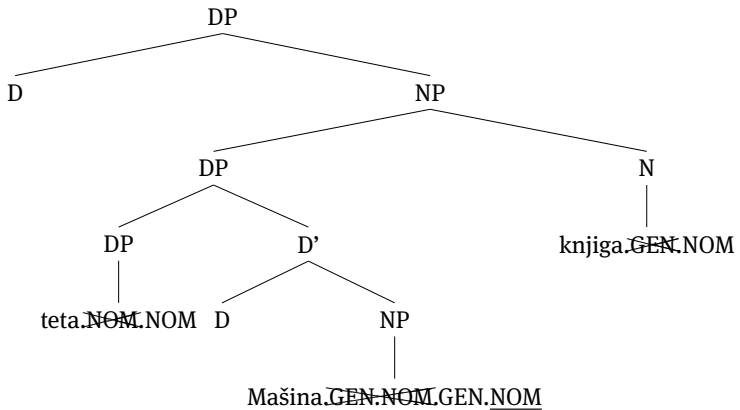
Step 2. [_{DP} D [_{NP} [_{DP} aunt.NOM.GEN].NOM [_N book.GEN.NOM]]

Consider next a case of complex possessives. Recall from chapter 3 that possessives in Serbian can be complex, as long as the elements that form the possessive

behave like a single unit, in a sense similar to compounds. Recall also from the previous section that Pesetsky shows that in cases where Russian possessives are parts of a larger phrase (i. e. complex), the genitive morphology on other elements is in the regular genitive form, and only the right-most element bears the special allomorphic genitive. The case with Serbian complex possessives is a bit different and the analysis for Russian cannot be straight-forwardly applied to Serbian. Namely, two crucial differences have to be assumed. First, the point in which the two elements within the complex possessive are merged together is different in Serbian and Russian. And secondly, unlike what Pesetsky proposes for Russian, in Serbian, Feature Assignment cannot see inside a DP. As a result, a crucial difference between the Russian and the Serbian example arises: while ‘aunt’ in Russian is in the genitive case (*tet-i Mash-in-a knjiga* ‘aunt-GEN Masha-GEN.NOM), in Serbian it is crucially in the nominative case (*tet-a Maš-in-a knjiga* ‘aunt-NOM Masha-GEN.NOM). Consider the derivation of *teta Mašina knjiga* ‘auntie Masha’s book’ for Serbian.

- (230) a. tet-a Maš-in-a knjig-a
 aunt-NOM Masha-GEN-NOM book-NOM
 ‘auntie Masha’s book’

b.



The NP *Masha* is merged with D, which assigns nominative morphology to it, and deletes its primeval genitive.

Step 1. [_{DP} D [_{NP} Masha.GEN.NOM]]

Next, the DP *aunt* is merged within the DP projection of *Masha*, triggering the assignment of nominative, and at the same time deleting its previous nominative morphology and sending the DP *aunt* to Spell-Out.

Step 2. [_{DP} [_{DP} aunt.NOM.NOM] [_{D'} D [_{NP} Masha.GEN.NOM]]]⁸³

Next the whole DP *aunt Masha* is merged with N *book*-GEN. N assigns genitive to *Masha*-NOM on the word-level, deleting its nominative morphology. Now, unlike in Russian, where N can look inside the DP with which it merged and assign case morphology to all the elements contained in the DP, I argue that this is not the case in Serbian. In Serbian, N can only reach linearly the last member of the DP, in this case *Masha*, and assign case morphology to it.⁸⁴

Step 3. [_{NP} [_{DP} [_{DP} aunt.NOM.NOM] [_{D'} D [_{NP} Masha.GEN.NOM.GEN]]] book.GEN]

In the final step, the whole NP *aunt*-NOM *Masha*-GEN *book*-GEN is merged with D. D assigns nominative to *book* on a word level and nominative to the DP *aunt Masha* on the phrasal level, attaching thus only to the rightmost element of the DP – *Masha*. Therefore, *aunt* appears with nominative morphology, *Masha* appears with “the stacking version of the genitive morphology”, plus the nominative morphology; and *book* appears with nominative morphology.

Step 4. [_{DP} D [_{NP} [_{DP} [_{DP} aunt.NOM.NOM] [_{D'} D [_{NP} Masha.GEN.NOM.GEN.NOM]]] book.GEN.NOM]

In this section, I have shown that the analysis for Russian possessives proposed by Pesetsky (2013) can be extended to Serbian data, with two modifications. First, the two members of the complex possessive are merged together at different levels: within the NP projection in Russian, and within the DP projection in Serbian.

83 One could also argue that the reason why one of the nominatives gets deleted is because two instances of the same case morphology cannot be spelled-out adjacent, similarly to the Genitive Haplogy Rule (Pesetsky, 2013: 105), whereby genitive suffix cannot immediately follow another genitive suffix, resulting in the deletion of one.

84 Recall that these compounds really behave like single units, since the linearly first member never declines, and is always in its nominative form.

- (1) a. Teta Maša se javila na telefon.
aunt.NOM Maša.NOM REFL answered on telephone
'Aunt Masha picked up the phone.'
- b. Pozvali smo teta/ *tetu Mašu.
called-we are aunt.NOM/ *aunt.ACC Maša.ACC
'We called aunt Masha.'
- c. Pričali smo sa teta/ *tetom Mašom.
talked-we are with aunt.NOM/ *aunt.INST Maša.INST
'We talked with aunt Masha.'

Secondly, whereas Feature Assignment in Russian can look inside the DP, in Serbian it cannot – it can only see and attach to the linearly last element.⁸⁵

6.5 Chapter summary

In this chapter, I have presented ample evidence for the treatment of Serbian possessives as exponents of D, regardless of their adjectival behavior in certain respects. I have also presented two existing analyses of Russian possessive forms – Rappaport (1998) and Pesetsky (2013), both of which treat them as genitive DPs. Having adopted Pesetsky’s framework in this thesis, in the final section of this chapter, I have extended his analysis of Russian possessives to Serbian. I wrap up this chapter by concluding that possessive forms in Serbian are exponents of D, and not adjectives, as had been argued extensively by the contra DP camp.

85 Sabina Halupka-Rešetar points out how the Serbian condition, whereby FA can only reach linearly the last element, predicts ill-formed outputs such as (1) and (2).

- (1) *teta Maša Kostićina knjiga
aunt Masha Kostić.POSS book
intended: ‘aunt Masha Kostić’s book’
- (2) *teta Maša iz Beogradina knjiga
aunt Masha from Belgrade.POSS book
intended: ‘aunt Masha from Belgrade’s book’

(1) is out for reasons already discussed previously – namely, that possessives can only be formed out of elements which syntactically behave like a single unit. The combination of first + last name does not behave like a single unit, unlike the combination of last + first name. Likewise, *Teta Maša iz Beograda* is complex as well.

7 Nominalizations

In this chapter I address the questions raised in the previous chapters regarding Serbian. More specifically, in section 7.1 I discuss the morpho-syntax of nominalizations – their similarities with passive constructions and their morphological composition in the framework of Distributed Morphology. In section 7.2, I put all the pieces of the puzzle together, and I propose an analysis of nominalizations featuring possessive, genitive and *od strane* phrase as the external argument.

7.1 Morpho-syntax of nominalizations

Serbian nominalizations are derived either from perfective or imperfective verbs.

(231) Imperfective versus perfective verb

- a. Ivan je oduvek dobro procenjivao/ *procenio troškove.
Ivan aux always well estimate.IMPERF/ *estimate.PERF expenses
'Ivan was always very good at estimating expenses.'
- b. Ivan je procenio/ *procenjivao da je prilika
Ivan aux estimate.PERF/ *estimate.IMPERF that aux opportunity
bila dobra.
was good
'Ivan estimated that the opportunity was good.'

Generally, nominalizations can be formed from both perfective and imperfective versions of the verb, except in certain cases where the perfective verb simply does not allow for the formation of the nominalization. Consider the verbs (both imperfective and perfective) and their corresponding nominalizations.

Table 7.1: Perfective and imperfective verbs and the corresponding nominalizations.

Imperfective		Perfective		Translation
<i>Verb</i>	<i>Nominalization</i>	<i>Verb</i>	<i>Nominalization</i>	
osvajati	osvajanje	osvojiti		conquest
iskrcavati	iskrcavanje	iskrcati		unloading
vraćati	vraćanje	vratiti		returning
analizirati	analiziranje		analiza	analysis
procenjivati	procenjivanje	proceniti	procena	estimation
proslavljati	proslavljanje	proslaviti	proslava	celebration
uzgajati	uzgajanje	uzgojiti	uzgoj	breeding
zaključivati	zaključivanje	zaključiti	zaključak	conclusion
pronalaziti	pronalaženje	pronaći	pronalazak	discovery
otkrivati	otkrivanje	otkriti	otkriće	discovery
proizvoditi	proizvodnja	proizvesti	proizvod	product(ion)
potpisivati	potpisivanje	potpisati	potpis	signing/signature
ispitivati	ispitivanje	ispitati	ispit	exam(ination)
pokretati	pokretanje	pokrenuti	pokret	movement

Since nominalizations can be formed from both perfective and imperfective verbs, the question arises with respect to the possible differences in terms of their structures. Nominalizations derived from imperfective verbs behave differently from (some) nominals derived from their perfective counterparts with respect to their ability to take two genitive arguments. While the former do take two genitive arguments (232a), the latter generally cannot do so (232b).

- (232) a. *ispitivanje kvaliteta vode vodećih hidrologa*
 examination quality.GEN water.GEN leading.GEN hydrologists.GEN
 ‘the examination of the water quality by the leading hydrologists’
- b. **ispit kvaliteta vode vodećih hidrologa*
 exam quality.GEN water.GEN leading.GEN hydrologists.GEN

With the latter, the agent argument cannot be expressed with the possessive either.

- (233) **Jovanov ispit kvaliteta vode*
 John.POSS exam quality water
 intended: ‘John’s exam(ination) of the quality of the water.’

The ill-formedness of (233) is predicted by Grimshaw’s (1990) classification of deverbal nouns into three classes, whereby only the nouns in Class 1 (i. e. Complex Event Nominals) are argument-taking nouns. The result nominal like *ispit* ‘exam’ is therefore predicted not be able to take arguments.

However, there seem to be a number of result nominals in Serbian which are able to take arguments.

- (234) *zaključivanje/ zaključak ugovora generalnih direktora*
 concluding/ conclusion contract.GEN managing.GEN director.GEN
 ‘the sealing of the contract by the managing directors’

The question becomes whether *zaključak* ‘conclusion’ is a result nominal in (234), and if it is, how come it can take arguments.

The central question regarding the nominalization processes pertains to the ability of the nominalizations to take arguments. The question is whether nominalizations have argument structure at all, and if so, how do they end up having it. Grimshaw (1991) argues that nouns take arguments optionally (cf. Andersen, 1984, Higginbotham, 1983, Dowty, 1989, who claim that nouns lack argument structure altogether).

- (235) a. *[The doctor] examined *[the patient.]
 b. the examination of the patient
 c. The doctor’s examination was successful.
 d. The examination went well.

Deverbal nouns comprise 3 classes and only nouns belonging to Class 1 are argument-taking (Grimshaw, 1991):

1. Class 1: Complex Event nominals (CENs)
2. Class 2: Result Nominals (RNs)
3. Class 3: Simple Event Nominals (SENs)

Certain nominalizations are ambiguous, i. e. they can belong to all three classes.

- (236) a. the examination of the patient (CEN)
 b. the examination lasted for hours (SEN)
 c. the examination was on the table (RN)

Only Class 1 nouns can take arguments, so the question becomes where does this argument-taking ability come from. I discuss this question in the framework of Distributed Morphology, where verbs and nouns are considered to be category neutral roots augmented by some functional layers:

- If functional layer is nominal → nominalization (F=D)
- If functional layer is verbal → verbal predicate (F=v) (Marantz, 1997, Harley & Noyer, 1998)

A certain amount of consensus exists that derived nouns that have argument structure inherit this in some form from their verbal source. In order for a noun to have argument structure, it must have been a verb at some point.⁸⁶ This means that in languages with verbalizing morphology, nominalizing morphology should appear at the outside of the verbalizing marker, which in turn means that these derived nominals should always bear meaning related to their verbal source and have argument structure (Alexiadou, 2009: 253). The problem with this treatment is that deverbal nominals are ambiguous – they can also have a simple event reading, where they have event interpretations but still pattern with referential nominals. They can also have result reading. But, if the form *examination* always has a verbal source, then argument structure should always be present, irrespective of the interpretation of the noun. The argument structure of nominals should thus not be dependent on the presence of the verbal source.⁸⁷ Instead, arguments in nominals are introduced through functional layers (Alexiadou, 2001). A distinction has to be made between layers that introduce arguments and those that function as simple verbalizers, i. e. may introduce events but not arguments (Alexiadou, 2001). VoiceP introduces external arguments (Alexiadou, Anagnostopoulou, Schäfer, 2006). Alexiadou (2001) thus proposes the following structure for the complex event nominals, where by functional layers have the following characteristics:

- LP – a category neutral lexical projection
- VoiceP – responsible for licensing of the external argument, agentive PPs, manner adverbs
- AspectP – related to the semantic properties of the event – perfectivity for the completed event, or imperfectivity for the ongoing event; responsible for licensing of adverbs⁸⁸
- FP – responsible for licensing of adjectives; agreement (NumP)

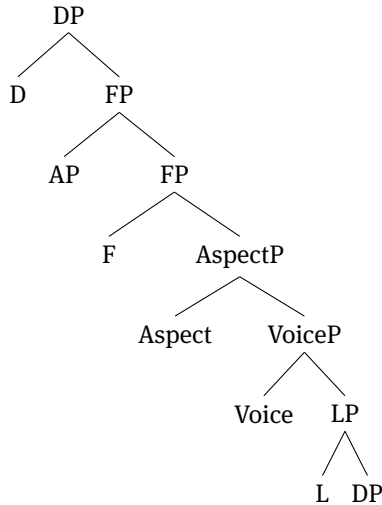
86 Based on the data from Hebrew (Hazout, 1995), where the object of the nominalization is in the accusative case, and adverbial modifiers are allowed, Borer (2003), among others, concludes that there must be V within Hebrew nominals, and perhaps universally.

(1) harisat ha-cava et ha-kfar be-axzariyut
 destruction the-army ACC the-village cruelly
 ‘the army’s destroying the village cruelly’

87 Following Marantz (1997), Alexiadou (2001) assumes that internal arguments are introduced by roots and licensed under specific structural conditions: by the presence of Voice and/or Aspect.

88 There is a connection between morphology and voice/aspect in Turkish nominalizations, where the deverbal nominals have voice-morphology that also appears in a finite verb

(237)



7.1.1 Evidence for functional layers in Serbian nominalizations

Having presented the assumptions stated in Alexiadou (2009) regarding the functional layering in nominalizations, I now turn to Serbian and show evidence for the existence of these functional projections – namely v , VoiceP and AspectP. I address each in turn.

Complex Event Nominals (in the terminology of Grimshaw, 1990), or what I have simply called nominalizations in this thesis, have been argued to have event interpretations, licence argument structure and adverbs and also occasionally to assign accusative case (e. g. Alexiadou, 2001; Borer, 2003). More specifically, they are considered to have an eventive little v head in their internal structure and thus display certain verbal properties.

(Comrie, 1976). Consider the following examples from Alexiadou (2001: 50) where the passive morpheme *-il* occurs both in the participle and in the nominalization.

- (1) a. Mektub yaz -il -di.
 letter write PASS PAST
 ‘The letter was written.’
- b. mektub-un yaz -il -ma -si
 letter.GEN write PASS VN its
 ‘the writing of the letter’

7.1.1.1 Verbalizers/theme vowels in nominalizations

Serbian, like most of the Slavic languages, has a verbalizer, or a theme vowel that shows up between the root and the morphology indicating tense and agreement.⁸⁹ This piece of morphology has been analyzed as an exponent of *v* (Svenonius, 2004; Jabłońska, 2007). Consider the examples from Bašić (2010: 50) where verbalizers are in bold and the morphology *-ti* is an infinitival suffix.

- (238) a. obeć-**a**-ti ‘to promise’
 b. reš-**i**-ti ‘to solve’
 c. napuk-**nu**-ti ‘to crack’

The same root that is interpreted as a verb when the verbalizer is present, can also appear in non-verbal lexical items such as adjectives (Bašić, 2010: 50).

- (239) a. privlač-**i**-ti → privlač-an
 attract-TH-INF attract-ADJ
 ‘to attract’ – ‘attractive’
 b. šir-**i**-ti → šir-ok
 wide-TH-INF wide
 ‘to widen’ – ‘wide’

Verbalizers occur inside nominalizations (Bašić, 2010: 51).

- (240) a. napuk-**nu**-ti → napuk-**nu**-će
 crack-TH-INF crack-TH-NOM
 ‘to crack’ – ‘a crack’
 b. obeć-**a**-ti → obeć-**a**-nje
 promise-TH-INF promise-TH-NOM
 ‘to promise’ – ‘a promise’
 c. nos-i-ti → noš-en → noš-en-je⁹⁰
 wear-TH wear-PART wear-PART-NOM
 ‘to wear’ – ‘worn’ – ‘wearing’

Thus, if verbalizers/theme vowels are indeed exponents of *v*, then their occurrence in nominalizations suggests the presence of at least some verbal structure.

⁸⁹ The name theme vowel is a bit misleading as this piece of morphology can consist of more than a vowel. For the sake of clarity and precision, I will call it verbalizer.

⁹⁰ The presence of the verbalizer is obscured due to the process of iotization, but is nevertheless revealed on the preceding consonant.

7.1.1.2 VoiceP

Another property of nominalizations that Bašić (2010: 45) points out is that they very much look like passives in several respects. First, they seem to share a participial passive morpheme. Namely, passive participles in SC have a suffix *-(e)n/t* attached to the verbal stem.

- (241) a. *ispitiva-ti* → *ispitiva-n*
 question-INF question-PART
 ‘to question’ → ‘questioned’
- b. *Optuženi su ispitiva-n-i od strane policije.*
 accused AUX question-PART-PL from side police
 ‘The accused were questioned by the police’

It appears that the same morpheme also occurs in the nominalization of the verb *ispitivati* ‘to question’. Bašić (2010) points out that alternatively, the nominalizing suffix could be *-nje* and not *-je*, which would then be attached directly to the stem, as argued by Zlatić (1997) for SC, Schoorlemmer (1995) for Russian and Procházková (2006) for Czech. Under this analysis of the nominalizing stem, the relationship between the participial and the nominalization could not be captured. Bašić illustrates additional evidence in favor of the derivational relationship between the participial and the nominalization.

Namely, the participial morpheme in SC has two allomorphs: *-(e)n* and *-t*, depending on the conjugation class of the verb in question. Consider the examples from Bašić (2010: 46).

- (242) a. *rešiti* ‘solve’ → *rešen*
 b. *rešeni zadaci*
 solved problems
 c. *obećati* ‘promise’ → *obećan*
 d. *obećane povlastice*
 promised benefits
- (243) a. *napuknuti* ‘crack’ → *napuknut*
 b. *napuknuta cev*
 cracked pipe
 c. *uganuti* ‘sprain’ → *uganut*
 d. *uganuti članak*
 sprained ankle

Bašić notices that the same allomorphy patterns appear in nominalizations: if a verb takes *-(e)n* in the participial form, it will also take it in nominalizations. If

on the other hand, the verb takes *-t* in the participial, *-t* will also appear in the nominalization (N.B. The change from *t* to *ć* in (245) is due to iotization).

- (244) a. rešen ‘solved’ → reš-en-je ‘a solution’
 b. obećan ‘promised’ → obeća-n-je ‘a promise’
- (245) a. napuknut ‘cracked’ → napuknu-t-je → napuknuće ‘a crack’
 b. uganut ‘sprained’ → uganut-t-je → uganuće ‘a sprain’

Bašić takes this as evidence that nominalizations in SC indeed contain the participial morpheme.

- (246) ispitiva-n-je optuženih⁹¹
 question-PART-NOM accused
 ‘questioning of the accused’

Second, the external argument in both passives and nominalizations can be expressed as a *by* phrase (Bašić, 2010: 47).

- (247) a. Optuženi su ispitivani od strane policije.
 accused AUX questioned from side police
 ‘The accused were questioned by the police.’
 b. ispitivanje optuženih od strane policije
 questioning accused from side police
 ‘questioning of the accused by the police’

Moreover, the external argument for both constructions can be completely left out.

- (248) a. Optuženi su ispitani.
 accused AUX questioned
 ‘The accused are questioned.’
 b. ispitivanje optuženih
 questioning accused
 ‘questioning of the accused’

Finally, nominalizations, just like passives, lack accusative case. Instead, the complement of the noun is in the genitive case.

- (249) ispitivanje optuženih od strane policije
 questioning accused.GEN from side police
 ‘questioning of the accused by the police’

⁹¹ Bašić points out how the nominalizing suffix is actually *-j* and not *-je*. *-e* is a marker of gender and number. For exposition purposes, I follow Bašić in glossing *-je* as a nominalizing morpheme.

7.1.1.3 AspectP

In certain languages, verbal morphological markers can be found in nominals, too. Bašić (2010: 40) illustrates how in SC both the verb (250a) and the nominalization (250b) contain a perfectivity marker in a form of a prefix and a secondary imperfective suffix (SI), suggesting thus the existence of an aspectual projection.

- (250) a. **is-piti-va-ti** optužene
 PREF-ask-SI-INF accused
 ‘to question the accused’
- b. **is-piti-va-nje** optuženih
 PREF-ask-SI-NOM accused
 ‘questioning of the accused’

Moreover, nominalizations take the same type of aspectual modifiers as their verbal counterparts: perfective ones take ‘in hour’ adverbials and imperfective take durative time adverbials (Bašić, 2010: 62).

(251) Imperfective

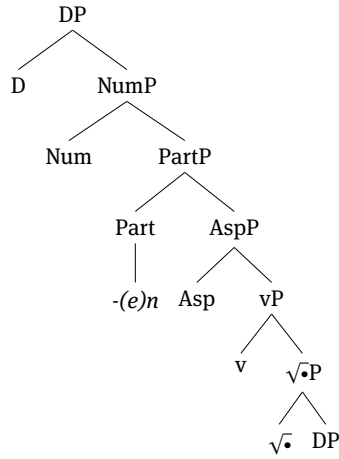
- a. Oni su uručivali nagrade (po) ceo dan/ *za pet minuta.
 they aux awarded.IMPERF prizes for whole day/ in five minutes
- b. uručivanje nagrada (po) ceo dan/ *za pet minuta
 awarding prizes for whole day in five minutes

(252) Perfective

- a. Oni su uručili nagrade *(po) ceo dan/ za pet minuta.
 they aux awarded.IMPERF prizes for whole day/ in five minutes
- b. uručenje nagrada *(po) ceo dan/ za pet minuta
 awarding prizes for whole day in five minutes

Bašić thus concludes that Serbian nominalizations show evidence for all of the functional layers proposed by Alexiadou: they have verbalizers, VoiceP, and AspectP. She proposes the following structural make-up of event nominals, integrating participial morphology above little *v* in a projection termed Part(icipial)P, yielding thus a nominal element which has features of both eventivity and agentivity, both of which are standardly associated with little *v*.

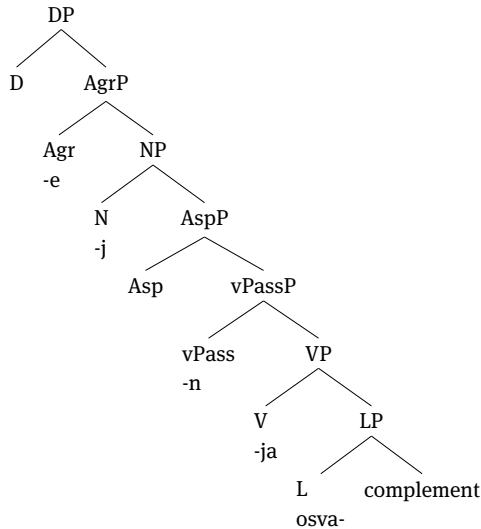
(253)



I modify the analysis of Bašić and propose the following make-up of SC nominalizations like *osvajanje* ‘conquest’ in order to incorporate all the morphemes:

- (254) a. *osvajanje* = *osva* -ja -n -j -e
 root⁹² verbalizer passive nominalizer agreement
 ‘conquest’

b.



92 I mark roots as LPs, i. e. Lexically neutral projections, in the syntactic trees.

A nominalization like *osvajanje* ‘conquest’ starts out as a lexically neutral root *osva-*. Next, verbalizer *-ja* is merged as an exponent of V, forming *osvaja-*. Perfective morpheme *-n* is introduced next as a head of the passive little *v*, producing *osvajan-*. Finally, nominalizer *-j* is merged as a head N, forming *osvajanj-*. The agreement morphology, in this case *-e*, is introduced in the Agr(eement) P(hrase), creating *osvajanje*.

7.2 The analysis of genitives, possessives and *od strane*-phrases

Having established the internal structure of nominalizations, the categorial status of possessives and the mechanisms behind the assignment of case, in this section I put the pieces of the puzzle together, and offer an account for the constructions brought up in the introductory chapter. The relevant examples are repeated below.

- (255) a. *osvajanje Rima velikog generala*
 conquest.NOM Rome.GEN great.GEN general.GEN
 ‘the conquest of Rome by the great general’
- b. *generalovo osvajanje Rima*
 general.POSS conquest.NOM Rome.GEN
 ‘general’s conquest of Rome’
- c. *osvajanje Rima od strane (velikog) generala*
 conquest.NOM Rome.GEN from side great.GEN general.GEN
 ‘the conquest of Rome by the great general’

Before I proceed to the analysis of the examples in (255), I briefly summarize the reasons for treating them as DPs, some of which are in fact consistent with Bošković’s treatment of nominals in DP languages.

First, the examples in (255) exhibit a very strict word order. Recall that one of the arguments of Bošković regarding the NP treatment of Serbian nominals is the fact that the word order in the nominal domain is free. In contrast, in a DP language like English, the word order is strict.

- (256) a. *moja lepa sestra vs. lepa moja sestra*
 my pretty sister vs. pretty my sister
- b. *my pretty sister vs. *pretty my sister*

Note that nominal expressions in (255) have a very rigid word order. In fact, no other word order, apart from the one in (255) is possible for any of the examples.

- (257) a. *osvajanje velikog generala Rima
 b. *Rima osvajanje velikog generala
 c. *Rima velikog generala osvajanje
 d. *velikog generala osvajanje Rima
 e. *velikog generala Rima osvajanje
- (258) a. *osvajanje generalovo Rima
 b. *osvajanje Rima generalovo
 c. *Rima osvajanje generalovo
 d. *Rima generalovo osvajanje
 e. *generalovo Rima osvajanje
- (259) a. *osvajanje od strane velikog generala Rima
 b. *Rima osvajanje od strane velikog generala
 c. *Rima od strane velikog generala osvajanje
 d. *od strane velikog generala osvajanje Rima
 e. *od strane velikog generala Rima osvajanje

The fact that the word order within these nominal expressions is fixed, points to the fact that these include the DP layer.⁹³

Secondly, in the two analyses of the parallel constructions in Russian, these are treated as DPs, as the D layer is necessary for the assignment of case. Under the more traditional view, Rappaport makes use of D when accounting for the source of the second genitive in double genitive constructions. Pesetsky, on the other hand, does not tie the DP layer with genitive case, but with nominative instead. In other words, if Serbian (or in his framework, Russian) did not have the DP layer, then no element would ever surface in the nominative case in the respective languages.

Finally, these constructions can function as arguments and according to Longobardi (1994), they should therefore have the DP layer.

93 The word order rigidness argument regarding the existence of the DP layer should be taken with caution. As I have suggested in (2.2.2), the fact that Serbian has a relatively free arrangement of adjectives, demonstratives and possessives with respect to each other and with respect to the noun might as well be due to some information structural rule. I simply want to point to the fact that if Bošković's line of reasoning was followed, it would be predicted that Serbian nominalizations are DPs, since they have a strict word order.

- (260) a. Cela zemlja je pratila osvajanje Vimblodona Novaka Đokovića.
 whole country aux followed conquest Wimbledon Novak Đoković
 ‘The whole country followed Novak Đoković’s winning of Wimbledon.’
- b. Osvajanje Vimblodona Novaka Đokovića je motivisalo decu da
 conquest Wimbledon Novak Đoković aux motivated children to
 počnu da igraju tenis.
 start to play tennis
 ‘Novak Đoković’s winning of Wimbledon motivated children to start
 playing tennis.’

Having once again established the reasons for treating nominalizations as DPs, and having proposed the structure in (254b), the burden is now on the placement of the external argument: where is possessive, bare genitive and the *od strane*-phrase merged?

As already pointed out in the introductory chapter, the external argument expressed as a possessive, a bare genitive and an *od strane*-phrase seems to be licensed by different projections. Consider the summary with respect to licensing of different types of external arguments in Table (1.1), repeated here as (7.2).

Table 7.2: Licensing of different forms of agents.

Agent	Result nouns	Process nouns	Passives
POSSESSIVE	✓	✓	X
GENITIVE	✓	✓	X
BY-PHRASE	X	✓	✓

Since possessives and genitives occur exclusively within nominal environments, I conclude that they are licensed by a nominal head – specifically, in the structure proposed in (254b), by the head that introduces the nominalizing morphology. The *od strane*-phrase, on the other hand, appears both in passive constructions and in nominalizations, but crucially not in these “picture-type nouns”, which I have been calling result nouns, following Rappaport (1998). What sets apart the nominalizations and passives on the one hand, from result nouns on the other, is the existence of a designated functional projection, which I have termed *vPassP*. Alexiadou (2001) proposes that what is responsible for the licensing of the external PP argument is precisely this projection related to voice.⁹⁴ In relation to this,

⁹⁴ Bruening (2013) proposes the same.

the question arises with respect to how the external arguments are introduced in their designated projection: are they specifiers or adjuncts. Consider the data involving the anaphor *sebe* ‘oneself’ and its behavior with respect to different types of external arguments in nominalizations.

- (261) a. generalovo; uništenje sebe;
 general.POSS destruction self
 ‘general’s destruction of himself’
- b. *uništenje sebe; velikog generala;
 destruction self great.GEN general.GEN
 intended: ‘great general’s destruction of himself’
- c. *uništenje sebe; od strane velikog generala;
 destruction self from side great.GEN general.GEN
 intended: ‘great general’s destruction of himself’

Assuming that the anaphor is a complement of L (i. e. a category neutral projection), the fact that the possessive, but not the bare or the *od strane* genitive can bind it in that position, shows that only possessive is in a c-commanding relationship with the anaphor. Consequently, I propose that possessive is merged as the specifier of the projection that introduces the nominalizing morphology. The bare genitive and the *od strane* genitive are introduced as adjuncts of the NP and the vPassP, respectively.⁹⁵

Although they are syntactically adjuncts, these phrases are semantically arguments. That is, they “do not *add* external argument roles; they *fill* them. But there must be an external argument for them to realize it” (Bruening, 2013: 5).⁹⁶

⁹⁵ Sacha Alexeyenko points out to me how the adjunction of genitives overgeneralizes for Russian nominalizations which do not allow for genitive arguments. However, the problem for Russian nominalizations is not the some sort of ban of adjunction, which would be rather unintuitive, but rather some sort of ban of anything licensed by N. Recall that Russian nominalizations also dislike possessives, which, I have argued, are also licensed in N. On the other hand, the Russian equivalent of the *by* phrase is adjunct to vP, and this is perfectly possible in nominalizations. It thus seems that it is the licensing problem of the N layer that is blocking genitive arguments in Russian, and not the ban on adjunction.

⁹⁶ For example, in unaccusatives and middles, which lack the external argument, *by-phrase* is disallowed (Roeper, 1987; Lasnik, 1989, as cited in Bruening, 2013: 2).

- (1) a. The ship sank (*by a saboteur)
 b. Politicians bribe easily (*by lobbyists)

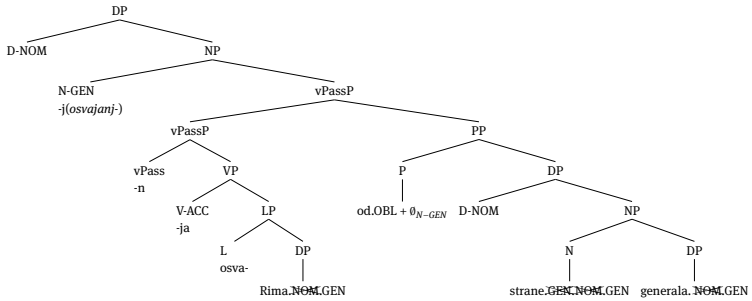
The same is true of Serbian.

On the other hand, they are optional in the sense that they could be left out (this is true for both passives and nominalizations). I thus treat the Serbian *by*-phrase, i. e. the *od strane*-phrase as being adjoined to the phrase that introduces participial morphology, which I have labeled vPassP. Consider a step by step derivation of (255c), repeated here as (262a). In explaining the derivation of these constructions I make use of the machinery developed in the previous chapters, specifically in section 5.3. For ease of exposition, I repeat here the crucial points made previously.

1. **Feature Assignment:** When X merges with Y, forming [x XY], the grammatical features of X are immediately copied onto Y and realized as morphology on all lexical items dominated by Y.
2. **The One Suffix Rule:** Delete all but the outermost suffix.
3. **Timing of operations relevant to Spell-Out of a phase Φ :**
 - The syntax constructs Φ .
 - Merge (α , Φ).
 - FA applies.
 - Spell-Out applies to Φ , freezing it for further applications of FA.
4. **Feature Assignment and licensing:** FA applies to DP only in the position in which it is Vergnaud-licensed.
5. **Possessives:** Possessives are genitive DPs, which exhibit overt case-stacking. “Possessive suffix” is an instance of genitive morphology, which appears in stacking environments only.
6. **Genitive assigning prepositions:** Prepositions that seemingly assign genitive case to their complements are complex in that they have a (null) noun within their structure which is responsible for the assignment of genitive.

-
- (2) a. Brod je potonuo (*od strane pirata)
 ship aux sunk from side pirates
 intended: ‘the ship sank (*by the pirates)
- b. Moja kosa se brzo suši (*od strane frizera).
 my hair refl. fast dry from side hairdresser
 intended: ‘My hair dries fast (*by the hairdresser)

- (262) a. *osvajanje Rima od strane (velikog) generala*⁹⁷
 conquest.NOM Rome.GEN from side great.GEN general.GEN
 ‘the conquest of Rome by the great general’
- b.



The root *osva-* is introduced as the head of a category neutral projection LP. This head takes a DP complement – *Rim* ‘Rome’. By virtue of the fact that it is a DP – *Rim* is marked with nominative case morphology. Even though it is a phase, it does not get spelled-out at this point, since it is not yet Vergnaud-licensed (4). Next, the verbalizing morphology *-ja* is merged as the head of a verbal projection, which takes LP as its complement. The introduction of the verbalizer turns *osvaj-* to an element of the category V, which in turn assigns accusative morphology to whatever it merges with, in accordance with (1). Nevertheless, *Rim* does not surface with the accusative morphology because Feature Assignment cannot apply here because of (4), hence the Spell-Out of *Rim* is delayed. Next, the participial morphology *-n* is merged as the head of voice-determining projection – vPassP. This projection licenses the external argument in the form of the *od strane*-phrase ‘by-phrase’. The *od strane velikog generala* PP is adjoined to vPassP. The PP *od strane velikog generala* consists of the complex preposition *od*, which in itself has a null noun, in accordance with (6). This complex P takes a DP complement consisting of the head noun *strane*, which in turn takes a DP complement *velikog generala*. *Velikog generala* gets genitive morphology from *strane*, in accordance with (1) and immediately gets spelled-out as predicted by (3) and *strane* gets genitive from the null noun, after which it is spelled-out. Next, the nominalizing morphology *-j* is merged as the head of NP. At this point the DP *Rim* is licensed and Feature Assignment applies: *Rim* gets genitive suffix and its previous nominative is deleted in accordance with (2), after which it gets spelled-out.

⁹⁷ For exposition purposes I leave out the AspP and AgrP from the syntactic structure.

Note that the exact timing of the Spell-Out of the PP adjunct is irrelevant.⁹⁸ If it is spelled-out at the point when it adjoins to vPassP, the preposition itself – *od* – will remain in the oblique case, as vPass is not “a case assigner”. On the other hand, if the Spell-Out is postponed until the merger of N, then *od* would be spelled-out with genitive morphology. Since prepositions in Serbian do not decline for case, this cannot be tested. Crucially, in any of the two scenarios, *strane* and *velikog generala* will surface with genitive morphology as they have already undergone Spell-Out and are frozen in the genitive form and insensitive to any further FA. However, considering that the same *od strane* phrase occurs in passives, which do not have the NP projection, yet still get spelled-out, I assume that the PP is spelled-out as soon as it is adjoined to vPassP. *Osvajanj-* is now in the genitive case, due to the change in its category from V to N. In the final step the whole NP is merged with D, which assigns genitive morphology to the head noun *osvajanje*, but cannot affect neither *Rima* or *od strane velikog generala*, both of which have been spelled-out previously.

The whole DP *osvajanje Rima od strane velikog generala* has not undergone Spell-Out yet, as it still needs to be merged with something, in accordance with (3). If the whole DP is merged as, for example, a complement of a preposition, only the head noun *osvajanje* will undergo Feature Assignment.

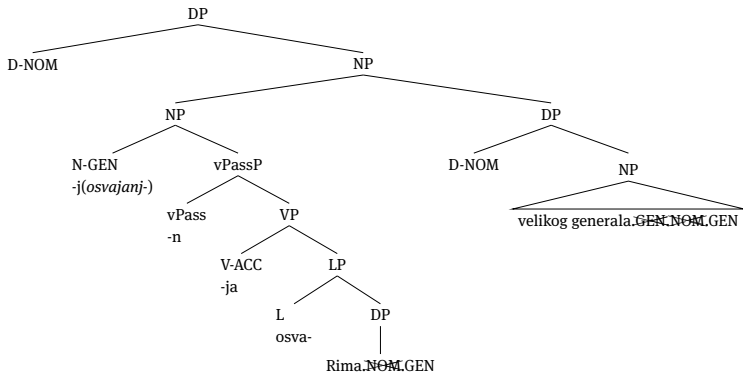
- (263) Pričali smo o osvajanju Rima od strane (velikog)
 talked.we aux about conquest.LOC Rome.GEN from side great.GEN
 generala
 general.GEN
 ‘We talked about the conquest of Rome by the great general’

The construction with the bare genitive external argument in (255a), repeated here as (264a), has a similar derivation.

- (264) a. osvajanje Rima velikog generala
 conquest.NOM Rome.GEN great.GEN general.GEN
 ‘the conquest of Rome by the great general’

⁹⁸ Pesetsky (2013) does not address adjuncts in his manuscript.

b.

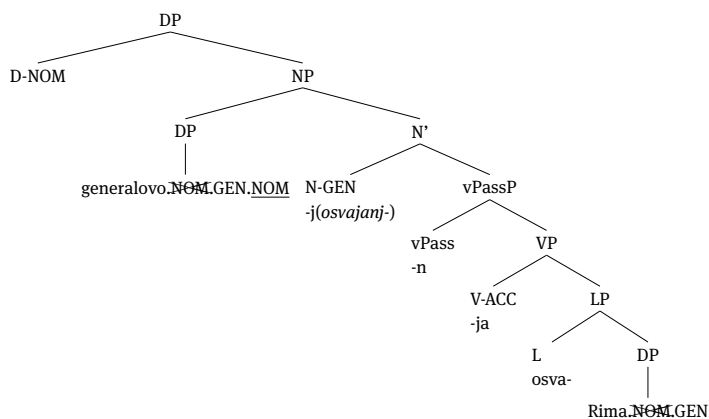


The first part of the derivation proceeds in the same manner as with the *od strane* cases. The difference in the two cases lies in the position of the external argument. Namely, while *od strane* phrases are licensed by vPassP, I have argued that genitive arguments are licensed by the nominal layer of the nominalization, namely, the NP (this is why they cannot appear in passive constructions). By virtue of the fact that it is a DP, *velikog generala* is marked with nominative morphology when it enters the derivation. However, since it is within the projection of N, which is the assigner of genitive morphology, Feature Assignment applies and its nominative morphology gets overwritten by genitive, in accordance with (2), and in turn gets spelled-out, in accordance with (3). The rest of the derivation proceeds in the same way as in (262a).

Finally, consider the derivation of a nominalization in which the external argument is expressed in a possessive form.

- (265) a. generalovo osvajanje Rima
 general.GEN.NOM conquest.NOM Rome.GEN
 ‘general’s conquest of Rome’

b.



Due to their behavior with respect to binding, I treat “possessive agents” of nominalizations as specifiers, merged in the projection of NP.⁹⁹ The derivation is thus rather straight forward, and does not differ much from the previous two cases (i. e. *od strane* and *genitive*). The possessive, being a DP, bears nominative case. As soon as it merges as the specifier of N, Feature Assignment applies and overwrites nominative into genitive. However, as the result of (5), once the whole NP *generalovo osvajanje Rima* gets merged with D, Feature Assignment does not only affect the head noun *osvajanje*, assigning nominative morphology to it on the word-level (and deleting its genitive), but it also assigns nominative morphology to the DP *generalovo*, but without having the ability to delete its genitive, i. e. it stacks two case markers, which results in the genitive case-marker being spelled-out in its “stacking version” (i. e. *-ov* instead *-a*).

Putting all the pieces of the puzzle together, the initial observation that genitives and possessives are mutually exclusive when it comes to nominalizations can be put into perspective. Namely, the fact that possessives are restricted to single units, whereas genitives are restricted to complex and modified nouns can now be accounted for. In simple terms, there is a certain meaning one intends to express. With nominalizations, there are two options of expressing the agent: (i) to merge it as a PP, which is materialized as *the od strane phrase*; or (ii) to merge it as a DP. Both possessives and genitives fall under the second option, as they are both DPs, as I have argued extensively throughout this thesis. Essentially, both possessives and genitives are underlyingly genitives. In other words, whether you have

⁹⁹ Pesetsky (2013) also treats possessives as specifiers of NP. See section 6.3.

a simplex or a complex noun is irrelevant with respect to case since genitive is assigned in either way. Crucially, in the next step, the system must recognize the DP as simple, and assign additional case morphology to it, producing stacking which surfaces in what has traditionally been called possessive. If, on the other hand, the system recognizes the DP as complex, no other case morphology will be able to further attach. In other words, it is not the genitive case that is restricted to complex units, because genitive is also there with simplex NPs, but it is only visible on the complex NPs because no other case morphology can be added on top of it, unlike with simplex NPs.

7.3 Chapter summary

In this chapter, I have discussed the internal make-up of nominalizations in Serbian, by adopting the approach of Alexiadou (2001), which is developed within the framework of Distributed Morphology. I have then presented evidence for the existence of the proposed functional projections in Serbian, as proposed by Bašić (2010), whereby each projection introduces specific morphological bits of the nominalization. Finally, I have put together evidence discussed in the previous chapters, and proposed the analysis of nominalizations including three types of external arguments – possessives, genitives and *os strane* phrases. I adopted the approach of Pesetsky, whereby cases are treated as morphological instantiations of parts of speech, which in turn assign morphology to things they merge with.

8 Conclusion

My aim in this thesis was two-fold. First, I set out to offer an account for double genitive constructions in Serbian, which have not received a proper amount of attention in the literature, because they were generally wrongly ruled out as ill-formed. Secondly, based on the behaviour of these constructions, I re-examined the DP hypothesis in Serbian. The account for the double genitive constructions and the existence of the DP layer go hand in hand: It is precisely the lack of this functional projection that has been taken as the reason behind the ill-formedness of these constructions in languages without articles, since it is generally assumed that the second genitive gets assigned in the DP layer.

(266) **Adnominal genitives parameter:** Languages without articles do not allow transitive nominals with two genitives (Bošković, 2008a: 116).

However, throughout this thesis, I have provided examples from three languages without articles – Serbian, Russian and Polish – which do allow nominals with two genitive arguments. I have also shown that Serbian is the most flexible one, as it allows double genitive arguments with both result and process nominals, whereas double genitives in Russian and Polish are restricted to the former type of nouns. The existence of these constructions thus renders the adnominal genitives parameter inapplicable to these languages, in turn weakening Bošković's NP/DP parameter.

As we have seen, double genitive constructions of the type in (267) are rather ubiquitous in Serbian.

(267) osvajanje Rima velikog generala
conquest.NOM Rome.GEN great.GEN general.GEN
'the conquest of Rome by the great general'

Looking at these constructions, I have raised a number of questions, all of which to a greater or lesser extent pertain to the (non)existence of the DP projection in Serbian.

I have first addressed the question of what kind of nominals can appear as genitive arguments of nominalizations. Following Longobardi's (1994) proposal that nominal expressions have to be DPs in order to be able to function as arguments, which has been widely accepted and is now standardly assumed; and building up on the observations of Kovačević (2014), who was the first one to notice that arguments in the nominal domain follow the patterns proposed by Longobardi, I have argued that nominal expressions in Serbian behave in a way much

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similar to English. Namely, based on the interpretative differences between internal and external arguments, I have argued that nominal expressions in Serbian raise from their base positions in N to D at the level of Logical Form, i. e. they move covertly. Null D in Serbian is restricted to plurals and occurs with internal arguments only, yielding an existential interpretation and patterning with English in this respect, too. This is a rather welcoming conclusion for an articleless language like Serbian, which does not require the DP layer for any overt material to sit in it. Recall that one of the arguments of the contra DP camp (e. g. Zlatić, 1997, 1998; Bošković, 2008a) for the lack of the DP layer in Serbian is precisely the lack of articles and the optionality of all determiner-like elements – that is, there is nothing overt that requires the existence of the DP layer. Having shown that nominals in Serbian move at LF, I proposed that the DP layer must be assumed as the landing site for the covert movement.

The central question and the starting point of this thesis was the issue of case. Namely, the fact that double genitive constructions like (267) do in fact exist in Serbian, brings up the question regarding the source of the genitive case on linearly the second genitive element. I have addressed the issue of case assignment in the nominal domain from two entirely different approaches to case – the standard Case Theory, and (Russian) Case Morphology. More specifically, I have first examined the relevant constructions in Russian within the two frameworks and I then applied it to the Serbian data.

Within the Traditional Case Theory, Rappaport (1998) accounts for the double genitive constructions in Russian by proposing that the second genitive gets assigned in the DP layer. This is precisely what Willim (2000) and Bošković assume for these constructions in DP languages, and what in turn should block their existence in NP, i. e. articleless languages. Recall that unlike Serbian, which allows double genitives with both result and process nominals, Russian only does so with the former. For the latter, i. e. process nominals, the agent argument must be in the instrumental case. Rappaport accounts for this case pattern by proposing that unlike result nominals, process nominals cannot assign inherent genitive case to their complements (due to the fact that they do not have nominal roots). In other words, process nominals in Russian have only one source of the genitive case, namely, D. Hence, only one argument can surface with genitive, and the other one must be in instrumental.

I have argued that if we wanted to extend Rappaport's (1998) analysis for Russian to Serbian, a number of not so elegant stipulations would have to be made. First, as argued by Zlatić (1997) and Bošković (2010), genitive case assigned by nouns in Serbian is an instance of structural case. Process nominalizations in Serbian share certain properties with passive constructions, i. e. they can take external arguments expressed as *od strane phrases* (equivalent of the English *by phrase*)

and they contain the same morpheme that occurs in participles (Bašić, 2010). Additionally, Bošković himself treats the genitive case in nominals on a par with the accusative case in verbs. Therefore, all things considered, process nominals in Serbian should not be able to assign genitive to their complements, much like their Russian counterparts. Having only D left as a case assigner, it is unclear how the second genitive gets assigned in Serbian nominalizations. What is more, notice that if we followed Bošković and Zlatić, Serbian nominalizations should not allow even a single genitive argument. The first structural genitive assigned by the head noun is blocked due to passivization, and there is no DP layer to assign the second genitive.

I have shown that, although at first glance it seemed like a reasonable consideration, bare genitive agents cannot be analyzed as elided versions of *od strane* PPs. Although this would solve the problem of the source of the genitive case, it nevertheless raises the question of why this kind of ellipsis cannot happen in passives. Passives do not allow for the agent argument to be expressed by anything but the *od strane phrase*. Similarly, if indeed bare genitives were just elided versions of *od strane phrases*, then we would also expect for the *od strane phrase* to occur with result nouns. However, I have shown that result nouns cannot have *od strane phrases* as their external arguments. Therefore, I have concluded that under Rappaport's analysis, it is not only that Serbian and Russian cannot receive a unified account, but the account for Serbian would also have to include some rather unrefined stipulations. I have thus adopted Pesetsky's (2013) Russian Case Morphology approach to case, which, although quite novel and rather unorthodox, in my opinion has great potential.

In Pesetsky's framework, case categories do not represent independent categories; instead, they are treated as morphological realizations of part of speech categories. Specifically, genitive case is associated with the category N, nominative with D, accusative with V, and oblique cases are associated with the category P. This means two things in Pesetsky's framework. First, by default, all nouns are genitive, determiners are nominative, verbs accusative and prepositions oblique. Secondly, case morphology can be assigned through Feature Assignment: whatever merges with an element of a particular category will end up with the morphology indistinct from the morphology of the element it has merged with. For example, a nominal expression such as *Rima* 'Rome.GEN' in (267) will have nominative morphology due to the fact that it is a DP. However, since this DP is further merged with the head noun *osvajanje*, which is of category N, and thus specified with the genitive case morphology, the same morphology will also be assigned to 'Rome'. Under Pesetsky's framework, the analyses I develop for Russian and Serbian are essentially the same; the only difference between the two being the c-selectional properties of the nominalizations. Whereas in Russian they crucially

c-select for a PP as the external argument, in Serbian they c-select for either a PP (in which case we have the *od strane phrase*), or a DP (in which case we have a bare genitive). Although under the analysis I developed within Pesetsky's framework, double genitive constructions do not depend on the existence of the DP layer, nevertheless, Pesetsky's approach crucially assumes the DP layer, because otherwise, we would never see nominals in nominative forms.

Additionally, in Pesetsky's framework, possessives are treated as genitive DPs exhibiting overt case stacking. This is also a welcoming outcome, as the contra DP camp uses the categorial status of possessives as evidence against the DP hypothesis in an articleless language like Serbian. The proponents of the parametrized DP hypothesis analyze possessives on a par with adjectives. Following Pesetsky's analysis of Russian possessives, I have proposed that what has traditionally been called "possessive suffix" is actually an allomorphic realization of the genitive case morpheme, which appears exclusively in case stacking environments. This again is a rather convenient conclusion as it basically equates possessives with bare genitives, which as I have shown are mutually exclusive. Recall that it is exactly the cases where possessive forms of certain nominals cannot be formed that the bare genitives are used. Additionally, I have provided ample evidence for the DP treatment of Serbian possessives, such as their ability to bind reflexives or to serve as antecedents of anaphoric pronouns, or the fact that they can be coordinated with genitive DPs.

Putting all the pieces together, I have proposed an analysis for the constructions of the type in (267), and those with the external argument as a possessive and the *od strane phrase*. I have adopted Alexiadou's (2001) structure of nominalizations, which utilizes the framework of Distributed Morphology, and I have reviewed evidence for the proposed structure in Serbian. I have analyzed Serbian nominalizations as category neutral roots which contain a number of functional layers in their extended projection. They contain verbalizers, which are embedded under a verbal functional projection – VP. From verbal functional projections, nominalizations also contain a Passive Projection, which is headed by participial morphology and Aspect Phrase, which is where adverbials are licensed. Nominalizing morphology is introduced as a head of the NP, on top of all the verbal projections, and agreement morphology is introduced in the Agreement Phrase. The phrase is finished with the DP player. Since possessives and genitives appear only within nominal environments, and are excluded from passive constructions, I have argued that they are licensed in the NP layer of the nominalization. The *od strane phrase*, on the other hand, occurs in passives and nominalizations, but not in result nouns. Based on the proposed functional make-up of these constructions, what sets apart nominalizations (i. e. process nominals) and passives on the one hand from result nominals on the other, is the existence of the Passive

Phrase. Hence, I assume that the *od strane phrase* is licensed by the PassP. Next, I have combined the Distributed Morphology approach to nominalizations with Pesetsky's Case Morphology discussed above, and offered an account for the constructions in question.

The proposed analysis crucially assumes the DP layer in the extended projection of Serbian nominals for the following reasons. The two genitives in nominalizations are arguments of the head noun, and need to be DPs in order to be able to serve that function. Moreover, the nominalization, together with its arguments, when embedded into a larger context also serves as an argument, which makes it a DP as well. Case assignment in the framework I adopted in this thesis relies on part of speech categories. More specifically, if there were no category D in Serbian, then we would never encounter nominals in the nominative case. Note that, even if we opted for the Traditional Case Theory, the DP layer would also have to be assumed, in this case as the genitive case assigner. Furthermore, possessives, which can serve as agents of nominalizations are treated as DPs in the analysis proposed here, as their syntactic behavior would be hard to explain under any different treatment.

All in all, in this thesis, I have analyzed double genitive constructions in Serbian, and I have shown that they require for the DP layer to be present. In what follows, I discuss the status of the DP hypothesis in Serbian, and beyond, in more general terms. Additionally, I state some open questions and ideas for further work in relation to the questions I addressed in this thesis.

As we have seen in the introductory chapters, the idea that languages without articles do not project the DP layer is not a new one. Bošković, as one of the leading proponents of the parametrized DP hypothesis, composes a list of phenomena which behave somewhat uniformly in languages with articles, and which in turn behave in the opposite manner in languages without articles. Bošković (2008a) explains the observed generalizations by proposing that languages that do not have articles lack the DP layer altogether. This is a quite neat and a rather elegant solution, as it allows for a number of phenomena to be explained by one parameter only: the (non)existence of the DP projection in those languages. An explanation of this kind is indeed desirable, as it is as minimal as it could be: one functional layer, or better yet a lack thereof, accounts for an immense number of phenomena.

However, upon closer inspection the picture gets blurry. Namely, if we look closely at each generalization in isolation, the NP/DP parameter slowly starts to fall apart. Aside from the adnominal genitives generalization, which was the topic of this thesis, and for which I have shown to be incorrect, along with the claim that possessives are adjectives in articleless languages, for which I have also shown not to be the case, some other generalizations are also quite questionable. Take for

example the Left Branch Extraction, which is considered as one of the strongest NP/DP generalizations.

Following the observation of Uriagereka (1988) that LBE is only allowed in languages without articles, Bošković (2005) accounts for it with the assumption that articleless languages do not have the DP layer. However, there are certain exceptions for this rule and in a footnote, Bošković (2005: 17) acknowledges their existence. In light of that, he writes: “Note that we are dealing here with a one-way correlation, not having articles being a prerequisite, but not sufficient, for LBE. Whatever is responsible for the correlation between articles and the impossibility of LBE (call it X) is not the only principle of the grammar. A number of things could go wrong if X is not active in a language that could still block LBE.”

In other words, there are other things, aside from articles, i. e. the DP layer, that could block LBE. So, if the common denominator is strictly the lack of articles and the absence of the DP layer, then it is unclear why should other things be of importance when it comes to the (im)possibility of LBE. Furthermore, whatever it is that blocks LBE in such cases, might also be active in an articleless language like Serbian. Hence, the Left Branch Extraction generalization must also be relaxed.

Additionally, as discussed previously, Bašić (2010) offers an account for LBE in Serbian, which crucially does not rely on the absence of the DP layer. Instead, Bašić makes use of the rules of information structure and remnant movement to account for the relevant examples.

Looking at the arguments of the contra DP camp, the most troublesome issue with their proposal that languages which do not have articles lack the DP layer is the fact that it puts the equal sign between articles with the DP layer. Plainly speaking, the existence of the DP layer is thus boiled down solely to the position to host articles, and is in turn stripped of all other functions that it is generally proposed to have. First and foremost, the DP is standardly assumed to be responsible for the reference assignment. As nouns are not inherently referential, in the sense that they do not refer to particular extralinguistic entities by default, D is responsible for turning a predicate into a syntactic argument by linking it to the extralinguistic entity. If an articleless language like Serbian does not project the DP layer, then what does that mean for reference assignment? How is then reference assigned in such a language? Furthermore, the DP layer has standardly been linked to the notion of definiteness. Again, if there is no DP layer in a particular language, then how is definiteness encoded? To my knowledge, the contra DP camp does not devote proper attention to the discussion of these issues.

Having shown that the DP layer is necessary in order to account for the double genitive constructions in an articleless language like Serbian, in turn proving the adnominal genitives parameter false, and having seen for example Bašić’s account for LBE, which allows for the DP layer to be maintained, the question

becomes whether there is still motivation to reject the DP hypothesis for languages without articles. In other words, since the generalizations begin to lose what at the beginning seemed like a clear-cut NP/DP difference, the strength of Bošković's main argument starts to disappear. Namely, extra stipulations have to be assumed, and generalizations have to be relaxed, which begs the question of whether the NP/DP parameterizations might as well be abandoned altogether, since the argument that the lack of the functional DP layer can no longer account for such a wide range of phenomena, as initially assumed.

In this dissertation, I have argued extensively in favor of the DP layer in Serbian, and possibly in other articleless languages. However, there is still a lot of work that needs to be done in order for the universality of the DP projection to become standardly assumed, especially in the Slavist circles. In general, other NP/DP parameters should be studied in detail, from a cross-linguistic perspective. In other words, they should be examined with the premise that the DP layer is present, and the observed patterns should be offered an account that does not dispose of the DP layer.

Looking at the research I have conducted for this dissertation, the point of inquiry in future work should be extended to other languages without articles, apart from those examined in this work, with respect to the case-marking of arguments of nouns. It would be interesting to see whether other languages make a distinction between process and result nominals in the same manner as Russian and Polish, or whether they behave more like Serbian, or whether they potentially exhibit totally different patterns. The same also goes for the behavior of possessives; more specifically, for their categorial status.

Last but not least, Pesetsky's (2013) framework, which has been used as a theoretical background for the analysis proposed here, should be advanced further, as it, at least in my opinion, shows great potential, even though it is still in the formative stages of the development.

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