

THE SYNTAX OF NOMINAL EXPRESSIONS IN
ARTICLELESS LANGUAGES:
A SPLIT DP-ANALYSIS OF CROATIAN NOUNS

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I dedicate this thesis to my family

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LIST OF ABBREVIATIONS

A(P)	Adjective (Phrase)
ACC	Accusative
Agr(P)	Agreement (Phrase)
Arg	Argumental
ASN	Argument-Supporting Nominalizations
Asp(P)	Aspect (Phrase)
AUX	Auxiliary
Class(P)	Classifier Phrase
Conj(P)	Conjunction (Phrase)
C(P)	Complementizer (Phrase)
D(P)	Determiner (Phrase)
DAT	Dative
DEF	Definite
DFG	Deutsche Forschungsgemeinschaft
DIST	Distal
DZC	Durđica Željka Caruso
DX	Deictic
ECP	Empty Category Principle
EPP	Extended Projection Principle
FEM	Feminine Gender
Fin(P)	Finiteness (Phrase)
Foc(P)	Focus (Phrase)
FP	Functional Phrase
GEN	Genitive
Impf	Imperfective
INDEF	Indefinite
Infl(P)	Inflection Phrase
INST	Instrumental Case
IS	Information Structure

LBC	Left Branch Condition
LBE	Left Branch Extraction
LF	Logical Form
MASC	Masculine Gender
MED	Medial
N(P)	Noun (Phrase)
NEU	Neuter
NOM	Nominative
Num(P)	Number Phrase
Obj	Object
P	Person
PART	Participle
PDP	Parametrized DP-Hypothesis
Pred	Predicative
Perf	Perfective
PF	Phonological Form
PL	Plural
POSS	Possessive / Possessor
PRES	Present Tense
PROX	Proximal
Q(P)	Quantifier (Phrase)
SBC	SerBoCroatian
SFB	Sonderforschungsbereich
SG	Singular
Spec	Specifier
Subj	Subject
Top(P)	Topic Phrase
TNP	Traditional Noun Phrase
V(P)	Verb Phrase
XP	Maximal Projection

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SUMMARY OF THIS THESIS

The primary goal of this thesis is to investigate the internal structure of nominal expressions in Croatian, which regularly appear without articles, and to provide a syntactic analysis for them.

As is well known, languages with articles are said to project a DP. The head of DP is occupied by definite and indefinite articles in DP-languages. Articles have long been regarded as the most prominent instantiation of the D-head¹. Since Croatian does not have definite and indefinite articles, the principal question is whether articleless nominal expressions project a DP on top of NP, and, if so, which elements qualify as possible D-heads.

This dissertation consists of three parts: **Part I** introduces the topic and lays the foundations for the subsequent analysis and discussion of Croatian nominal expressions. **Part II** critically questions some of the main arguments in favour of an NP-analysis and examines certain syntactic structures and patterns that provide clues to the syntactic make-up of Croatian nominal expressions. **Part III** provides a syntactic analysis of Croatian nouns in terms of the split DP-approach.

In addition to providing a general background, Part I also deals with the ongoing debate on whether Slavic nominal expressions are headed by a noun or a determiner. In order to give an insight into this discussion, a very detailed account of different approaches to the structure of Slavic noun phrases will provide the reader with a good overview and help to identify the highly problematic issues raised by this discussion, which are then critically reviewed in Part II. A comparative description of the most evident morphological and syntactic differences between Croatian and English nouns, along with a description of the word order within the noun phrase (focusing on the arrangement of prenominal elements and permitted permutation patterns) will introduce the Croatian noun

¹ Possessive marker *-s* in English, personal pronouns and proper nouns in Italian (Longobardi 1994) can also appear under D⁰.

phrase and pave the way for the discussion of various syntactic phenomena to come.

Having set out the theoretical foundations in Part I, Part II provides a critical review of some of the main arguments brought in favour of an NP-analysis and examines certain syntactic structures and patterns in Croatian, such as adjectival premodification in coordinated NP-structures, structural alternations in genitive constructions and the internal structure of argument-supporting nominalizations (ASNs). Their discussion and analysis provide a more in-depth insight into the syntactic structure of Croatian nominal expressions, showing that the NP is not the highest nominal projection. Instead, the nominal structure additionally includes different functional categories on top of NP.

Building upon this, Part III provides a syntactic analysis of the Croatian noun phrase in terms of a split DP-approach. Based on the claim that demonstrative pronouns are, in their function, regarded as ‘potential substitutes for definite articles’ (cf. Trenkić 2004, and the references therein), but are, at the same time, considered non-obligatory within the noun phrase, I will examine their optionality-status and deal with the question how and to what extent they contribute to the (in)definite interpretation of noun phrases. Following the idea that the interpretation of nouns is conceptually equal across languages, irrespective of the presence or absence of certain morpho-syntactic markers (in this case articles), and under the assumption that semantic interpretation follows from the underlying syntactic structure, I will adopt a DP-structure for Croatian nouns and subsequently provide a syntactic analysis of Croatian nominal expressions in terms of a split DP. Having reconsidered the syntactic status of all prenominal elements (including their external merge position), I will then turn to a discussion of the prenominal neutral word order. This discussion, in turn, is followed by a brief reanalysis of noun/pronoun asymmetries. Finally, an appropriate syntactic analysis of both possessive and vocative constructions in Croatian in terms of a split DP closes out Part III.

The results of my investigation can be summarized as follows. As is well known, Croatian apparently provides no empirical evidence for the existence of

the DP (hence posing a challenge to the DP-Hypothesis). Based on this fact, some linguists have refused the DP-analysis altogether and have argued in favour of the simple NP-analysis instead (cf. Zlatić 1997, 1998, Bošković 2005, 2009, 2011). According to these linguists, all prenominal elements are categorially adjectives (phrasal adjuncts). Correspondingly, they occupy either the specifier position of the NP (multiple specifiers) or are adjoined to the NP. The logical consequence of this assumption is that the NP is the highest nominal projection within the nominal complex. The proponents of the universal DP-Hypothesis, however, have argued that noun phrases in articleless languages also project a DP, in spite of the fact that its head D is predominantly empty in most cases (cf. Progovac 1998, Dimitrova-Vulchanova and Giusti 1998, Leko 1999, Rutkowski 2002, Bašić 2004, Pereltsvaig 2007, among others). The only elements that can occupy the D head position are personal pronouns (cf. Progovac 1998). Departing from these controversial initial assumptions about the structure of the noun phrase in Croatian, my discussion and subsequent analysis of some of the most influential arguments provided in favour of the NP-analysis, along with the analysis of prenominal adjectival modification, possessive constructions and argument-supporting nominalizations has yielded different results.

In contrast to the claim that the noun phrase in SerBoCroatian is headed by N, my discussion of each of the relevant *headedness* criteria (applied by Zlatić 1998) has allowed me to arrive at the conclusion that determiners carry phi-features and display head properties as well and that nouns are not necessarily the sole candidates that qualify as potential heads of nominal expressions. Determiners not only impose very tight restrictions with respect to the number specification on their associated complements, but they also c-select and case-mark their complements. The fact that they c-select their complements goes against the claim concerning their phrasal status. Possessive adjectives, for instance, behave differently from their English counterparts, because possessive suffixes in Croatian do not attach to XPs. In addition, their binding properties, as already shown by Bašić (2004) and Zlatić (1997), offer further support for their non-XP-status. On top of all this, in argument-supporting nominalizations they act

as nominal subjects, are theta-marked by the head noun and contribute to the definiteness of the entire noun phrase. In addition to being heads, determiners are, in many cases, obligatory elements within the noun phrase.

As for the adjectival nature of prenominal elements, their different morphological and syntactic behaviour indicates that determiners and adjectives are two distinct categories. Determiners cannot be syntactically treated in the same manner as adjectives.

The discussion of adjectival premodification in coordinated noun phrases, however, has shown that both determiners and adjectives behave in a similar manner in modifying each of the nouns within coordinated NP-constructions. Apart from the displayed agreement with only the first element in a coordinated construction, which basically shows that coordinated NPs cannot be regarded as a single plural constituent, adjectival premodification also shows that neither determiners nor adjectives are part of either of the conjoined NPs. Instead, they must be NP-external. This, in turn, implies that NP cannot be treated as the highest maximal projection within the nominal complex. This is further supported by constructions involving transitive deverbal nouns, in which nominal subjects regularly surface as possessive adjectives (being consistently case-marked and assigned different thematic roles). Neither the complexity of argument-supporting nominalizations nor the syntactic behaviour of possessive adjectives in such constructions can be explained by the simple NP-analysis.

The results of my discussion imply that the syntactic analysis of Croatian nouns has to be approached in a different way. Following the idea that semantic interpretation results from the underlying syntactic structure, I adopted the split DP-analysis for Croatian noun phrase. The splitting of the nominal left periphery into various functional projections, such as DefP, FocP or TopP, allows us to explain various syntactic phenomena within the Croatian noun phrase. Within the split DP-approach, definite and indefinite articles in DP-languages (as markers of (in)definiteness) occupy the functional projection DefP. By analogy, the overt morphological markers of (in)definiteness in Croatian, such as the numeral *jedan* 'one', definite adjectival inflectional endings or possessive (pro)nouns, also

occupy the head position of DefP. The numeral *jedan* 'one', for instance, is primarily used to indicate indefiniteness of its nominal referent (because the lexical item *jedan* 'one' regularly accompanies plural nouns).

Conceiving of the noun phrase as being subdivided into thematic, inflectional and determination areas posed the questions of where and in which order pronominal elements are externally merged within the Croatian noun phrase. My discussion of this issue allowed me to conclude that they are base-generated in the inflectional and/or theta-domain of the noun (in line with Ihsane & Puskás 2001), moving upwards to the nominal left periphery in order to check relevant features, such as definiteness, focus or specificity. Pronominal possessives, which function as nominal subjects within argument-supporting nominalizations, are externally merged in the thematic domain of the noun. All other elements are base-generated in the inflectional domain, with the quantifier phrase appearing in the highest position in the inflectional domain, directly below the lowest functional projection of the determination area, Def⁰. The numeral *jedan* 'one' has been regarded as a *pre-determiner* by some authors (cf. Silić 1992). According to my analysis, which has shown that the lexical item *jedan* 'one' functions as the indefiniteness marker, *jedan* 'one' is merged directly in the nominal left periphery (Def⁰). This also explains why it precedes all other determiners, having been rightly considered as a pre-determiner.

As far as possessive constructions are concerned, the nominal subject within the ASN, which regularly surfaces as the possessive adjective, is c-selected and theta-marked by the head noun. After having been theta-marked by the head noun in the nP-shell, the nominal argument internally merges with the possessive suffix in Poss⁰ (inflectional domain), moving farther up to Def⁰ (the left periphery), where it checks its definiteness feature. Possessive suffixes have been claimed to be strong definiteness markers in Croatian (cf. Kuna 2003). That possessive elements occupy Def⁰ in Croatian is endorsed by the definite adjectival inflection. When possessive adjectives coincide with descriptive adjectives, the latter have to be marked definite (with the inflectional suffix *-i*). Here again, a parallel can be drawn between DP-languages and Croatian. While definite and

indefinite articles occupy Def^0 in DP-languages, triggering inflection on the succeeding adjectival modifiers (e.g. German), the same effect can be observed in constructions involving possessive elements in Croatian.

A brief discussion of vocative structures has revealed why the co-occurrence of demonstrative pronouns and nouns marked for vocative case is ruled out in Croatian. Since both are endowed with a strong interpretable deictic feature, they compete for the same syntactic position (here Top^0).

All in all, the split-DP approach to the analysis of Croatian nouns has allowed me to account for a number of different syntactic phenomena, many of which cannot be explained neither by the NP-analysis nor by the DP-analyses of Slavic noun phrases, which have been suggested and discussed in the literature so far.

ZUSAMMENFASSUNG IN DEUTSCHER SPRACHE

Das Hauptziel dieser Dissertation ist die Untersuchung der internen Struktur der Nominalphrase im Kroatischen, mit der primären Aufgabe, ihre syntaktische Struktur auszuarbeiten und näher zu analysieren. Da Nominalausdrücke im Kroatischen regelmäßig ohne definite oder indefinite Artikel vorkommen, stellt die Ausarbeitung ihrer syntaktischen Struktur eine besondere Herausforderung dar, insbesondere im Hinblick auf die Anwendbarkeit der DP-Hypothese.

Bekanntermaßen wird in Sprachen, welche indefinite und definite Artikel haben, eine Determiniererphrase (DP) projiziert. Der Kopf dieser Phrase wird vorwiegend durch definite und indefinite Artikel besetzt. Bislang wurden diese Elemente als einzige funktionale Kategorie betrachtet, welche in der Kopfposition der DP auftreten können². Aufgrund der Tatsache, dass das Kroatische keine Artikel hat, stellt sich hiermit berechtigterweise die Frage, ob die Nominalphrase im Kroatischen ebenfalls eine DP oberhalb der NP projiziert und, falls ja, welche Elemente als potentielle D-Köpfe in Frage kommen.

Neben der Untersuchung verschiedener syntaktischer Strukturen, welche über den syntaktischen Aufbau kroatischer Nominalausdrücke Aufschluss geben, werden zudem pränominale Elemente (Demonstrativ- und Possessivpronomina, Possessivadjektive, Quantifikatoren (determinierte und indeterminierte Zahlwörter) und Numerale), welche sehr oft anstelle des im Kroatischen fehlenden Artikels eingesetzt werden, genauer analysiert.

Diese Dissertation gliedert sich in drei Teile: in **Teil I** werden die theoretischen Grundlagen erarbeitet, sowie das oben umrissene Thema vorgestellt. Dies bildet die Grundlage für die darauffolgende Diskussion und die syntaktische Analyse der kroatischen Nominalausdrücke. In **Teil II** werden einige der

² Possessivendung *-s* im Englischen oder Personalpronomina und Eigennamen im Italienischen (Longobardi 1994) können ebenfalls in der D-Position auftreten. Der funktionale Kopf D⁰ wird jedoch unumstritten durch definite und indefinite Artikel realisiert.

wichtigsten Argumente, welche für eine NP-Analyse der Nomina im Kroatischen sprechen, kritisch hinterfragt. Darüber hinaus werden bestimmte syntaktische Konstruktionen untersucht, die entscheidende Hinweise zur internen syntaktischen Beschaffenheit nominaler Ausdrücke im Kroatischen liefern. **Teil III** widmet sich der syntaktischen Struktur der kroatischen Nominalphrase im Rahmen der *Split-DP-Hypothese*.

Zusätzlich zur Einführung in die theoretischen Grundlagen bietet Teil I dieser Dissertation ebenfalls einen Überblick über die aktuelle linguistische Debatte, in deren Mittelpunkt die Frage steht, ob Nominalausdrücke in slavischen Sprachen generell als maximale Projektionen der lexikalischen Kategorie N^0 oder der funktionalen Kategorie D^0 anzusehen sind. Der komparativen Gegenüberstellung morphologischer und syntaktischer Eigenschaften englischer und kroatischer Nomina folgt eine Beschreibung der pränominalen Wortstellung innerhalb der kroatischen Nominalphrase. Besonderes Augenmerk wird dabei auf die Anordnung pränominaler Elemente und deren zulässige Kombinationen gelegt. Zusätzlich werden im zweiten Teil dieser Dissertation folgende syntaktische Phänomene im Kroatischen analysiert: Modifizierung koordinierter Nominalphrasen durch pränominale Adjektive, strukturelle Konstituentenalternation in Genitivkonstruktionen, sowie die interne Struktur der Nominalisierungen, welche sich durch eine Argumentstruktur auszeichnen (die so genannten *argument-supporting nominalizations (ASNs)*). Die durch die Untersuchung obiger Konstruktionen gewonnenen Erkenntnisse bilden die Basis für die anschließende syntaktische Analyse der kroatischen Nominalphrase im Rahmen der Split-DP-Hypothese. Auf Grund der Behauptung, dass Demonstrativpronomina im SerBoKroatischen als „potenzieller Ersatz für definite Artikel“ (cf. Trenkić 2004 und die dort angegebenen Referenzen) betrachtet werden und als solche fungieren, zugleich aber fakultativ sind, untersuche ich in Teil III dieser Dissertation zuerst ihre Optionalität innerhalb der kroatischen Nominalphrase und gehe der Frage nach, inwiefern sie zur (in)definiten Interpretation der Nomina beitragen. Basierend auf den Annahmen, dass erstens die Interpretation der Nomina unabhängig von der Anwesenheit bzw. Abwesenheit bestimmter

morphosyntaktischer Kategorien (in diesem Falle *Artikel*) sprachübergreifend konzeptuell identisch ist, und dass zweitens die semantische Interpretation aus der zugrunde liegenden syntaktischen Struktur resultiert, nehme ich die DP-Hypothese für das Kroatische an. Anschließend diskutiere ich die syntaktische Struktur der kroatischen Nominalphrase im Rahmen einer theoretischen Weiterentwicklung der DP-Hypothese: der Split-DP-Hypothese. Nachdem der syntaktische Status aller pränominalen Elemente besprochen wurde (einschließlich ihrer Verkettung im syntaktischen Strukturbaum), wende ich mich der Ausarbeitung ihrer neutralen Wortstellung zu. Anschließend wird sowohl auf die *Nomen-Pronomen* Asymmetrien eingegangen, als auch eine entsprechende syntaktische Analyse der Possessiv- und Vokativkonstruktionen im Kroatischen vorgenommen, womit der dritte Teil dieser Dissertation abgeschlossen wird.

Zusammenfassung der Ergebnisse: Da das Kroatische keinen empirischen Beweis für die Existenz der DP liefert (keine Artikel hat), wurde die Anwendbarkeit der DP-Hypothese auf ihre Nominalausdrücke in Frage gestellt. Stattdessen wurde für das Kroatische die NP angenommen (vgl. Zlatić 1997, 1998, Bošković 2005, 2009, 2011). Die Befürworter der NP-Analyse gehen davon aus, dass alle pränominalen Elemente Adjektive sind (phrasale Adjunkte). Entsprechend befinden sie sich im syntaktischen Strukturbaum entweder in der [Spec, NP] Position, oder werden als Adjunkte an die NP angefügt. Die logische Konsequenz dieser Betrachtung ist, dass die NP (und nicht die DP) die höchste maximale Projektion bildet. Die Befürworter der DP-Hypothese hingegen (vgl. Progovac 1998, Dimitrova-Vulchanova and Giusti 1998, Leko 1999, Rutkowski 2002, Bašić 2004, Pereltsvaig 2007, unter anderen) vertreten die Meinung, dass die Nominalphrase in Sprachen ohne Artikel trotzdem eine DP ist, obwohl der D-Kopf in den meisten Fällen leer bleibt. Die einzige Kategorie, welche in dieser Position auftreten kann, sind Personalpronomina (Progovac 1998). Ausgehend von diesem sehr kontroversen Bild über die syntaktische Struktur der kroatischen Nominalphrase liefert meine Analyse andere Ergebnisse, die im Folgenden kurz dargestellt werden.

Im Gegensatz zur Zlatićs (1998) Behauptung, dass der Kopf der serbokroatischen Nominalphrase die lexikalische Kategorie N^0 ist, führt meine Diskussion der von ihr angewandten *headedness*-Kriterien zum Ergebnis, dass Determinierer ebenfalls Kopfeigenschaften aufweisen. Determinierer spezifizieren ihre Komplemente nicht nur hinsichtlich des Numerus, sondern sind ebenfalls für ihre *c*-Selektion sowie Kasusmarkierung verantwortlich. Die Tatsache, dass Determinierer die Kategorie ihrer Komplemente bestimmen, spricht gegen deren phrasalen (XP) Status. Zudem verhalten sich die Possessivadjektive im Kroatischen unterschiedlich zu Possessoren im Englischen insofern als Possessivsuffixe im Kroatischen nicht wie im Englischen an die XP angehängt werden. Ein weiteres Argument dafür, dass Possessivadjektive Köpfe sind, resultiert aus ihren Bindungseigenschaften (cf. Bašić 2004, Zlatić 1997). Darüber hinaus fungieren sie als Subjekte innerhalb der komplexen Ereignisnominalisierungen (ASNs), werden theta-markiert und tragen zur Definitheit der gesamten Nominalphrase bei. Des Weiteren sind sie nicht, wie behauptet, fakultativ innerhalb der kroatischen Nominalphrase, sondern in vielen Fällen obligatorisch.

Aufgrund ihrer unterschiedlichen morphologischen und syntaktischen Eigenschaften können Determinierer und Adjektive nicht zur gleichen Kategorie gezählt werden. Daraus folgt, dass sie ebenfalls syntaktisch anders behandelt werden müssen. Die Modifizierung der koordinierten NPs durch Adjektive zeigt, dass sowohl Determinierer als auch Adjektive sich ähnlich verhalten, indem sie beide Nomina innerhalb der koordinierten NP-Konstruktion modifizieren. Zudem weisen sie Kongruenz mit der jeweils ersten NP innerhalb der koordinierten NP-Konstruktion auf. Dies deutet darauf hin, dass die koordinierten NPs nicht als Plural-Konstituente betrachtet werden sollten. Wichtiger noch: weder Determinierer noch Adjektive können demnach ein Bestandteil der koordinierten NP sein, sondern sind NP-externe Konstituenten. Dieses wiederum zeigt, dass die NP nicht die höchste maximale Projektion im Kroatischen darstellt, bzw. dass kroatische Nominalphrase keine NP ist. Diese Behauptung wird unterstützt durch komplexe Ereignisnominalisierungen (ASNs), in welchen das Subjekt, welches

die Form des Possessivadjektivs annimmt (der Possessor), sowohl theta- als auch kasusmarkiert wird (was atypisch für Adjunkte ist).

Nach den Annahmen der Split-DP-Hypothese wird die Nominalphrase in drei Bereiche unterteilt: das Vorfeld (*determination area/left periphery*), das Mittelfeld (*inflectional domain*) und das Nachfeld (*theta-domain*). Die nominale linke Peripherie (determination area) beinhaltet folgende funktionale Projektionen (beginnend von unten im syntaktischen Strukturbaum): DefP, FocP, TopP und DP. Im Rahmen der Split-DP-Hypothese befinden sich definite und indefinite Artikel (als (In)Definitheitsmarker) in Def⁰. Meine Analyse ergibt, dass sich der Indefinitheitsmarker *jedan* 'ein', definite adjektivische Flexionsendungen sowie Possessivelemente im Kroatischen in derselben Position (Def⁰) befinden. Sie werden in dieser Position entweder basisgeneriert oder dorthin bewegt.

Um verschiedene Wortstellungsmöglichkeiten innerhalb der kroatischen DP zu erklären, muss man grundsätzlich davon ausgehen, dass alle pränominalen Elemente entweder im Mittelfeld oder im Nachfeld basisgeneriert werden. Von dort aus bewegen sie sich nach oben im syntaktischen Strukturbaum, d.h. sie bewegen sich in die linke Nominalperipherie, wo ihre Merkmale überprüft werden. Die Analyse der Anordnung pränominaler Element hat ergeben, dass die Quantifikatorphrase (QP) die oberste maximale Projektion im Mittelfeld ist, gefolgt von anderen funktionalen Projektionen. Der Indefinitheitsmarker *jedan* 'ein' wird beispielsweise in Def⁰ basisgeneriert. Dies erklärt auch warum *jedan* 'ein' als Prä-Determinierer im Kroatischen betrachtet wird (cf. Silić 1992). Die Possessivelemente, welche als Subjekte in komplexen Ereignisnominalisierungen (ASNs) fungieren, werden im Nachfeld (theta-domain/nP-shell) basisgeneriert. In dieser Position werden sie theta-markiert und bewegen sich von dort aus nach PossP, wo das theta-markierte Nomen mit dem entsprechenden Possessivsuffix zusammengefügt wird und sich anschließend nach Def⁰ bewegt, um das starke Definitheitsmerkmal [+def] zu überprüfen. Die definite adjektivische Flexion im Kroatischen unterstützt die Annahme, dass Possessoren in Def⁰ angehoben werden. Wenn Possessivadjektive zusammen mit den Deskriptivadjektiven vorkommen, werden die deskriptiven Adjektive mit der overten definiten

Flexionsendung *-i* markiert. Die Parallele zwischen den DP-Sprachen und dem Kroatischen wird hier ebenfalls deutlich, da derselbe Effekt auch in DP-Sprachen beobachtet werden kann: wenn z.B. im Deutschen definite und indefinite Artikel dem Adjektiv vorausgehen, lösen sie starke bzw. schwache Deklination des deskriptiven Adjektivs aus, was in Form verschiedener Flexionsendungen sichtbar wird. Eine kurze Diskussion der Vokative hat verdeutlicht, warum Demonstrativpronomina und Nomina im Vokativ nicht gleichzeitig vorkommen können: dadurch, dass beide das Merkmal [+deictic] tragen, stehen sie miteinander im Wettbewerb um die gleiche syntaktische Position (Top⁰).

Zusammenfassend lässt sich festhalten, dass die Split-DP-Hypothese einen geeigneten Rahmen für die syntaktische Analyse der kroatischen Nominalausdrücke darstellt, mit deren Hilfe eine Reihe verschiedener DP-interner syntaktischer Phänomene im Kroatischen erklärt werden kann. Dies konnten bisher weder die reine NP-Analyse noch die DP-Analyse leisten, zumindest nicht in der Art und Weise wie sie in der Literatur verwendet wurden.

PART I
SETTING THE SCENE

CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1. Introduction

As is well known, a complex nominal expression may contain both lexical and functional material:

- (1) a. [_{NP} **The** extraordinarily well-prepared *explanation* of [_{NP} **the** financial report]] impressed the CEO.
b. [_{NP} Nevjerovatno dobro pripremljeno *obrazloženje* [_{NP} finansijskoga izvještaja]] impresioniralo je generalnog direktora.

The comparison of the noun phrases in (1) above immediately displays the most obvious difference between English and Croatian. While each of the English nominal expressions in (1a) contains a determiner (the definite article *the*), their Croatian equivalents contain no element that corresponds to the English definite article. Since its introduction in the late 1980s, the idea that lexical categories are headed by functional categories (Chomsky 1986), as summarized in the DP-Hypothesis (Abney 1987), has been successfully applied to the structure of nominal expressions across languages. Languages with articles are said to project a DP. The head of DP is occupied by definite and indefinite articles. Since Croatian does not have definite and indefinite articles, the principal question is whether articleless nominal expressions project a DP on top of NP, and, if so, which elements qualify as possible D-heads.

The main aim of this thesis, therefore, is to investigate the internal structure of nominal expressions in Croatian, which regularly appear without articles, and to provide their syntactic analysis. In order to elaborate on this issue, I will examine the nature of prenominal elements, such as demonstrative pronouns, possessive adjectives, quantifiers, and numerals (e.g. the numeral *jedan*

'one'), which are very often used to denote nominal reference (like definite and indefinite articles in DP-languages), along with different structures and patterns that provide clues about the syntactic make-up of Croatian noun phrases.

The aim of this chapter is to provide some general background and to introduce the topic outlined above. The next subsection will briefly sketch out the DP-Hypothesis, including the reasons that led to the reanalysis of NP in terms of a DP. The subsequent section addresses the universal nature of the DP-Hypothesis, which has been seriously challenged by the fact that nominal expressions in Slavic languages regularly appear without articles. This in turn led to a discussion concerning the functional make-up of noun phrases in these languages, which has resulted in an overall disagreement about the number and nature of projections contained within a Slavic noun phrase. Section 1.4 deals with a decomposition of the clausal and nominal left periphery. Before introducing the split DP-Hypothesis, section 1.4.1 will provide some general theoretical background on the interaction between two components of grammar: Information Structure (IS) and Syntax. The subsequent sections 1.4.2 and 1.4.3 introduce some preliminary considerations regarding the observed parallelism between the clausal and nominal domain, which has paved the way for the analogous decomposition of the nominal determination area. Briefly, section 1.4.2 will deal with DP-CP-parallelisms and their subdivision into three structural domains: a thematic domain, an inflectional area and a clausal/nominal left periphery. Section 1.4.3 offers a brief outline of Rizzi's (1997) split CP-Hypothesis. Finally, section 1.4.4 will focus on the nominal left periphery. As already mentioned, the decomposition of the clausal left periphery as proposed by Rizzi (1997) has resulted in a close inspection of the left periphery within the nominal domain, which has in turn led to various proposals regarding its functional make-up (cf. Ihsane & Puskás 2001, Aboh 2004b, Haegeman 2004, Länzlinger 2005b, 2010, Giusti 2005, among others). The co-occurrence of different determiners within a nominal domain and their attested systematic rearrangements, which evoke ambiguities within the nominal system and give rise to different interpretations and readings, can be best captured by a reanalysis of the nominal left periphery in terms of a split DP. Some

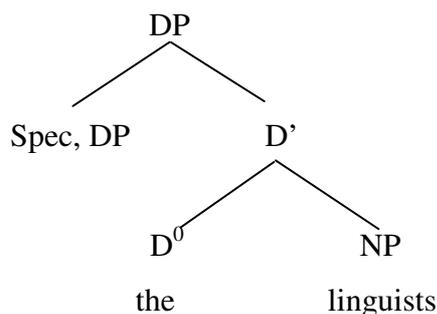
of the relevant proposals are outlined in 1.4.4.2, whereby Ihsane & Puskás' (2001) approach, summarized in 1.4.4.3, provides the basis for the analysis of Croatian nominals. Section 1.5 introduces a summary of the main claims I will be making with respect to the structure of Croatian nominal expressions. This chapter concludes with the organization of this dissertation.

1.2. The DP-Hypothesis (Abney 1987)

In his seminal work *Barriers*, Chomsky (1986) proposed a revised version of X'-Theory, by which not only lexical categories such as nouns (N) and verbs (V) project to the phrasal level, but also functional categories such as auxiliaries (Aux) and complementizers (Comp) do as well. This idea resulted in an elaborated syntactic structure of a verbal domain dominated by IP and CP, the maximal projections of the functional categories Infl and Comp. However, as pointed out by Bernstein (2001a:536), Chomsky himself “never applied this revised notion of X'-theory to the nominal domain, which continued to be represented as NP. In particular, determiner elements, such as definite articles, continued to be generated in SpecNP, although this sort of configuration was inconsistent with at least two aspects of the X'-theory: (i) the idea that lexical as well as functional elements project to the phrasal level, and (ii) the notion that specifier positions host phrasal categories (e.g. *wh*-phrases in SpecCP, sentential subjects in SpecIP).”

Building upon Brame (1982) and Szabolcsi (1983), Abney (1987) addressed the above issues and proposed the DP-Hypothesis: basically a determiner-headed nominal phrase. Nominal expressions were no longer seen as being solely constituents of the NP, a maximal projection headed by the lexical head N^0 , but rather as constituents of the newly introduced Determiner Phrase (DP). The head of the DP is the functional head D^0 and NP is a complement of this functional head, as illustrated in (1) below:

(1)



The reanalysis of NP as a DP in languages with articles is based on very compelling morphological, syntactic and semantic evidence (cf. Bernstein 2001a, Ihsane 2010, Alexiadou et al. 2007 for an overview). Some of the main empirical arguments in favour of an extended nominal structure concern the following phenomena:

1. The co-occurrence of determiners. In many languages, various determiner types, such as articles, demonstratives or possessives, may co-occur, generating perfectly grammatical nominal constructions:

(2) a. *il suo* libro (Italian)

the his book

‘his book’

b. *băiatul acesta* (Romanian)

boy-the this

‘this boy’

(Ihsane 2010:14)

Despite the fact that in languages such as English (e.g. **the this/her man*) or German (e.g. **der dieser/ihrer Mann* ‘the this/her man’), definite articles cannot co-occur with demonstrative pronouns or possessive elements, the cross-linguistically attested grammatical structures provided in (2) suggest that these items occupy different structural positions and that the structure of nominal expressions should be extended (ibid.).

2. Parallelisms between the nominal and clausal domains. One of the reasons for the assumption that the nominal phrase (NP) was headed by a functional projection was the observed parallelism between sentences and NPs that allowed for the proposal of an NP structure similar to that of the extended projection of the verb, the CP and IP. Support for the similarities between these clausal and nominal structures comes from independent syntactic phenomena such as argument structure, word order, ellipsis, and from the matching clausal and nominal agreement patterns in certain languages (e.g. Hungarian, a nominative/accusative language, or the Mayan language Tzutujil (discussed by Abney (1987))). Deverbal nouns, for instance, share the same argument structure as the verbs from which they are derived:

- (3) a. Rome destroyed Carthage
b. Rome's destruction of Carthage

(Bernstein 2001a:540)

Chomsky's (1970) well-known examples given in (3) above exemplify the parallelism between the clausal and nominal structures, where nouns as well as verbs take external and internal arguments. In (3), both the verb *destroy* and the noun *destruction* take two arguments, the NP *Rome* (assigned the theta-role of Agent) and the NP/PP *Carthage/of Carthage* (interpreted as Patient). The semantic relations established in (3a) hold in (3b). Furthermore, evidence from binding and control phenomena underscore the equivalent hierarchical arrangement of arguments within both the nominal and the clausal domain.

3. Movement. Just as with the movement patterns observed within the clausal domain, e.g. head movement of a verb to functional heads within CP or the phrasal movement to specifier positions (the raising of the clausal subject from [Spec,VP] to [Spec, IP]), plenty of evidence has been provided for both DP-internal head and phrasal movement.

Head movement inside the nominal projection implies that the noun moves from its base-generated position in the lexical domain to a higher functional projection above NP (N-raising). Instances of DP-internal N-raising have been provided for many languages (for Romance, see Picallo 1991, Bernstein 1993, Cinque 1994, Longobardi 1994, Giusti 1994, 1997; for Semitic languages, see Ritter 1991 and Siloni 1991; and for Scandinavian, Taraldsen 1990, Delsing 1993b). The surface order *noun-adjective* found across many Romance languages is considered to be an instance of N-raising, where the noun raises across the modifiers to a functional head located between N and D:

- (4) a. the beautiful big red *ball*³ (English)
 b. la bella grande *palla* rossa (Italian)

Another example of noun raising concerns instances of noun movement to D, as in (5a, b), where the noun precedes the definite article and therefore moves upwards in order to bind it:

- (5) a. *un frumos [băiat]_i român t_i* (Romanian)
 a nice boy Romanian
 ‘a nice Romanian boy’
 b. *[băiat]_i-ul frumos t’_i (cel român) t_i*
 boy-the nice (the Romanian)
 ‘the nice (Romanian) boy’

(Ihsane 2010:16)

In addition to the *noun-adjective* surface order mentioned above, Italian, a language without enclitic articles, provides another kind of evidence for N-to-D movement. Longobardi (1994:623) observes that nominal constructions

³ The examples (4a) and (4b) originate from Giusti (1997:97) and are taken here from Ihsane (2010:16).

containing proper names in Italian display two different surface structures that alternate depending upon whether a proper name appears with a definite article (6a) or without (6c):

- (6) a. *Il mio Gianni* ha finalmente telefonato.
the my John finally called up
- b. **Mio Gianni* ha finalmente telefonato.
my John finally called up
- c. *Gianni mio* ha finalmente telefonato.
John my finally called up

If the order *possessive adjective - noun* is preserved within the DP, the omission of the definite article *il*, as displayed in (6b), leads to ungrammaticality. The inverted order in (6c) is perfectly fine, leading to the conclusion that “the lack of the article forces an N-initial order (Longobardi 1994:623)”, which is derived by the movement of the proper name from N^0 to the empty D^0 position⁴.

DP-internal **phrasal movement** was first postulated by Szabolcsi (1983), who argued that [Spec, DP], analogous to [Spec, CP], serves as an escape hatch for extraction out of the nominal phrase:

- (7) a. This is [_{DP} a [_{AP} *very important*] decision].
b. [_{DP} [_{AP} *How important*] a decision] is this?

(Alexiadou et al. 2007:84)

As illustrated in (7) above, DP-internal phrasal movement is akin to clausal *wh*-movement, where the *wh*-phrase *how important* in (7b) (here the AP) moves to the left of the indefinite article.

⁴ Alexiadou et al. (2007:87) point out that the hypothesis concerning N-to-D raising has been recently challenged by many authors (e.g. Alexiadou, Stavrou & Haegeman 2001, Cinque 2003, Laenzlinger 2005a or Shlonsky 2004) and has been abandoned for some languages.

Following Abney (1987), many linguists have provided empirical evidence for the existence of DP in various languages and have been primarily concerned with its internal structure. The only functional category that uncontroversially occupies the head position of the DP is the category of definite and indefinite articles. However, other proposals have been made as well. Lyons (1999:301) suggested that DP is in fact a Definiteness Phrase, whose head D encodes the features [+/-DEF]. Longobardi (2009) conceives of D as the locus of a *Person* head. However, due to the fact that articles have been predominantly taken as the only instantiation of a D head, the cross-linguistic application of the DP-Hypothesis has been questioned particularly with regard to those languages in which nominal expressions appear without articles. In addition to some Asian languages, such as Korean or Japanese, a large majority of Slavic languages, among them Croatian, belongs to this group, hence posing a challenge for the DP-Hypothesis.

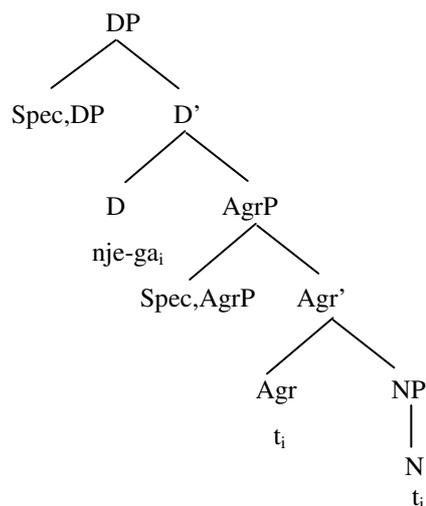
1.3. A Challenge to the DP-Hypothesis: Articleless Languages

A focus of recent linguistic discussions is the controversy regarding the functional projection of DP and the question of whether articleless languages project a DP on top of NPs. In many Slavic languages DPs are assumed (cf. Progovac 1998, Dimitrova-Vulchanova and Giusti 1998, Leko 1999, Rutkowski 2002, Bašić 2004, Pereltsvaig 2007), but some linguists have refused the DP analysis altogether and argued instead in favour of a simple NP analysis (Zlatic 1998, Trenkić 2004, Bošković 2005, 2008, 2009). The result of this discussion was the emergence of the Parametrized DP-Hypothesis (PDP), according to which a given language may or may not have DPs (Corver 1992). This parametric choice is closely associated with the observable presence versus absence of articles in the given language.

Being a member of the so-called ‘det-drop’ family of languages, Croatian does not have articles and consistently provides no empirical evidence for the existence of the DP, as the only functional element that uncontroversially occupies the head position of a DP projection is the syntactic category of

(in)definite articles. Nevertheless, Progovac (1998:165) argues that “even Serbo-Croatian, a language without articles, projects a DP on top of NPs in argument positions”, thus suggesting that “the projection of DPs is a universal property”. According to her, D⁰ in SerBoCroatian⁵ is occupied by personal pronouns:

- (8) **nje-ga**
 him-ACC/G.MASC.SG



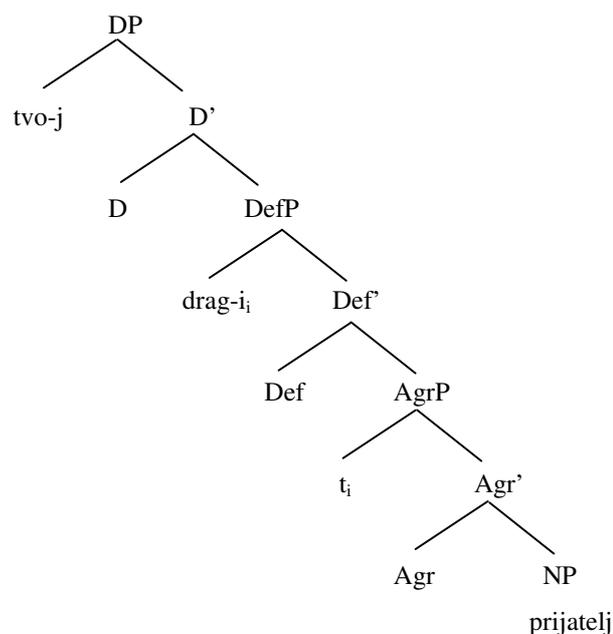
(Progovac 1998:173)

In addition, the noun phrase in SerBoCroatian hosts more than one functional projection between N and D. Based on her discussion of adjectives and their position within the DP, Progovac (1998:174ff.) suggests that one further functional category, labelled Definite Phrase (DefP), should additionally be embedded into the DP structure. The existence of DefP is justified by the fact that in SerBoCroatian a ‘definite aspect’, which is equivalent to the use of definite articles in English, appears on adjectives that precede masculine nouns in the nominative case. These definite adjectives are morphologically marked by the inflectional suffix *-i*. After being base-generated in [Spec, AgrP] position, they

⁵ The term SerBoCroatian stands for Serbian, Bosnian and Croatian and is adopted here from Aljović (1999). It replaces the term Serbo-Croatian (SC) and will be employed in contexts where the cited literature refers to SC.

move to [Spec, DefP] in order to check their ‘definite aspect’, as illustrated in (9) below:

- (9) *tvoj* *drag-i* *prijatelj*
 your-NOM.MASC.SG. dear-NOM.MASC.SG.DEF. friend-NOM.MASC.SG.



(Progovac 1998:176)

In much a similar manner, Leko (1999) also assumes a rich functional structure above NP, including the functional projections AgrP, DefP, NumP, PossP and DP in the syntactic representation of Bosnian nouns. However, the elements hosted by these functional projections occupy their specifier positions. Although he assumes a DP, its head D^0 is usually empty. The only instance of a lexically filled D^0 is limited to nominal expressions involving personal pronouns, a point in which he agrees with Progovac (1998). Nevertheless, in spite of being predominantly empty, his D^0 additionally “carries the referential features of the noun phrase” (Alexiadou et al. 2007:219). While Pereltsvaig (2007) likewise argues for the universality of a DP, other researchers (cf. Zlatić 1998, Bošković 2005, 2008, 2009) have adopted a simple NP-analysis. The arguments for both

approaches will be introduced in more detail in Chapter 2. However, we can already see that the issue regarding the projection of a DP in articleless languages is far from being settled.

1.4. Decomposition of the Clausal and Nominal Left Periphery

Only recently, a further refinement of the clausal CP domain and its decomposition into various functional categories (such as FinP, ForceP and TopicP (cf. Rizzi 1997)), which is better known under the term **Split-CP Hypothesis**, has given rise to a closer inspection of the nominal left periphery and has led to several proposals that involve a parallel decomposition of the nominal determination area (Ihsane & Puskás 2001, Aboh 2004b, Haegeman 2004, Laenzlinger 2005, 2010, Giusti 2005, among others). The relevant proposals are summarized under the term **Split DP-Hypothesis**. The splitting of the determination area was motivated by a co-occurrence of various determiner types within a DP (cf. Giusti 2005) as well as by the observed overt morphosyntactic realizations of Topic and Focus features within the nominal domain. Additionally, the explanation of various DP-internal displacement phenomena makes the splitting of the DP necessary. Parallel to Rizzi's (1997) split-CP, the nominal left periphery consistently includes the following functional projections: DP, TopP, FocP and DefP (cf. Giusti 2005, Ihsane & Puskás 2001).

1.4.1. Theoretical Background: Interaction between Information Structure (IS) and Syntax

The term *information structure*⁶ goes back to Halliday (1967) and its description within generative grammar can be traced back to Chomsky (1972) and Jackendoff (1972). Information Structure (IS) denotes the formal organization of linguistic expressions in relation to their discourse functions (cf. Halliday 1967, Chafe 1976, Lambrecht 1994). In general it is assumed that in a communicative situation a speaker structures his utterance in such a way as to achieve an optimal

⁶ According to Büring (2005:1), related notions include Chafe's (1976) *information packaging* or the *functional sentence perspective* of the Prague school (Firbas (1975), Sgall et al. (1986)).

exchange of information. Following Prince (1981), Aboh et al. (2010:783) point out that “information structure reflects the speaker’s hypotheses about the hearer’s state of mind (i.e., his assumptions, beliefs and knowledge) at the time of the utterance.” Since its introduction in the late sixties, the term *information structure* has been widely used to refer to the partitioning of sentences into categories such as focus, topic or comment. However, no consensus has yet been reached as to which and how many categories of information structure can be distinguished and identified (cf. Büring 2005). Only recently, the search for parallelisms within the clausal and the nominal domain (Bernstein 1997, 2001a, Haegeman 2004, Aboh 2004, among others) has raised the issue of whether the established parallelism between the two can be extended into the domain of information structure as well.

Within the DP, the speaker’s hypotheses about the hearer’s familiarity with a certain referent, e.g. the nominal expression *a/the linguist from China* in the English examples below, are reflected in his choice of determiner (Aboh et al. 2010:783):

- (10) a. John invited [*a* linguist from China] (indefinite; non-identifiable)
 b. John invited [*the* linguist from China] (definite; identifiable)

Other languages use other grammatical and lexical means to express such a differentiation, as we will see later on. At this stage, however, two questions can be posed: (i) Which place does information structure generally occupy in the model of grammar? and (ii) How does information structure interact with its other components?

According to the standard minimalist approach, the **Lexicon** supplies the **Syntax** with words that contain phonological, formal and semantic features. These are inserted into the syntactic/computational component of the grammar (C_{HL}), where they combine and form syntactic structures. These **syntactic structures** serve as an input for the next two components of grammar (Radford 2004:9):

- (i) the **semantic component** (Logical Form (LF) and Information Structure (IS)), which interfaces with systems of thought, and converts the syntactic structure into a corresponding semantic representation;
- (ii) the **PF component** (Phonological Form (PF) and Morphology) converts the syntactic structure into a PF representation, telling us how it is pronounced. PF representation interacts with the systems of speech.

The images below depict the model of Grammar adopted by Länzlinger (2010:51), who suggests that Information Structure must be connected to Phonological Form. The observed focus-induced changes in stress pattern are one of his reasons for viewing it this way.

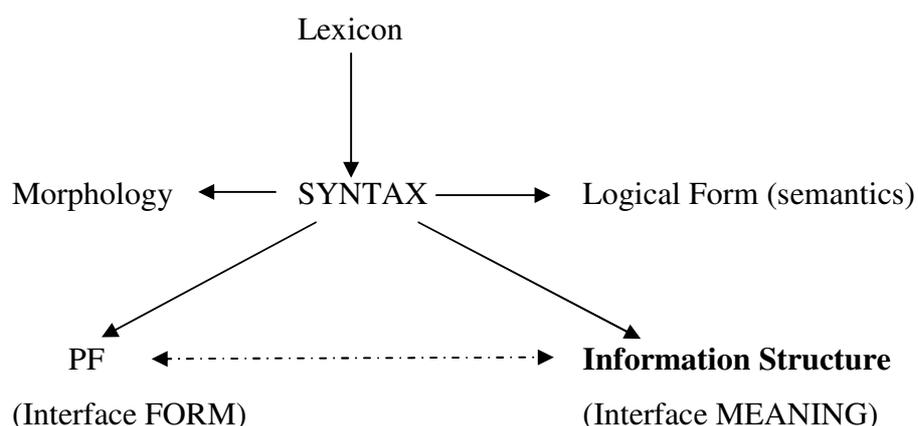


Figure 1.1: The architecture of the Grammar (Länzlinger 2010:51)

Following Szendrői (2004), Giusti (2005) assumes a T-model grammar (see Figure 1.2), in which both PF and LF represent opposite interfaces fed by syntax, i.e. they are not linked to each other. Out of this assumption follows that “if information structure is relevant to LF, the features that trigger overt movement must be inserted earlier than the output to the PF module (spell-out), otherwise they could not be interpreted at the relevant LF level” (Giusti 2005:23). In other words, the features related to information structure appear either in the Numeration (N) or at the level of syntax. Indeed, in accordance with the

minimalist proposals, which conceive of syntax as an operation which begins with the selection of lexical items in the lexicon (Numeration), including functional categories and informational features [+/-Topic] or [+/-Focus], Giusti assumes, using terminology adopted by Rizzi (1997), that the informational features are merged in the functional heads Top^0 and Foc^0 .

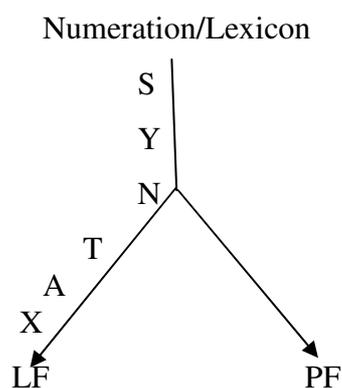


Figure 1.2: T-model of Grammar (Giusti 2005:23)

Similarly, Aboh (2010:12) argues that “information structure starts in the numeration in the form of discourse-related lexical items which drive the derivation.” Furthermore, these discourse-related particles “encode features such as interrogative force, topic or focus and display a specific structural behaviour, allowing for the conclusion that they project in the syntax”. What is Aboh’s line of reasoning for the view that core syntax encodes properties of IS? Aboh (2010:16) backs up his hypothesis with Chomsky’s (1995) *Inclusiveness Condition*, which states the following:

(11) *Inclusiveness Condition*

Given the numeration N , C_{HL} computes until it forms a derivation that converges at PF and LF [...] A “perfect language” should meet the condition of inclusiveness: any structure formed by the computation [...] is constituted of elements already present in the lexical items selected for N ; no new objects are added in the course of computation apart from rearrangements of lexical properties.”

(Chomsky (1995:228), adopted from Aboh (2010:16))

According to the widely accepted general view, the crucial notions of IS (such as Topic and Focus) are not part of the syntax, but are attributed to a linguistic expression after it has been computed by C_{HL}. However, following Chomsky (1995), the introduction of these features either in syntax or after the process of computation would violate the Inclusiveness Condition. Therefore, these notions must enter the derivation at a very early stage. According to Aboh (2010), they are part of the numeration. Support for his claim comes from examples that involve focus constructions, such as question-answer pairs (Aboh 2010:16):

- (12) a. {C, T, who, did, love, John}
b. [_{CP} who [_C did [_{TP} John [_T ~~did~~ [_{VP} ~~John~~ love ~~who~~]]]]]

The question in (12b) is derived from the numeration given in (12a). Being a property of C, the interrogative force (*wh*-feature) forces the movement of the *wh*-phrase *who* from its base-generated position to [Spec, CP] along with the T-to-C movement of *did*. Aboh (ibid.) emphasizes that already at this stage “the lexicon of English contains the functional category C endowed with the feature interrogative (i.e., C_{wh})”. This allows for the conclusion that the Lexicon contains certain IS-sensitive functional items that project in the syntax. It is therefore appropriate to ask why topic and focus features should be treated differently from the interrogative one. With respect to the discourse-related notions of definiteness and specificity and their relation to topicality, he says the following: “Another feature that is commonly assumed to project in syntax though it primarily relates to discourse (and therefore information structure) is definiteness/specificity as encoded by (in)definite articles (Abney 1987, Szabolcsi 1987, 1994, Longobardi 1994). Given the close relation between definiteness/specificity and topicality [...] it is not clear to me why one is seen as a legible formal feature expressed by the nominal periphery D, while the other is banned from the clausal periphery” (Aboh 2010:16/17). The important issue brought up in this statement relates to the fact that the DP-internal notions of information structure, such as definiteness and specificity, project in the syntax as well and are accordingly understood to be a

part of the numeration N. Following this line of argumentation, the features of definiteness and specificity infer the projection of the functional D head.

Since nominal expressions in Croatian are evidently endowed with these features, I assume that they project in the syntax. As the encoding of information structure within a noun phrase along with its syntactic mapping is of primary interest for my final analysis, I will briefly outline Rizzi's (1997) split-CP proposal first before summarizing the split DP approaches, because Rizzi's split-CP proposal has been the foundation for the analogous decomposition of the nominal left periphery.

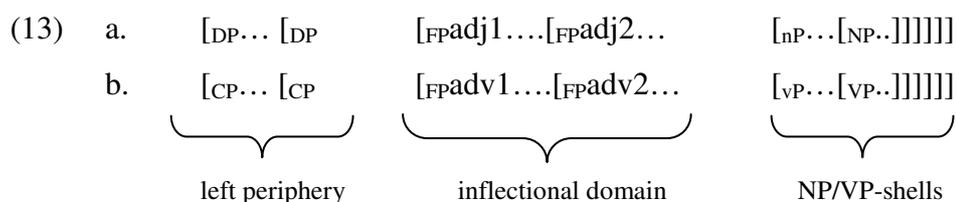
1.4.2. DP-CP-Parallelism: Structural Subdivision into Three Domains

The cartographic approach to syntactic structures (e.g. Rizzi 1997, 2004, Cinque 1999, Belletti 2004, among others) "investigates the make-up of functional categories in the clause, and by extension in nominals. Essentially, it consists in identifying distinct positions in the structure dedicated to different interpretations" (Ihsane 2010:8). Under the assumption that inflectional morphemes head their own functional projections (Chomsky 1986), clauses are viewed as being "articulated and formed of a succession of lexical and functional projections" (Ihsane 2010:8). The cartographic approach has been successfully applied to the clausal inflectional domain (Pollock 1989) as well as to its left periphery (Rizzi 1997), and has recently been proposed for the nominal domain as well (cf. Ihsane & Puskás 2001, Aboh 2002, 2004b, Länzlinger 2005b, Giusti 2005).

According to the cartographic approach to syntactic structures, the noun phrase displays a parallel structure to the one of the clause: both can be decomposed into three domains.

The NP/VP-shells represent a **thematic domain** of a verb or a noun, that is, a domain where their external and internal arguments are merged (Larson 1988, Chomsky 1995, Grimshaw 1990). The **inflectional domain** is made up of functional projections that host modifiers of each lexical category, such as adverbs within the clause or adjectives within the noun phrase. Agreement, phi-features and case are also checked in this domain. Finally, **the left periphery** is associated

with the notions of topic and focus in the clausal domain (Rizzi 1997) and, within the nominal domain, with the features related to the D head, such as (in)definiteness, specificity or referentiality (Aboh 2004a,b). The established parallelism⁷ between the two and the corresponding subdivision into three domains is illustrated in (13) below:



(Ihsane 2010:17)

Arguments of the noun, which, following a thematic hierarchy, are externally merged in the theta-domain inside the nP-shell, leave the nP-domain in order to check their case features and in order to reach the P-related projections. As Laenzlinger (2010:58) points out, the linear order in the complex nominal construction such as *la photo de la mer par Jean* ‘the picture of the sea_{+theme} by John_{+agent}’ shows that the PP_{de} is built higher than the PP_{par}, and both of them, along with the case-related positions, are situated above the adjectival and agreement domain. The left periphery is split into various functional categories including projections related to focalization, topicalization, informational prominence and quantification (Laenzlinger 2010:59). The universal quantifier *all* in [QP *all* [DP_{deictic} *these* books]], for instance, occupies the highest DP-layer. An example of such a tripartite inner structural representation of the noun phrase is given in (14):

⁷ Laenzlinger (2005b) labels these three domains *Vorfeld* (left periphery), *Mittelfeld* (inflectional domain) and *Nachfeld* (thematic domain).

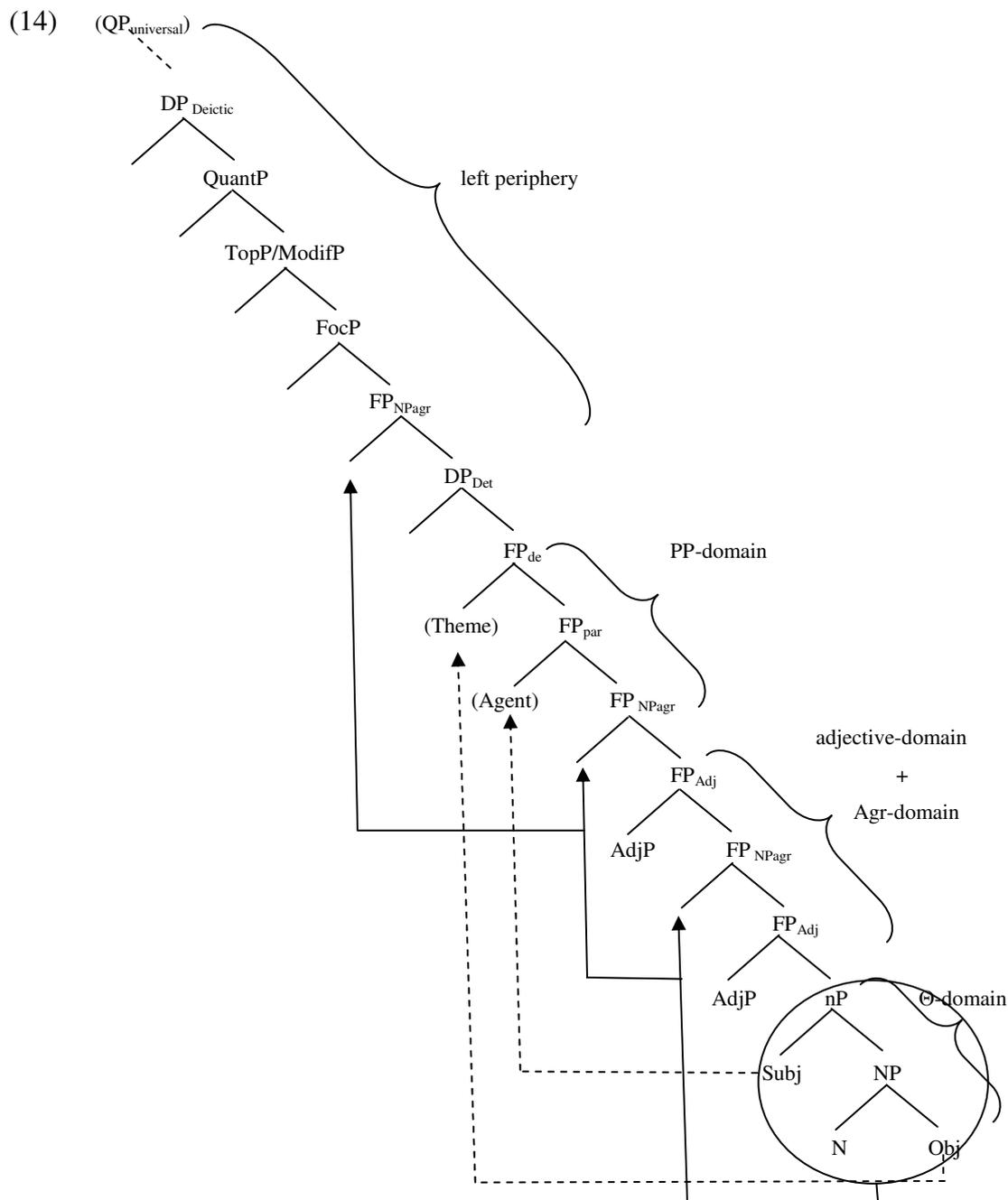


Figure 1.3: The inner structure of the noun phrase (Laenzlinger 2010:58)

Since the splitting of the determination area is an important foundation for the proposed NP-reanalysis of Croatian nouns, the next section will focus on the left periphery of the nominal phrase and various proposals arguing for a split DP-

analysis in other languages. The thematic domain and the morphosyntactic area will not be dealt with in this thesis any further⁸.

1.4.3. The Split CP-Hypothesis (Rizzi 1997)

The empirical motivation for advancing the idea that there must be more than one type of a CP projection above TP comes from examples such as those in (15a), where the preposed constituent, here *no other colleague*, occurs after a complementizer like *that* (Radford 2004:328):

- (15) a. I am absolutely convinced [**that** *no other colleague* would he turn to].
b. I am absolutely convinced [_{ForceP} [_{Force} **that** [_{FocP} *no other colleague* [_{Foc} would [_{TP} he would turn to ~~no other colleague~~]]]]].

The embedded CP in (15a) contains a focused constituent and a complementizer, both of which, along with the moved finite verb *would*, occur in the CP-domain. In order for all these elements to be hosted under CP, Rizzi (1997) suggested that the CP should be split into a number of different projections: ForceP, TopicP, FocusP and FinitenessP. His analysis has been widely referred to as a **split CP-Hypothesis**. Since complementizers specify whether a given clause is declarative, interrogative or exclamative in force, he suggested that complementizers are **Force** markers that head their own maximal projection, **ForceP**. The preposed focused constituents are contained within a separate Focus projection, **FocP**. In the above example the focused constituent *no other colleague*, which originates as a complement of the preposition *to*, moves from its complement position within the PP into the specifier position of the FocP. The head of FocP is targeted by the auxiliary *would*, which moves there from T⁰. The rearrangement of the constituents results in the clausal structure given in (15b).

A focused constituent typically represents a **new** piece of information within the discourse that the hearer is assumed not to be familiar with. As opposed

⁸ Alexiadou et al. (2007) deal very extensively with each of the three domains within the noun phrase. For an overview regarding the inflectional domain, see Part II (especially chapter 3) of their book. The theta domain is thoroughly discussed in Part IV.

to this type of constituent there is another class of preposed expressions that represent information which has already been introduced into the discourse, hence **old** information, referred to as a **topic**. Let us consider the following example, adopted here from Radford (2004:329):

- (16) A: The demonstrators have been looting shops and setting fire to cars.
B: *That kind of behaviour*, we cannot tolerate in a civilized society.

Being the complement of the verb *tolerate*, the nominal phrase *that kind of behaviour* does not surface in its base-generated position, a canonical complement position to the right of the verb *tolerate*, but rather undergoes a movement (**topicalization**) to the specifier position in the left periphery of the clause. This type of a movement, generally regarded to be an instance of A-bar movement, serves to mark the preposed constituent as the topic of the sentence (cf. Radford 2004). According to Rizzi (1997) and Haegeman (2000), topicalized constituents occupy the specifier position within a Topic Phrase, which appears below the ForceP and above FocP, bringing about the following partitioning of the CP-domain: [_{ForceP} [_{Force} [_{TopP} [_{Top} [_{FocP} [_{Foc} [_{TP}...]]]]]]].

In addition to these three different types of projection, there is a fourth functional projection placed directly above TP, which Rizzi (1997) labels as **FinP** (Finiteness Phrase). The function of Fin^0 is to mark the sentence either as finite or as non-finite. In Italian this position is occupied by the infinitival prepositional particle *di* ‘of’, which introduces constructions involving infinitival control clauses (Radford 2004:333):

- (17) a. Gianni pensa, il tuo libro, di PRO conoscerlo bene
Gianni thinks, the your book, of PRO know.it well
‘Gianni thinks that your book, he knows well’
b. Gianni pensa, [_{ForceP} [_{Force} \emptyset [_{TopP} il tuo libro [_{Top} \emptyset [_{FinP} [_{Fin} di [_{TP} PRO
conoscerlo bene]]]]]]].

As mentioned before, the decomposition of the clausal left periphery has led to a close inspection of the left periphery within the nominal domain. This in turn has generated various proposals concerning the decomposition of the nominal determination area. They are summarized under the term **Split-DP Hypothesis**. Some of the relevant proposals are outlined in the next subsection.

1.4.4. The Split-DP Hypothesis

1.4.4.1. Discourse-Related Notions of Definiteness and Specificity

“[...] information structure reflects the speaker’s hypotheses about the hearer’s state of mind (i.e., his assumptions, beliefs and knowledge) at the time of utterance [...] The assumptions of the speaker about the hearer’s knowledge about, or familiarity with, the entity is reflected, for example, in the choice of determiners and case-markers. Thus, the use of an indefinite article or a definite article typically marks whether the speaker assumes the referent of the noun phrase to be identifiable to the addressee.”

(Aboh et al. 2010:783)

Following the view that the clausal left periphery encodes discourse-related properties like topic, focus or illocutionary force, which have been captured by Rizzi’s (1997) split-CP hypothesis introduced above, the question arises as to whether and to what extent the left periphery of the nominal domain encodes discourse-related notions as well. Among the most prominent discourse-related notions related to noun phrases are the notions of specificity and definiteness, both of which play an important role at the grammar-discourse interface. As Aboh et al. (ibid.) point out, the speaker’s assumptions about the hearer’s familiarity with an entity denoted by a noun phrase is reflected in his use of certain determiners that mark the noun as either identifiable or non-identifiable for the addressee⁹:

- (18) a. John invited [**a linguist** from China] (indefinite; non-identifiable)
b. John invited [**the linguist** from China] (definite; identifiable)

⁹ The examples (18) - (21) adopted here are all taken from Aboh et al. (2010:783). The examples in (19), (20) and (21) originate from Ionion (2006:176), Lambrecht (1994) and Ebert (1970), respectively.

(19) There is **this man** who lives upstairs from me who is driving me mad
because he jumps rope at 2.a.m. every night. (indefinite; specific)

(20) a. Ahmet öküz-**ü** aldı. (accusative case, identifiable)
Ahmet ox-ACC. bought
'Ahmet bought **the ox**.'

b. Ahmet öküz aldı. (no accusative marking, non-identifiable)
Ahmet ox bought
'Ahmet bought **an ox**.'

(21) a. **A hünj** hee tuswark. (+identifiable/-familiar)
The dog (i.e. the speaker's dog) has toothache
'The dog has a toothache.'

b. Peetje hee jister an kü slachtet.
Jo saai, **det kü** wiar äi sünj. (+identifiable/+familiar)
Peetje has yesterday a cow slaughtered.
One says **the cow** was not healthy.
'Peetje has slaughtered a cow yesterday. One says that the cow was not
healthy.'

The above examples illustrate that different languages use different means to express the distinction between identifiability and non-identifiability: the situation in English is straightforward in that it makes use of indefinite and definite articles, as shown in (18a, b). The example given in (19) illustrates the use of the so-called 'this-indefinite' (referential indefinite *this*) in English, where the demonstrative *this* is not used deictically, but rather as a specificity marker. The referential indefinite *this* (*this_{ref}*) is an indefinite determiner that contributes to the specificity of as indefinite classified DPs. Such DPs denote, as Ionin (2006:180) puts it, "a particular referent [...] about which further information may

be given¹⁰”. Turkish, for instance, marks the distinction between the identifiable vs. non-identifiable object noun phrase with the help of case marking. The noun assigned accusative case in (20a) can be identified by the hearer, whereas the noun lacking accusative in (20b) cannot. Fering, a variant of Frisian, employs two types of definite articles, *a* in (21a) and *det* in (21b) to distinguish between a familiar (D-linked) and a non-familiar (but identifiable) referent. The definite article *a* encodes the features [+identifiable/-familiar], whereas the definite article *det/di* is assigned values [+identifiable/+familiar] (cf. Aboh et al. 2010:783).

Similarly, in Croatian, different means are used to mark specificity and definiteness of nouns as well. Remember that adjectives that precede masculine nouns in nominative take the morphological ending *-i* when the entity they modify is perceived as identifiable¹¹:

- (22) tvoj drag-*i* prijatelj
 your dear-DEF friend

In addition, similarly to Turkish, the difference between an identifiable and non-identifiable object noun phrase can be expressed via an accusative/genitive case distinction (Pranjković 2000:345):

- (23) a. dodati kruh (+identifiable)
 to fetch bread-ACC.SG.MASC
- b. dodati kruha (-identifiable)
 to fetch bread-GEN.SG.MASC

The noun *kruh* ‘bread’ in (23a) is understood as being identifiable due to its accusative case marking, whereas the same noun is perceived as non-identifiable when it is marked for genitive case, as illustrated in (23b).

¹⁰ Ionin (2006) adopts the above description concerning the use of indefinite *this* from Maclaran (1982:90).

¹¹ Progovac (1998:174ff.) talks about the “definite aspect” in this context.

The above examples show that the discourse-related notions of specificity and definiteness “have syntactic manifestations that need to be accounted for” (Aboh et al. 2010:784). Besides, these examples also show that specificity and definiteness are features common to DPs across languages. The only difference concerns their grammaticalization. Some languages predominantly employ articles to express these two interrelated notions, while others make use of alternative grammatical and lexical devices. For this reason, the structure of nominal expressions needs to include the projection(s) of these features in the syntax irrespective of the lack/presence of articles.

The rationale above has been one of many reasons that has led some linguists to propose a more finer-grained syntactic structure for the nominal left edge (cf. Ihsane & Puskás 2001, Aboh 2004b, Haegeman 2004, Länzlinger 2005b, 2010, Giusti 2005, among others). Such a layered left peripheral structure captures the subtle differences between nominal expressions mentioned above with respect to their specificity and/or definiteness features along with other IS-related notions such as topic or focus, for instance. The main arguments for a layered DP, along with the categories that necessarily need to be included there, are given in the next subsection.

1.4.4.2. Functional Categories within the Nominal Left Periphery

Why do we need a split-DP? According to Giusti (2005:25), the fact that more than one functional element, or, in her words “multiple occurrences of determiners”, can appear within DP can be accounted for by assuming a split DP. In addition, the left periphery of the noun phrase “serves the function of complying with information structure” and is there in order to “host A-bar movement(s)” (Giusti 2005:23). She assumes that unexpected, marked word orders within the NP in Romance can be explained if adjectival modifiers or genitival arguments move to left peripheral positions. The movements of these elements to the left periphery are triggered by the interpretive features [topic] and [focus]. Accordingly, she proposes that the determination area of a DP mirrors the

clausal left periphery, as depicted in (24a), and consistently includes the functional projections given in (24b):

- (24) a. ForceP > TopP* > FocP > TopP* > FinP (Rizzi 1997)
b. DP > TopP* > FocP > TopP* > dP

The proposed split DP is attributed the following properties (Giusti 2005:46):

- (25) a. "TopP and FocP are merged only if necessary."
b. If no TopP or FocP is merged, DP and dP can be realized in a unique projection.
c. If DP and dP are split, either can host the interpretable Top or Foc features.
d. [Top] is merged higher than [Foc] (at least) in the noun phrase".

The highest DP is similar to Rizzi's ForceP. It hosts Case features (Giusti 1993, 1994, 1997) that are assigned to the noun from outside the NP. The lower dP is the nominal counterpart of the clausal FinP. Similarly to Fin, which specifies tense features on the verb, the head of dP hosts articles, which in some languages trigger different inflection on adjectival modifiers.

In much the same manner, various other proposals focus primarily on the topic-focus articulation within the nominal domain in different languages (cf. Giusti 1996 for Albanian; Cardinaletti 1998 for Italian; Bernstein 1997, 2001b for Romance and Germanic languages; Aboh 2004a for Gungbe; Nthelitheos 2004 for Greek; Corver and van Koppen 2006 for Frisian and Dutch; among others). Their arguments for the splitting of the nominal determination area are based either upon the existence of DP-internal morphological expressions of topic and focus or DP-internal displacement phenomena, that is, word order alternations within a noun phrase. The latter often entail different interpretations, such as focalization or emphasis of a particular nominal constituent.

1.4.4.3. Ihsane & Puskás (2001)

A somewhat different approach to the structure of the nominal left periphery has been suggested by Ihsane & Puskás (2001), who place special emphasis on the discourse related notions of definiteness and specificity and their DP-internal syntactic realization. Like Giusti (2005) and many others, they also propose a structure of the nominal left periphery akin to Rizzi's (1997) split CP:

(26) DP > TopP > FocP > DefP

However, in their view, the notions of definiteness and specificity are responsible for the DP-internal movement of various constituents within the noun phrase. Since definiteness and specificity clearly cannot be collapsed into one property, they project separately. A closer look at their proposal is instructive.

Although the notions of specificity and definiteness are interrelated, definite DPs need not be necessarily specific; they can also receive a non-specific reading. The following French and Italian examples illustrate this difference:

(27) a. J'ai pris *le train*.

I have taken the train.

'I took the train.'

(Ihsane & Puskás 2001:40)

b. Scommetto che non troverai mai *la segretaria di un onorevole* che sia disposta a testimoniare contro di lui.

'I bet you'll never find the secretary of a deputy who is-SUBJ willing to witness against him.'

(Giusti 2002:63)

In (27a) the definite DP *le train* can be interpreted either as a specific or a non-specific nominal. When the referent of the DP is not pre-established in the discourse, the DP is interpreted as non-specific. In this case the DP denotes any

non-specified train. The same applies to the example given in (27b). Although the DP *la segretaria di un onorevole* appears with the definite article *la*, the DP does not refer to any particular person that has been previously introduced into the linguistic discourse. Similarly, in Hungarian definite DPs can also be interpreted as either specific or non-specific. These two readings depend on the position of the definite DP within a sentence. While the definite DP receives a non-specific reading in the post-verbal position in (28a), the very same DP is interpreted as being specific when it appears pre-verbally (28b):

- (28) a. Anna lemaradt a vonatrol.
Anna down-stayed the train-from
'Anna missed the train.'
- b. A vonatrol lemaradt Anna.
the train-from down-stayed Anna
'Anna missed the train [specific].'

(Ihsane & Puskás 2001:41)

The evidence introduced above allows us to conclude that definiteness and specificity are two distinct properties of a noun (Ihsane & Puskás 2001:40):

- (29) a. *Definiteness*: selects one object in the class of possible objects
b. *Specificity*: relates to pre-established elements in the discourse

Ihsane & Puskás (2001) assume that definiteness and specificity are syntactically realized in a different functional projection. The feature [+specific] appears on Top^0 , whereas Def^0 hosts the feature [+definite]. Let us have a more detailed look at each of the functional categories included in the left periphery.

1. The Definite Phrase (DefP). The lowest projection within the nominal left periphery, which corresponds to Rizzi's (1997) FinP, is labeled Definite Phrase (DefP). As already argued by Giusti (2005), the head of DefP, Def^0 , is

occupied by articles, which in some languages trigger different inflection on adjectival modifiers. Ihsane & Puskás (2001:41) argue that “the choice of the article reflects certain properties of the nominal system”. This view is endorsed by two separate arguments. First, determiners select the nominal domain. This means that certain types of nouns are selected by certain determiners, e.g. mass nouns in English can only be selected by a zero indefinite article:

(30) John bought (*a) rice.

(Ihsane & Puskás 2001:41)

Second, in the same way that Fin^0 “anchors the event in time and determines the truth conditions of the proposition containing the predicate [...], definiteness relates to nominals in the sense that it determines the presupposition of existence of the entity represented by the nominal” (ibid.). The presupposition of existence is a property of definiteness. Definiteness is therefore considered to be an “existence-anchor”. The morpho-syntactic realization of definiteness within the nominal system differs from language to language. In languages like Swedish, definiteness markers can appear twice, see (31a), while in others, e.g. Romanian in (31b), the feature [+definite] sometimes does not have to be phonologically realized. Nevertheless, the nouns given in (31a, b) below are both definite¹²:

(31) a. *det* store huset
the big house-the

b. Merg la profesor(*ul).
I’m going to professor-(*the)

(Ihsane & Puskás 2001:42)

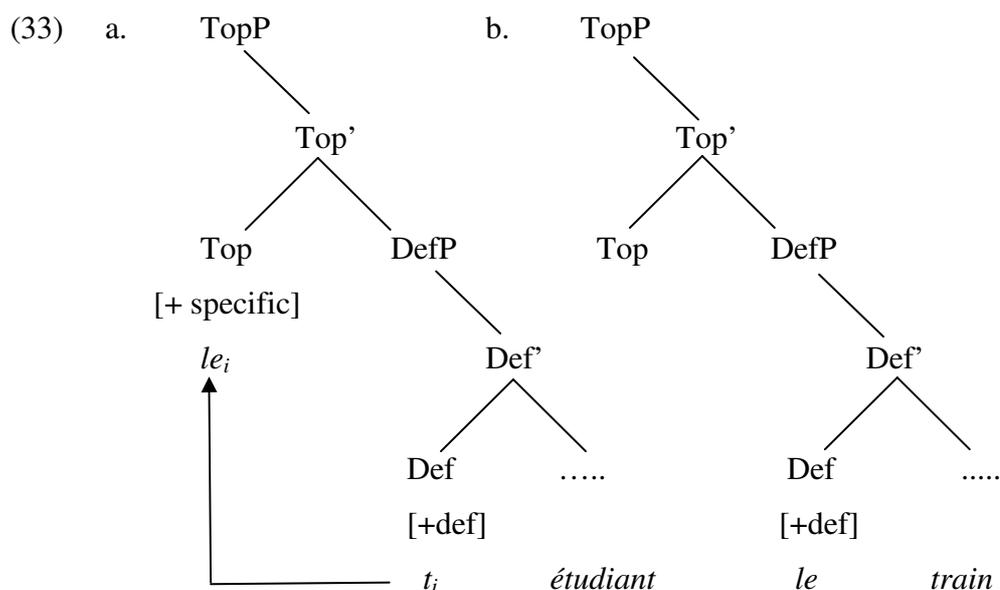
The head of DefP, Def^0 , is characterized by the feature [+/-definite]. According to Ihsane & Puskás (2001:42), Def^0 hosts articles “as a possible realization of the feature [+/-definite]”.

¹² The examples in (31), adopted from Ihsane & Puskás (2001:42), originate from Granfeldt (1999) and Giusti (1997), respectively.

c. *Un étudiant* est venu voir la professeur. [-definite, +specific]
 a student is come to-see the professor
 ‘A student came to see the profesor.’

d. *L’étudiant* a acheté *un livre*. [-definite, non-specific]
 the student has bought a book
 ‘The student bought a book.’

As shown in (32a, b), nouns accompanied by a definite article can have either specific or non-specific readings. Ihsane & Puskás (2001) argue that the specific reading in (32a) results from the movement of the definite article *le* from Def^0 to Top^0 , where the determiner checks its specificity feature, see (33a). In (32b) the definite article *le* remains in Def^0 . The syntactic structure is given in (33b) below:



3. The Focus Phrase (FocP). Due to the fact that certain elements within the noun phrase can be emphasized (e.g. numerals and possessives), Ihsane & Puskás (2001) also argue for a FocusP, which is dominated by both the nominal TopP and the highest DP projection, the DP. That FocP is lower than TopP is evidenced by the following Hungarian examples, where the emphasized lexical

item, the numeral *egy* ‘*a/one*’ below, does not necessarily have a specific reading. This implies that the projection hosting [+focus] feature occurs below the projection where the [+specific] feature is checked:

(34) a. *egy* *könyv*
‘a book/one book’

b. *EGY* *könyv*
‘(exactly) one book’

(Ihsane & Puskás 2001:48)

In addition, in constructions where the numeral co-occurs with the definite article *az* ‘*the*’, the definite article always precedes the numeral (ibid.):

(35) a. *az EGY* *könyv*
the ONE book

b. **EGY az* *könyv*
ONE the book’

Ihsane & Puskás (ibid.) explain this in the following manner: in the specific use of the definite article in (35), the definite article *az* ‘*the*’ moves from Def^0 to Top^0 , being followed by the numeral *egy* ‘*one*’, which targets the specifier of the FocP in order to check its [+focus] feature. Since the definite article precedes the emphasized numeral, TopP dominates FocP. The proposed order of the functional projections within the nominal left periphery, therefore, has the following structure:

(36) DP > TopP ((non)specific) > FocP (+/-focus) > DefP (+/-definite)

4. The Determiner Phrase (DP). As summarized in (36), the nominal left periphery includes one other functional category, the Determiner Phrase (DP). Again, the existence of this functional category is backed up by Hungarian data:

- (37) A lánynak ez a könyve
the girl-DAT this the book-POSS
'this book of the girl's'

The dative possessor¹³ *a lánynak* 'the girl' appears before the demonstrative *ez* 'this', which occupies the head position of TopP. Ihsane & Puskás (2001:50) assume that the dative possessor does not occur in the [Spec, TopP] because it is not associated with a specificity feature. Rather, it sits in the specifier position of the maximal projection placed over TopP, the [Spec, DP]. The idea that one further projection dominates TopP is further supported by constructions in which the dative possessor can be extracted out of the DP to a higher position in the clause:

- (38) a. A lánynak vettem meg a könyvét.
the girl-DAT bought-I part the book-POSS
'I bought the girl's book.'
- b. *A lány vettem meg a könyvét.
the girl-NOM bought-I part the book-POSS

The fact that only the dative possessor in (38a) can be moved out of the DP, and not the nominative one in (38b), allows us to conclude that a position occupied by it must be an escape hatch position within the DP which allows the possessor to move out.

¹³ Hungarian distinguishes between two different possessive constructions: a nominative and a dative one. For the details of Ihsane & Puskás' (2001) analysis, the reader is referred to their paper.

As shown above, the co-occurrence of different determiners within a nominal domain along with their attested systematic (re-)arrangements evoke ambiguities within the nominal system, giving rise to different interpretations and readings. This state of affairs can be best captured by a reanalysis of the nominal left periphery in a manner described above. As discussed earlier, the notions of specificity and definiteness manifest themselves in different ways and obviously vary from language to language. Since nominal expressions in Croatian are evidently endowed with such features, Ihsane & Puskás' (2001) approach will form the foundation for my analysis of Croatian nominals.

1.5. Main Claims

As briefly outlined in section 1.3, articleless languages pose a challenge to the universality of a DP. While the DP-analysis has been adopted for many languages, primarily and uncontroversially for those that have articles, recent discussions on languages without articles, such as Russian, Polish or SerbBoCroatian, have focused on whether a DP is projected on top of NP in these languages. The different proposals range from an elaborated DP structure (cf. Progovac 1998, Dimitrova-Vulchanova and Giusti 1998, Leko 1999, Rutkowski 2002, Bašić 2004, Pereltsvaig 2007) to the complete omission of the DP layer in favour of a simple NP analysis¹⁴ (Zlatic 1998, Trenkić 2004, Bošković 2005, 2008, 2009).

Based on the observation that nominal expressions are endowed with D-features, such as (in)definiteness or specificity, irrespective of whether they are accompanied by the elements that overtly encode these features (articles, possessives, demonstratives) or not, allows us to assume that the projection of a D head is necessary. As shown in (31), repeated as (39) below for the sake of clarity, the morpho-syntactic realization of definiteness within the nominal system differs from language to language. While in languages like Swedish, definiteness markers

¹⁴ According to Bošković (2006), an exception to the (bare) NP-analysis of Slavic nominals is posed by the so-called GQ-constructions, that is, constructions involving *genitive of quantification* in Russian. Such constructions allow for the Quantifier Phrase (QP) as the only functional projection above NP.

can appear twice, as in (39a), in others, like Romanian in (39b), the feature [+/-definite] does not have to be phonologically realized. Nevertheless, the nouns given in (39) are both definite.

- (39) a. *det* store huset
the big house-the
- b. Merg la profesor(*ul).
I'm going to professor-(*the)

(Ihsane & Puskás 2001:42)

In addition to Swedish or Romanian, many other languages, e.g. English, Italian, German etc., realize the feature [+/-definite] with the help of definite or indefinite articles. Due to this fact, the lack of articles in most Slavic languages¹⁵ would consistently imply that nominal expressions are not marked for the feature [+/-definite]. If this assumption is confronted with linguistic data, it can be established that it does not hold.

Although the head position of a DP projection primarily hosts the article, the structural position D is also claimed “to assign referentiality to its NP complement” and “not the article per se” (Alexiadou et al. 2007:159). Remember that the emergence of articles in Romance languages, for instance, was the result of the impoverished inflectional morphology on nouns, or, to be more precise, was due to the loss of morphological case in Latin signalling definiteness (Boucher 2003:47). As shown previously, languages like Turkish or Fering, for instance, make use of alternative lexical and syntactic strategies to express (in)definiteness and specificity (see section 1.4.4.1). Croatian behaves in a similar manner. Croatian not only uses the morphological ending *-i* on adjectives (cf. Progovac 1998) for this purpose, but also utilizes case, number, word order, and accent (cf. Pranjković 2000). On the sentential level, restrictive relative clauses imply that the noun they modify has the property [+definite], while non-restrictive relative clauses imply the opposite. Although there are no articles in Croatian, other lexical means such as demonstrative and possessive pronouns, or the

¹⁵ Unlike other Slavic languages, Bulgarian and Macedonian have articles.

numeral *jedan* 'one', all of which belong to the functional category of determiner, are used to express the (in)definiteness of the nominal referent.

Based on the considerations introduced above, this thesis argues, therefore, for a **split DP-analysis** of nominal expressions in Croatian. I will critically reflect on the main arguments that have been brought in favour of an NP analysis, such as the optionality of determiners, unavailability of a DP-head, and the adjectival nature of determiners, and will show that they are inconclusive. Instead I will show that Croatian nominal expressions do indeed host a D head, assuming its reanalysis in terms of a split DP. This is contrary to the NP approach in Corver (1992), Zlatić (1998) and Bošković (2005, 2008, 2009), who take determiners to appear either as specifiers of the noun or in a position adjoined to NP. It is also contrary to the DP approach in Progovac (1998) and Leko (1999), who share the view that determiners are adjectival in nature, instead proposing that these elements appear in the specifier position of various functional categories projected above NP. Hence, the main claims I am making in this thesis can be summarized as follows:

(i) Determiners that can be potentially used instead of articles, such as prenominal possessives, demonstratives, quantifiers etc., are claimed to be optional elements within the noun phrase, because they can be omitted without having any impact on the grammaticality of the nominal expression with which they appear. I argue that the assumed optionality of determiners is context-sensitive and the necessity of their use is closely related to the existing contextual accessibility of nouns. In other words, determiners are not always optional within a noun phrase. This being the case, the syntactic structure necessarily needs to provide functional projections that host these elements.

(ii) All prenominal elements other than adjectives are claimed to be adjectival in nature as well, for reasons that will be explored in Chapter 2. Regarding the adjectival status of determiners in Croatian, I will provide a

range of arguments for the view that determiners and adjectives are distinct categories with different morphological (inflection, derivation) and syntactic properties (modification, distribution, thematic structure) (cf. Frleta 2005). For instance, descriptive adjectives are gradable, see (40a), whereas determiners are not¹⁶ (ibid.):

(40) a. lijep - ljepši - najljepši
beautiful - more beautiful - the most beautiful

b. taj - *tajiji - *najtajiji / moj - *mojiji - *najmojiji
that - *thater - *thatest / my - *myer - *the myest

(iii) Being adjectival, determiners are syntactically treated in the same manner as adjectives, that is, as phrasal categories (XPs). Based on the observations that some determiners impose strict restrictions on the selected noun, as illustrated in (41) below, they evidently display head properties and are accordingly assumed to occupy the head position of their own functional projection. Hence, they are consistently neither adjoined to other XPs (because adjuncts do not c-select the phrase to which they adjoin (cf. Richards 2008)), nor do they occupy specifier positions (which are preserved for the projections of the XP type).

(41) a. *nekoliko* ključeva / hlača / *ključa / *mlijeka
several keys-G.PL / trousers-G.PL / *key-G.SG / *milk-G.SG

b. *svaki* recept / **svaki* recept-*i*
each prescription-NOM.SG / **each* prescriptions-NOM.PL

¹⁶ Exception: the indefinite quantifiers *puno* (*a lot / much / many*) and *malo* (*little*) take, due to their scalar nature, the comparative and superlative forms analogous to their English counterparts (*puno, više, najviše* (*much, more, the most*) / *malo, manje, najmanje* (*little, less, the least*)).

(iv) The examination of some regular syntactic patterns, such as adjectival premodification in coordinated noun phrases (e.g. *intenzivni okus i miris* ‘*intense taste and flavour*’) or the constructions involving transitive deverbal nouns (e.g. *Kolumbovo otkriće Amerike* ‘*Columbus’ discovery of America*’) provide evidence against the view that NP is the highest maximal projection within the nominal complex. Nominal subjects, for instance, regularly surface as possessive nouns. Based on Kuna’s (2002, 2003) analysis of genitives and possessive constructions, who demonstrated the need for a functional projection PossP to be postulated above the NP, I argue (in line with Birtić 2008) that nominal subjects are generated within the nP-shell, where they receive their theta role. After being theta-marked by the head noun, they move to PossP, as suggested by Kuna (2003). Subsequently they move farther up to the nominal left periphery, where they check their definiteness feature in Def⁰. Obligatory definite adjectival inflection on descriptive adjectives in such constructions (e.g. *Marijin star-i rođak* ‘*Mary’s old-DEF. cousin*’ vs. **Marijin star-I rođak* ‘**Mary’s old-INDEF. cousin*’ (Kuna 2003:258)) supports the idea that possessive elements occupy Def⁰.

(v) As already argued by Silić (2000), the unstressed version of the numeral *jedan* ‘one’ is used to indicate the indefiniteness of the nominal referent and functions as a real indefinite article. I fully endorse this claim and provide a further support for this view. Since *jedan* ‘one’ also appears with plural nouns, as shown in (42), the numeral *jedan* ‘one’ is here obviously an indefiniteness marker:

- (42) c. Na redu su još *jedni savjeti za vašu kosu*¹⁷.
Follow are still *one-NOM.PL advices-NOM.PL for your hair*
‘There still follow some advices for your hair.’

¹⁷ <http://videoteka.novativ.hr/multimedia/oblak-film-o-luki-ritzu.html>, accessed on November 4, 2011.

Being an indefiniteness marker, *jedan* ‘one’ is base-generated in Def⁰, a position where both definite and indefinite articles in DP-languages occur.

(vi) In the spirit of Ihsane & Puskás (2001), and many others, I adopt the three-part structure of the noun phrase for Croatian, which comprises of a thematic domain, an inflectional domain and a decomposed left periphery. With respect to the external merge position of prenominal elements, I argue that the QP is the highest functional projection within the inflectional domain in Croatian. Elements that serve as (in)definiteness markers, such as the items *jedan* ‘one’ or the definite adjectival suffix *-i*, are base-generated in the lowest functional projection within the nominal left periphery, Def⁰. Word orders that deviate from the established neutral word order of prenominal elements are derived by the DP-internal movement out of the theta/inflectional domain to the nominal left periphery.

The postulation of a split DP-Analysis for Croatian nominals allows me to explain some syntactic phenomena in Croatian, such as the variations in the word order of prenominal elements, the obligatory definite adjectival inflection in possessive constructions and the observed incompatibility of demonstratives and nouns in vocative constructions.

1.6. Organisation of This Dissertation

In addition to the preliminary reflections and theoretical considerations set out in the previous subsections of this chapter, **Part I** of this thesis lays the foundations for the subsequent analysis and discussion of the Croatian nominal expressions. Chapter 2 deals with the ongoing debate on whether Slavic nominal expressions are headed by a noun or a determiner. In order to give an insight into the relevant discussion, a very detailed account of different approaches to the structure of Slavic noun phrases will provide the reader with a good overview and will help to identify the highly problematic issues raised by this discussion. These will then be critically reviewed in Part II. Chapter 3 introduces the Croatian

nominal phrase. A rather comparative description of the most evident morphological and syntactic differences between Croatian and English nouns is followed by an extensive outline of the lexical and functional elements that may accompany the noun. Chapter 3 closes with a description of the word order within the noun phrase, focusing on the arrangement of prenominal elements and allowed permutation patterns.

Having set out the theoretical fundamentals in the first three chapters, in **Part II** I critically question some of the main arguments brought in favour of an NP-analysis and examine certain syntactic structures and patterns that provide clues concerning the syntactic make-up of Croatian nominal expressions. Chapter 4 examines the relevance of the *headedness tests* (Zwicky 1985) used by Zlatić (1998), who applied the relevant criteria to the SerBoCroatian nominal expressions in order to establish whether the noun phrase is headed by a functional category D or a lexical category N. The results of her analysis support the NP approach. However, I will show that these results are inconclusive for several reasons. Having thoroughly discussed each of the criteria in question, very compelling empirical evidence has allowed me to arrive at the conclusion that determiners display head properties as well and that nouns are not necessarily the sole candidates that qualify as potential heads of nominal expressions. Chapter 5 examines the nature and status of determiners and addresses the issue raised with respect to their categorial status, according to which they are claimed to behave as adjectival modifiers. Upon closer scrutiny, we will see that determiners and adjectives display different morphological and syntactic properties. Chapter 6 deals with adjectival premodification in coordinated nominal constructions. Based on Linde-Usiekniewicz & Rutkowski's (2006) observation that single adjectives appearing in constructions with coordinated nouns refer to and modify both of these nouns (meaning that they are structurally located above NP), I will have a look at Croatian premodifiers with the aim of establishing whether they behave in the same manner. The results of my analysis support their observation, hence implying that NP is not the highest maximal projection. This idea is further elaborated in Chapters 7 and 8, which address the structure of argument

supporting nominalizations (ASNs). In such structures the nominal subject regularly surfaces as a prenominal possessive, which basically demonstrates the need to postulate further functional projections above the NP and urges us to assume an elaborated syntactic structure of Croatian nominal expressions.

Building upon this insight, in the first chapter of **Part III** I turn to the analysis of demonstrative pronouns, which are, in their function, claimed to be potential substitutes for definite articles, but are, at the same time, regarded as non-obligatory within the noun phrase. Chapter 9, therefore, considers the question whether these elements are quintessentially optional and how and to what extent they contribute to the (in)definite interpretation of noun phrases. Following the idea that the interpretation of nouns is conceptually equal across languages, irrespective of the presence/absence of certain morpho-syntactic markers, in this case articles, and under the assumption that semantic interpretation follows from the underlying syntactic structure, I adopt a DP-structure for Croatian nouns. Chapter 10 provides their syntactic analysis. I will first reconsider the syntactic status of all prenominal elements and discuss their external merge position, before turning to the analysis of neutral word order. Having elaborated on this issue, I will also discuss noun/pronoun asymmetries along with possessive and vocative constructions and provide an appropriate syntactic analysis of each in terms of a split DP. Chapter 11 concludes the discussion and addresses some questions left open for future research.

CHAPTER 2

NOUN PHRASES IN ARTICLELESS LANGUAGES - THE NP/DP DIVIDE

2.1. Introduction

The DP-Hypothesis claims that a nominal phrase is not a single-headed endocentric projection, but rather can be split into a functional domain (DP) and a lexical domain (NP) (Alexiadou et al. 2007:89). The head of DP is the functional head D^0 , which selects a projection of N as its complement. Since nominal projections are NPs dominated by a DP, the common label DP is used to refer to the full nominal projection.

As already shortly touched upon in the previous chapter, recent linguistic discussions on the cross-linguistic universal applicability of the DP-Hypothesis have focused on the internal structure of nominal projections in articleless¹⁸ languages, because nominal expressions in these languages regularly appear without articles, which are regarded to be a prototypical lexical instantiation of a D head. Hence, different approaches to the internal composition of nouns in Slavic languages range from an elaborated DP structure, containing different functional categories in spite of a predominantly empty D (Leko 1999, Progovac 1998, Rutkowski 2002, Pereltsvaig 2007), to a complete omission of the DP layer in favour of a simple NP-analysis (Bošković 2005, 2008, 2009, Zlatić 1998, Trenkić 2004). This parametric choice is closely associated with the lack or presence of articles in a given language. Based on this distinctive feature, Bošković (2005), for instance, suggests a general subdivision of languages into the following two types:

¹⁸ In my opinion, the term *determinerless* is misleading and should be rather replaced by *articleless*, since the term *determinerless* implies that those languages have no determiners, which is not quite right. They do have determiners as such (demonstratives, possessive pronouns and nouns or cardinal numbers). What they lack are different forms of articles such as *the* or *a* in English, or *der*, *die*, *das* along with their different declensions in German.

- (1) (i) languages with articles, where noun phrases are DPs and
(ii) languages without articles, where nominal expressions are bare NPs.

Among the Slavic languages, Bulgarian and Macedonian illustrate the first type, whereas Croatian, along with Russian, Czech and Polish, are the examples of the second. Following this subdivision of Slavic languages, the literature on the internal structure of Slavic noun phrases consistently either supports the view that Slavic noun phrases are NPs lacking functional projections or that they are DPs projecting numerous functional heads. The former view is captured in the **Parametrized-DP Hypothesis (PDP-Hypothesis)**. The proponents of the **Universal-DP Hypothesis** adopt the latter suggestion. The essence of these two different approaches will be elaborated on in the following subsections. Section 2.2 introduces the PDP-Hypothesis, first proposed by Corver (1992). However, before introducing this hypothesis, the notion of a stacked nominal expression as well as the phenomenon of extraction from the nominal left periphery must be described in detail in order to understand the linguistic circumstances that led Corver (1992) to examine the existing phenomena and thus assume cross-linguistic variation in the structure of nominal phrases. This examination resulted in his postulating of the PDP-Hypothesis.

2.2. The Parametrized DP-Hypothesis (PDP-Hypothesis)

2.2.1. Extraction from Noun Phrases: Background

The very core of the PDP proposal is based on the syntactic phenomenon known as **pied-piping** and the syntactic constraint termed **Left Branch Condition (LBC)**, introduced by Ross (1967). A noun phrase may consist of only one word, e.g. [*NP love*], or it may be enriched by further lexical and functional material that includes determiners, adjectives, prepositional phrases or other noun phrases, e.g. as in [*NP the extraordinarily well-prepared explanation of the financial report*]. Rappaport (2001:3) defines the stacked nominal phrase as one “whose head noun takes as its complement either another nominal phrase or a prepositional phrase”. Like other syntactic operations, stacking can be recursive,

resulting in the creation of very complex nominal expressions. An example of a stacked nominal phrase, out of which the most deeply embedded nominal phrase can be extracted, is given in (2) below:

- (2) a. The government prescribes [the height of the lettering on the covers of *the reports*].
- b. The reports, [*which* the government prescribes [the height of the lettering on the covers of *t*]]...

(Ross 1986:121, qtd. in Rappaport 2001:3)

The process of extraction may proceed in steps, resulting not only in the movement of a *wh*-word, but of the complete stacked nominal phrase that contains it (ibid., qtd. in Rappaport 2001:4):

- (3) The reports, [[the height of the lettering on the covers of *which*] the government prescribes *t*]...

The example in (3) shows that a constituent contained within a left branch and requiring movement forces the whole category in which it is embedded to move along with it. This type of movement is termed **pied-piping**. The requirement that the maximal left branch category be pied-piped along with the constituent that is supposed to move is due to a syntactic constraint on extraction that Ross (1967) termed **Left Branch Condition (LBC)**:

Left Branch Condition (LBC)

No NP which is the leftmost constituent of a larger NP can be reordered out of this NP by a transformational rule. (Ross 1967:207)

The impact of LBC is paradigmatically explained by the examples given in (4). As we can see, the LBC blocks the movement of the leftmost constituent:

- (4) a. We elected [the boy's guardian's employer] president.
b. *The boy [*whose* we elected [*t* guardian's employer] president]...
c. ✓The boy [[*whose* guardian's employer] we elected *t* president]...

(Ross 1986:128, qtd. in Rappaport 2001:4)

The LBC defines the context in which the extraction from a nominal phrase is NOT possible. Pied-piping is independent of the LBC, which means that it can occur in contexts that do not involve LBC. In addition, the LBC is not a universal syntactic phenomenon. According to Ross (1967, 1986), it holds for languages such as German or English, but not for Russian or Latin. As Ross (1986:146) himself puts it, he is “unable to predict when a language will exhibit the Left Branch Condition and when not.” He also notes that the LBC does not operate in highly inflected languages. This, however, does not mean that the LBC does not exclusively appear in all such languages. Languages such as Finnish, Greek or Hungarian, for instance, are exceptions to the above generalisation, because they allow for left-branch extraction (cf. Rappaport 2001).

2.2.2. The PDP-Hypothesis (Corver 1992)

Uriagareka (1988:13) observed that left branch extraction is allowed only in languages that do not have overt articles. SerBoCroatian, Russian, Polish and Czech have no overt articles and allow left branch extraction (as illustrated by the SerBoCroatian example in (5b)), while Bulgarian and Macedonian have overt articles and disallow LBE:

- (5) a. **Kakva_i prodade Petko [t_i kola]?* (Bulgarian)
what-kind-of sold Petko car
'What kind of a car did Petko sell?'

a'. *Kakva kola_i prodade Petko t_i?*

b. *Kakva_i si kupio [t_i kola]?* (SerBoCroatian)

what-kind-of are bought car?

'What kind of a car did you buy?'

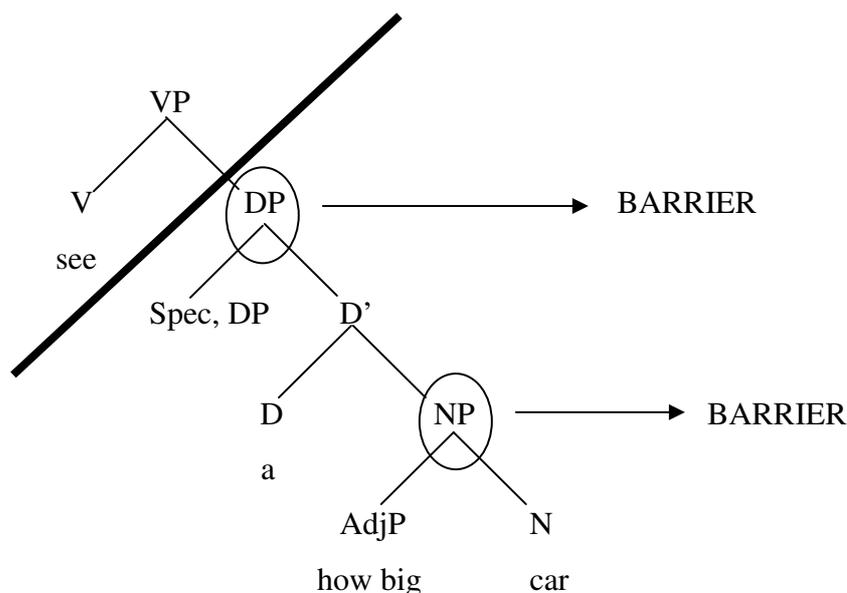
(Bošković 2005:2ff.)

The same contrast is found with Latin and modern Romance languages. How can the observed phenomenon and its cross-linguistic variation be explained? Stating that the leftmost constituent cannot be extracted out of its NP, the LBC suggests that linear order is of crucial importance for prenominal extraction. In 1992, Corver proposed that linear order is not what is crucial for the extraction of prenominal phrases out of the NP, but rather configurational structure. The extraction of prenominal phrases is blocked in languages such as English due to violations of both Subjacency and the Empty Category Principle (ECP). Let us have a look at the examples of prenominal extraction in English originally discussed by Corver, here adopted from Rappaport (2001:6):

- (6) a. *How big did you see [a *t* car]?
b. *Which did you see [*t* car]?
c. *Whose did you see [*t* car]?

The question in (6a) implies that the moved constituent is an XP, e.g. [_{AP} *very big*]. The sentence in (6a) is an instance of an A'-movement, where the AP *how big* moves from the [Spec, NP] to [Spec, CP]. However, this movement violates both Subjacency and the ECP. An analysis of (6) in the spirit of Chomsky's (1986) *Barriers Theory*, see (7), results in both the NP and the DP being barriers: the NP is governed not by a lexical category, but by a functional category D, and is therefore an inherent barrier. The DP is a barrier by inheritance, since it contains an inherent barrier.

(7)



(Rappaport 2001:6)

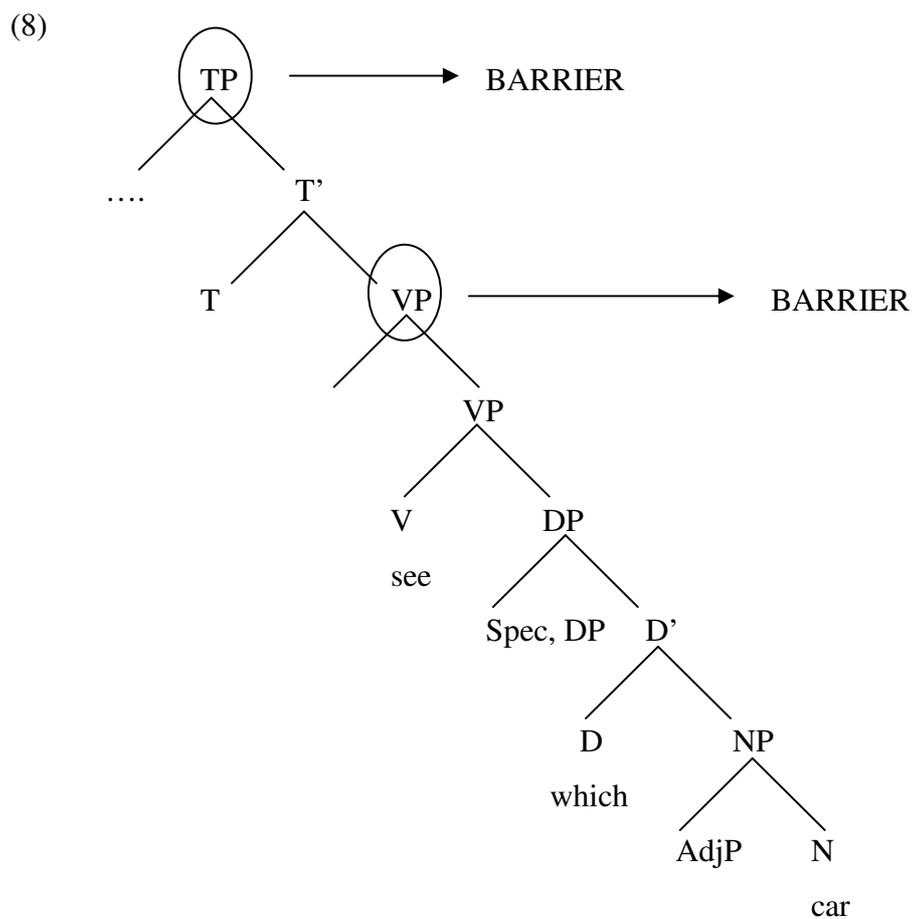
The movement across two barriers violates the Subjacency Principle.

Subjacency Condition¹⁹

Movement cannot cross more than one bounding node, where **bounding nodes** are IP (TP) and NP. (Haegeman 1994:402)

The Subjacency could be satisfied if the AP is taken to adjoin either to the NP or DP. However, in this case its trace would not be properly governed and therefore would not satisfy the ECP. The trace must be either lexically-governed or antecedent-governed. The first requirement is not fulfilled, because the AP is an adjunct. The second requirement is not met due to the fact that the trace is separated from its antecedent by an NP or DP, both of which serve as barriers and thus prevent antecedent government. In (6b) the movement of the head *which* is also blocked by both the Subjacency Condition and the ECP, because the VP and TP act as barriers and prevent the movement of *which* to [Spec,CP] (cf. Rappaport 2001:7):

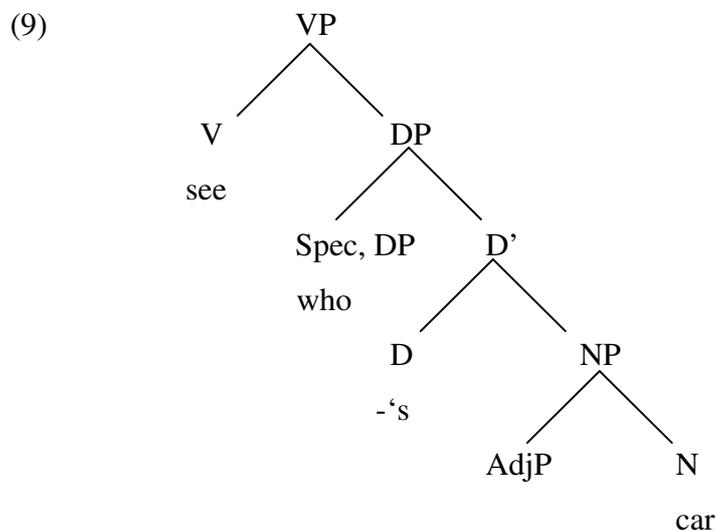
¹⁹ There are numerous formulations of the Subjacency Condition. Although Corver (1992) and Rappaport (2001) refer to Chomsky's (1986) *Barriers Theory*, I chose a definition given in Haegeman (1994) for reasons of simplicity and clarity. The addition of (TP) within the above definition is my own.



If *which* was to move upwards, its trace left in D^0 would be neither lexically-governed nor antecedent-governed. In addition, according to the Head Movement Constraint²⁰, the movement of a head to the intermediate Spec-position (an A'-position) is not allowed (cf. *ibid.*). In (6c) *whose* is spread over [Spec, DP] and D^0 , as illustrated in (9). Being spread over two categories, *whose* is not a constituent. Since only constituents are allowed to move, *whose* is frozen in situ (Rappaport 2001:7). The examples in (6) show that the extraction of prenominal phrases is blocked in languages such as English due to the violation of syntactic rules that must be obeyed during movement operations. Nominal expressions in such languages predominantly contain articles and are therefore assumed to have a DP-structure. It follows that articleless languages such as Croatian, Polish or Russian,

²⁰ The Head Movement Constraint (HMC) goes back to Travis (1984). According to the HMC, an X^0 may only move into the Y^0 which properly governs it (Travis 1984:131).

which allow left-branch extraction, cannot have a DP projection because its presence would consistently block it.



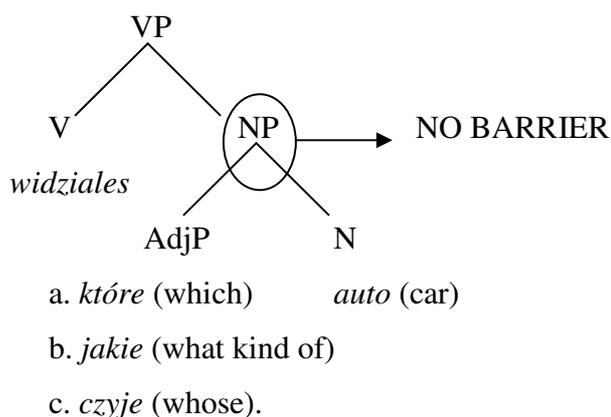
Pursuing this line of reasoning, Corver (1992) assumed that nominal expressions in Polish are NPs and not DPs, allowing him to explain why left branch extraction in Polish does not violate any syntactic principles, but rather produces grammatical constructions:

- (10) a. ✓ *Które widziałeś [t auto]?* *adjective LBE*
 which you saw [t car]
 ‘Which car did you see?’
- b. ✓ *[Jakie / Jak duże] widziałeś [t auto]?* *adjective LBE*
 [what-kind / how big] you saw [t car]
 ‘What kind of / how big a car did you see?’
- c. ✓ *Czyje widziałeś [t auto]?* *possessor LBE*
 whose you saw [t car]
 ‘Whose car did you see?’

(Rappaport 2001:7/8)

According to Corver (1992), the *wh*-words in the Polish examples above are adjective phrases (APs). Under the assumption that there is no DP, the NP is not a barrier because it is governed by a lexical category, the verb *widziales*. The trace left in [Spec,NP] after the movement of AdjP in each of these three sentences is antecedent-governed, since no barrier intervenes between the trace and its antecedent. Therefore, the ECP is also satisfied. The tree-diagram structure of the examples given in (10) is as follows:

(11)



(Rappaport 2001:8)

This linguistic data enabled Corver (1992) to conclude that the presence or absence of a DP in a given language is closely associated with the presence versus absence of articles. The existence of DP is obviously subject to cross-linguistic variation. This evidence led him to surmise that DP is a linguistic parameter. According to Rappaport (2001), the **Parametrized DP-Hypothesis (PDP-Hypothesis)** can be therefore formulated as follows:

- (12) a. “The presence/absence of a DP is a parameter of cross-linguistic variation. In the absence of a Determiner, possessives and demonstratives must be adjectival in category.
- b. A language with articles has the functional category D; a language without articles may not or does not have Ds.

c. Adjuncts of NP (whether to the left or right of the head) cannot be extracted in languages with DPs (i.e. with articles), because a violation of Subjacency or of the ECP would result”.

(Rappaport 2001:10)

As Rappaport (2001) points out, a range of questions is left open by the PDP-Hypothesis: Does the DP-Hypothesis apply to some or all NPs within a language that have DP? What is the status of DP in languages that have one – is DP solely the extended projection of the functional head D, or is it a kind of an ultimate super-projection of a nominal head?

2.3. Evidence for the Non-Existence of DP in Slavic Languages

2.3.1. Headedness Approach to the Analysis of NP (Zlatić 1998)

Zlatić’s (1998) approach to the analysis of SerBoCroatian nouns primarily deals with the question of whether SerBoCroatian nominal expressions are headed by a lexical category N or by a functional category D. Her point of departure is the examination of different nominal constructions and word order patterns in SerBoCroatian. Hypothesizing that the “headedness of the noun phrase is related to the presence/absence of definite/indefinite articles in a given language (Zlatić (1998:2)”, she argues for the NP-analysis, substantiating her view with the following observations and claims:

- (i) Noun phrases in SerBoCroatian regularly appear without determiners.
- (ii) Syntactic and morphological evidence shows that determiners and adjectives are non-distinct categories.
- (iii) The results of the application of Zwicky’s (1985) *headedness tests* to the SerBoCroatian noun phrase show that nominal expressions are headed by nouns rather than determiners.

Let us have a closer look at each of the proposals introduced above. The observation given in (i) is endorsed by examples such as (13), which shows that a noun phrase in SerBoCroatian can be accompanied by a determiner, here the demonstrative pronoun *ovaj* 'this', which appears in place of a definite or an indefinite article. However, as the example shows, such elements are optional and can be left out without influencing the grammaticality of the sentence:

(13) (Ovaj) student voli Mariju.

This student loves Mary

'This/the student likes Mary.'

(Zlatić 1998:3)

Since determiners are optional elements, other means are used (such as word order, case distinction or definite vs. indefinite marking on modifying adjectives) in order to differentiate definite and indefinite NPs. The word order in neutral context in Slavic languages is SVO, as the Polish examples in (14) below illustrate. This basic word order reflects the theme-rheme structure, which means that information already introduced in previous contexts appears as the first element within a sentence. In languages such as English, the given information would be indicated by a definite article. If the subject NP is indefinite, it must appear post-verbally, as shown in (14b):

(14) a. Student lubi Marie.

student-NOM likes Mary-ACC

'The student likes Mary.'

b. Marie lubi student.

Mary-ACC likes student-NOM

'A student likes Mary.'

(Zlatić 1998:2)

(In)definiteness of an NP can be also expressed through different morphological endings on modifying descriptive adjectives, as illustrated by the SerBoCroatian examples in (15) below:

(15) a. lep grad
beautiful-INDEF. town-NOM.M.SG.
'a beautiful town'

b. lep-*i* grad
beautiful-DEF. town-NOM.M.SG.
'the beautiful town'

(Zlatić 1998:3)

Descriptive adjectives that contribute to the definite interpretation of their head noun are attached the inflectional suffix *-i*, while no such morphological ending appears on indefinite adjectives, as shown in (15a). These examples also show that “determinerless noun phrases have the same distribution as noun phrases with determiners” (Zlatić 1998:3). In addition, as she further adds, “the DP-analysis of noun phrases would not be able to capture this generalization, unless one postulated an empty determiner in the D-position [...], which seems to be an ad-hoc solution” (ibid.).

In the next step of her argumentation, Zlatić (1998) applies Zwicky’s (1985) headedness criteria²¹, whose aim is to determine which element within a certain phrase functions as the head of that phrase. Having applied them to the SerBoCroatian noun phrase, she reaches the conclusion that it is a noun rather than a determiner that exhibits head-like properties. The relevant criteria are briefly summarized below:

1. ***The Morphosyntactic Locus.*** The morphosyntactic locus is the constituent carrying the morpho-syntactic inflectional endings.

²¹ In addition to the five headedness criteria stated above, Zwicky’s (1985) list also includes the criteria *subcategorizand* and *governor*. Zlatić (1998), however, does not apply them to SerBoCroatian examples, since they “cannot conclusively prove whether the noun or the determiner is the head of the noun phrase” (Zlatić 1998:4).

- (16) grad država selo
city-MASC. country-FEM. village-NEUT.

(Zlatić 1998:4)

Common nouns in SerBoCroatian, such as those given in (16), carry grammatical phi-features, such as gender, number and animacy. Since the grammatical phi-features originate on the noun and not on the determiner, the noun is the morphosyntactic locus and therefore head of the NP.

2. The Concord Determinant. The determinant of concord is the constituent that determines the agreement features of other co-constituents. As the examples in (17) below show, Slavic determiners inflect for case, gender and number and agree in these features with the noun they specify:

- (17) a. ova zanimljiva knjiga
this-NOM.F.SG. interesting-NOM.F.SG. book-NOM.F.SG.
- b. ovaj zanimljivi čovek
this-NOM.M.SG. interesting-NOM.M.SG. man-NOM.M.SG.

(Zlatić 1998:4)

Based on these facts, the noun is the determinant of concord and therefore a head of the NP.

3. The Obligatory Constituent. As already shown in (13-15), a noun is the obligatory constituent, whereas determiners are always optional²².

4. The Distributional Equivalent. The same examples show that bare NPs have the same distribution as those NPs modified by various determiners.

5. The Semantic Argument. Noun is the semantic argument because “it describes the type of the object denoted by the noun phrase” (ibid.).

²² In spite of its being widely-accepted, this view concerning the optionality status of determiners will be questioned and dealt with in more detail in Chapter 9 of this thesis.

In addition to her claims summarized above, Zlatić also argues, in the spirit of Corver (1992), that pronominal modifiers, namely demonstratives and indefinite determiners equivalent to the English words *one* and *some*, behave like adjectives. She endorses her claim by the following morphological and syntactic evidence:

(i) MORPHOLOGICAL EVIDENCE

1. Agreement. Just like adjectives, determiners agree with the head noun in gender, number and case, as already attested by the SerBoCroatian examples given in (17) above. Pronominal elements in other Slavic languages, e.g. Polish or Russian, display the same behaviour:

(18) a. ta mila dziewczyna (Polish)
 this-NOM.F.SG. nice-NOM.F.SG. girl-NOM.F.SG.
 ‘this nice girl’

b. eti milye devushki (Russian)
 these-NOM.F.PL. nice-NOM.F.PL. girl-NOM.F.PL.
 ‘these nice girls’

(Zlatić 1998:5)

2. Declension. Determiners exhibit the same declensional paradigm as adjectives, which basically confirms their adjectival status:

(19) a. jedan dobar čovek Nominative (SerBoCroatian)
 a good man
 b. jedn-og dobr-og čoveka Genitive/Accusative
 c. jedn-om dobr-om čoveku Dative/Locative

(Zlatić 1998:6)

(ii) SYNTACTIC EVIDENCE

1. Distribution. As illustrated in (17) to (19), determiners occur in prenominal position. Zlatić (1998) notes that, in the appropriate context, they can also occur after the noun, as shown in (20). This “indicates that these elements do not have the status of a functional category, since generally, functional categories, such as D(eterminer), AGR(ement), T(ense), C(omplementizer), occur in a fixed position” (Zlatić 1998:6):

- (20) a. dziewczyna ta mila (Polish)
 girl this nice
- b. devushki eti milye (Russian)
 girls these nice
- c. devojke ove mlade (SerBoCroatian)
 girls these young

She rejects an N-to-D movement analysis as the possible explanation of the above word order, because it fails to explain why the sequences Det-N-Adj (*ove devojke mlade* ‘these girls young’) or Adj-N-Det (*mlade devojke ove* ‘young girls these’) are possible, along with the question of why determiners in prenominal position have no fixed order²³.

2. Extraction. Following Corver (1992), Zlatić (1998) also argues that extraction of prenominal modifiers out of the NP provides evidence for the adjectival status of Slavic determiners, because determiners can be moved out of the Slavic NP in the same way that adjectives can:

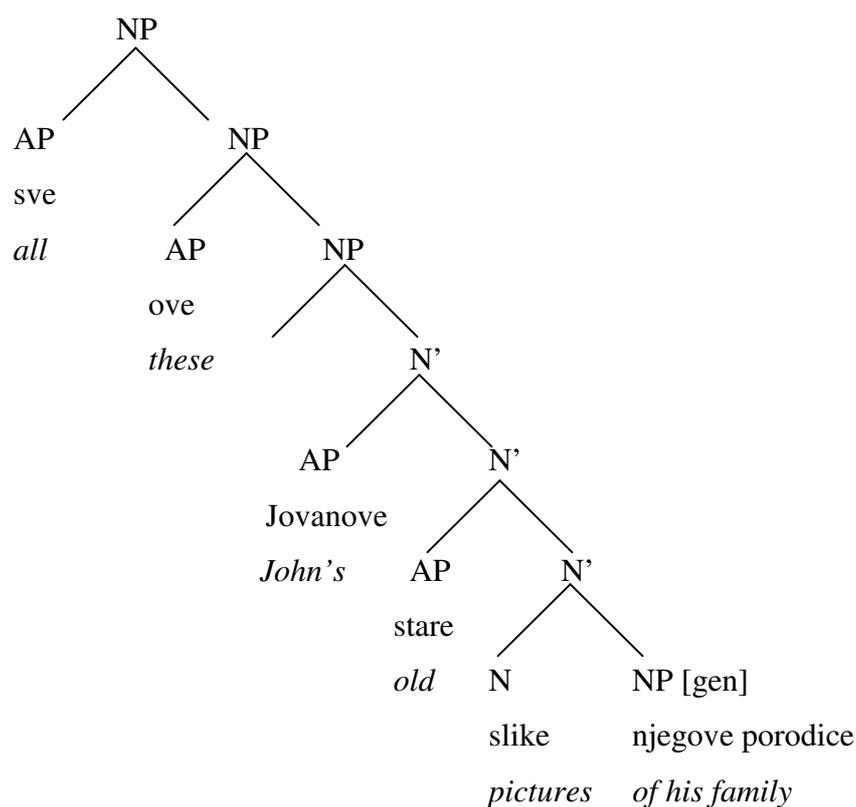
- (21) a. Ovu_i / lepu_j sam pronašla [t_i/t_j knjigu].
 This/nice-ACC.F.SG. AUX found book-ACC.F.SG.
 ‘This/nice I found book.’

²³ In chapter 10 I will return to examples of the same type and provide an alternative analysis in terms of a split DP.

- b. Koju_i / kakvu_j si pronašla [t_i/t_j knjigu].
 which/what kind-ACC.F.SG. AUX found book-ACC.F.SG.
 ‘Which/what kind did you find book?’

(Zlatić 1998:7)

On the basis of linguistic facts presented so far, Zlatić concludes that “elements preceding the noun are all categorially adjectives, while those following the head noun can be NPs, PPs, clauses, or right branching APs” (ibid.). She therefore proposes the following structure of the Slavic NP:



(Zlatić 1998:10)

The tree-diagram structure of the above NP clearly shows that all prenominal elements are to be treated as adjectives. The possessive noun *John's* as well as the adjective *old* are both analysed as APs being adjoined to N'. In contrast to Rappaport's (1998) analysis of possessive nouns, which finds them to be covert genitive nouns, Zlatić analyses them as adjuncts, because such an analysis allows her "to explain why they (possessives) can switch their usual order with ordinary adjectives" (Zlatić 1998:10). However, she further notes that "not all possessives have the syntactic status of an adjunct" (ibid.). Her alternative analysis denotes possessives as specifiers. Which of the two proposed analyses should be preferred is dependent on the syntactic context.

2.3.2. Left Branch Extraction and Other Generalisations as Evidence against the DP-Analysis (Bošković 2005 / 2008 / 2009a,b)

Bošković's (2005) approach to the analysis of the structure of NP is slightly different. He takes up the phenomenon of left branch extraction (LBE) and applies it to SerBoCroatian, using the LBE facts as evidence that SerBoCroatian lacks a DP projection. He primarily focuses on adjectival LBE. His goal is to provide a proper explanation of the phenomenon in SerBoCroatian and its consequences for the internal structure of NP, since SerBoCroatian generally allows left branch extraction, as the following examples illustrate:

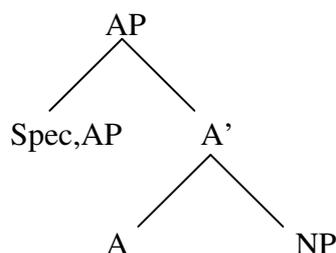
- (22) a. Čijeg_i si vidio [t_i oca]? *possessor LBE*
whose are seen father
'Whose father did you see?'
- b. Kakva_i si kupio [t_i kola]? *adjective LBE*
what-kind-of are bought car
'What kind of a car did you buy?'
- c. Lijepe_i je vidio [t_i kuće].
beautiful is seen houses
'Beautiful houses, he saw.'

- | | |
|---|---|
| <p>d. Ta_i je vidio [t_i kola].
 that is seen car
 ‘That car, he saw.’</p> | <p><i>LBE of the
 demonstrative pronoun</i></p> |
| <p>e. Koliko_i je zaradila [t_i novca]?
 how-much is earned money
 ‘How much money did she earn?’</p> | <p><i>LBE of the
 cardinal number</i></p> |

(Bošković 2005:2)

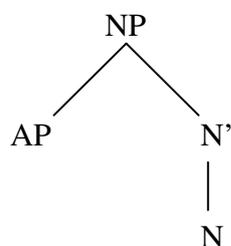
He pursues two lines of argumentation, both of which are based on the claim that **languages that allow LBE of adjectives do not have a DP**. The first type of evidence supporting this claim comes from the phase-based locality system²⁴, while the second type of evidence is supported by crosslinguistic variation regarding the position of adjectives within the traditional noun phrase (TNP). Regarding the latter, there are two possible analyses, which are, according to Bošković (2005), both correct, but for different languages:

- (i) **AP-over-NP analysis** (in the spirit of Abney 1987), proposing that NP is a complement of A (and adopting the hypothesis that NP is headed by a functional category D).



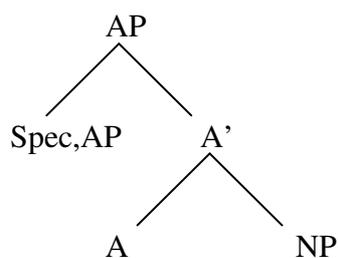
²⁴ Readers interested in this type of LBE-analysis are referred to Bošković (2005:15ff.).

- (ii) **NP-over-AP analysis**, suggesting that adjectives are located in multiple specifiers of the same head²⁵ (and therefore the analysis of NP as DP is ruled out).



Which of the structures presented above a language has is assumed to depend on the presence versus absence of DP. If a language lacks DP, the favoured analysis yields the NP-over-AP structure, which means that adjectives are hosted under [Spec, NP] or eventually adjoined to NP (cf. Bošković 2005:20). If a language is assumed to have DP, then an adjective either takes NP as its complement (see (23a)) or APs adjoin to NP (as shown in (23b)):

(23) a. Abney (1987)



b. Corver (1992)

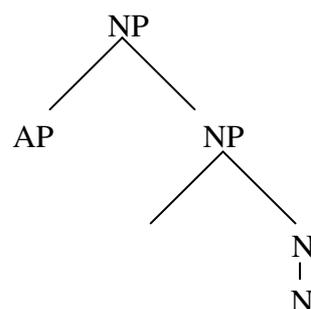


Figure 2.1: Structural position of adjectives in the **AP-over-NP** configuration
(based on Bošković 2005:4).

²⁵ Bošković (2005:20) says: “In particular, I would like to suggest that in English, A indeed takes NP as a complement (the AP-over-NP pattern), as argued by Abney. In SC, on the other hand, N takes AP as its Spec. (Assuming that AP is adjoined to NP would also work. I will refer to the SC pattern as the NP-over-AP pattern.)”

Although Bošković (2005) does not completely agree with Corver's (1992) analysis of left branch extraction (which is based on Chomsky's ECP system²⁶), he adopts Corver's assumption that languages that allow LBE do not have DP at all and applies his discussion of Polish to SerBoCroatian. The main arguments against the existence of a DP in SerBoCroatian rely on the following claims:

- 1) SerBoCroatian does not have overt articles, which typically occupy the D⁰ structural position in languages that have one. Therefore, the projection of DP on top of NP is not necessary.
- 2) The lack of overt articles is compensated by the use of lexical items such as pronominal possessives or demonstratives corresponding to *that, some*, etc. in English. However, in Serbo-Croatian these elements are adjectives for the following reasons (Bošković 2005:6/7):

(i) They display adjectival morphology:

(24) a. *nekim mladim djevojkama*
some-INST.F.PL young-INST.F.PL girls-INST.F.PL

b. *nekih mladih djevojaka*
some-GEN.F.PL young-GEN.F.PL girls-GEN.F.PL

(ii) They can appear in typical adjectival syntactic environments in SerBoCroatian, such as the predicate position in copula constructions:

(25) Ova knjiga je moja.

*this book is my

'This is my book.'

²⁶ Bošković provides a modified version of Corver's (1992) analysis. For a detailed discussion, see Bošković (2005:4ff.).

- (iii) They can stack up and display a relatively free word order, just like adjectives do:

(26) ta moja slika
*this my picture

According to Bošković, the relative order of adjectival modifiers in SerBoCroatian is free in comparison to a language such as English, where their order is rigidly fixed:

(27) Jovanova skupa slika vs. skupa Jovanova slika
John's expensive picture vs. *expensive John's picture

- (iv) Prenominal possessives cannot be modified by a possessor or another adjective:

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

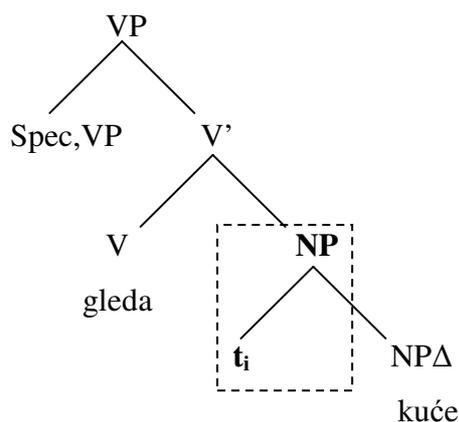
b. *bogati susedov konj
rich neighbour's horse

On the basis of this evidence, Bošković (2005) concludes that “all D’s are As in SC. SC, and the same holds for other Slavic languages allowing LBE, does not project DP on top of NP” (Bošković 2005:7).

If these elements are to be treated as adjectives, what does this mean for the structure of NP and how does this justify the LBE? Under the PDP-Hypothesis, adjectives are adjoined to NP, meaning that all prenominal adjectival modifiers are phrasal adjuncts. This implies that demonstratives, possessives and other prenominal modifiers in SerBoCroatian are adjoined to NP. Bošković’s

(2005:7) analysis of the sentence given in (29) below shows the assumed structure of NPs in SerBoCroatian:

- (29) Lijep_i [_{VP} t_i [_{VP} [_V gleda [_{NP} t_i [_{NP} kuće]]]]].
 beautiful watches houses
 ‘Beautiful houses, he/she is watching.’



As far as prenominal LBE in Serbo-Croatian is concerned, LBE is justified, since SerBoCroatian nominal expressions are NPs and not DPs, and therefore no minimality barrier is projected, which would rule out left branch extraction²⁷. In addition, the ban on movement of non-constituents, which obviously makes LBE in languages like English ungrammatical, does not apply “in SC-type languages, where LBE does not involve non-constituent movement” (Bošković 2005:36).

In an appendix to his paper, Bošković (2005:37ff.) provides an alternative account to the LBE phenomenon, and this alternative does not depend on the presence or absence of DP, but rather on the possibility of scrambling. Whether a language allows LBE or not depends on whether the language in question allows scrambling. Languages that allow LBE, such as Russian, SerBoCroatian, Polish and Czech, also allow scrambling. Modern Romance languages do not have

²⁷ For a detailed discussion of different instances of LBE in SerBoCroatian, such as the extraction of genitive complements of nouns and its different accounts, the reader is referred to Bošković’s (2005) paper. At this point their exposition is of no relevance for the further understanding of this thesis.

scrambling and consistently do not allow LBE. Bošković (2005) summarizes that LBE languages

- (i) have no DP, and
- (ii) allow “massive” scrambling, which leads to the creation of discontinuous constituents.²⁸

Therefore, it is either the absence of DP that is crucial for LBE (and not the scrambling), which implies that there must be LBE languages without either DP, or scrambling. In the latter case, scrambling is necessary for LBE, which means that there must be LBE languages that have both DP and scrambling.

Bošković (2008, 2009a,b) introduces further generalisations regarding the structure of nominal expressions in articleless languages. These generalisations are supposed to back up his NP-account. In addition to the already discussed phenomenon of LBE and the adjectival status of determiners, he further provides the following arguments for the fundamental structural difference of nominal expressions in languages with and those without articles (Bošković 2008:3ff., 2009a:199, 2009b):

- (i) Only languages without articles may allow adjunct extraction out of TNPs (traditional noun phrases).
- (ii) Only languages without articles allow scrambling.
- (iii) Languages without articles disallow negative raising, and languages with articles allow it.
- (iv) Multiple *wh*-fronting languages without articles do not display superiority effects.
- (v) Only languages with articles allow clitic doubling.
- (vi) Languages with articles do not allow transitive nominals with two genitives.
- (vii) Only languages with articles allow the majority superlative reading.

²⁸ This conclusion confirms “Hale’s (1983) observation that discontinuous constituency is a property of scrambling languages” (Bošković 2005:38).

- (viii) Head-internal relatives are island sensitive in languages without articles, but not in those with articles.
- (ix) Polysynthetic languages do not have articles.
- (x) Negative constituents must be marked for focus in NP languages.
- (xi) The negative concord reading may be absent with multiple complex negative constituents only in DP negative concord languages.
- (xii) Radical pro-drop is possible only in NP languages.
- (xiii) Number morphology may not be obligatory only in NP languages.

The above generalizations capture a potential correlation between the availability of articles and the observed syntactic phenomena within a given language.

2.4. Is D really empty? Elaborated Structure of a DP in Slavic Languages

This subsection introduces proposals made by Progovac (1998), Rutkowski (2002), Leko (1999) and Pereltsvaig (2007), all of whom argue for the availability of DP in articleless languages. Their proposals, however, differ with regard to the number and kind of functional categories they assume to be projected between NP and DP.

The strongest evidence for the existence of DP layer comes from noun/pronoun asymmetries (Progovac 1998), according to which certain intensifying adjectives precede the noun, but follow the pronoun in the same syntactic environment, thus yielding the opposite word order. Leko (1999) adopts the adjectival analysis of different determiners proposed by Zlatić (1998) and further endorsed by Bošković (2005), but he assumes that adjectival elements are, in the spirit of Cinque (1994), generated in [Spec,NP] and must move to the extended projection of NP in order to check relevant features such as gender, number, case, referentiality or definiteness. His analysis of nominal expressions results in a very elaborated and complex structure of a DP. Pereltsvaig (2007) reexamines the hypotheses postulated by Bošković (2005) and shows that they do not hold for Russian.

the SBC data endorse the latter option. The same syntactic phenomenon was observed in Polish by Rutkowski (2002:161), who shows that the same class of adjectives appears with personal pronouns and is permitted only to the right of the pronominal head:

- (31) a. [sam Chomsky] czytał moj artykuł
alone Chomsky read my article
'Even Chomsky read my article.'
- b. [on sam] czytał moj artykuł
he alone read my article
'Even he read my article.'
- c. *[sam on] czytał moj artykuł
alone he read my article

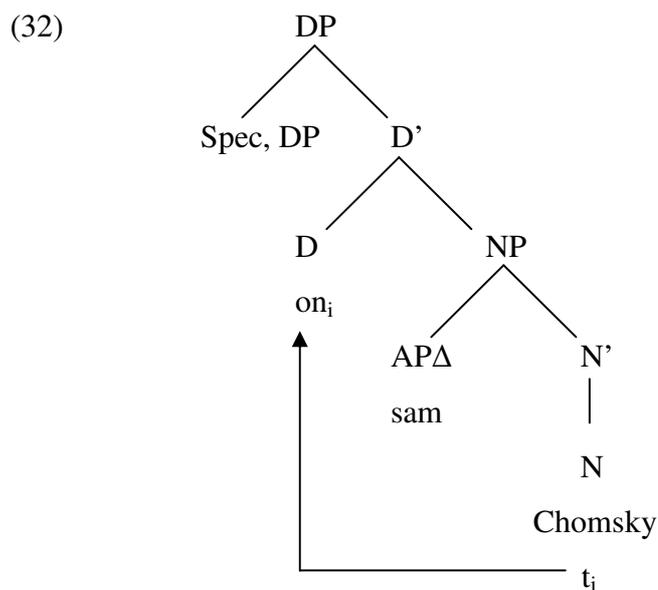
Both Progovac (1998) and Rutkowski (2002) argue that the order *pronoun – adjective* results from the movement of a pronoun from its underlying position in N^0 to D^0 , which functions as its landing site. According to Progovac (1998), the movement of the personal pronoun is driven by the Principle of Greed³⁰, which makes a pronoun move in order to check its referential features. As exhibited in the tree-diagram analysis in (32) below, Rutkowski (2002) adopts N-to-D movement for the Polish equivalents. In his paper he provides further evidence for the noun/pronoun asymmetries, showing that the observed syntactic phenomenon also occurs in Polish constructions involving

- (i) the quantifier *wszyscy*, which corresponds to English *all*,
- (ii) numerals, and
- (iii) in the construction *coś ciekawego*, meaning *something interesting*³¹.

³⁰ The Principle of Greed goes back to Chomsky (1995).

³¹ For a detailed discussion of the examples involving constructions listed above, see Rutkowski (2002).

These examples additionally support the assumption that there are other functional phrases above NP. Rutkowski (2002:167) draws the conclusion that “the D position must be syntactically active” and is necessary “since it is targeted by overt N-to-D raising in certain constructions with numerals, quantifiers and attributive adjectives”.



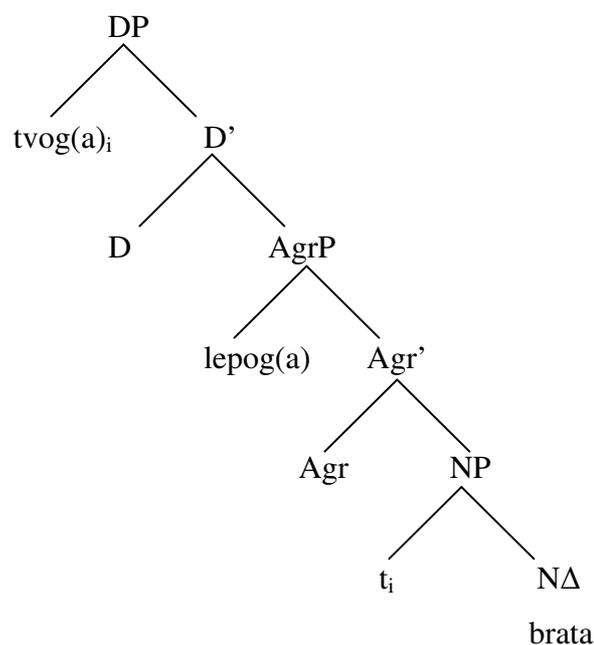
(Rutkowski 2002:163)

Having adopted the DP-Hypothesis for SerBoCroatian, Progovac (1998) notes that the only category that occupies the D position in SBC are personal pronouns. She further points out that the DP analysis of SBC nominal expressions raises other questions, such as how to adequately explain the LB phenomenon. Recall that the possibility of left-branch extraction was the main argument against the existence of a DP structural layer in Slavic nominal phrases. Since under such an analysis pronominal elements were categorized as adjectives in Slavic languages, Progovac (1998) suggests that a different categorial status of determiners in English and SerBoCroatian should be sufficient to explain their different behavioural patterns and the LBE phenomenon.

However, although Progovac (1998) agrees that possessives in SBC bear adjectival morphology, she points out that they show certain properties that

distinguish them from all other adjectives. In neutral word order they precede adjectives, which allows her to assume that possessives are base-generated in [Spec, NP]. Their adjectival morphology is the result of a movement from [Spec, NP], most likely through the adjoined [Spec, AgrP] to [Spec, DP], resulting in the following structure:

- (33) a. tvog(a) lepog(a) brata
 your-ACC/GEN.M.SG handsome-ACC/GEN.M.SG brother-ACC/GEN. M.SG



(Progovac 1998:173)

Having analysed the adjectival and pronominal agreement patterns, she postulates one further structural position labelled DefP, which is placed above the AgrP. This structural position is necessary, because certain definiteness markers as well as lexical elements that carry definite morphology (such as definite adjectives) need to be accommodated within the DP structure:

- (34) a. tvoj drag-i brat
 your-NOM.MASC.SG dear NOM.MASC.SG.DEF brother NOM.MASC.SG

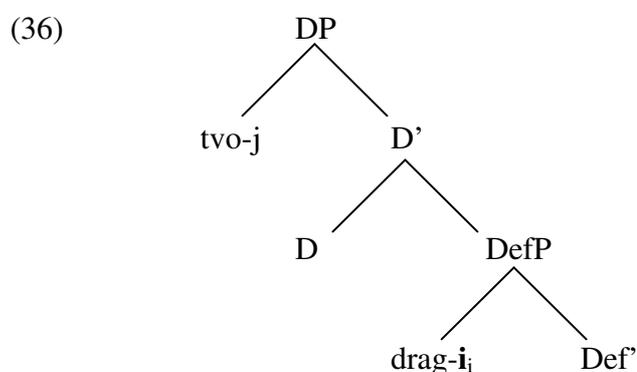
- b. *tvoj drag brat
 your-NOM.MASC.SG dear NOM.MASC.SG.INDEF brother NOM.MASC.SG

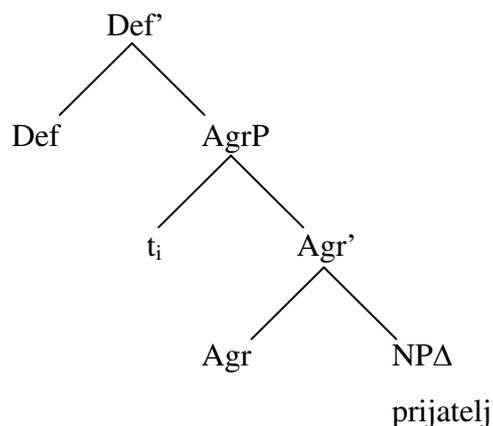
The definite aspect in SerBoCroatian is realized by means of the suffix *-i*, which is attached to adjectives that modify singular masculine nouns in nominative. When they appear together with demonstratives and possessives, they usually follow them. As the example in (34b) shows, the short form of adjectives is not allowed in such constructions. Progovac (1998) argues that adjectives carrying definite morphology move into the DefP. Other elements that move through DefP are possessives (e.g. *tvoj* ‘your’). Being base-generated in the specifier of NP, they move through DefP on their way to the specifier position of DP. Since they cannot take the definite morpheme *-i* (e.g. **tvoj-i auto* ‘your car’), she argues that possessives are, along with demonstratives and pronouns, inherently definite. Definiteness is phonologically realized with the help of the suffix *-j*.

- (35) a. **moj, tvoj, njegov, njen** Possessives
 my, your, his, her

- b. **ovaj, taj, onaj** Demonstratives
 this-MASC that-MED.MASC that-DIST.MASC

None of these elements appears together with the definite article in English (e.g. **the your*, **the that*). On the basis of these considerations Progovac (1998:176) reaches the conclusion that the Slavic NP has the following structure:





2.4.2. Complex DP-Structure (Leko 1999)

As already mentioned in the introduction, Leko (1999) adopts the adjectival analysis of different determiners, but he assumes that adjectival elements are, in the spirit of Cinque (1994), generated in the specifier position of NP and must move to the extended projection of NP in order to check relevant features such as gender, number, case, referentiality or definiteness. His analysis of nominal expressions results in a very elaborated and complex structure of a DP, which consists of various functional levels. In what follows, I will introduce Leko's (1999) analysis and provide an explanation as to why these functional levels are deemed to be necessary.

Given the fact that there are, as already mentioned, the presence of two different forms of descriptive adjectives in SerBoCroatian, namely definite and indefinite, has lead many to observe that these adjectives display different behavioural patterns than other adjectives. According to Leko (1999), all other adjectives in SerBoCroatian check only one set of features, which are gender, number and case. Such adjectives always precede nouns. Since descriptive adjectives distinguish indefinite and definite forms, they can additionally carry definiteness markers such as the suffix *-i*, as already described in (34). The first type of adjective checks its features in AgrP, which is the immediate extended projection of NP. The second type of adjectives moves higher through AgrP to DefP. It is the functional head Def⁰ that regulates which form of the adjective is

used. If Def⁰ has a strong definiteness feature, the adjective will have definite morphology. Otherwise the indefinite form will be used. The assumed structure matches the one proposed by Progovac (1998:176), introduced in (36).

However, on the basis of the examples given in (37) below, which clearly show that in compounds containing an adjective as an integral part, a definite form of a descriptive adjective cannot precede the indefinite one, Leko (1999) stipulates that a single functional head (Def) must have two specifier positions. The higher [Spec, DefP] is reserved for indefinite, and the lower one for definite adjectives.

- (37) a. odvratni slijepi miš
ugly-DEF blind-DEF mouse
'the ugly bat'
- b. odvratan slijepi miš
ugly-INDEF blind-DEF mouse
'an ugly bat'
- c. *odvratan, slijep miš
ugly- INDEF blind- INDEF mouse
- d. *odvratni slijep miš
ugly- DEF blind- INDEF mouse

(Leko 1999:235)

A possible alternative to a multi-specifier DefP is to assume two separate functional heads, where one of them is marked positively and the other one negatively for the feature *definiteness*, thus hosting appropriate descriptive adjectives. As Leko (1999) admits, this analysis is unsatisfactory, because it allows the same head to be specified both positively and negatively with respect to the same feature.

In addition to AgrP and DefP, which were already suggested by Progovac (1998), Leko (1999) postulates two other functional categories within the DP, namely NumP and PossP. Where are these two categories placed within the hierarchy of functional categories in the nominal domain? The examples given below show that both categories follow demonstratives (38) and appear in front of adjectives (39):

- (38) a. onaj **tvoj** stroj
 that-NOM.MASC.SG **your**-NOM.MASC.SG machine-NOM.MASC.SG
b. ***tvoj** onaj stroj
c. ono **peto** dijete
 that-NOM.NEUT.SG **fifth** NOM.NEUT.SG child-NOM.NEUT.SG
d. ***peto** ono dijete

- (39) a. **tvoje** plave oči
 your-NOM.FEM.PL blue-NOM.FEM.PL eyes-NOM.FEM.PL
b. *plave **tvoje** oči
c. **prve** crvene zastave
 first-NOM.FEM.PL red-NOM.FEM.PL flags-NOM.FEM.PL
d. *crvene **prve** zastave

(Leko 1999:242)

When they appear together, possessives usually precede adjectival numerals:

- (40) a. moj prvi stroj
 my-NOM.MASC.SG first NOM.MASC.SG machine-NOM.MASC.SG
b. ?prvi moj stroj

(Leko 1999:243)

The observed ordering restrictions allow Leko (1999) to postulate the following order of prenominal elements within the Bosnian NP:

demonstrative < possessive < numeral < descriptive adjectives

Demonstratives appear very high in the extended projection of NP. Leko adopts Giusti's (1992, 1997) proposal that they occupy the specifier position universally. However, demonstratives and indefinite determiners are optional, and nouns may occur freely without them. They are base generated in [Spec, NP] and their adjectival agreement is the result of movement through AgrP on their way to their ultimate landing site in [Spec, DP]. [Spec, DP] is also a landing site for *wh*-phrases (Leko 1999:241). Leko agrees with Progovac (1998) that a D-position is occupied only by pronouns in SBC. There is no evidence of overt proper name raising (Leko 1999:239). Below D there is a separate functional category labelled PossP. Based on the fact that possessives cannot appear after adjectives, he concludes that they occupy a higher structural position. Leko (1999) emphasises that, in contrast to English, where the possessive morpheme *-s* is the head of PossP, the SerBoCroatian Poss⁰ does not have any lexical or morphological content. Instead, the [Spec, PossP] is occupied by the feature [POSS], which may be realised by the possessive suffixes *-ov* (*-ev*), *-in*, and *-ski* on possessive adjectives:

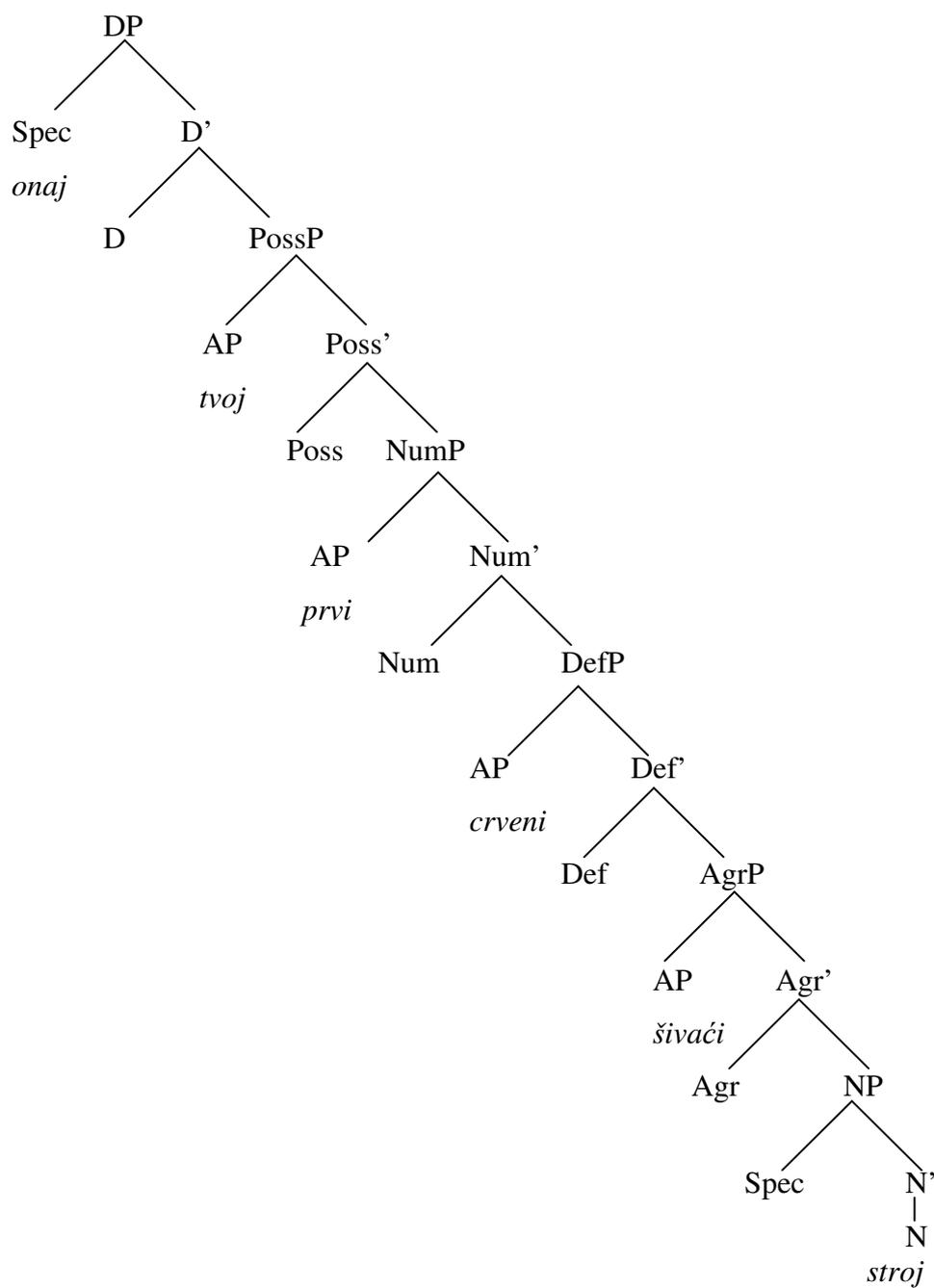
- (41) bratov / očev / sestrin / školski stroj
brother's / father's / sister's / school's machine

(Leko 1999:244)

The adjectival agreement features of possessive adjectives are checked by their movement through AgrP on their way to [Spec, PossP]. The adjectival numerals occupy the specifier position of a separate functional projection NumP, which appears above the NP, but below the DP. The head of NumP is, just as in Modern

Hebrew (Ritter 1991), the locus of number specifications of NP. The complex DP proposed by Leko (1999:248/249) has the following structure:

- (42) onaj tvoj prvi crveni šivaći stroj
 that your first red sewing machine
 ‘that first red sewing machine of yours’



2.4.3. The Universality of a DP (Pereltsvaig 2007)

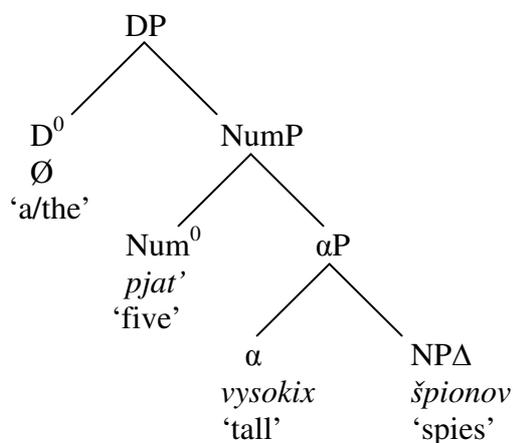
Pereltsvaig (2007) contends that the presence or absence of overt articles is not crucial for the internal syntactic structure of nominal expressions. According to her, the structure of noun phrases is universal cross-linguistically. Pereltsvaig (2007) supports her claims in favour of a Universal DP-Hypothesis by applying Bošković's (2005) hypotheses concerning the syntactic structure of noun phrases in articleless languages to examples taken from Russian, another articleless language. The results of her analysis allow her to corroborate the opposite, namely that nominal expressions in articleless languages project a DP on top of NP. First, she surveys the order of adjectives in Russian and shows that it is not less rigid than it is in English, a language assumed to have DPs. Second, she discusses 'light' and 'heavy' adjectives in Russian, which behave differently in the same way their counterparts in languages with overt articles do. Finally, she takes a closer look at demonstratives, possessives and numerals in Russian, arguing for their placement in separate, hierarchically ordered functional projections.

Recall that the predictions made by the Universal and the Parametrized DP-Hypothesis with respect to the internal structure of NP and the placement of adjectives³² are completely different. For the sake of convenience, these two different approaches will be illustrated using the Russian example *pjat' vysokix špionov* 'five tall spies' in (43) and (44) below. The **Universal-DP Hypothesis** predicts that adjectives are hosted by dedicated functional projections. Hence, they are expected to be **rigidly ordered**. Under **the Parameterized-DP Hypothesis**, adjectival modifiers are adjuncts to NP and are anticipated, in contrast to the former analysis, to be **freely ordered**.

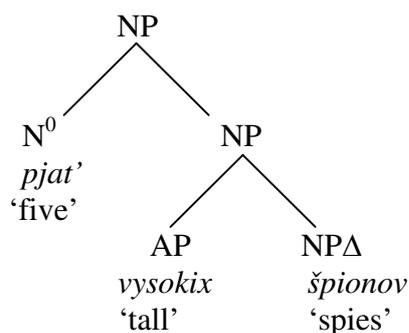
Hence, Pereltsvaig's (2007) primary task was to determine whether the ordering of adjectives in Russian is as restricted as it is in English. In order to ascertain the relative order of Russian adjectival modifiers, she conducted a survey that consisted of 30 pairs of adjectives. For each of these adjective pairs native speakers of Russian had to provide their preferred order.

³² Although both approaches are principally different, some versions (Corver 1992, Bošković 2005) share the same view concerning the placement of adjectives, in that they propose that adjectives are adjoined to NP.

(43) Universal-DP Hypothesis



(44) Parameterized-DP Hypothesis



(Pereltsvaig 2007:60)

The adjectives used for the judgement tests belong to the top 500 most frequently used lexical items in Russian, because frequency of use is suspected of having an effect on the relative order of adjectival modifiers. Here are some examples of survey items (Pereltsvaig 2007:63):

(45) a. černyj staryj botinok vs. staryj černyj botinok

black old shoe vs. old black shoe

b. znakomyj vysokij špil vs. vysokij znakomyj špil

familiar tall spire vs. tall familiar spire

- c. ploxo_j anglijski_j čaj vs. anglijski_j ploxo_j čaj
bad English tea vs. English bad tea

In order to evaluate native speakers' responses, Pereltsvaig (2007) compares the obtained results with the hierarchy of adjective types taken from Scott (2002). According to the Scott's (2002:102) hierarchy, adjectives appear in the following order:

*subjective evaluation > size > length > height > speed > depth > width > weight
> temperature > wetness > age > shape > colour > nationality / origin >
material > typing attribute (e.g. northern)*

A comparison of the given examples shows that both English and Russian native speakers agree with the hierarchy proposed above and that there are no significant perceptible deviations in their responses. This allows her to conclude that “the relative order of adjectival modifiers in both Russian and English is equally restricted” (Pereltsvaig 2007:65). This finding has immense consequences for the structure of the Russian noun phrase. It implies that “adjectives in articleless languages (as well as in languages with articles) are hosted by dedicated functional projections, contrary to the claims of the Parameterized-DP Hypothesis and in accordance with the Universal-DP Hypothesis” (ibid. 2007:67).

The second argument that supports the DP-analysis of Russian noun phrases comes from differences regarding the behaviour of ‘light’ and ‘heavy’ adjectival modifiers. Light adjectives, such as *small* in (46a), can appear only prenominally. They are analysed as heads (Adj⁰) in English. Heavy adjectives, as exemplified in (46b), cannot appear prenominally and are analysed as phrasal categories (AdjP):

- (46) a. [_{AdjP} [_{Adj⁰}small]] house
b. *the [_{AdjP} proud of his children] father

(Pereltsvaig 2007:67)

According to the Parameterized DP-Hypothesis, all prenominal adjectival modifiers are analysed as phrasal adjuncts in articleless languages, which implies that both light and heavy adjectives have to be analysed as phrasal categories. In languages with overt articles, light adjectives are heads. This difference is outlined in the following table:

	Languages with articles	Languages without articles
light adjectives	Heads (Adj ⁰) prenominal	Phrasal adjuncts (AdjP) prenominal
heavy adjectives	Phrasal adjuncts (AdjP) postnominal	Phrasal adjuncts (AdjP) pre- & postnominal

Table 2.1. The status of *light* and *heavy* adjectives in languages with/without articles
(based on Pereltsvaig 2007:67)

In contrast to English, heavy adjectival modifiers in Russian can appear in prenominal position. With respect to the different behaviour of heavy adjectives in Russian and their English counterparts, the question arises as to how the existing contrast between them can best be explained. Pereltsvaig (2007) claims that the proposed different status of prenominal modifiers (head vs. phrasal adjunct) cannot be taken as an argument for their different behaviour. In general, she rejects a different treatment of prenominal modifiers for the reasons stated below:

(i) the grammaticality of prenominal heavy adjectival modifiers **does not correlate with the existence of overt articles**, as the linguistic data from languages that lack overt articles (Russian, SerBoCroatian) and those that do not (Bulgarian, Swedish) confirm. All these languages allow for prenominal heavy adjectival modifiers. The only difference lies in the ordering of adjectives and their PP-complement. The former language pair exemplifies the order A-PP, whereas the latter allows for PP-A.

(ii) **not all prenominal adjectival modifiers are phrasal adjuncts** in articleless languages. The reason for this attitude is based on the observed **head-movement-blocking effects** in Russian. What does this mean? Pereltsvaig (2007)

- b. ***specialistov_i desjat' izvestnyx t_i** (po ruskomu sintaksisu)
specialists ten well-known (in Russian syntax)
'approximately ten well-known specialists in Russian syntax'
- c. ***izvestnyx specialistov desjat'** (po ruskomu sintaksisu)
well-known specialists ten (in Russian syntax)
'approximately ten well-known specialists in Russian syntax'
- d. ***specialistov izvestnyx desjat'** (po ruskomu sintaksisu)
specialists well-known ten (in Russian syntax)
'approximately ten well-known specialists in Russian syntax'

(Pereltsvaig 2007:69)

The ungrammaticality of the examples (48b-d) can only be accounted for if we assume that adjectival modifiers are not adjoined to NP, but rather occupy their own functional projection(s). Pereltsvaig (2007) explains it in the following way: “[...] the light adjectival modifiers are merged in the head of the functional projection that hosts such modifiers (namely, α^0) and this causes a violation of the Head Movement Constraint” (Pereltsvaig 2007:70). This explanation favours the universal DP-approach for Russian. In contrast to light adjectives, heavy adjectival modifiers in Russian are invisible to head movement, because they are analysed as phrasal categories and as such are merged in Spec- α . This approach justifies the grammaticality of (49), adopted from Pereltsvaig (2007:70):

- (49) **specialistov_i desjat** [_{AP} dovol'nyx svoimi vystuplenijami] (**t_i**)
specialists ten satisfied self's-INSTR. talks-INSTR.
'approximately ten specialists well-known for their radical theories'

The third and final argument in favour of the DP-Hypothesis in articleless languages concerns the status of demonstratives, possessives and numerals, all of

which are supposed to project their own functional phrasal categories between NP and DP. The reason why numerals (including cardinal numerals and quantifiers) are hosted under dedicated functional projection is due to their categorial status, according to which they cannot be subsumed under the lexical category of nouns in Russian. In the same syntactic environment, cardinal numerals such as *pjat* ‘five’, *desjat* ‘ten’ and *sto* ‘hundred’ behave differently from the cardinal nouns *pjatok* ‘five’, *desjatok* ‘ten’ or *sotnja* ‘hundred’. This difference concerns the gender, number and case agreement patterns. If an adjective modifies a **cardinal numeral**, the adjective in question agrees in gender, number and case with the main noun and not with the cardinal numeral. If an adjective modifies a **cardinal noun**, it agrees with that noun. Pereltsvaig (2007:72) illustrates the described difference on the following examples:

- (50) a. James Bond vypil celyx **desjat’** koktejlej.
James Bond drank whole-GEN.PL. ten-NUM. cocktails-GEN.PL.
‘James Bond drank a whole ten cocktails.’
- b. James Bond vypil celyj **desjatok**
James Bond drank whole-ACC.SG.MASC ten-NOUN.ACC.MASC.
koktejlej.
cocktails-GEN.PL.
‘James Bond drank a whole ten cocktails.’

There are two other arguments that support the claim that cardinal numerals belong to a distinct syntactic category (Pereltsvaig 2007:73):

(i) approximative inversion is possible only with cardinal numerals:

- (51) James Bond vypil rjumok [desjat’ / *desjatok] vodki.
James Bond drank up glasses-GEN. ten-NUM. / ten-NOUN vodka-GEN.
‘James Bond drank up about ten glasses of vodka.’

(ii) cardinal numerals can be used as quasi-ordinals:

- (52) James Bond našel dom [desjat' / *desjatok].
James Bond found house ten-NUM.ACC. / ten-NOUN.ACC.
'James Bond found No.10.'

Furthermore, Pereltsvaig (2007) argues that demonstratives and possessives are not adjectival, but rather functional elements hosted in DP. She refers back to the arguments put forward by Trenkić (2004) and Bošković (2005), who maintain that the lack of overt articles in Slavic languages is compensated by the use of prenominal modifiers such as prenominal possessives or demonstratives, which are adjectival in category for the reasons given below:

- (i) They display adjectival morphology.
- (ii) They can appear in typical adjectival syntactic environments in SerBoCroatian, such as the predicate position in copula constructions.
- (iii) They can stack up and display a relatively free word order, just like adjectives do.
- (iv) They cannot be modified by a possessor or another adjective.³⁴

She challenges these claims by showing clearly that they do not apply for Russian. As far as the claim under (i) is concerned, Pereltsvaig (2007) argues that neither demonstratives nor possessors in Russian display clear adjectival morphology. There are two paradigms of adjectival declension in Russian, one called the paradigm of Short Form Morphology (SFM) adjectives, and the other known as Long Form Morphology (LFM) adjectives. Although declension of demonstratives and possessors is similar to that of short adjectives, a significant change has occurred with respect to the declension of short adjectives in Modern Russian. They no longer decline for case and have preserved only one case form,

³⁴The SerBoCroatian example sentences illustrating the syntactic phenomena in (i) to (iv) are given in section 2.3.2.

which is nominative. This implies that the declension of demonstratives and possessives may resemble the one displayed by short adjectives in nominative, but this does not apply to other morphological cases. The examples below show that the declension paradigm of demonstratives/possessives corresponds to that of short adjectives in nominative (53a), but no longer does so compared with the declension of long adjectives in other morphological cases, here accusative in (53b):

- (53) a. Ètot- \emptyset Vanin- \emptyset krasiv-**yj** dom
this-M.SG.NOM Vanya's- M.SG.NOM beautiful-LFM-M.SG.NOM house
vysok- \emptyset .FM.

tall

'This beautiful house of Vanya's is tall.'

- b. Kupim èt-**u** Vanin-**u** interesn-**uju**
we-will-buy this-F.SG.ACC Vanya's-F.SG.ACC interesting-LFM-F.SG.ACC
knigu.

book

'Let's buy this interesting book of Vanya's.'

(Pereltsvaig 2007:74)

The second argument, according to which demonstratives and possessives can appear in syntactic constructions typical of adjectives, does not hold either. The proposed syntactic environment was the predicate position in copula constructions. Pereltsvaig maintains that in Russian, demonstratives can appear in what looks like predicate position, but in English they cannot:

- (54) a. Vanino pal'to bylo èto.
Vania's coat was this
'Vanya's coat was this one.'

- b. Èto pal'to byl moe.
This coat was my
'This coat was mine.'

(Pereltsvaig 2007:76)

In English sentence *one*-support is necessary, as shown in (54a). If (54b) is to be interpreted with the pronominal possessor *moe* as an adjective, this would mean that the English counterpart *mine* is adjective as well. However, this is not so, since *mine* cannot modify a noun, as the example such as **the mine book/mine books* illustrates.

Regarding the proposal given in (iii), the order of demonstratives and pronominal possessives is not free, neither with respect to each other nor with respect to other adjectives. The neutral order in Russian is **demonstrative < possessive < adjective < noun**. Deviations from this order are as ungrammatical as their English counterparts are (Pereltsvaig 2007:76):

- (55) a. *krasivyj ètot Vanin dom
beautiful this Vanya's house
*'beautiful this Vanya's house'
- b. *šerstjanoè èto Vanino pal'to
woolen this Vanya's coat
*'woolen this Vanya's coat'

The order **demonstrative < possessive < adjective < noun** was also elaborated for SerBoCroatian by Leko (1999).

The final argument is related to the fact that pronominal possessors cannot be modified by another adjective or a possessor, just as adjectives cannot be modified by another adjective or possessor, as illustrated in the examples below:

- (56) a. *bogatyj **sosedov** kon'
rich neighbour's horse
'a/the rich neighbour's horse'
- b. *moj **sosedov** kon'
my neighbour's horse
'my neighbour's horse' (Pereltsvaig 2007:78)

However, adjectives can be modified by adverbs, which is not possible with possessors. Possessive elements can neither be modified by adverbs nor can they have possessive genitive complements (ibid.):

- (57) a. *očen' maminy ruki
very Mom's hands
'the very Mom's hands'
- b. *očen' materinskie ruki
very motherly hands
'very motherly hands'
- (58) a. *[maminy Koli] ruki
Mom's Kolya-GEN hands
both: 'Kolya's Mom's hands'
- b. ruki [mamy Koli]
hands Mom-GEN Kolya-GEN

It seems to be a syntactic fact that prenominal possessive elements can be formed from heads only. Adjectives are phrasal categories which may include only a head, but they can also be modified by a further lexical material. This comparison underlines the different syntactic status of these two categories. Since

possessive elements and demonstratives are not adjectival in category, they are obviously subsumed under separate functional projections that are placed between NP and DP. There are also additional arguments in favour of the non-adjectival status of demonstratives and possessives: these will be discussed at a latter time in this thesis.

2.5. Summary

Within the framework of Standard X-Bar Theory, noun phrases were analysed as single-headed constructions. Such an NP structure implied that elements contained within it were either specifiers, modifiers or complements of the head noun. Extended X-Bar Theory (Chomsky 1986) has replaced this standard view on the structure of noun phrases. Now, phrasal categories in general are regarded to be headed by functional categories. Such an analysis implies that XPs have a multi-headed structure. Its extension to the analysis of all XPs has resulted in the DP analysis of noun phrases (Abney 1987).

As far as Slavic languages are concerned, a controversy has arisen over the question of whether Slavic nominal expressions are headed by a noun or a determiner. The majority of linguists participating in the ongoing debate assume that DP is a language specific property closely related to the absence vs. presence of articles in a given language. The assumed cross-linguistic difference in the structure of noun phrases has resulted in the Parametrized DP-Hypothesis (Corver 1992), according to which noun phrases are either NPs lacking functional projections or DPs projecting numerous functional heads. The crucial criterion for attributing a language to either the first or the second group is the presence vs. absence of articles in a given language. A language with articles has the functional category D, whereas a language without articles does not have it. With the exception of Bulgarian and Macedonian, which have overt articles, all other Slavic languages, including Croatian, lack articles and are consistently assumed to have no DP-layer. However, discussions on the internal structure of Slavic noun phrases have yielded no uniform result.

Zlatic's (1998) headedness approach to the analysis of noun phrases was supposed to prove that Slavic nominal expressions are headed by a lexical category N, and not by a functional category D. She argues against the existence of DP and provides evidence for an NP-analysis of articleless Slavic languages, which is based on the following observations:

- i) Noun phrases in SerBoCroatian appear without determiners.
- ii) Application of the *headedness tests* to the SerBoCroatian noun phrase confirms that the noun is the head and not the determiner.
- iii) Syntactic and morphological evidence shows that determiners and adjectives are non-distinct categories.

Since SerBoCroatian generally allows the extraction of the leftmost constituent out of the NP, Bošković (2005) uses left branch extraction facts as evidence that SerBoCroatian lacks a DP projection. He adopts Corver's (1992) idea concerning the position of adjectives within NP, according to which they are not located in [Spec, NP], but rather adjoin to it. Since, in his opinion, determiners in SerBoCroatian are categorially adjectives, they are also adjoined to NP and require no further functional layer to host them. This is the reason why the extraction of the leftmost constituent out of NP in SerBoCroatian is not blocked. Bošković's (2005) main arguments against the existence of DP are based on the following claims:

- i) SerBoCroatian does not have overt articles typically occupying the D^0 structural position (in those languages that have one), therefore the projection of DP on top of NP is not necessary.
- ii) The lack of overt articles is compensated by the use of lexical items, such as prenominal possessives or demonstratives. However, as already mentioned, these elements are adjectives in SerBoCroatian, because they

- a. display adjectival morphology
- b. appear in typical adjectival syntactic environments
- c. can stack up and display a relatively free word order, and
- d. cannot be modified by other prenominal modifiers.

In addition to these claims, Bošković (2008, 2009a,b) introduces several other generalisations regarding the structure of nominal expressions in articleless languages, the aim being to provide further arguments for the fundamental structural difference of nominal expressions in languages with and those without articles and to support his NP-account.

Progovac (1998), Rutkowski (2002), Leko (1999) and Pereltsvaig (2007) argue for the existence of DP in articleless languages. They examine different syntactic phenomena in Polish, SerBoCroatian and Russian, respectively, in order to provide evidence for an elaborated structure of DP in Slavic languages. Their proposals differ with regard to the number and kind of functional categories they assume to be projected between NP and DP. Progovac (1998) observes an asymmetry between the syntactic distribution of nouns and pronouns in SerBoCroatian. Based on the examples introduced in (30), she concludes that nouns and pronouns appear in different surface positions. The observed contrast allows her to assume DP-internal noun movement, by which pronouns (base-generated in N^0 or in one of the functional projections between N and D) raise to D^0 . Rutkowski (2002) observes the same noun-pronoun-asymmetry in Polish and adopts the N-to-D-movement analysis for the Polish equivalents. Progovac (1998) analyses agreement patterns and morphology of possessives, definite adjectives and demonstratives, reaching the conclusion that, on the grounds of their definite morphology, these elements move through DefP, which is placed above AgrP as a further structural position between NP and DP. According to her, the Slavic nominal expressions have the structure [DP [DefP [AgrP [NP [N]]]]].

Leko (1999) argues for an adjectival analysis of different determiners, but he assumes that they are generated in [Spec, NP] and that they move to the extended projection of NP in order to check syntactic and semantic features such

as gender, number, case, referentiality or definiteness. Leko differentiates between two forms of descriptive adjectives, namely definite and indefinite. These adjectives behave differently from all other adjectives in SerBoCroatian, because they can additionally carry definiteness markers such as the suffix *-i*. While all other adjectives move to AgrP to check gender, number and case only, descriptive adjectives move higher through AgrP to DefP in order to check their definiteness feature. In addition to AgrP and DefP, he postulates two other functional projections within DP, namely NumP and PossP, hence proposing the following multi-headed DP structure of nominal expressions in SerBoCroatian: [DP [PossP [NumP [DefP [AgrP [NP [N]]]]]]].

Pereltsvaig (2007) says that the presence vs. absence of articles within a nominal construction is not crucial for its phrasal structure. In her opinion the syntactic structure of noun phrases is universal cross-linguistically. She applies the hypotheses about the NP-structure of articleless languages introduced by Bošković (2005) to Russian examples and concludes that they do not hold. She first surveys the ordering of adjectives in Russian and shows that it is not less rigid than it is in English, a prototypical DP-language. According to the Parametrized DP-Hypothesis, adjectival modifiers are adjuncts to NP and are expected to be freely ordered. The Universal DP-Hypothesis predicts that they will be hosted by dedicated functional projections and are therefore expected to be rigidly ordered. The Russian data confirm the predictions made by the Universal DP-Hypothesis. Second, Pereltsvaig discusses the syntactic behaviour of *light* and *heavy* adjectives in Russian and establishes that they behave differently in the same manner as their counterparts in languages with overt articles do. According to the PDP-Hypothesis, both light and heavy adjectives are to be analysed as phrasal categories in articleless languages. In languages with articles, light adjectives are heads, whereas heavy adjectival modifiers are phrasal adjuncts. Although heavy adjectives have the same phrasal status in languages with and without articles, they exhibit different syntactic behaviour. In languages with articles they appear postnominally, whereas in languages without articles they can occupy both pre- and postnominal position. Pereltsvaig maintains that the

grammaticality of prenominal heavy adjectives does not correlate with the existence of overt articles, since Bulgarian and Swedish allow them in spite of the presence of overt articles. Furthermore, she suggests that not all prenominal adjectival modifiers are phrasal adjuncts in articleless languages, thus arguing against the predictions made by the PDP-Hypothesis. Finally, her last argument in favour of the DP-Hypothesis in articleless languages pertains to the status of demonstratives, possessives and numerals in Russian. Her thorough analysis of Russian examples finds that they are placed in separate, hierarchically ordered functional projections, hence confirming the existence of further functional layers between NP and DP and a complex DP structure in Slavic nominals.

CHAPTER 3

THE NOMINAL PHRASE IN CROATIAN

3.1. Introduction

As is well known, a complex nominal expression may contain both lexical and functional material:

- (1) a. [NP **The** extraordinarily well-prepared *explanation of* [NP **the** financial report]] impressed the CEO.
- b. [NP Nevjerovatno dobro pripremljeno *obrazloženje* [NP *financijskoga izvještaja*]] impresioniralo je generalnog direktora.

If we compare the noun phrases in (1) above, we immediately note some obvious differences between English and Croatian. English version of the nominal expression in (1a) contains a determiner, the definite article *the*, and the semantically empty preposition *of*, which is used to introduce the PP complement of the transitive noun *explanation*. The Croatian equivalent does not contain any element that corresponds to the English definite article. The complement of the head noun *obrazloženje* ‘*explanation*’, the noun phrase *financijskoga izvještaja* ‘*financial report*’, is assigned genitive case, which is morphologically visible on the adjectival modifier *financijskoga* ‘*financial*’ in the form of the inflectional genitive ending *-oga* and as the inflectional suffix *-a* on the noun *izvještaj* ‘*report*’.

This chapter will provide a survey of the lexical and functional elements that make up a noun phrase in Croatian. The next two subsections highlight the most evident morphological and syntactic differences between English and Croatian nouns. In addition to the rich inflectional morphology of Croatian nouns, which affects not only the morphology of its constituent parts but also pronouns and associated verbs, we see that nouns predominantly occur bare, since there is

no element that assumes the role of an (in)definite article. This is a wide-accepted and well-known fact, which will, nonetheless, be questioned at a later stage in this dissertation. As we know, certain nouns in English also appear without articles, e.g. generic and mass nouns, or bare plurals (cf. Alexiadou et al. 2007:172 ff.). However, the articleless appearance of these nouns does not lead to their ungrammaticality.

Section 3.3 briefly describes what type of pre- and postnominal elements appear within noun phrases in Croatian. It also addresses different understandings and definitions of the term *determiner* as used in the Croatian and Slavic literature, along with some terminological disagreement concerning this issue. In addition, I will also discuss the arrangement of prenominal constituents within a noun phrase. In order to simplify the existing terminological variety, I propose that the elements *svi* ‘all’, *svaki* ‘every/each’ and the determiner *jedan* ‘one’, which, according to Silić (1992), has the same distribution as the aforementioned universal quantifiers, can be subsumed under the term of *pre-determiners*. As we will see, the sequence of prenominal elements and allowed permutation patterns are still a matter of some disagreement, as the comparison of the proposals by Zlatić (1997) and Leko (1999) shows. Nevertheless, the discrepancies are marginal, which will allow me to arrive at a commonly accepted, satisfactory representation of a prenominal neutral word order at the end of this chapter.

3.2. Morphological and Syntactic Differences between English & Croatian

Nominal Expressions

3.2.1. Morphological Differences

Although the syntax of nominal expressions is at the heart of this chapter, I will briefly sketch some most obvious morphological differences between English and Croatian nouns first, because rich inflectional morphology is often declared to be the reason for the unavailability of indefinite and definite articles, and hence the different syntax of nominal expressions in Slavic languages.

Like most other Slavic languages, Croatian has a rich system of nominal inflection. Nouns, pronouns, adjectives and some numerals decline to reflect their

grammatical features. Determiners and adjectival modifiers agree in case, number and gender with nouns they accompany, thus displaying a variety of different inflectional affixes.

The case paradigm of Croatian is substantially different from the English one. While English makes extensive use of word order and prepositions in order to express different noun cases, Croatian has a very rich case system:

- (2) a. Gledam *sliku*. (noun-ACC.SG)
 a'. I am looking **at** *the picture*. (preposition + noun- ACC.SG)
- b. Govorim *Katarini*. (noun-DAT.SG)
 b'. I am talking **to** *Katarina*. (preposition + noun-ACC.SG)
- c. Poklonila sam *Mariji knjigu*. (noun-DAT.SG noun-ACC.SG)
 c'. I gave *Mary a book*. (noun-DAT.SG noun-ACC.SG)
- d. Poklonila sam *knjigu Mariji*. (noun-ACC.SG noun-DAT.SG)
 d'. I gave *a book to Mary* /**a book Mary*. (noun-ACC.SG preposition +
 noun-ACC.SG / *noun-ACC.SG
 noun- ?? .SG)
- e. ponosan *svojom radom* (adj.-poss.pronoun-INST.SG noun-
 INST.SG)
 e'. proud **of** *my work* (adj.+preposition+poss.pronoun-
 GEN.SG + noun-ACC.SG)

As exemplified in (2), different grammatical cases are overtly realised by various morphological endings. Except for the possessive pronoun in (2e), the English equivalents are not overtly marked for case. The case assigner in English examples in (2a, b) is not the corresponding verb, but rather the preposition, which assigns accusative to its nominal complement. The examples in (2c) and

(2d) demonstrate the importance of word order for case assignment in English, while (2e) shows that, contrary to English, where nouns and adjectives cannot function as case assigners, Croatian adjectives (along with nouns) may assign case to their complements.

The noun phrases above also exemplify a very important distinction regarding the declension of lexical noun phrases in Croatian and English. This distinction pertains to the number of different case forms as well as the extent of their morphological realisation. Full lexical noun phrases in Croatian are declined into the following seven cases: nominative, genitive, dative, accusative, vocative, locative and instrumental. Each of these grammatical cases has different morphological endings for both singular and plural. Additionally, Croatian distinguishes between three different declension classes. For instance, the first declension differentiates between the subgroup of masculine and neuter singular and plural nouns, which exhibit different declension patterns (cf. Kunzmann-Müller 1999:101ff). They are illustrated in the Table 3.1 below:

First Declension					
Subgroup 1: masculine nouns <i>student</i> 'student'			Subgroup 2: neuter nouns <i>more</i> 'sea'		
CASE	SG	PL	CASE	SG	PL
Nom	<i>student-∅</i>	<i>student-i</i>	Nom	<i>mor-e</i>	<i>mor-a</i>
Gen	<i>student-a</i>	<i>studentat-a</i>	Gen	<i>mor-a</i>	<i>mor-a</i>
Dat	<i>student-u</i>	<i>student-ima</i>	Dat	<i>mor-u</i>	<i>mor-ima</i>
Acc	<i>student-a</i>	<i>student-e</i>	Acc	<i>mor-e</i>	<i>mor-a</i>
Voc	<i>student-e</i>	<i>student-i</i>	Voc	<i>mor-e</i>	<i>mor-a</i>
Loc	<i>student-u</i>	<i>student-ima</i>	Loc	<i>mor-u</i>	<i>mor-ima</i>
Inst	<i>student-om</i>	<i>student-ima</i>	Inst	<i>mor-em</i>	<i>mor-ima</i>

Table 3.1: An example of a declension paradigm in Croatian
(based on Kunzmann-Müller 1999:101ff.)

In English only genitive case is overtly realised on full noun phrases. The fully-fledged overt morphological distinction of nominative, accusative and genitive forms can still be found in the English pronoun system, although even there there are instances of case syncretism, e.g. 2nd person singular nominative and accusative personal pronoun *you* (cf. Haegeman 1994:157).

Nouns in Croatian distinguish between three grammatical genders: masculine, feminine and neuter. Every noun is invariably attributed to one of these genders and accordingly displays a different morpho-syntactic behaviour. This means that the grammatical gender of a noun affects the morphology of its constituent parts, see (3a), as well as that of pronouns and associated verbs, as shown in (3b, c):

- (3) a. *velika država* / *veliki grad-∅* / *veliko selo*
large state-FEM.SG / large city-MASC.SG / large village-NEUT.SG
- b. *Marija* *je posjetila* *njezinu* *sestru*.
Mary-FEM.SG is visited-FEM.SG her- ACC.FEM.SG sister-ACC.FEM.SG
- c. *Marko* *je posjetio* *njegovoga* *brata*.
Marko-MASC.SG is visited-MASC.SG his-ACC.MASC.SG brother-ACC.M.SG

As the examples above show, the grammatical category of gender is morphologically visible on the associated noun. Roughly speaking, nouns ending in *-a* are feminine, *-o* and *-e* are neutral, and the rest are masculine. In English no such subdivision based on the overt morphology of a noun can be observed. English does not make gender distinctions through inflectional endings and it does not require gender agreement between related words. Nevertheless, in present-day English, remnants of gender marking, which was common in Old English, have been preserved both on personal (*he/she*) and possessive pronouns (*his/her*).

In addition to gender and case, nouns generally also inflect for number. The regular English plural is formed by adding the morphological ending *-(e)s* to a corresponding singular noun:

- (4) a. a teacher two teachers
 b. a library two libraries

In Croatian, plural form is realised by numerous different plural morphemes, the proper attachment of which depends on the gender and class of the given noun:

- (5) a. *kuća* *kuće* (*knjiga – knjige, lopta – lopte*)
 house-FEM.SG houses-FEM.PL (*book - books, ball - balls*)
- b. *automobil* *automobili* (*prozor – prozori, okvir – okviri*)
 car-M.SG cars-M.PL (*window - windows, frame - frames*)
- c. *stol* *stolovi* (*vrt-vrtovi, bol – bolovi*)
 table-M.SG tables-M.PL (*garden - gardens, pain - pain*)
- d. *ključ* *ključevi* (*vrč – vrčevi, grč - grčevi*)
 key-M.SG keys-M.PL (*jar - jars, seizure - seizures*)
- e. *zaključak* *zaključci* (*priključak – priključci*)
 conclusion-M.SG conclusions-M.PL (*installation - installation*)
- f. *svjetlo* *svjetla* (*pismo – pisma, sjedalo - sjedala*)
 light-NEUT.SG lights-NEUT.PL (*letter - letters, seat - seats*)

As exemplified in (6) below, a prenominal Saxon genitive in English is marked by the possessive *-s* (genitive case inflection):

- (6) a. the teacher's job
b. the library's owner

In Croatian, prenominal possessives are morphologically realised by the suffixes *-ov*, *-ev*, *-in*, *-ski*, *-ški*, *-čki*, *-ji*, *-ni*, *-nji*. Here is an example:

- (7) a. Ivanova kuća
Ivan-POSS.NOM.FEM.SG house-NOM.FEM.SG

b. Marijin automobil
Marija-POSS.NOM.MASC.SG car- NOM.MASC.SG

In addition to the possessive marker *-ov* in (7a), which is attached to the proper noun *Ivan*, both nouns also agree in number, case and gender, which is morphologically realised as the inflectional suffix *-a*. The same type of congruence can be observed in (7b), where the possessive relationship is expressed by the possessive suffix *-in*, which is attached to the proper noun *Marija*. Since the 2nd noun is masculine singular, there is no further overt inflectional marker on the possessive noun. If we alter the number of cars being talked about, this changes:

- (8) Marij-in-**i** automobil-**i**
Marija- POSS.NOM.MASC.PL car- NOM.MASC.PL

In (8) we can see that, for agreement reasons, both nouns are given the plural inflectional suffix *-i*. Although English nouns also agree in case, number and gender with their specifiers and modifiers, the examples given for both languages allow us to conclude that the complex morpho-syntactic mechanisms observed to be at work in Croatian do not operate in English in the same complex manner, at least not overtly.

3.2.2. Syntactic Differences

Words belonging to the same category occur in similar positions within a sentence or a given phrase. English nouns, for instance, can be immediately preceded by the article *the* or by a possessive pronoun such as *his*:

- (9) a. (i) *the* friend - *the* library - *the* lunch
(ii) \emptyset prijatelj - \emptyset knjižnica - \emptyset ručak
- b. (i) *his* friend - *his* library - *his* lunch
(ii) *njegov* prijatelj - *njegova* knjižnica - *njegov* ručak

In Croatian there is no lexical element that functions as article, which means that nouns mostly stand on their own. Nevertheless, if there is a possessive pronoun, as in (9b), the pronoun precedes the noun it specifies in the same way it does in English. Additionally, agreement in gender, number and case is overtly realized and, hence, morphologically visible on Croatian nouns.

However, the prototypically licensed sequence *the* + *noun* cannot always be used as a constituent in English. In case of abstract nouns, for instance, a noun has to be modified by further lexical material in order to be licensed with a definite article:

- (10) a. **The freedom* is precious.
b. *The freedom he enjoyed during his stay in London* was memorable.
c. *Freedom* is the foundation of democratic societies.

If there are no modifiers, abstract nouns such as *freedom* appear without articles. There are also other types of nouns in English that are characterized by their articleless appearance in a sentence. These nouns are those labelled in the literature as bare plurals, mass, proper and generic nouns. Although English is a predominantly analytic language, in which the use of indefinite and definite articles is mandatory, these types of nouns show that the absence of definite and

indefinite articles does not necessarily lead to ungrammaticality in certain nominal constructions. As the example in (10a) shows, quite the contrary may be the case.

This observation raises many different questions. One of these questions refers to its importance regarding the internal structure of noun phrases for both English and Croatian. If articleless nominal expressions in English are analysed in the same way as those containing articles, what is the implication of such an analysis for languages in which nouns predominantly appear bare?

3.3. Components of the Croatian NP

3.3.1. Prenominal Elements within NP

As briefly touched upon in the previous subsection, following elements can appear in prenominal position within a nominal complex:

- **DETERMINERS**

(11) demonstrative pronouns:

ova / ta djevojka
this / that-NOM.F.SG girl-NOM.F.SG

(12) definite and indefinite pronouns:

neke djevojke
some-NOM.F.PL girls-NOM.F.PL

(13) *one* as indefinite article (cf. Pranjković 2000:344):

(i) *Jednoga dana* pristigla je obavijest.
 one-GEN day-GEN arrived is message
(ii) *Toga dana / jučer* je pristigla obavijest.
 that-GEN day-GEN / yesterday is arrived message
(iii) **Dana* je pristigla obavijest.
 day-GEN is arrived message

- (14) possessive nouns and pronouns:
studentova / moja knjiga
student-POSS.NOM.F.SG / my-NOM.F.SG book-NOM.F.SG

- (15) quantifiers and numerals:
(i) svi studenti
all-NOM.MASC.PL students-NOM.MASC.PL
(ii) pet studenata
five-NOM.MASC.PL students-GEN.MASC.PL

• **ADJECTIVES**

- (16) stara napuštena kuća
old-NOM.F.SG desolate-NOM.F.SG house- NOM.F.SG

• **NOUNS**

- (17) brat Ivan
brother-NOM.MASC.SG John-NOM.MASC.SG

As far as the functional category of *determiners* is concerned, there has been much disagreement as to which elements should be considered members of this group. In his discussion of this category, Kuna (2002:41ff.) points to different understandings and definitions of the term *determiner* in Croatian and Slavic literature. According to Ivić (1983), Radovanović (1990) and Silić (1992), the term *determiner* designates any lexical item that *determines* the noun. Since they do not distinguish between elements that function either as specifiers or modifiers, their definition of determiners also includes adjectives as well as the number *one* in its function as indefinite article. For Vukojević (1995) every prenominal element within a noun phrase, with the exception of qualifying adjectives (*kvalifikativni pridjev*), is to be regarded as a determiner. Kuna (2002)

follows Gallmann and Lindauer (1994), according to whom a D category carries agreement features and is closely related to the grammatical category of definiteness. He, therefore, excludes all items that are [-definite] from the group of determiners, such as indefinite pronouns *neki* ‘some’, *svi* ‘all’, *svaki* ‘every’ as well as the number *jedan* ‘one’ in its function as indefinite article. Quantifiers *mnogo* ‘many’, *puno* ‘a lot of’, *više* ‘more’, *dosta* ‘enough’, *previše* ‘too much/many’, along with nouns that express an indefinite amount of something, such as *dio* ‘a part of’ or *manjina* ‘minority’, also do not belong to the category of determiners. The reason for their exclusion, according to Kuna (2002:42ff.), is that determiners such as *ovo* ‘this’ or *svoj* ‘his/hers/its’ do not have antonyms, whereas the above introduced quantifiers above do, e.g. *mnogo* – *malo* ‘many-little’, *više* – *manje* ‘more – less’, *manjina* – *većina* ‘minority – majority’.

Throughout this thesis, the use of the term *determiners* covers all prenominal elements that specify nouns in a certain way. Since adjectives modify nouns, they are not included into this group, but rather form their own category. However, irrespective of their categorial status, all prenominal elements behave similarly with respect to agreement. This means that both determiners and adjectives agree in case, gender and number with the noun they appear with.

3.3.2. Postnominal Elements within NP

Although the analysis of postnominal elements within a noun phrase is not of crucial importance for answering the question related to the NP/DP - internal structure debate, the examples given below offer a survey of possible phrasal complements that can appear within nominal expressions. For example, a noun in Croatian can be complemented by the following categories (cf. Kuna 2002):

- **NOUNS (DPs / postnominal genitives)**

- (18) dan *nezavisnosti*
day-NOM.MASC.SG *independence-GEN.MASC.SG*
‘an/the independence day’

- (19) kvalitativno-kvantitativna analiza *biodiverziteta*
qualitatively-quantitative-N.F.SG analysis-N.F.SG *biodiversity-G.MASC.SG*
*mikroorganizama sirovog i pasteuriziranog mlijeka*³⁵
microorganisms-G.MASC. PL untreated and pasteurized-G.N.SG milk-G.N.SG
'qualitative and quantitative analysis of the biodiversity of microorganisms
found in raw and pasteurized milk'
- (20) brat *moga djeda*
brother-NOM.MASC.SG *my-GEN.MASC.SG grandfather-GEN.MASC.SG*
'my grandfather's brother'
- (21) Aleksandar *Makedonski*
Alexander Macedonian-POSS
'Alexander the Great'
- (22) županija *vukovarsko- srijemska / županija posavska*
county-NOM.F.SG *vukovar-POSS srijem-NOM.POSS.F /county posavska-POSS*
'Vukovar–Syrmia County' / 'Posavina Canton'
- **ADJECTIVES (AdjPs)**
- (23) brežuljak *prekriven snijegom*
hill-NOM.MASC.SG *covered-NOM.MASC.SG snow-INS.MASC.SG*
'a hill covered with snow'
- (24) hrana *bogata vitaminima*
food-NOM.F.SG *rich-NOM.F.SG vitamins-INS.MASC.PL*
'food rich in vitamins'

³⁵ This complex nominal expression is the title of a scientific paper printed in the magazine *Mljekarstvo* 52(4) (2002), 291-313. Available at: http://hrcak.srce.hr/index.php?show=clanak&id_clanak_jezik=3542

- (25) *stablo visoko pet metara*
tree-NOM.N.SG *high-NOM.N.SG five metres-GEN.MASC.PL*
'a five-metre high tree'

- **PREPOSITIONAL PHRASES (PPs)**

- (26) *šetnja po livadi*
walk across meadow
'a walk across the meadow'

- **ADVERBIAL PHRASES (AdvPs)**

- (27) *prva kuća zdesna*
first house *right*
'the first house to the right'

- **INFINITIVAL IPs**

- (28) *sposobnost izdvojiti bitno*³⁶
capability-N.MASC.SG *abstract-INF. essence-ACC.N.SG*
'the capability to abstract the essence'

- **COMPLEMENTIZER PHRASES (CPs)**

- (29) *djevojka koju sam jučer sreo na zabavi*
girl *that am yesterday met at party*
'the girl I met at the party yesterday'

³⁶ Kuna (2002:41).

3.3.3. Ordering of Pre- and Postnominal Constituents within the NP

In his discussion of the different types of attributes that can accompany a noun in Croatian, Kuna (2002) observes that they can appear in both pre- and a postnominal position. His observation is captured in the following lines:

“Imeničnu sintagmu čini glava koja može biti modificirana jezičnim jedinicama koje stoje ispred ili iza nje. Iako gotovo svi atributi mogu doći u oba položaja, jedan je položaj neutralan, dok je drugi u većoj ili manjoj mjeri obilježen u rasponu od pripadnosti uzvišenu, arhaičnu stilu (Sabor *hrvatski*), okamenjenih idiosinkratičkih izraza (*Župa Dubrovačka*) do jezične neobičnosti ili ironičnog podsmijeha:

(1) Što je to s nama, pobro, reci / Hrvate *crveni i bijeli*?” (Slamnig 33)”

[A nominal phrase is built around the head that can be modified by lexical units that either precede or follow the noun. Although almost all attributes can appear in both positions, one of them represents the neutral word order, whereas the other is marked to such an extent that its markedness ranges from an elevated, archaic style (Parliament *Croatian*), to fossilized idiosyncratic expressions (municipality *Dubrovnik-POSS*) all the way to the linguistic peculiarity/exceptionality or irony:

(1) What happened, mate, tell me, / you Croatian *red and white*? (Slamnig 33)]

Kuna (2002:40); (Translation DZC)

In spite of the fact that nominal constituents can appear either pre- or postnominally, it can be noted, however, that generated nominal structures are not equivalent. One of them represents a neutral and the other one a marked word order (e.g. *brežuljak prekriven snijegom (neutral)* vs. *snijegom prekriven brežuljak (marked)*). This observation poses the question as to how we can account for such word order variations within nominal structures.

Another important issue that must be separately discussed and analysed is related to the ordering of prenominal elements (determiners and adjectives) within a noun phrase. Recall that Leko (1999) proposed the following order of prenominal elements within the SerBoCroatian noun phrase: *demonstrative* > *possessive* > *numeral* > *descriptive adjectives*. Bošković (2005), on the contrary, says that arrangement of these elements is relatively free. The assumption that the word order of possessors and other prenominal modifiers is relatively free, as put forward and purported by Bošković (2005), is rather incoherent. His treatment of this topic raises different questions. If there is no underlying word order, or if the

underlying word order is not recognisable as such, how can we then talk about scrambling as a movement operation in Slavic languages? Only the existence of an underlying neutral word order allows us to generate different variations of the same thing and thus recognise deviations arising out of it. Therefore, we must distinguish between a prototypical prenominal neutral word order and its marked counterpart(s). As a consequence, if we adopt this view, any deviation from the underlying neutral word order necessarily involves DP-internal movement that is responsible for the creation of these new structures.

3.3.3.1. Neutral Word Order

As mentioned above, the outcome of the observed ordering restrictions within the Bosnian noun phrase, as depicted in section 2.4.2 (examples 38-40), allowed Leko (1999) to postulate the following order of prenominal elements within SerBoCroatian nominal expressions:

(30) demonstrative > possessive > numeral > descriptive adjectives > NOUN

His example, which illustrates the neutral word order proposed above, is repeated in (31) below for the sake of convenience (Leko 1999:249):

(31) *onaj tvoj prvi crveni šivaći stroj*
that your first red sewing machine
'that first red sewing machine of yours'

Zlatic (1997:27) additionally incorporates a category of quantifiers in the syntactic pattern suggested in (30). Hence, a proposed supplemented sequence of prenominal constituents looks as follows:

(32) quantifiers > determiners > possessives > cardinal expressions > adjectives
> NOUN

As we may notice, she makes a distinction between quantifiers and cardinal expressions. One reason for her subdivision comes from the observed distributional differences between some quantifiers and cardinal numerals. While quantifiers such as *sve* ‘all’ and *svako* ‘every/each’ appear in the first position of a prenominal complex, cardinal expressions such as *mnogo* ‘many/much’, or the numerals *pet* ‘five’ and higher, occupy a position between possessives and adjectives. Examples illustrating this difference are given below:

(33) **svaka** ova knjiga → quantifier in terms of a *totalizer*³⁷
each-NOM.F.SG this-NOM.F.SG book-NOM.F.SG
‘each book’ or ‘each of these books’

(34) **mojih pet** starih knjiga → cardinal numeral
my-GEN.PL five old-GEN.PL books-GEN.PL
‘five old books of mine’

Zlatić (1997:28)

She obviously does not include quantifiers, possessives and cardinal expressions in the functional category of determiners. According to her definition, the group of determiners consists only of demonstrative pronouns.

By contrast, according to Silić (1992), the term *determiner* designates any lexical item that determines a noun. Hence, his definition of determiners³⁸ includes both the category of adjectives as well as the number *jedan* ‘one’ in its function as indefinite article, which is, in his opinion, equivalent in its syntactic status to Zlatić’s quantifiers. Silić (1992) comes up with his own terminology in order to distinguish between different types of determiners. With respect to their sequence, he basically proposes the same syntactic pattern. However, he leaves the category of numerals unconsidered, as shown below:

³⁷ The term “totalizer” goes back to Browne (1993), who used it to denote pre-determiners. Zlatić (1997) takes up this term in order to specify what is included into her definition of quantifier.

³⁸ I have already pointed out this terminological divide in the previous section.

- (35) **relativizator** ‘relative determiner’ (*svaki* ‘every/each’ or *jedan* ‘one’) >
demonstrativizator ‘demonstrative determiner’ > **posesivizator**
‘possessive determiner’ > **diferencijalizator** ‘differential determiner’ >
kvalifikativizator ‘qualifying determiner’ > **NOUN**

The respective ordering of various determiners introduced above can be illustrated with the following example (Silić 1992:405):

- (36) *jedna takva bratova nova bijela košulja*
one-F.SG of that kind-F.SG brother-POSS.F.SG new-F.SG white-F.SG **shirt**-F.SG

As we know, some quantifiers in English, such as *all*, *both* and *half*, are used before other determiners within nominal expressions. These quantifiers are called pre-determiners (Pre-D). Relevant examples are given in (37) below:

- (37) a. *all* the books
b. *half* that wealthy woman’s money
c. *both* those problems

Both Silić (1992) and Zlatić (1997) suggest that the elements *sve* ‘all’ and *svako* ‘every/each’, along with the indefiniteness marker *jedan* ‘one’ accordingly act as pre-determiners in SerBoCroatian. Related to this, Silić (1992:405) says:

“Distribucijski se determinator *jedan* ponaša kao determinator *svaki* [...] No je li značenjski jedinstven kao determinator *svaki*? Ima li, drugim rječima, isto značenje u svim distribucijama kao što to ima determinator *svaki*?”

[With regard to its distribution, the determiner *jedan* ‘one’ behaves as the determiner *svaki* ‘every/each’ [...] But, is it unique in its meaning in the same way as the determiner *svaki* ‘every/each’? Does it have, in other words, the same meaning in every syntactic position it appears in in the same way that the determiner *svaki* ‘every/each’ has?

(Translation: DZC)

A comparison of the proposed neutral prenominal word orders introduced above yields the following preliminary ordering:

pre-determiners > determiners > adjectives > NOUN

Adopting the view that *determiner* as a general term includes *articles*, *demonstrative* and *possessive pronouns*, *possessive nouns*, *quantifiers* and *numerals*, we may postulate the following neutral sequence of these elements within the Croatian noun phrase:

**pre-determiners > demonstratives > possessives > quantifiers/numerals >
ADJECTIVES > NOUN**

This neutral word order is exemplified below:

- (38) *sve te moje prve besmislene pogreške*
all-F.PL these-F.PL my-F.PL first-F.PL preposterous-F.PL mistakes-F.PL
‘all these first preposterous mistakes of mine’

What about adjectives? Adjectives immediately precede a noun. Like in English (cf. Quirk et al. 1985), they are attributed to different semantic classes and ordered with respect to each other. According to Mrazović & Vukadinović (1990:304), in SerBoCroatian they are arranged as follows:

- (39) a. quantificational > referential > qualitative/material > classificational
- b. *mnogobrojni ovdašnji pametni županijski predstavnici*
numerous-M.PL local-M.PL smart-M.PL county-POSS.M.PL representatives
‘numerous local smart county representatives’

(based on Zlatić 1997:30)

The first semantic class in this hierarchy is made up of non-gradable adjectives. This type of adjectives disallows comparison and cannot be modified by intensifiers. Referential adjectives denote time and location, and very often correspond to English genitive noun phrases such as *yesterday's*, *today's* (cf. Zlatić 1997:30). The third group of adjectives are descriptive adjectives, which themselves display a rigid ordering within its own class. Adjectives indicating size appear before adjectives that denote colour:

- (40) a. *velike crvene ruže*
big red roses
- b. **crvene velike ruže*
red big roses

(Browne & Nakić 1975:87, qtd. in Zlatić 1997:31/32)

Finally, there is the subgroup of classificational adjectives, which are derived from nouns, which has “the purpose of delimiting the interpretation of the following head noun according to a particular class. For example, the noun phrase *seoski život* ‘*the rural life*’ means a life typical of a village” (Zlatić 1997:32).

Although in the majority of syntactic constructions adjectives appear in prenominal position, there are two syntactic environments where they necessarily occur postnominally. As already introduced in the section on postnominal elements, adjectives that are followed by their own modifiers or complements appear postnominally:

- (41) a. **hrana** [*AdjP**bogata vitaminima*]
food-NOM.F.SG *rich*-NOM.F.SG *vitamins*-INST.MASC.PL
‘food rich in vitamins’
- b. **bogata vitaminima* **hrana**
- c. *vitaminima bogata* **hrana**

- (42) a. **stablo** [*AdjP*visoko pet metara]
tree-NOM.N.SG high-NOM.N.SG five metres-GEN.M.PL
'a five-metre high tree'
b. *visoko pet metara **stablo**
c. pet metara visoko **stablo**

This phenomenon can also be observed in English (cf. Williams 1982, Radford 1993, Sadler and Arnold 1994):

- (43) a. **teachers** [*AdjP*proud of their students]
a'. *proud of their students **teachers**

(based on Williams 1982:160)

- b. the waters [*AdjP*navigable by cruise ships]
b'. *the navigable by cruise ships waters

(based on Sadler and Arnold 1994:187)

Williams (1982:160) explains the unacceptability of the preposed modifiers as a consequence of the violation of the Head-Final Filter (HFF). In his opinion there is a "head-final" constraint on prenominal modifiers in English, according to which the head of a prenominal modifier must appear in final position within its own phrase. Since the adjectival modifiers above are not head-final, the syntactic constructions in (43a') and (43b') violate the HFF and are therefore not licensed. Radford (1993:84), however, points to a descriptive inadequacy in the HFF, since it fails to account for the acceptability of the following examples (taken from Zlatić (1997:34), her (17)):

- (44) a. [after dinner] speeches
b. [under the counter] transactions

Zlatic (1997:34) points out that the stress pattern on the bracketed prenominal modifiers indicates that they are compounds rather than phrases. She suggests that the head-final constraint, put forward by Williams (1982), should be reformulated in terms of an adjacency condition, according to which the noun and its premodifying adjective(s) must be adjacent. The adjacency condition offers a satisfactory explanation for the ungrammaticality of corresponding SerBoCroatian examples. In her opinion “the adjective’s modifier must undergo ‘scrambling’ in such a way that the head adjective be adjacent to the modified noun” (Zlatic 1997:35). This strategy is employed in both English and SerBoCroatian, which explains the well-formedness of the alternatives, given respectively in each (b) example below:

- (45) a. a girl [_{AdjP} suitable [_{PP} for the job]]
b. a suitable girl [_{PP} for the job]

- (46) a. *devojka* [_{AdjP} *prikladna* [_{PP} *za posao*]]
girl suitable for job
b. *prikladna devojka* [_{PP} *za posao*]

(Zlatic 1997:35)

The second type of nominal construction in which adjectives necessarily appear in a postnominal position is the adjectival modification of indefinite pronouns, such as *nešto* (*something*), *netko* (*somebody*) or *ništa* (*nothing*). Relevant examples (based on Zlatic 1997:32) are given below:

- (47) a. *nešto predivno* b. *netko pametan* c. *ništa novo*
‘something beautiful’ ‘somebody smart’ ‘nothing new’

3.3.3.2. Scrambling

With respect to the proposed ordering of prenominal elements, we may observe that certain categories within a nominal complex can exchange position. However, this permutation of elements follows certain rules, meaning that some combinations yield unacceptable results. It is important to emphasize that the observed flexibility of prenominal constituents and their permutation influence the prosody of the entire nominal expression. Constituents which do not occur in their underlying position usually bear emphatic stress. According to Zlatić (1997:36), any inversion of word order with pre-determiners and demonstratives is disallowed, whereas all other combinations seem to be acceptable. So, basically the permutation of constituents pertains to the following elements (here underlined):

**pre-determiners > demonstratives >
possessives > quantifiers/numerals > adjectives
> NOUN**

The examples given below, all of which are taken from Zlatić (1997:36ff.), are meant to illustrate various unacceptable sequences of prenominal elements:

- The unacceptability of the order *Poss/Adj - DET*:

(48) a. *moja ova ruža
my this rose
* ‘my this rose’

b. *Petrovi oni prijatelji
Peter-POSS those friends
* ‘Peter’s those friends’

c. *velika ova kuća
big this house
* 'big this house'

- the unacceptability of the order *Pos/Adj - Pre-DET* (*jedan* 'one', *svaki* 'each/every', *svi* 'all')

(49) a. *moja jedna prijateljica
my one friend
'a friend of mine'

b. *velika jedna kuća
big one house
* 'big a house'

c. ?moje / *studentove sve knjige
my / * students all books
'all books of mine / *student's all books'

d. *dobri svi studenti
good all students
'all good students'

The inversion of the order *possessive pronoun - pre-determiner sve* 'all' in (49c) is not absolutely unacceptable. The pre-determiner *sve* 'all' can also appear after demonstratives, as illustrated below (ibid.):

(50) ove sve knjige
these all books
'all these books'

According to Zlatić (1997) all other word order sequences and combinations of possessives, numerals and adjectives seem to be possible and acceptable. For example, possessive nouns can occur before descriptive adjectives:

- (51) lijepa studentova soba
beautiful student-POSS room
'the student's pretty room'

However, we may remember that, according to Leko (1999), possessives and numerals appear in front of adjectives. The alternative word order is unacceptable:

- (52) a. **tvoje** plave oči
your-NOM.FEM.PL blue-NOM.FEM.PL eyes-NOM.FEM.PL
b. *plave **tvoje** oči
c. **prve** crvene zastave
first-NOM.FEM.PL red-NOM.FEM.PL flags-NOM.FEM.PL
d. *crvene **prve** zastave

(Leko 1999:242)

When they appear together, possessives usually precede adjectival numerals. The inverse order, however, is not entirely ruled out:

- (53) a. moj prvi stroj
my-NOM.MASC.SG first NOM.MASC.SG machine-NOM.MASC.SG
b. ?prvi moj stroj

(Leko 1999:243)

The above examples clearly show that the arrangement of prenominal elements in SerBoCroatian is still a controversial issue. However, deviations from the generally accepted neutral word order are minimal, so that the overall sequence *pre-determiners* < *determiners* < *adjectives* < *NOUN* is still very relevant. A

more extensive and detailed look at the arrangement of these elements, however, will be undertaken again in chapter 10, where a syntactic analysis of the prenominal neutral word order will be provided using a split DP approach.

3.4. Conclusion

The primary goal of this chapter was to provide the reader with an insight into the relevant morphological and syntactic characteristics of Croatian nominal expressions. By comparing the morphology of Croatian noun phrases with those of English, the rich nominal inflectional morphology of Croatian nouns is clearly obvious. As has been widely accepted, the rich inflectional morphology in Slavic languages has been held largely responsible for the unavailability of indefinite and definite articles. That, in turn, has been taken to be a reason for the different syntactic structures.

After dealing with the morphological properties of Croatian nouns, particular attention was thereafter paid to the arrangement of prenominal elements within the noun phrase. Despite the minor inconsistencies identified in various discussions of prenominal word order, a neutral sequence of prenominal elements within a Croatian noun phrase was given, which will serve as the starting point for the upcoming syntactic analysis. Once again, this order is as follows:

**pre-determiners > demonstratives > possessives > quantifiers/numerals >
ADJECTIVES > NOUN**

PART II
RECONSIDERING THE PRO-NP-ARGUMENTS

CHAPTER 4

HEADEDNESS TESTS AND CROATIAN NOMINAL EXPRESSIONS

4.1. Introduction

One of the main arguments in support of the NP-analysis of nominal constructions in Croatian was provided by Zlatić (1998), who put forward the claim that Slavic nominal expressions are headed by a lexical category N and not by a functional category D. According to her, it is the noun rather than the determiner within a noun phrase that exhibits head-like properties. Zlatić (1998) uses Zwicky's (1985) *headedness* tests (*morphosyntactic locus, concord determinant, obligatory constituent, distributional equivalent, semantic argument*) to show that nominal expressions like (1) are headed by a noun and not by a determiner.

However, this claim is highly problematic when subjected to each of the tests mentioned above. In this chapter I will be thoroughly discussing each of the criteria used to determine which element is the head of a given phrase. Furthermore, I will also include the criteria *subcategorizand* and *governor* into the upcoming discussion, despite the fact that these tests were not applied to SerBoCroatian examples, because they “cannot conclusively prove whether the noun or the determiner is the head of the noun phrase” (Zlatić 1998:4). The results of my discussion will show that determiners also carry phi-features and display head-like properties.

4.2. The Morphosyntactic Locus

The morphosyntactic locus is a constituent carrying morpho-syntactic inflectional endings. Common nouns in SerBoCroatian, such as

- | | | | |
|-----|--------------|----------------|-----------------|
| (1) | grad | država | selo |
| | city-MASC.SG | country-FEM.SG | village-NEUT.SG |

carry grammatical phi-features, such as gender and number as well as animacy. Since grammatical phi-features originate on nouns and not on determiners, the noun is the morphosyntactic locus and therefore the head of a noun phrase (Zlatic 1998). However, this conclusion is not entirely unproblematic. As we will see, many determiners are also marked for number. Moreover, they show selectiveness towards their nominal complements (cf. Galasso 2001).

4.2.1. Number Feature

According to Newson et al. (2006:131), many determiners carry number features of their own:

(2)	a. these people	*these person	plural determiners
	a'. oni ljudi	*oni osoba	
	b. all answers	*all answer	
	b'. svi odgovori	*svi odgovor	
	c. each prescription	*each prescriptions	singular determiners
	c'. svaki recept	*svaki recepti	
	d. an occasion	*an occassions	
	d'. jedna prilika	?jedne prilike	

The corresponding Croatian examples, given in (2a'-d'), confirm the observation made for English. In these cases both nouns and determiners are marked for number and therefore it is rather difficult to say where the number feature is projected from.

4.2.2. Selectiveness: Number Sensitive Determiners

Galasso (2001) shows that certain determiners in English impose very tight restrictions on the selection of nouns they modify. In his paper on non-count noun

determiners, Galasso (2001:1) makes a distinction between the following types of selective determiners:

(i) Determiners like *the* modify any kind of noun [+/- count]:

- the book / the books

(ii) Determiners like *enough* modify [+ plural] and non-count nouns:

- enough books / enough money

(iii) Determiners like *several* modify [+plural] count nouns:

- several chairs / *chair / *furniture

(iv) Determiners like *much* modify singular non-count nouns:

- much furniture / *chair / *chairs

(v) Determiners like *a/an* modify only a singular, that is, [-plural] count nouns:

- a book / *books

As a follow-up, we can establish that Croatian determiners are also number-sensitive, showing selectiveness towards their nominal complements. As already introduced in (2), the indefinite determiner *svaki* 'each' and the pre-determiner *jedan* 'one' select for singular count nouns:

(3) a. jedna studentica / ??studentice

one-FEM.SG student-FEM.SG / ??students-FEM.PL

b. svaka slika / *slike

each-FEM.SG picture-FEM.SG / *pictures-FEM.PL

However, although the indefinite determiner *jedan* 'one' is in general restricted to use with singular count nouns, in certain cases it can also accompany the so-called

plurality nominals such as *jedne papuče* ‘one-PL slippers’ / *hlače* ‘trousers’ / *rukavice* ‘gloves’ / *škarice* ‘scissors’ / *novine* ‘newspapers’, etc. In these cases it is inflected for plural. With respect to this phenomenon, Zlatić (1997:54) says the following: “The fact that *jedan* inflects for plural feature in agreement with the following noun, shows that number features come from the noun rather than from *jedan*.” However, she also points out that the numeral *jedan* ‘one’ in combination with other numerals, such as 21, 31, or 101, is to be regarded as the source for number within a nominal expression. Nevertheless, the introduced observation allows us to question the status of the pre-determiner *jedan* ‘one’ in given constructions, since this rather infrequent phenomenon of plural use is regarded to be a distinguishing feature of indefinite articles³⁹ (cf. Himmelmann 2001).

The quantifiers⁴⁰ *nekoliko* ‘several’, *mnogo* ‘many’, *puno* ‘a lot of/much’, *malo* ‘little’, *više* ‘more’, *manje* ‘less’, *dosta/dovoljno* ‘enough’, *previše* ‘too much/many’, along with nouns that express an indefinite amount of something, such as *dio* ‘a part of’ or *manjina* ‘minority’/ *većina* ‘majority’, occur with nouns specified for a [+plural] feature or non-count nouns, e.g. *malo* ‘a little’ *mlijeka* ‘milk’/ *vode* ‘water’/ *vina* ‘wine’. In addition to projecting a number feature, these quantifiers assign genitive case to their nominal complement:

(4) a. *nekoliko knjiga*

several books-GEN.PL

b. Pročitala sam *nekoliko knjiga*.

read-F.SG.PAST be-1stP.SG.PRES. [*several books-GEN.PL*]-ACC.PL

‘I read several books’

c. *malo vina*

little wine -GEN.SG

³⁹ In Chapter 9 further evidence will be presented which shows that the numeral *jedan* ‘one’ regularly combines with plural nouns, and, as such, it should be regarded as an indefiniteness marker *per se*.

⁴⁰ Please note that the introduced classification of different determiner types with respect to their selectiveness properties does not form an exhaustive list.

- d. Popila sam *malo vina.*
drunk-FEM.SG.PAST be-1stP.SG.PRES. [*little wine*-GEN.SG]-ACC.SG
'I drank little wine.'

In (4a) above, the quantifier *nekoliko* 'several' assigns genitive case to the noun *knjiga* 'books', which itself obligatorily carries a [+plural] grammatical feature in such a construction. In (4b) the entire nominal complement of the verb *pročitati* 'to read' is assigned accusative case. The non-count noun *vino* 'wine' in (4c) is also assigned genitive, but with a slight difference related to the grammatical number - the nominal complement is inherently singular. Such nouns can also appear in plural, but in such cases they have a different meaning, e.g. the plural noun *vina* 'wines' denotes different sorts of wine. Being integrated within a clause as a verbal complement, the nominal expression [*malo vina*] is assigned accusative case.

The introduced examples clearly show that certain determiner types not only affect the number feature of the following nominal complement, but are also responsible for their case marking, that is, they function as case assigners in such constructions. Within the Government and Binding framework, the conditions of structural case assignment involve the structural relationship of government and c/m-command:

(5) **Government**

A governs B if and only if

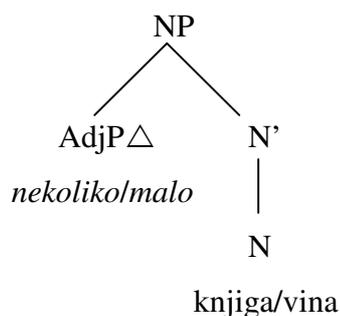
- (i) A is a governor; and
- (ii) A m-commands B; and
- (iii) no barrier intervenes between A and B.

Maximal projections are barriers to government. Governors are heads.

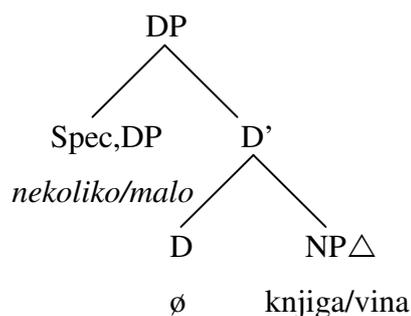
(Haegeman 1994:137)

In order to case-mark their nominal complements, the determiners *nekoliko* ‘several’/*malo* ‘little’ need to govern and c-command them. By definition, governors are heads. Let us consider the analyses favoured so far⁴¹:

(6) a. an NP-Analysis



b. a DP-Analysis

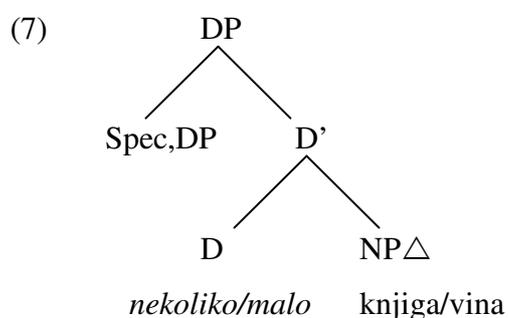


The idea that nominal expressions are NPs implies that determiners appear either as specifiers of the noun or in a position adjoined to NP (cf. Corver 1992, Zlatić 1998, Bošković 2005). The first alternative is depicted in (6a). With this alternative, note that in either of these positions the determiners *nekoliko* ‘several’ or *malo* ‘little’ would not satisfy the requirement imposed by the case-assignment condition. They are not heads, but phrasal categories, and as such, they are ruled out as governors and, consistently, as potential case-assigners.

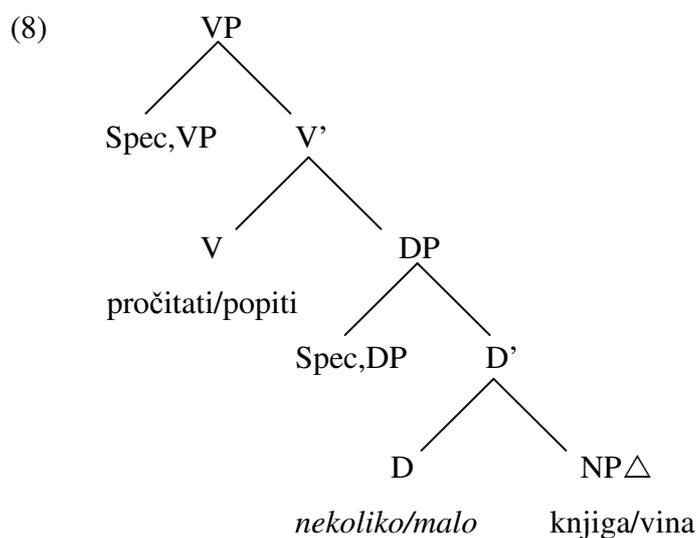
This very same observation rules out the DP-analysis of these expressions given in (6b). Both Progovac (1998) and Leko (1999) argue in favour of the DP-analysis of nominal expressions in SerBoCroatian. However, both adopt an adjectival analysis of different determiners, in which these elements appear in the specifier position of different functional categories projected above NP. As (6b) exemplifies, such an analysis would also not provide a proper explanation of the nominal expressions introduced in (4), for the very reason explicated above. If determiners are analysed as phrasal categories that occupy a specifier position,

⁴¹ The representations given in (6) above are largely oversimplified and are introduced here as such in order to show that equal treatment of all prenominal elements is not justified. Above all, as the data above suggest, these elements should not be treated as phrasal adjuncts. I also want to emphasize that none of the approaches discussed so far states that the quantifiers *nekoliko* ‘several’ or *malo* ‘little’ occupy [Spec, DP].

they cannot function as case-assigners. According to this analysis, the expressions in (4) would not be possible. Therefore, on the basis of these facts, I suggest the following interim analysis:



Given that the determiners *nekoliko* ‘several’ and *malo* ‘little’ occupy a head position within a DP, they can act as governors and assign case to their nominal complements. The analysis of the verbal domain in the clauses given in (4b, d) underscores the fact that nominal complements are case-marked by associated determiners and not by the corresponding verb (another potential governor):



On account of the minimality condition on government, if there are two potential governors, the closer one wins (cf. Haegeman 1994:163).

(9) **Relativized Minimality**

X α -governs Y only if there is no Z such that

- (i) Z is a typical potential α -governor for Y,
- (ii) Z c-commands Y and does not c-command X.

(Rizzi 1990:7)

The verbs *pročitati* 'to read' and *popiti* 'to drink' c-command and m-command the corresponding noun phrases. Both are governors and potential case assigners. However, the node Z, which is the node D in (8), intervenes and excludes the possibility that V governs the NP. This structural relationship is also made visible at the level of morphology, since both verbs are accusative case-assigners, whereas the selected NPs *knjiga* 'books' / *vina* 'wine' are inflected for genitive. All this leads to the conclusion that determiners such as *nekoliko* 'several', *mnogo* 'many', *puno* 'a lot of', *malo* 'little', *više* 'more', *manje* 'less', *dosta/dovoljno* 'enough', *previše* 'too much/many' in Croatian occupy a head position within a DP. Personal pronouns are obviously not the only category that appears in this position, as has been previously assumed (cf. Progovac 1998). However, whether they occupy the head position of a DP or of some other functional category within the extended projection of a noun phrase, is a topic for further discussion. The crucial fact, though, is that they display head properties and are, accordingly, assumed to have the status of a head within a nominal expression.

To complete the picture, other determiners, such as the proximal demonstrative *ovaj* 'this', medial demonstrative *taj* 'that' as well as the distal demonstrative *onaj* 'that', can appear with both singular and plural count and non-count nouns, as shown below:

- (10) a. ova / ta / ona-FEM.SG **knjiga**-FEM.SG
this / that / that book

b. ove / te / one-FEM.PL **knjige**-FEM.PL

these / those / those books

c. ovo / to / ono-NEUT.SG **brašno** / **vino**-NEUT.SG. NON-COUNT

this / that / that flour / wine

4.2.3. Numerals

In his discussion of Russian numeral expressions, Corbett (1993) concentrates on the *head-dependent* relation and examines numeral expressions on the basis of the criteria for heads put forward by Zwicky (1985) and Hudson (1987). In these expressions it seems as if the head properties are shared between different elements. Therefore, he analyses them with the aim of finding out whether the idea of a single head carrying all relevant features can be maintained.

Corbett (1993:12) observes that the syntactic behaviour patterns of simple cardinal numerals in Russian vary to a high degree and in such a way that “the larger the numeral, the more closely its syntactic behaviour approximates to that of a noun”. While the numeral *odin* ‘one’ agrees with the quantified noun in gender, case and number and behaves like an adjective, the cardinal numeral *million* ‘million’ does not agree with the noun, but rather displays noun-like qualities. It can take both singular and plural forms, it assigns genitive case to its nominal complement, and it can take a determiner that fully agrees with it. As far as the numerals *dva* ‘two’, *tri* ‘three’, *četire* ‘four’ and *pjat* ‘five’ are concerned, they “fall between these syntactic extremes” (ibid.). Their relation to the noun appears to be rather complex and it is difficult to isolate a single head of a phrase. With respect to the head criterion discussed here, Corbett’s (1993) analysis of a simple phrase *dva žurnala* ‘two magazines’ yields that the numeral *dva* ‘two’ should be regarded as the morphosyntactic locus and, consistently, head of its own phrase.

If we have a look at a corresponding Croatian example, then we can establish that the previous analysis of the determiners *nekoliko* ‘several’ and *malo* ‘little’ can also be applied to the analysis of the nominal expression *dva automobila* ‘two cars’, given in (11b,c), where the singular noun *automobil* ‘car’

is inflected for genitive if it is preceded by a numeral such as *dva* ‘two’. Unlike the determiner *nekoliko* ‘several’, the numeral *dva* ‘two’ selects for a singular noun. The full declension paradigm of the masculine noun *automobil* ‘car’ is given in the table below:

CASE	SINGULAR of the noun <i>automobil</i> ‘car’	PLURAL of the noun <i>automobil</i> ‘car’
Nominative	automobil	automobili
Genitive	automobila	automobila
Dative	automobilu	automobilima
Accusative	automobil	automobile
Vocative	automobilu	automobili
Locative	automobilu	automobilima
Instrumental	s automobilom	s automobilima

Table 4.1. The singular and plural declension paradigm of the noun *automobil* ‘car’

So, if a simple declarative sentence is constructed in which a verb such as *viditi* ‘to see’ subcategorizes for a nominal complement to which it regularly assigns accusative case (as in (11a)), we observe that the accusative noun *automobil* ‘car’/*automobile* ‘cars’ changes its case form if it occurs together with the numeral *dva* ‘two’, as shown in (11c):

(11) a. Vidim **automobil /automobile.**

see-1st P.SG.PRES car(s)-ACC.MASC.SG (PL)

‘I see the car(s).’

b. *dva* **automobila**

two car- GEN.MASC.SG

- c. Vidim [dva **automobila**].
see-1st P.SG.PRES [two car- GEN.MASC.SG]-ACC.MASC.PL
'I see two cars.'

The examples discussed so far show that the idea that the phi-features originate solely on nouns can obviously no longer be maintained, as Zlatić (1998) claims. Furthermore, in addition to phi-features such as case or number, we can establish that nominal expressions are also marked for the features [+/-definite] or [+/-specific]. In examples such as (12), the demonstrative determiner *taj* 'that-MED' also contributes to a specific interpretation of the definite noun *nož* 'knife' in (12b), so that the noun is not only marked for (in)definiteness, but in addition to being [+definite], it also carries the feature [+specific].

- (12) a. Molim te, daj mi nož!
Please you, give me-DAT.SG knife-ACC.SG
'Please, give me the knife!'
- b. Molim te, daj mi **taj** nož!
Please you, give me-DAT.SG that knife-ACC.SG
'Please, give me the/that knife!'

The evidence that endorses the fact that (in)definiteness- and phi-features do not originate solely on nouns also comes from languages such as German, where determiners are, for the most part, overtly marked for case and number, while the selected nouns remain uninflected (cf. Strunk 2005):

- (13) **der** Mann / **dem** Mann / **den** Mann
the-NOM.MASC.SG man / the-DAT.MASC.SG man / the-ACC.MASC.SG man

Moreover, a declension of adjectival elements within nominal expressions in German also depends on the preceding determiner:

(14) a. **beide**_{st} guten_{wk} Freunde
 both_{strong infl.} good friends

b. meine_{st} **beiden**_{wk} guten Freunde
 my both_{weak infl.} good friends

(Strunk 2005:19)

Summarizing all this, the idea can be rejected that one single element within a given projection bundles all properties typical of a syntactic head. The discussed Croatian examples, together with evidence provided from other languages (both those with and without articles), allow us to conclude that the feature complex appearing on nominal expressions does not always originate on nouns. Moreover, some phi-features apparently come from determiners.

This allows me to draw the conclusion that a noun is not the only constituent within a nominal expression responsible for the projection of grammatical phi-features, and therefore, cannot be regarded as the absolute morphosyntactic locus of the noun phrase.

4.3. The Concord Determinant

The determinant of concord is the constituent that determines the agreement features of other co-constituents. As the examples below show, Slavic determiners inflect for case, gender and number and agree in these features with the noun they specify:

(15) a. ova zanimljiva knjiga
 this-F.SG interesting-F.SG book-F.SG

b. ovaj zanimljivi čovek
 this-MASC.SG interesting-MASC.SG man-MASC.SG

(Zlatić 1998:4)

These facts led Zlatić (1998) to the conclusion that a noun is the determinant of concord within a noun phrase, and, therefore, is head of the NP.

This second morphosyntactic criterion is tightly connected with the criterion of morphosyntactic locus. As a rule, the lexical entry of a noun contains information about gender⁴². Within the nominal feature complex, the gender feature is taken to be responsible for triggering agreement patterns. Therefore, the agreement controller in the above examples is clearly the noun.

However, according to Hudson (1987:117), the agreement controller is not always the head. Moreover, he says that “the direction of concord determination has nothing at all to do with the notion ‘head’”. As shown in the previous section, other phi-features, such as case and number, are not inherent properties of nouns and can be realised on determiners as well. In these cases determiners are co-responsible for the triggered agreement pattern. As illustrated in (11c), the numeral *dva* ‘two’ imposes case and number on the noun *automobil* ‘car’, which, in turn, determines the gender of the numeral. In a parallel context related to Russian numeral expressions, Corbett (1993:16) talks about “a negotiation of features”.

If we consider other instances of a grammatical gender, as manifested on the German noun *das Mädchen* ‘the-N.SG girl’, we can see that, although the noun *Mädchen* ‘girl’ is inherently feminine, the neuter gender feature is encoded on a D-element, the definite article *das*. In German, agreement on nominal expressions largely depends on determiners (cf.14a,b). A comparison of SerBoCroatian nominal expressions with their Italian counterparts (where nouns are assumed to have a DP-structure) shows that Italian determiners also inflect for gender and number, and agree in these features with the noun they specify. However, this fact does not exclude a noun phrase from having D as its head:

⁴² Alexiadou (2004) argues that nouns are not necessarily inherently specified for the gender feature. In many cases the gender specification is assigned to nouns via morphological rules. In her examination of the gender feature in Modern Hebrew and Romance languages, Ritter (1993:795) proposes that in Hebrew gender is attached to the noun stem in the lexicon and, therefore, it necessarily appears at all levels of syntactic representation, whereas in Romance it is base-generated “as a feature on Num and may be attached to N as a consequence of syntactic head movement”. According to Picallo’s (1991) analysis of Catalan, noun phrases contain not only DPs and NumPs, but also GenPs as a separate functional category.

- (16) a. **una** **donna** **diversa**
 a-F.SG woman-F.SG different-F.SG
- b. **un'** **uomo** **diverso**
 a-MASC.SG man-MASC.SG different-MASC.SG

This evidence allows us to assume that this criterion cannot be regarded as being of crucial importance for both the identification of both the head of a nominal phrase and the determination of its internal structure.

4.4. The Obligatory Constituent / Distributional Equivalent

On the basis of the example given in (17), Zlatić (1998:4) argues that a noun is an obligatory constituent, whereas a determiner should be considered as an optional element within a nominal complex. In addition, the same example shows that an articleless noun phrase has the same distribution as a noun phrase that is modified by a determiner:

- (17) (Ovaj) **student** voli Mariju.
 this student loves Mary
 ‘This/the student likes Mary.’

However, in contexts like (18) below, the sentence becomes unacceptable if the demonstrative determiner *onaj* ‘that-DIST’ is omitted. The adverbial clause in (18) creates a particular referential context which makes the demonstrative determiner obligatory⁴³:

- (18) *(Onaj) razgovor sa svećenikom, dok je još bio dijete,
 (That) conversation with priest, while is still been child,

⁴³ The example in (18) is taken from Paulo Coelho’s book *The Fifth Mountain* (Croatian Edition). The issue regarding the optionality of determiners will be extensively discussed in Chapter 9 of this thesis, where I will show that the use of demonstrative pronouns is, to a large extent, context-dependent. Their context-sensitive nature will allow me to conclude that they can not be as easily dispensed with as has been generally assumed.

pretvorio se u sjećanje.
turned itself into memory.

'The conversation with the priest, when he was still a child, came to be a mere memory.'

Providing arguments in favour of and against the noun as head of a nominal expression, Strunk (2005:12) refers to German noun phrases, where nouns cannot always occur without determiners (as in (19a)), and to those in which nouns do not appear to be obligatory elements either (19c, d):

- (19) a. *Mensch ist gut.
man is good
- b. Wasser ist gut.
water is good
- c. Die gefällt mir.
the-F.SG. like me-DAT.SG
- d. Deins ist besser als meins.
Yours is better than mine.
- e. *manch / ein kommt.
*some / one comes

Certainly, there are also cases where a noun has to appear determinerless, as in (19b), or where a determiner cannot stand without a nominal complement (19e).

Although German noun phrases are considered to be headed by D, the above examples illustrate how blurred the picture pertaining to these two criteria seems to be. Both the distributional equivalence criterion and the obligatoriness

criterion for headedness are difficult to apply (cf. Corbett 1993, Beavers 2003). In Beavers' (2003) opinion, the head of a phrasal category is distributionally equivalent to a full phrase, which implies that these criteria do not isolate a single phrasal head. In English, where D is considered to be the head of a given phrase, both D and N are distributionally equivalent in the same manner as their Croatian counterparts. As illustrated in (20b) below, the intransitive determiner *neki* 'some' can also stand alone and has the same distribution as the entire noun phrase including it:

- (20) a. *Some people / people / some* walked without a break.
b. *Neki ljudi / ljudi / neki* su hodali bez prestanka.

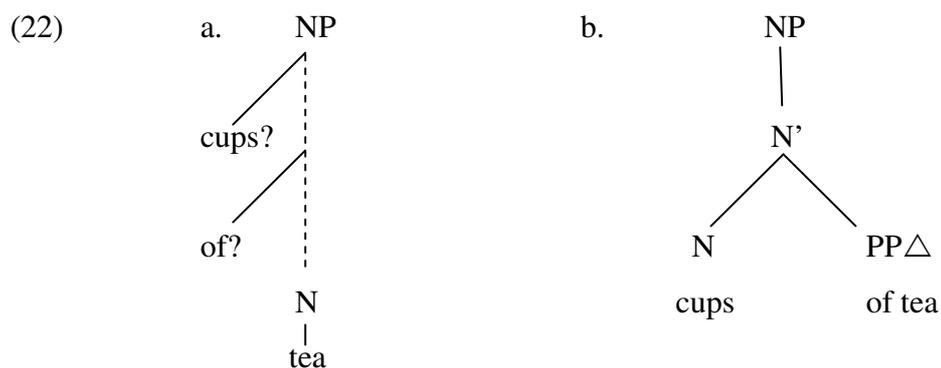
With respect to these two operational criteria, Zwicky (1985:11) himself says that "in fact they appear to be imperfect guides to the head in syntactic percolation". Furthermore, since "the head characterizes a construct in the sense that it is the one constituent that belongs to a category with roughly the same distribution as the construct as a whole" (ibid.), it is well justified to question the relevance of these operational criteria for the definition of the syntactic notion of head within a phrase. Therefore, the application of these tests does not yield a straightforward result that can be taken for granted.

4.5. The Semantic Argument

The noun is the semantic argument because "it describes the type of the object denoted by the noun phrase" (Zlatic 1998:4). This observation is definitely true of nouns, because they are defined as R-expressions. However, the fact that a word regarded to be the semantic focus within a phrase is not always a syntactic head is endorsed by the following examples (Newson et al. 2006:130):

- (21) a. cups of tea
b. go [_{PP} to London] / *go [London]

The semantically most important element in (21a) seems to be the noun *tea*, because it denotes a type of a hot beverage intended for human consumption: it is the tea that gets drunk and not a cup. Following the idea that the semantically most important element is the syntactic head of a given phrase leads to the conclusion that the noun *tea* should be the element that takes over this function. As Newson et al. (ibid.) point out, such an analysis is highly problematic, as depicted in the tree-diagram in (22a) below:



Instead, it is the noun *cup* that is the syntactic head of this phrase, taking the PP *of tea* as its complement, see (22b).

Similarly, if we consider the Croatian examples such as *boca vina* ‘a bottle of wine’, *šalica kave* ‘a cup of coffee’ or *šnita kruha* ‘a slice of bread’, the second analysis is also favoured, because the nouns *boca* ‘a bottle’, *šalica* ‘a cup’ and *šnita* ‘a slice’ additionally assign genitive case to their nominal complements. This can happen only if they are analysed as heads. The analysis of the prepositional phrase [*to London*] also supports the argument that the most important semantic element is not necessarily the syntactic head of a phrase. Although the preposition *to* contributes to the meaning of the whole phrase, it “is not clear that this should be seen as the most important aspect of the meaning of the whole phrase (ibid.)”. However, in the example the preposition *to* is the syntactic head and not “the semantically more important” noun *London*.

The semantics of both nouns and determiners is partly associated with different features. According to Beavers (2003:3), “two different kinds of semantic pieces” can be distinguished, and those are outlined below:

- (23) a. **D-Semantics:** quantification, (in)definiteness, genericity, etc.
- b. **N-Semantics:** attributive/restrictive semantics, the restriction set (dog’, cat’, fish’, etc.) of some kind of a quasi-quantificational operator.

The requirement that all well-formed noun phrases have both D-semantics and N-semantics is captured in the Nominal Phrase Semantic Well-Formedness Condition:

Nominal Phrase Semantic Well-Formedness Condition

All well-formed noun phrases must have both D-semantics and N-semantics.

(Beavers 2003:4)

The following examples, adopted from Beavers (*ibid.*), substantiate the observation that all noun phrases necessarily have both D- and N-semantics:

- (24) a. NPs displaying both D- and N-semantics:

Every fish likes the movies.

- b. NPs without nouns still display N-semantics:

(i) Ellipsis: *Although most dogs eat dog food, many e prefer cat for dinner.*

(ii) Pronominal-DPs: *These (books) / They record who won the 1967 World Series.*

c. NPs without determiners still display D-semantics:

(i) Generic: *(Some) people* know who won the 1967 World Series.

(ii) Indefinite: I saw *(some) dogs* on the lawn.

(iii) Definite: *He / Kim* knows the answer.

Following the above postulated classification, we may observe that, as expected, the same holds for the Croatian nominal expressions:

(25) a. *Svako dijete voli svoje roditelje.* (D- and N-semantics)

‘Every child loves its parents.’

b. *Iako je puno građana glasovalo, mnogi e* (Ellipsis)

nisu izašli na biranje.

‘Although *a lot of citizens* voted, *many e* did not cast their votes.’

c. *Ovaj (automobil)/on mi se sviđa.* (Pronominal-DP)

This (car) / he me-DAT REFL like.

‘I like *this (car)/it*.’

d. *(Neki) ljudi* znaju tko je pobijedio na Svjetskom (Generic)

nogometnom prvenstvu ove godine.

‘*(Some) people* know who won the Soccer World Cup this year.’

e. *(Neke) novinarke* su te tražile. (Indefinite)

‘*(Some) journalists* were looking for you.’

f. *Ona / Katarina* zna odgovor. (Definite)

‘*She / Katarina* knows the answer.’

Therefore, the semantic argument criterion does not prove to be an adequate device that can filter out and isolate a single element as a syntactic head of a

phrase. The last two *headedness* criteria on the Zwicky's (1985) list, the syntactic criteria *governor* and *subcategorizand*, were not included in Zlatić's (1998) argumentation because "they cannot conclusively prove whether the noun or the determiner is the head", because common nouns in articleless Slavic languages do not require an overt determiner (Zlatić 1998:4). Since these additional criteria offer a more straightforward insight into the headedness problematic, they will briefly be outlined in the next subsection.

4.6. Governor/Subcategorizand

The very essence of the underlying distinction between the terms *governor* and *subcategorizand* is captured in the following definitions, adopted from Hudson (1987:111), and given below:

(26) **Subcategorizand**

The constituent which is subcategorized with respect to its sisters.

Governor

The constituent which determines the morphosyntactic form of some sister.

In a syntactic construction involving *Det + N* elements, a determiner is regarded to be the subcategorizand, because it imposes very tight restrictions on its nominal complement (cf. Galasso 2001). According to Zwicky (1985:5ff.) "determiners are lexically subcategorized according to whether they can combine with singular count nouns, e.g. *each penguin/*penguins/*sand*, plural count nouns, e.g. *many *penguin /penguins/*sand*, or mass nouns, e.g. *much *penguin/*penguins /sand*".

Croatian determiners display the same property towards their nominal complements. As has already been shown, the indefinite determiner *svaki* 'each' and the pre-determiner *jedan* 'one' select for singular count nouns, the quantifiers *nekoliko* 'several', *mnogo* 'many', *puno* 'a lot of', *malo* 'little', *više* 'more', *manje* 'less', *dosta/dovoljno* 'enough', *previše* 'too much/many', etc. combine with both plural count nouns and non-count nouns, while the demonstratives *ovaj* 'this' / *taj*

'*that-MED*'/*onaj* '*that-DIST*' occur with singular and plural count and non-count nouns. Additional evidence that supports the described selectiveness of determiners pertains to the phenomenon of noun ellipsis, where some determiners permit the noun elision, while some others do not (cf. Hudson 1987). Consider the following examples:

- (27) a. Iako je *puno građana* glasovalo, *mnogi e* nisu izašli na biranje.
'Although *a lot of citizens* voted, *many e* did not cast their votes.'
- b. Iako je *puno građana* glasovalo, *malo njih* je uvjereni da će nova vlada donijeti velike promjene.
'Although *a lot of citizens* voted, *few of them* are convinced that the new government will bring major changes.'
- c. Iako je *puno građana* glasovalo, **malo ø* je uvjereni da će nova vlada donijeti velike promjene.
'Although *a lot of citizens* voted, *few *(of them)* are convinced that the new government will bring about large changes.'

As shown in (27a), the elision of the noun is possible after the determiner *mnogo* 'many', while the determiner *malo* 'few' requires the presence of its nominal complement (27c). With respect to the government criterion, the fact that the head determines the morphosyntactic features of its dependent was extensively elaborated on in the examples of the determiners *nekoliko* 'several'/*malo* 'little' and the numeral *dva* 'two', where it was shown that they assign genitive case to their nominal complements and are, therefore, responsible for their overt morphosyntactic form.

4.7. Conclusion

Based on the fact that SerBoCroatian nouns appear without articles, Zlatić (1998) has argued that Slavic nominal expressions are headed by a noun rather

than a determiner. In order to support her claim, she applies the following set of syntactic criteria, developed by Zwicky (1985), to SerBoCroatian nominal expressions: *morphosyntactic locus*, *concord determinant*, *obligatory constituent*, *distributional equivalent*, *semantic argument*. Each of these criteria are taken as substantiation of her argument that nouns, not determiners, display head-like properties. However, as I have shown, this assumption is highly questionable, because determiners also show head-like behaviour. As we could see, certain determiners not only impose very tight restrictions with respect to the number specification of their associated complement, but they are also responsible for their case-marking. This property of determiners is, in particular, evident in case of various quantifiers and numerals.

The classification of various prenominal specifiers undertaken in this chapter does not form an exhaustive list. Nevertheless, in my opinion, it suffices to show that determiners c-select their complement phrase. We may note that adjuncts do not c-select the phrase to which they adjoin (cf. Richards 2008), which basically goes against the claim concerning the phrasal status of various determiners. Adjuncts, though, are always optional. However, as shown in (18), determiners are not always optional within a noun phrase. As already indicated, this issue will be further elaborated at a later stage in this thesis. For the time being, my discussion and application of each of the tests introduced above shows that, all in all, a noun cannot be regarded ultimately as the head of a noun phrase. Moreover, determiners can also qualify as such.

CHAPTER 5

DETERMINERS - AN ADJECTIVAL CATEGORY?

5.1. Introduction

The term *determiner* was introduced by Bloomfield (1933), who employed it in order to make a distinction between *descriptive* and *limiting* adjectives, with the group of limiting adjectives being subdivided further into *determiners* and *numerals*. However, he was not the only one to recognize the differences in nominal modifiers. As Frleta (2005:71) emphasises, the linguists Du Marsais and N. Beauzee pointed to this distinction already in the 18th century. With respect to the difference between determiners and descriptive adjectives in French, Frleta (2005:72) says the following:

“Determinant je obavezni dio svake nominalne sintagme koji određuje (determinira) jednu između više imenica. Opisni pridjev je neobvezni dio nominalne sintagme, koji za razliku od determinanta može biti i dio glagolske sintagme, te opisuje imenicu u njezinoj kakvoći neovisno postoji li uz nju još neka imenica iste vrste ili ne.”

[Determiner is an obligatory part of every nominal phrase that specifies (determines) one noun among many other nouns. Descriptive adjectives are optional parts of a noun phrase, which, unlike determiners, can also be a part of a verb phrase, and which describe the noun in its quality independently of whether some other noun of the same type appears with it or not.]

(Translation DZC)

In the generative tradition, determiners and adjectives have been treated differently. While determiners are said to specify the noun they appear with, adjectives modify it, that is, they assign different qualities to the entity denoted by a given noun. While in articleless languages determiners are regarded to be an optional part of the nominal complex, in languages such as French or English they cannot be omitted. However, as already shown, this superficial subdivision does not satisfactorily deal with all (non)occurrences of determiners in both language types. Contrary to the prevalent opinion concerning the arbitrariness of determiners within the Croatian noun phrase, they are sometimes obligatory due

to the necessity of establishing the definiteness/specificity status of a nominal reference in a given context. Adjectives, on the other hand, are never obligatory. In addition to this obvious difference regarding the syntactic distribution of determiners, there is a range of morphological and syntactic properties that characterizes them and accordingly justifies their assignment to a different category.

Concerning the status and nature of determiners, both Bošković (2005, 2008, 2009) and Zlatić (1998) argue that determiners and adjectives are non-distinct categories. Hence, since determiners behave as adjectival modifiers, they belong to the same class and consistently have an adjectival status within a noun phrase. The reasons for their claim are illustrated in (1) - (4) below:

- Like adjectives, determiners agree in gender, number and case with the head noun and display adjectival morphology (have identical declension paradigms):

- (1) a. *nekim mladim djevojkama*
some-INSTR.FEM.PL young-INSTR.FEM.PL girls-INSTR.FEM.PL
b. *nekih mladih djevojaka*
some-GEN.FEM.PL young-GEN.FEM.PL girls-GEN.FEM.PL
(Bošković 2005:6)

- They can appear in typical adjectival syntactic environments in SerBo-Croatian, such as the predicate position in copula constructions (ibid.):

- (2) Ova knjiga je moja.
*this book is my
'This is my book.'

- They can stack up and display a relatively free word order, just like adjectives do (ibid.):

(3) a. ta moja slika
*this my picture

b. Jovanova skupa slika vs. skupa Jovanova slika
John's expensive picture vs. *expensive John's picture

- Like regular adjectives, determiners can be extracted from within the noun phrase:

(4) a. Ovu_i / lepu_j sam pronašla [t_i/t_j knjigu].
This/nice-A.F.SG AUX found book-A.F.SG
'This/nice I found book.'

b. Koju_i / kakvu_j si pronašla [t_i/t_j knjigu].
which/what kind-A.F.SG AUX found book-A.F.SG
'Which/what kind did you find book?'

(Zlatić 1998:7)

Following Frleta (2005), Pereltsvaig (2007) and Bašić (2004), I will provide arguments and endorse the view that determiners and adjectives are distinct categories, with different morphological and syntactic properties. In addition, in line with Newson et al. (2006), I will argue that the proposed analysis of Croatian determiners as phrasal adjuncts, which was rejected in Section 4.2 due to case assigning properties displayed by certain determiners, does not appear to be appropriate for two other reasons. First, the non-recursive nature of determiners poses a problem for such an analysis. Second, as pointed out in Newson et al. (2006:132), their assumed phrasal status leaves certain questions open, such as why determiners never have specifiers or adjuncts of their own.

5.2. Morphological Differences

5.2.1. Derivation

The group of descriptive adjectives constitutes an open class, whose inventory can be arbitrarily enlarged. Through the morphological process of affixation, adjectives can change both their form and meaning, thus creating new lexical items that enrich the existing number of lexical elements. For instance, the French adjective *rouge* changes its meaning through the attachment of the suffixes *-âtre* and *-aud* (Frleta 2005). The corresponding Croatian equivalent behaves in the same way:

- (5) a. *rouge* → *rougâtre* → *rougeaud*
b. *crven* → *crvenkast* → *zacrvenjen*
‘red → reddish → red-hot’

(Frleta 2005:73)

Unlike adjectives, the group of determiners constitutes a closed class of lexical items with a limited, clearly defined and straightforward inventory of words. The derivational process applied to the adjective *crven* ‘red’ in (5) is not productive in case of determiners⁴⁴, as illustrated in (6) below:

- (6) a. *ovaj* / * *ovajkast* / * *zaovajjen*
‘this / *thisish’
b. *taj* / * *tajkast* / * *zatajjen*
‘that / *thatish’

5.2.2. Inflection

Descriptive adjectives can create comparative and superlative forms⁴⁵. With the exception of the indefinite quantifiers *puno* ‘a lot/much/many’ and *malo*

⁴⁴ This does not mean that the derivational suffixes given above attach to every adjective. They are selective with respect to the base to which they attach.

⁴⁵ There are some adjectives that are non-gradable as well, e.g. *pregnant*, *dead* or *nuclear*. However, what I want to emphasize here is that gradability as such is not a general property of determiners.

'little', which, due to their scalar nature, take the comparative and superlative forms analogous to their English counterparts (*puno* 'much', *više* 'more', *najviše* 'the most' / *malo* 'little', *manje* 'less', *najmanje* 'the least'), determiners in general cannot be graded (ibid.):

- (7) a. lijep → ljepši → najljepši
'beautiful → more beautiful → the most beautiful'
- b. taj → *tajiji → *najtajiji / moj → *mojiji → *najmojiji
'that → *thater → *thatest / my → *myer → *the myest'

(Frleta 2005:73)

5.3. Syntactic Differences

5.3.1. Modification

The behaviour of prenominal elements indicates that they should not be treated uniformly. Descriptive adjectives can be modified by adverbs derived from various adjectives as well as by degree adverbs. Again, with the exception of certain indefinite quantifiers mentioned above, which can be modified by degree adverbs only, such modification of determiners is not possible, as the following examples illustrate:

- (8) a. nevjerovatno lijepo / veoma kratko / totalno uvjerljivo ispričana priča
incredibly nicely / very shortly / totally convincingly told story
- b. lijepo / kratko / uvjerljivo *ova / *moja / *jedna
nicely / shortly / convincingly *this / *my / *one
- c. velik / veoma velik
large / very large

- d. ova / *veoma ova / *veoma moja / *veoma jedna
this / *very this / *very my / *very one

As far as the distribution of determiners and adjectives is concerned, both appear prenominal. As outlined in the earlier chapters, the order of prenominal elements is not as free as it appears to be (compare also Pereltsvaig (2007) for Russian). When determiners and adjectives occur together in a neutral word order, determiners always precede adjectives:

- (9) a. tvoje plave oči / *plave tvoje oči
your blue eyes / *blue your eyes

Adjectival modifiers can also appear after the noun, but the unmarked postnominal occurrence is restricted to a group of so-called *heavy adjectives*, that is, adjectives that themselves take complements. They can also occupy a prenominal position and, in this case, we may observe a reversion of order between the adjective and its complement:

- (10) a. lijepa kuća / *kuća lijepa
beautiful house / *house beautiful

- b. hrana bogata vitaminima
food-NOM.F.SG rich-NOM.F.SG vitamins-INSTR.MASC.PL
/ vitaminima bogata hrana
/ vitamins- INSTR.MASC.PL rich-NOM.F.SG food- NOM.F.SG
'food rich in vitamins'

As Frleta (2005:74) points out, in languages where the prenominal and postnominal occurrence of adjectives is equally licit, a difference in meaning arises when this happens, e.g. in French *un homme grand* differs in meaning when compared to *un grand homme*. In the first case, the adjective *grand* refers to a

person's body size, whereas in a prenominal position the adjective *grand* denotes a person credited with great achievements. In the neutral word order determiners appear, as a rule, in front of the noun:

- (11) ta kuća / *kuća ta
this house / *house this

According to Frleta (ibid.), any other reversion of order between a determiner and a noun is also grammatical, but stylistically marked:

- (12) Moj Bože! / Bože moj!
My Good / Good my!"

I want to note that the above example illustrates what is known as 'a vocative construction' in Croatian, where the nominal expression functions as an invocation. Applied to (11), we may observe that the determiner *ta* cannot accompany the noun:

- (13) a. ta kuća / *Kućo ta! / Kućo!⁴⁶
that house / house that / house

5.3.2. Stacking vs. Complementary Distribution

Stacking is regarded to be a typical property of adjectival modifiers, as described in a previous chapter. With respect to this phenomenon, Bošković (2005, 2008, 2009) argues that determiners behave like adjectives, that is, they display the same syntactic behaviour as adjectives in SerBoCroatian.

The number of descriptive adjectives within the nominal complex is, at least theoretically, unlimited. As Frleta (2005:74) points out, we can have multiple appearances of descriptive adjectives in front of the noun, e.g. the noun *kuća* 'a house' can be described as *stabilna* 'robust', *lijepa* 'beautiful', *velika* 'large',

⁴⁶ I will provide an analysis of this structure in chapter 10.

crvena ‘red’, etc. The number of determiners is limited, since the speaker can choose only between a few lexical elements that specify a desired reference.

Although different determiner types can co-occur, as shown in (14a), we definitely cannot use multiple determiners of the same type (14b-e), which means that demonstrative pronouns, possessives and quantifiers are not of an iterative nature themselves, but rather appear in complementary distribution⁴⁷:

- (14) a. *ona moja prva crvena lopta*
that-DIST my first red ball
‘that first red ball of mine’
- b. **ova ona moja prva crvena lopta*
**this that my first red ball*
- c. **ona moja tvoja prva crvena lopta*
**that my your first red ball*
- d. **ona moja prva druga crvena lopta*
**that my first second red ball*
- e. **nekoliko puno previše lopta*
**several many too many balls*

According to Bašić (2004:17), the co-occurrence of determiners and possessives can be best explained “by assuming that they occupy designated specifier positions of different functional projections⁴⁸”. In addition, in many other languages, such as Italian or Hungarian, determiners and possessives also coincide (ibid.):

⁴⁷ Here probably semantics is at work. However, what is important here is that various determiners cannot appear simultaneously, while adjectives can. For example, we may speak about a *red-white-blue flag*, meaning that the flag contains all these colours, while we cannot use determiners in this way. We can either say *this flag* or *that flag*, or analogously *a flag* or *the flag*, but not **this that flag* or **a the flag*.

⁴⁸ This idea goes back to the works of Progovac (1998) and Leko (1999).

- (15) a. a te kalap-od
the you hat (Hungarian)
b. la mia penna
the my pen (Italian)

As is generally known, in English pronouns can appear together with nouns, implying that they occupy different syntactic positions (16a):

- (16) a. we scientists
b. *we the scientists
- (17) mi znanstvenici⁴⁹
we scientists

A question that arises at this point is whether there exist any elements that are mutually exclusive, or, to put it differently, are there any elements that compete for the same syntactic position within the nominal syntactic structure? Since pronouns cannot co-occur with definite articles, see (16b), they are claimed to be D-elements hosted by the functional D head (Postal 1969, Abney 1987). Comparing Croatian with English, we may see that, in the same manner, pronouns appear together with nouns (17), suggesting that they eventually occupy D position in Croatian as well⁵⁰. Pronouns and demonstratives, on the other hand, as well as pronouns and possessives are mutually exclusive, as shown below:

- (18) a. ovi / ti / oni znanstvenici
this-PROX.PL that-MED.PL that-DIST.PL scientists
b. *ovi mi znanstvenici
this-PROX.PL we scientists

⁴⁹ Example:

- (i) Mi znanstvenici, koji se bavimo genetičkim inženjerstvom u javnim zdravstvenim
We scientists, who REFL deal with genetic engineering in public health
institucijama...
institutions...

[http://www.hugi.hr/files/Hrana_dobivena_iz_biljaka_oplemenjenih_Glom.pdf]

⁵⁰ As already outlined in section 2.4.1. Progovac (1998) suggests the same in her analysis of *noun-pronoun* asymmetries.

- c. *moj / *tvoj on
my / your he

5.3.3. Predicative Constructions

A further argument in favour of the adjectival treatment of possessives in SerBoCroatian concerns their ability to appear in the predicate position of a copular construction (cf. Bošković 2005:6):

- (19) a. Ova knjiga je moja.
this book is *my / mine.

Bašić (2004:23) says that this property of possessives cannot be due to their adjectival nature. English possessives can also appear in a predicative position, but in such constructions the longer form of the possessive element, here *mine*, must be used. As proposed by Cardinaletti (1998), this can be taken as evidence that there be strong/weak opposition in the class of English possessives.

If possessives can appear in copular constructions in Croatian, we would expect all other determiners to follow suit and to display the same behaviour, since they are assumed to be of the same category. However, as illustrated by the following examples, this is not the case:

- (20) a. Ova knjiga je *jedna / ?prva / *nekoliko / *svaka / *neka.
This book is *one / ?first / *several / *each/every / *some.
- b. Knjiga je *ova / *ta / *ona.
(The) book is *this / *that-MED / *that-DIST

Since multiple occurrences of demonstrative determiners are disallowed, the example in (20b) shows that, even if the prenominal demonstrative determiner *ova* 'this' is left out, which specifies the noun *knjiga* 'book' in (20a), the predicative construction in (20b) is ruled out. Similarly, in (20a) all possibilities are

ungrammatical, except for the construction with the ordinal numeral *prva* ‘first’. Even this one is tagged with a question mark. Here, we would expect a relative clause to follow, e.g. *prva koju sam pročitala* (the first I have read). Otherwise, the acceptability of the construction is rather marginal.

5.3.4. Thematic Structure

If we reconsider those predicative constructions in which adjectives regularly appear as predicates, another syntactic property of adjectives becomes clear, and this one is atypical of determiners: adjectives have a theta grid as a part of their lexical entry and they may take arguments, as shown below:

- (21) Ja mislim da je prodavačica *poštena*.
I think that is the salesperson-FEM honest-FEM
‘I think that the salesperson is honest.’

In its function as a predicate of the subordinate clause, the adjective *poštena* ‘honest’ theta-marks its subject *prodavačica* ‘salesperson’. Apart from the fact that determiners in general do not appear in predicative constructions, they also do not have a theta grid as part of their lexical entry.

5.3.5. Binding

Bašić (2004:21ff.) provides one further argument against the adjectival treatment of possessives. She observes that, with respect to binding, possessive elements show nominal properties. In SerBoCroatian the reflexive pronoun *sebe* ‘self’, the clitic reflexive pronoun *se* ‘self’, and the possessive reflexive *svoj* ‘self’s’ are used to express reflexivity. Reflexive pronouns favour clausal subjects as their antecedents (Bašić 2004:21):

- (22) *Petar_i je dao Mariji_j svoju_{i/*j} knjigu.*
Peter AUX gave Mary self’s book
‘Peter gave Mary his book.’

Nevertheless, as Zlatić (1997) observed, possessives are also able to function as antecedents and to bind anaphors, as shown in the following example, here adopted from (Bašić 2004:21):

- (23) Petar_i je slušao *Marijino*_j opisivanje *svoje*_{*i/j} majke.
Peter AUX listened Mary's description self's mother
'Peter listened to Mary's description of her mother.'

As is known, complex nominals are assumed to contain verbal functional projections, while possessive elements are taken to act as subjects in such constructions (cf. Alexiadou 2001). Consistently, they are also assigned different thematic roles. Given that possessives are generated as subjects within complex nominals, they are able to bind the reflexive, which explains the co-indexation of the reflexive *svoje* 'self's' with the possessive noun *Marijino* 'Mary-POSS' in (23). As Bašić (2004:22) points out, "if possessives are treated uniformly as adjectives, their behaviour with respect to binding is left unexplained". Three other pieces of evidence support what has been said so far about the non-adjectival nature of determiners. They are outlined below.

5.3.6. *Wh*-Questions

If we question different elements within a noun phrase, we can establish that they are questioned by different *wh*-words (cf. also Frleta 2005). Consider the following example:

- (24) a. *onaj tvoj prvi crveni šivaći stroj*
that your first red sewing machine
'that first red sewing machine of yours'
- b. *Koji šivaći stroj?*
Which sewing machine?
→ *onaj* 'that', *prvi* 'first'

c. **Čiji** šivaći stroj?

Whose sewing machine?

→ *tvoj* 'yours'

d. **Kakav** šivaći stroj?

What kind of/which sewing machine?

→ *crveni* 'red'

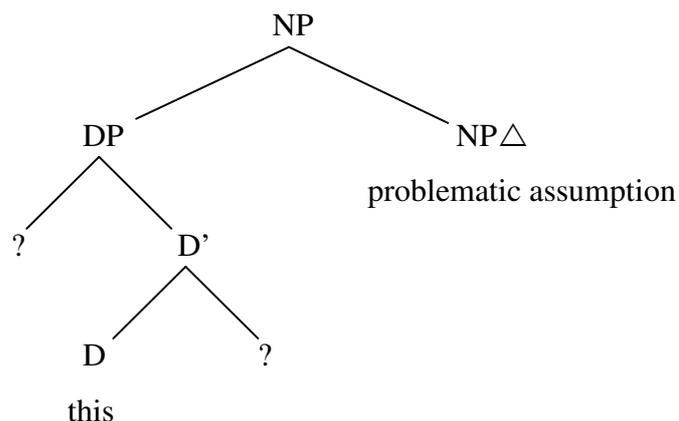
Adopting the view that determiners are of the same type as adjectival modifiers would result in the conclusion that they are recursive and, since they are analysed as phrasal adjuncts, they could be arranged in any order. The issue of word order has already been extensively discussed, with the result that determiners follow a rather strict ordering with respect to adjectives and nouns, as well as with respect to each other. Since determiners have a fixed position at the beginning of a phrase, Newson et al. (2006:132) says that, even if determiners were taken to be adjoined to NP, thus preceding AP adjuncts (which are, in his analysis, adjoined to N'), the non-recursive nature of determiners in English would pose a problem for such an analysis.

Unlike in English, determiners in Croatian can co-occur. However, demonstrative determiners, possessives and quantifiers also have a very fixed position at the beginning of a phrase, they are non-recursive, and they obey a rather strict word order.

5.3.7. Determiners as XPs?

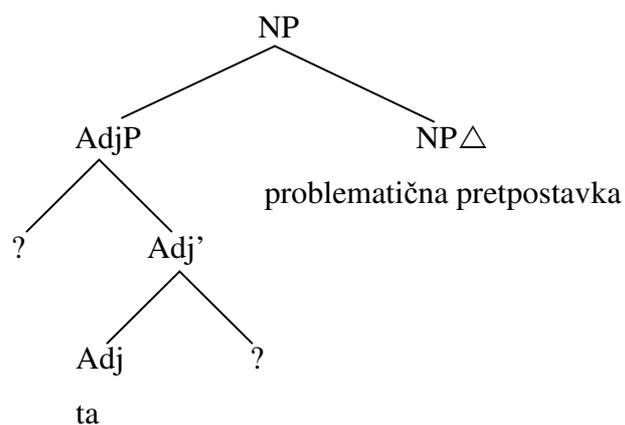
A further problem for the proposed equal treatment of determiners and adjectives concerns their analysis as phrasal adjuncts. With respect to this, Newson et al. (2006: 132) says that a “determiner looks suspiciously like a word and to analyse it as a phrase by itself begs the question of why determiners never have complements, specifiers or adjuncts of their own.” A phrasal analysis of the determiner *this* is represented below (ibid.):

(25)



The analogous analysis of the Croatian determiner *ovaj* ‘this’ as an adjectival phrasal adjunct, which is rejected here for the numerous reasons given previously, is captured in the following tree-diagram:

(26)



5.3.8. Coordination

If adjectives and determiners were of the same category, this would imply that adjectives could be replaced by determiners and vice versa. A coordination of discontinuous adjectival constituents is, however, only acceptable if an adjective is conjoined with another adjective, and not with a determiner:

- (27) a. U izlogu su /je crveni i crni / *onaj / *moj / *prvi pullover.
 In shop window are/is red and black / *that / *my / *first pullover.
 ‘There is a red and a black / *that / *my / *first pullover in the shop window.’

5.4. Conclusion

Although the adjectival treatment of all prenominal elements is widely accepted in the Slavic literature, the evidence presented so far points to a rather fundamental difference between adjectives and determiners in Croatian.

As has been shown in the numerous examples introduced and discussed in this chapter, the categories show different morphological and syntactic behaviour. It is an indisputable fact that both categories display agreement with the head noun. However, this feature is not only a common characteristic of prenominal elements in articleless languages, but also in some other DP-languages, such as Italian or German, and, hence, in my opinion, is not a very convincing argument for their categorial coherence. Due to this fact, a non-uniform treatment of these two categories seems to be more appropriate and has therefore been adopted in this thesis.

CHAPTER 6

ADJECTIVAL PREMODIFICATION IN COORDINATED NOMINAL CONSTRUCTIONS

6.1. Introduction

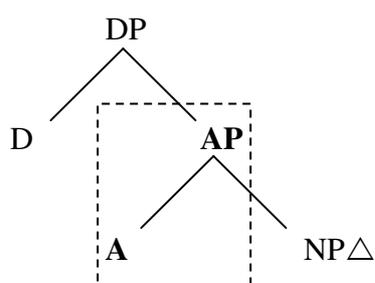
In addition to the proposed equal categorial status of determiners and adjectives in Croatian outlined in the previous chapter, proponents of the simple NP-analysis advance the view that the position of adjectival modifiers in DP and non-DP languages differs (cf. Bošković 2005, 2009, 2011). While adjectives are hosted by dedicated functional projections above NP in languages such as English, in SerBoCroatian they are taken to occupy either the specifier position of NP or a position adjoined to NP. The proposed structural difference is in line with Bošković's NP analysis of noun phrases, according to which the NP is assumed to be the highest nominal projection within the nominal complex.

However, Linde-Usiekniewicz & Rutkowski (2006) have made an interesting observation concerning adjectival modification of coordinated nouns in Polish, another articleless Slavic language. They have observed that, like in English, a single adjective appearing with coordinated nouns may refer to and modify both of these nouns. Such a wide scope reading is possible only if the adjectives are located above NP. This finding favours a DP approach to the analysis of Slavic nominal phrases. Since Polish and Croatian are very much alike, the question that arises out of the observation made for Polish is whether adjectives accompanying coordinated nouns in Croatian behave in a similar manner. The analysis of premodified coordinated nouns in Croatian presented in this chapter should provide new insight into the structural configuration of Croatian nominals.

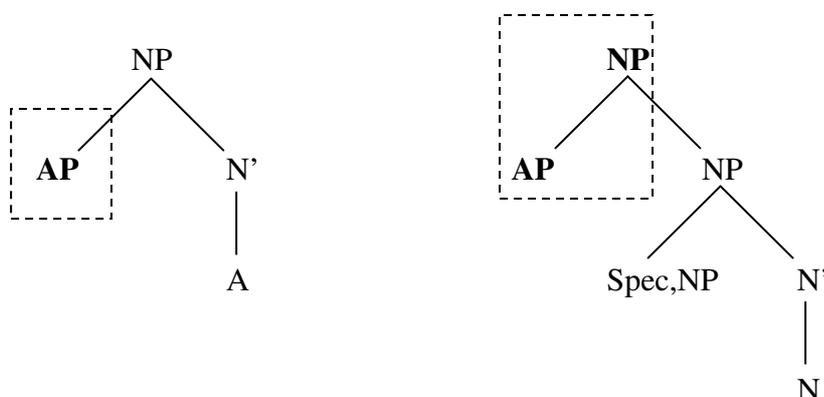
6.2. Position of Adjectives in DP- and non-DP-Languages

As outlined in chapter 2, proponents of the NP-analysis advance the view that SerBoCroatian does not project a DP layer. In addition to the claim that adjectives and determiners are categorially equal, Bošković (2005) maintains that the position of adjectives in DP and non-DP languages is different. While Abney's (1987) AP-over-NP structure is available in DP languages such as English, in SerBoCroatian the NP must be the highest nominal projection, which implies that AP occupies either the specifier position of NP or that AP is adjoined to NP. This structural difference is represented below (cf. Linde-Usiekiewicz & Rutkowski 2006:107ff.):

- (1) a. DP-languages: AP-over-NP configuration



- b. Non-DP languages: NP-over-AP configuration



6.3. NP-Coordination (Heycock and Zamparelli 2005)

The phenomenon of NP-coordination concerns the conjunction structures inside the noun phrase. According to Heycock and Zamparelli (2005), coordinated NP structures may lead to quite unexpected readings that vary across languages. In general, we may distinguish between **split and joint conjunction in the DP**, which consistently yield two different interpretations of coordinated nominals. These readings are introduced below:

- (2) a. [My [friend and colleague]] was late. joint reading
b. [That [liar and cheat]] is not to be trusted.
c. [My [father and grandfather]] were both sailors. split reading
d. [That [man and woman]] were still shouting at each other.

(Heycock and Zamparelli 2005:342)

As proposed by Heycock and Zamparelli (2005), the conjunction in (2a, b) should be interpreted in the same way as the conjunction of the predicative nominals or adjectives below (ibid.):

- (3) a. My uncle is [short and fat].
b. My aunt is [a doctor and an active member of the local union].

The overlap of properties in (3) is best captured by the operation of “property intersection”, as they put it:

- (4) my-uncle' \in [short' \cap fat']

The reading given in (2c, d) is rather unexpected. Here, the conjunction denotes distinct individuals with distinct properties. As the authors note, the split reading of the NP conjunction is available with many different determiners and noun heads in English (ibid.):

- (5) a. In today's preliminary hearings...[a [36-year-old farmer and 25-year-old X-ray technician]] both claim a right to asylum...
b. [My [mouth and throat]] went dry.
c. There is a Bastille in [every [glen and firth]].
d. ...each item consisted of so many bars of [one [tempo and time signature]]

In contrast to English, the conjunction of singular count NPs within DP in languages such as French, German, Italian and Spanish allows only the joint interpretation (Heycock and Zamparelli 2005:3):

- (6) a. [L' [amico e collaboratore] di Gianni] è stato qui.
the friend and collaborator of Gianni is been here
'Gianni's friend and collaborator was here.'
b. *[Questo [soldato e marinaio]] sono buoni amici.
this soldier and sailor are good friends
'This soldier and sailor are good friends.'

6.4. The Split Reading of Premodified Coordinated NPs in Polish (Linde-Usiekniewicz & Rutkowski 2006)

On the basis of the above described subdivision, Linde-Usiekniewicz & Rutkowski (2006:110ff.) propose that the split reading, like the one given in the English example in (7), where the determiner and adjective refer to both conjuncts of a coordinated nominal construction, can also be applied in premodified coordinated NPs in Polish, see (8a, b), here adopted from Linde-Usiekniewicz & Rutkowski (2006:112):

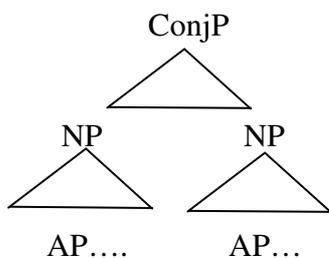
- (7) the nice [_{ConjP} boy and girl]
(8) a. Pijam gorzką herbatę i kawę.
I-drink unsweetened-SG tea and coffee
'I drink unsweetened tea and coffee.'

- b. Na kaŹdym wydziale stypendium dostanie jeden profesor, doktorant
 on each department fellowship will-get one professor, PhD-student
 i magistrant.
 and MA-student

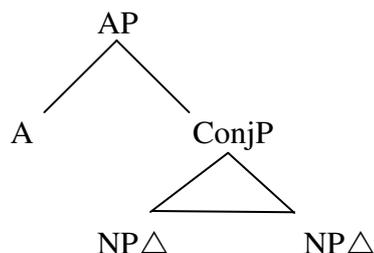
‘In each department, one fellowship will be given to a professor, one to a PhD student and one to an MA student.’

The question that arises out of the above observation is: what is the implication of the split-reading analysis for the syntax of the Polish NP, or more generally, what is the implication of such an analysis for the structure of nominal expressions in articleless languages? Linde-Usiekniewicz & Rutkowski (2006) argue that the availability of the split-reading analysis of premodified nominals in Polish provides evidence against Bošković’s (2005) NP-over-AP analysis of adjectival modifiers in non-DP languages. According to them, the NP-over-AP implies that **adjectives, being NP-internal, are expected not to be able to modify coordinated noun phrases in articleless languages**. In languages with articles this problem should not arise (Linde-Usiekniewicz & Rutkowski 2006:109):

- (9) a. Non-DP languages (NP-over-AP)



- b. DP languages (AP-over-NP)



Nevertheless, this conclusion is incorrect, because coordinated structures can have different meanings. This ambiguity arises due to the fact that nominals appear bare. Hence, the coordinated structure in (12a) may have three different interpretations (12b-d):

- (12) a. ten student i policjant
 this student and policeman
 ‘this student and policeman’
- b. this [student and policeman]
 c. [this student] and [this policeman]
 d. [this student] and [a/the policeman]

(Linde-Usiekiewicz & Rutkowski 2006:111)

The split reading is also acceptable in structures with adjectival modifiers, thus suggesting that singular NP conjuncts in Polish are “subject to modification of the wide scope type” (Linde-Usiekiewicz & Rutkowski 2006:112):

- (13) Pijam gorzką herbatę i kawę.
 I-drink unsweetened-SG tea and coffee.
 ‘I drink unsweetened tea and coffe.’

The sentence in (13) has the following meaning: *I drink unsweetened tea and unsweetened coffee*. The singular adjective *gorzką* modifies both NPs⁵¹. In order to facilitate the wide scope reading, the adjective *gorzką*, therefore, must be placed in a separate functional projection above NP. As Linde-Usiekiewicz & Rutkowski (2006:113) point out, the alternative approach to the explanation of the obtained wide scope reading in the above structure would be the ellision of the adjective (AP ellipsis under identity), as illustrated in (14) below:

⁵¹ This interpretation of the coordinated structure was confirmed by personal communication with Paweł Rutkowski.

- (14) a. *słodka herbata i kawa*
sweet-SG tea and coffee
'sweet tea and coffee'
- b. *słodka herbata i ~~słodka~~ kawa*
sweet-SG tea and sweet-SG coffee

However, they reject this analysis because it fails to account for the narrow scope reading of the type given in (12b).

6.5. Multi-Level DP-Internal Coordination

That NP cannot be treated as the highest nominal projection in Polish is further supported by the fact that phrasal categories can be coordinated at various levels within the DP, thus creating multiple DP-internal layers:

- (15) a. *te pięć dobrych polskich policjantek i lingwistek*
these five good Polish policewomen and linguists
'these five good Polish policewomean and linguists'
- b. *te pięć dobrych polskich policjantek i niemieckich lingwistek*
these five good Polish policewomen and German linguists
'these five good Polish policewomean and German linguists'
- c. *te pięć dobrych polskich policjantek i wspaniałych niemieckich
lingwistek
linguists*
'these five good Polish policewomean and excellent German linguists'

- d. *te* pięć dobrych polskich policjantek i siedem wspaniałych
these five good Polish policewomen and seven excellent
niemieckich lingwistek
German linguists
'these five good Polish policewoman and seven excellent German
linguists'

(Linde-Usiekniewicz & Rutkowski 2006:115)

Linde-Usiekniewicz & Rutkowski (ibid.) point out that Bošković's (2005) analysis of adjectives, given in (16) below, predicts that the coordinated constituents in the above examples are not phrasal constituents and therefore should not be able to function as phrasal conjuncts:

- (16) [_{NP} *te* [_{N'} *pięć* [_{N'} *dobrych* [_{N'} *polskich* [_N *policjantek*]]]]]

However, as documented in the examples (15a-d), his analysis contradicts the Polish data and does not account for the fact that in Polish "coordination is possible at many phrasal levels within the DP structure" (ibid.).

6.6. Split-Reading Constructions in Croatian

Taking the Polish data into account raises the question of whether Croatian data support Bošković's (2005) NP-over-AP analysis or not, and whether the pre-modified coordinated NP structures provide split readings analogous to those found in Polish. If the split readings happen to be available, which elements are involved in structures that provide such readings? Let us consider the following examples:

- (17) a. **Neki čovjek i žena** su nas posjetili.
some man and women are us visited
'Some man and women visited us.'

- b. **Moj otac i djed** su bili arhitekti.
my father and grandfather are been architects
'**My father and grandfather** were architects.'
- c. **Markov prijatelj i suradnik** je bio / su bili ovdje.
Marco's friend and collaborator is been / are been here.
'**Marco's friend and collaborator** was / were here.'
- d. Trebali bismo zamoliti **sve odrasle i djecu** koja dolaze u
should-1stP.PL ask all adults and children who come-3rdP.PL in
kontakt s našim mališanom da pripaze kako se izražavaju⁵².
contact with our child to be careful how self express-3rdP.PL
'We should ask **all adults and children** who get in touch with our
child to watch out how they speak to him/her.'
- e. **Sve te divne razlike i finese** čine djecu individualcima⁵³.
all these wonderful differences and finesses make children individuals
'**All these amazing differences and finesses** make our children
individuals.'
- f. Dodajte **malo soli i papra**.
add-2ndP.PL little salt-GEN.MASC.SG and pepper-GEN.MASC.SG
'Please, add **some salt and pepper**.'

The examples given in (17a-f) involve different determiner types. In (17a) the indefinite pronoun *neki* 'some' refers to both nouns, so that both *čovjek* 'man' and *žena* 'woman' receive indefinite interpretations. The possessive pronoun *moj* 'my' also refers to both nouns, implying that the coordinated nouns designate the

⁵² Source: <http://www.klinfo.hr/detaljnije/hr/moj-trogodisnjak-psuje-ne-znam-sto-da-radim/17/5929/1/>.

⁵³ This example is based on the text *Tinejdžeri i stalno mijenjanje prijatelja*, available at: <http://www.klinfo.hr/detaljnije/hr/tinejdžeri-i-stalno-mijenjanje-prijatelja/18/5153/1/>.

speaker's father and grandfather and not the speaker's father and someone else's grandfather. Whereas the joint reading is ruled out for semantic reasons in this example, in (17c) the specification of the noun by the possessive noun *Markov* 'Marco's' allows for both joint and split readings, which are additionally supported by either singular or plural verb inflection. They can be basically deduced as being one or the other. The pre-determiner *sve* 'all' in (17d) indicates that all adults and all children are supposed to take care of the way they communicate with others. In the same manner, the prenominal complex consisting of the pre-determiner *sve* 'all', the medial demonstrative *te* 'these' and the adjective *divne* 'wonderful/amazing' in (17e) modifies both nouns as well. Finally, in (17f) *malo* 'some/little' quantifies both *sol* 'salt' and *papir* 'pepper', and assigns genitive case to both of them. The introduced examples allow us to conclude that split readings of the NP conjunction are available with many different determiners and noun heads, similarly to the English sentences introduced in (5). An important consequence of the above observation is that the syntactic position of determiners cannot be NP-internal. What about adjectives? Consider the following examples:

- (18) a. Sa prijateljima koji odlaze u drugu školu, sele se u **drugi**
with friends who go away in another school, move self in another
kvart, grad ili mjesto, uz današnju
district-MASC.SG city-MASC.SG or place-NEUT.SG beside nowadays
tehnologiju, djeca mogu ostati u kontaktu⁵⁴.
technology, children can stay in contact.
‘With the help of modern technology children may keep in touch
with their friends who leave for another school, move to **another**
district, city or place.’

⁵⁴ Source: <http://www.klinfo.hr/detaljnije/hr/tinejdzeri-i-stalno-mijenjanje-prijatelja/18/5153/1/>.

- b. Neki će pokazivati **iznimnu otvorenost i energičnost**⁵⁵.
some will show extraordinary directness and impulsiveness.
‘Some will display **an extraordinary directness and impulsiveness** /
will behave extraordinarily directly and impulsively.’
- c. Ako smo nekome **dobar prijatelj ili prijateljica**,
if are-1st P.PL someone-DAT good friend-MASC.SG or friend-F.SG
prihvatićemo njegove mane i navike.
adopt will-1st P.PL his shortcomings and habits.
‘If we are **a good friend** to somebody, we will adopt his shortcomings
and habits.’
- d. Privukli su me **intenzivni okus i miris**
attracted are me-DAT intensive taste-MASC.SG and flavour-MASC.SG
bakalara i češnjaka.
dried cod-GEN.SG and garlic-GEN.SG
‘I was attracted by **an intense taste and flavour of cod fish and garlic**.’
- e. Jednostavan recept u kojem s **malo uloženog truda**
simple recipe in which with little invested effort-GEN.MASC.SG
i vremena, dobijete zaista ukusno jelo⁵⁶.
and time-GEN.NEUT.SG get-2nd P.PL. really delicious meal
‘A simple recipe, with which, if you invest **some effort and time**, you
will really get a delicious meal.’
- f. Pozvani smo na **svečani ručak i večeru**.
invited are-1st P.PL to festive lunch-MASC.SG. and dinner-F.SG.
‘We are invited to **a festive lunch and dinner**.’

⁵⁵ The examples (18b, c) are based on the text *Tinejdžeri i stalno mijenjanje prijatelja*, which is also available at: <http://www.klinfo.hr/detaljnije/hr/tinejdzeri-i-stalno-mijenjanjeprijatelja/18/5153/1/>.

⁵⁶ Source: <http://www.crochef.com/index.php?page=pretraga&type=cat&string=2&sp=3>.

rich functional structure must be projected above the NP and that NP cannot be treated as the highest maximal projection within the nominal complex⁵⁸.

⁵⁸ The wide scope of adjectives could alternatively also be achieved by their adjunction to the coordinated NP. However, since adjectives are not freely ordered, but rather appear in a certain hierarchy, as briefly touched upon in section 3.3.3.1 (cf. also Pereltsvaig 2007 for Russian), the analysis according to which they are assumed to be hosted by dedicated functional projections above NP appears to be more plausible and is to be favoured over the NP-adjunction-analysis. Whichever approach is regarded to be more appropriate, it does not affect the proposed different treatment of adjectives and determiners.

CHAPTER 7

THE ADNOMINAL GENITIVE:

POSSP AND A DP-INTERNAL NP-MOVEMENT

7.1. Introduction

According to the simple NP-Analysis, all lexical items appearing in front of a noun in Croatian, that is, both adjectives and determiners, are analysed as phrasal adjuncts. As has already been shown in the previous chapters, the syntactic behaviour of adjectives and determiners, which are claimed to be categorially equal, endorses the view that they must be treated differently. The binding properties of possessive elements, for instance, underscore their non-adjectival status.

Both this and the following chapter offer an in-depth insight into the structure of complex transitive nominals in Croatian, where possessives will be shown to act as arguments (subjects) in such constructions. They are also consistently case-marked and assigned different thematic roles. Following Alexiadou (2001), according to whom complex nominals contain verbal functional projections, I will show that this assumption also holds for complex (or argument supporting) nominals in Croatian. Neither the complexity of their syntactic structure nor the syntactic behaviour of possessive elements in such constructions can be explained by a simple NP-analysis, which treats them as phrasal adjuncts.

This chapter is organized as follows: Section 7.2 reviews a generalization on double genitive constructions postulated by Bošković (2009, 2011), who says that the unavailability of two nominal genitive arguments within transitive nominal constructions in articleless languages provides further evidence of a fundamental structural difference between these languages and languages with articles. As we will see, structures comparable to those in DP-languages are also available in Croatian. In order to understand the different syntactic behaviour of

attributive genitives in Croatian (among them the behaviour of possessive elements), section 7.3 suggests subdividing them into *athematic* and *thematic* attributive genitives, as proposed by Kuna (2003). Thematic attributive genitives are theta-marked by the head noun, while athematic ones are not. Since thematic genitives display structural alternation, surfacing either postnominally as genitive complements (e.g. *kovčeg putnika* ‘suitcase *passenger-GEN*’) or prenominally as possessives (e.g. *putnikov kovčeg* ‘*passenger-POSS* suitcase’), the question arises as to how this structural alternation can be accounted for. According to Kuna (2003), movement of a genitive complement from its postnominal to a prenominal position is driven by the necessity of the possessive element to check its definiteness feature.

Moving a step further, we will see that one of the nominal arguments within complex nominal structures necessarily surfaces as a possessive. The inability of the head noun to assign two structural genitives to its arguments is the reason for their strict syntactic distribution. It also provides an explanation for why one of them (primarily a thematic agent) appears as a possessive. A prerequisite for movement from postnominal to prenominal position within a complex nominal expression is the availability of further maximal projections above NP.

Why is it that a possessive element cannot be attached as an adjunct to the noun? First, adjuncts can iterate, while possessives obviously cannot e.g. **bratov susjedov automobil* ‘*brother’s neighbour’s car*’. Second, adjuncts are neither c-selected by the head noun, nor are they theta-marked or assigned case. Due to the overt morphological realization of the possessive suffix (e.g. *-ov*, *-ev*, *-in*) and the obligatory agreement marker, at least two other functional layers, namely the PossP (Kuna 2003) and AgrP (my own assumption), need to be projected above NP.

7.2. Double Genitive Constructions

Bošković (2008, 2009, 2011) introduced several generalisations regarding the structure of nominal expressions in articleless languages. The aim of these

generalizations is to provide further arguments for the fundamental structural difference of nominal expressions in languages with and those without articles, and to support his NP-account. Bošković (2009) refers to Willim (2000), who has claimed that languages with articles, such as English, Arabic, Bulgarian, German or Catalan, allow one external and one internal genitive argument. In those languages, genitive is realised either through a clitic/suffix or a dummy preposition:

- (1) a. Hannibals Eroberung Roms (German)
Hannibal-GEN conquest Rome-GEN
'Hannibal's conquest of Rome'
- b. l'avaluació de la comissió dels resultants (Catalan)
the evaluation of the committee of the results
'the committee's evaluation of the results'
- c. Fonetikata na bulgarskija ezik na Tilkov (Bulgarian)
the phonology of Bulgarian language of Tilkov
'Tilkov's phonology of Bulgarian language'

(Bošković 2009a:3)

Bošković (2008:5) argues that SerBoCroatian, unlike the languages given above, does not allow two nominal genitive arguments. He summarizes his finding in the following generalisation:

- (2) Languages without articles do not allow transitive nominals with two genitives.

Apart from the fact that the suffix *-s* on the noun *Hannibal* in (1a) represents a morphological realisation of the possessive comparable to Croatian possessive

affixes *-ov/ev*, *-ski*, *-ji* or *-in*, and not a genitive suffix⁵⁹, the Bulgarian example in (1c) does not involve a deverbal relational noun comparable to those given in (1a) and (1b). This leads us to question the relevance of these examples for the introduced generalisation, particularly with regard to the claim made by Bošković (2009), who claimed that this generalisation concerns only nominal arguments and not possessives. As pointed out, the German example in (1a) obviously involves a possessive construction (cf. Strunk 2004).

Bošković (2009a:3) endorses his argument with examples taken from Polish and Czech, which show the ungrammaticality of such constructions, and provides alternative grammatical representation possibilities, see (3b, d):

- (3) a. *odkrycie Ameryki Kolumba (Polish)
discovery America-GEN Columbus-GEN
'Columbus' discovery of America'
- b. odkrycie Ameryki przez Kolumba
discovery America-GEN by Columbus
- c. *zničení Říma barbarů (Czech)
destruction Rome-GEN barbarians-GEN
'The barbarian's destruction of Rome'
- d. zničení Říma Barbary
discovery Rome-GEN barbarians-INSTR

However, Bošković (2009a) provides no examples from SerBoCroatian, and he does not explain the relevance of this observation for the structure of the noun phrase. In my view, this generalisation cannot be maintained, since complex

⁵⁹ The noun *Hannibal* in (1a) agrees with the noun *Eroberung* in number, gender and case, which means that *Hannibal* is marked for nominative, not for genitive case. The suffix *-s* is the morphological instantiation of possessive. Replacing the noun *Hannibal* with its pronominal counterpart *sein* reveals the morphological agreement of the external (possessive) argument with the noun *Eroberung*: *sein-e_{POSS.NOM} Eroberung_{NOM} Roms_{GEN}*.

transitive nominal expressions in Croatian can also realise their internal and external argument in a double genitive construction through the insertion of a dummy preposition *od*, which is arbitrarily accompanied by the lexical element *strane* (*od strane* 'on the part of'), and which assigns genitive case to its nominal complement. An alternative realization of the external nominal argument is possible with the help of the possessive (pro)noun, which agrees in gender, number and case with the noun whose argument it represents:

- (4) a. Kolumbovo⁶⁰ otkriće Amerike
Columbus-POSS.NOM discovery-NOM America-GEN
'Columbus' discovery of America'
- a'. Otkriće Amerike od (strane) Kolumba
discovery-NOM America-GEN by Columbus-GEN
- b. savezničko oslobođenje neprijateljskog područja
allied forces- POSS.NOM liberation-NOM enemy's territory-GEN
'The liberation of the enemy's territory by the allied forces.'
- b'. oslobođenje neprijateljskog područja od (strane) saveznika
liberation-NOM enemy's territory-GEN by the allied forces-GEN
- c. T-Com-ova obrada korisničkih podataka
T-com- POSS.NOM processing-NOM users data-GEN
'T-com's processing of the users' data''
- c'. obrada korisničkih podataka od strane T-Com-a
processing-POSS.NOM users data-GEN by T-com-GEN

⁶⁰ The structure of possessive pronouns *njegov* 'his'/*njihov* 'their' shows that the possessive structure results from the attachment of the possessive suffixes *-ov/-ev/-in* to an inflected genitive base: *njeg*_{GEN-OV} / *njih*_{GEN-OV} (Kuna 2003:251).

d. profesorova procjena Vaših sposobnosti
professor-POSS.NOM appraisal-NOM your abilities-GEN
'Professor's appraisal of your abilities'

d'. procjena Vaših sposobnosti od (strane) profesora
appraisal-NOM your abilities-GEN by professor-GEN

In addition to the examples above, Zlatić (1998b) has also observed that two postnominal genitives can appear together. The first instance concerns deverbal nouns derived from ditransitive verbs such as *lišavati* 'to deprive', which take one accusative and one genitive internal argument:

(5) a. lišavati sestru nasljedstva
deprive sister-ACC inheritance-GEN
'to deprive the sister from her inheritance'

b. lišavanje sestre nasljedstva
deprivation-NOM sister-GEN inheritance-GEN
'depriving the sister from her inheritance'

(Zlatić 1998b:3)

The process of nominalization affects the structural accusative case, which becomes genitive. This means that the first genitive DP in (5b), the noun *sestre* 'sister', represents an instance of the structural genitive case that corresponds to the accusative nominal complement in the verbal domain. The second genitive must be inherent, since it remains preserved under the nominalization process. Zlatić (1998b:4) notes that her analysis of the above structure is "further confirmed by the fact that cross-linguistically prototypical structural cases of the clausal domain (nominative and accusative) become genitives in nominalizations, whereas oblique cases are generally retained under the nominalization process".

7.3.2. Athematic Genitives

The group of athematic attributive genitives, that is, genitives that are not Θ -marked by the head noun, can appear in neither the prenominal possessive construction nor in the PP construction, which expresses the possessive relation between the noun and its attribute. This group is further subdivided into *dijelni* (*partitive*), *objasnidbeni* (*explicative*) and *kvalitativni* (*qualitative*) genitives:

(8) a. **partitive genitive**

šalica *mlijeka* / **mliječna* šalica / *šalica *od mlijeka*
 cup *milk-GEN* / **milk-ADJ* cup / *cup *of/by milk-GEN*

b. **explicative genitive**

ideja *slobode* / **slobodna* ideja / *ideja *od slobode*
 idea *freedom-GEN* / **freedom-ADJ* idea / *idea *of/by freedom-GEN*

c. **qualitative genitive**

automobil *visoke klase* / (?) *visokoklasni* automobil
 car *upper-GEN class-GEN* / (?) *upper class-ADJ* car
 / *automobil *od visoke klase*
 / *car *of/by upper class-GEN*

(Kuna 2003:250)

Additionally, in the case of athematic genitives, the adjacency requirement must be satisfied. This means that no other category can occur between the governing head and its genitive complement, as illustrated in (9) below (*ibid.*):

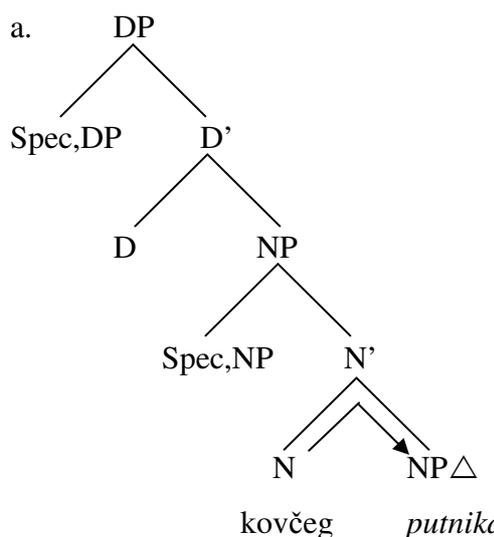
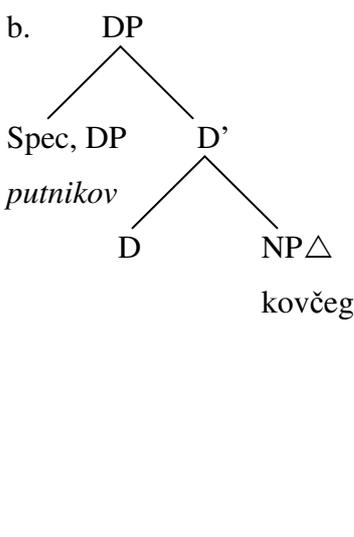
- (9) a. *šalica *moje bake* mlijeka / šalica *mlijeka moje*
 *cup *my-GEN grandmother-GEN* milk-GEN / cup *milk-GEN my-GEN*
bake
grandmother-GEN

- b. *ideja *M.Luthera Kinga* slobode / ideja slobode
 *idea *M.Luther King-GEN* freedom-GEN / idea freedom-GEN
M. L. Kinga
M.L.King-GEN
- c. *automobil *moga direktora* visoke klase / automobil
 *car *my-GEN director-GEN* upper class-GEN / car
 visoke klase *moga direktora*
 upper class-GEN *my-GEN director-GEN*

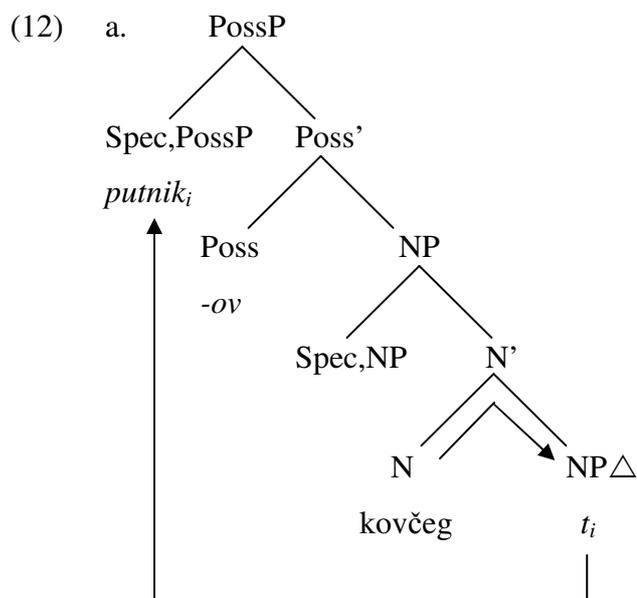
The question that arises out of this comparison and the resulting observation is how can the structural alternation of thematic genitives be accounted for. Let us consider the following example, adopted from Kuna (2002:94):

- (10) kovčeg *putnika* / *putnikov* kovčeg / *njegov* kovčeg
 suitcase *passenger-GEN* / *passenger-POSS* suitcase / *his* suitcase

The respective tree-diagram structures of the postnominal genitive construction and its possessive alternative is as follows (Kuna 2002:95):

- (11) a. 
- b. 

The above representations illustrate that the noun *putnika* ‘passenger’ in (11a) is governed and theta-marked by the head noun *kovčeg* ‘suitcase’, which assigns structural genitive case to its complement. In the alternative representation, the genitive noun has been moved from its base-generated complement position to [Spec, DP]. In this position it can neither be assigned genitive case nor can it be theta-marked, which means that it leaves a coindexed trace in its base-generated position. This movement triggers a change in the word category. The noun picks up the possessive suffix *-ov* on its way from the lower complement position to the specifier position of the DP, thus becoming a functional category, a determiner. This process necessarily presupposes the existence of a further functional layer above the NP and below the DP, the functional projection PossP:



A question that suggests itself here is what is it that triggers the above described DP-internal NP-movement? As Kuna (2003:256ff.) points out, whether the possessive element moves from its base-generated position to the specifier position of DP depends upon various syntactic, semantic and pragmatic conditions. However, the main reason for the movement is “provjera obilježja određenosti”, which roughly means that the movement is driven by the necessity of the possessive to check its definiteness feature. The possessive suffix as a

definiteness marker affects the definiteness status of the entire noun phrase and influences the overt morpho-syntactic form of the successive adjectival modifiers. When a prenominal possessive appears in combination with other adjectival modifiers, they have to be marked *definite*, as the following examples illustrate:

- (13) a. MarijinØ star-**i** rođak
 Mary-POSS old-**DEF** cousin
- b. *Marij-*in*-**i** star-**i** rođak
 Mary-*POSS-DEF* old-**DEF** cousin
- c. *MarijinØ starØ rođak
 Mary-POSS old-INDEF cousin

(Kuna 2003:258)

Unlike the descriptive adjective, which needs to be marked definite by the definiteness suffix *-i*, the derivational suffix *-in* contains such a strong definiteness feature that the possessive noun does not need any additional definiteness marker. In the case that the definiteness marker *-i* is attached to the possessive, as shown in (13b), the complete nominal phrase becomes ungrammatical. In (13c) the DP is ungrammatical, because the descriptive adjective *star* 'old' fails to be marked for definiteness.

7.4. The Syntactic Structure of Complex Transitive Nominals (Kuna 2003)

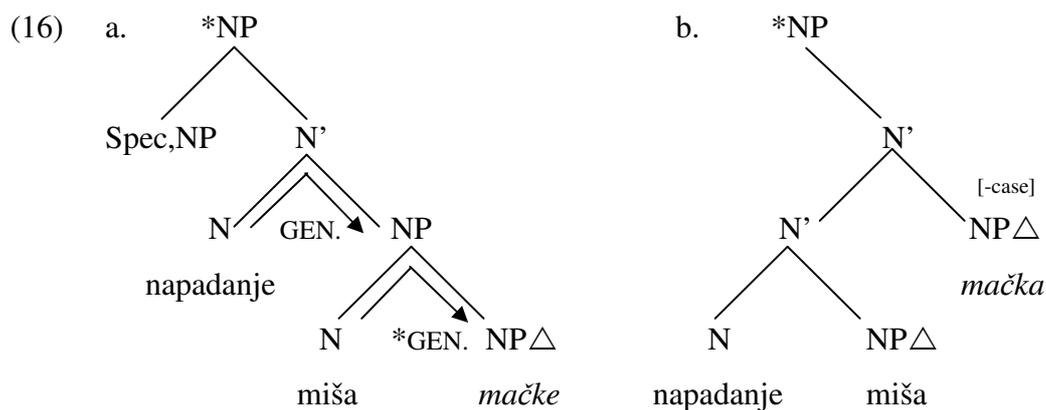
Let us now turn to the structure of complex transitive nominals. As already exemplified in (4), two genitive arguments within the complex deverbal nominal expression are allowed. In constructions with the preposition *od (strane)* 'by / on the part of', the agentival (external) argument receives its genitive case from the preposition. As Kuna (2002:61) shows, the distribution of nominal arguments within complex transitive nominals in Croatian is strictly defined and restricted to certain positions within the nominal phrase:

- (14) a. *napadanje miša mačke
attacking-NOM mouse-GEN cat-GEN
- b. *mačke napadanje miša
cat-GEN attacking-NOM mouse-GEN
- c. mačkino napadanje miša
cat-POSS attacking-NOM mouse-GEN
- d. napadanje miša od (strane) mačke
attacking-NOM mouse-GEN by (the side of) cat-GEN

As shown in (14a), two successive postnominal genitives that refer to the same head noun yield an ungrammatical construction. This construction is licit only when the second genitive is interpreted as the possessor of the first genitive. In this case the mouse belongs to the cat. The comparison of (14a) with another example adopted from Kuna (2002:64), given in (15) below, where the linearisation of genitives is perfectly acceptable, let us assume that something else causes the ungrammaticality of the above nominal expression.

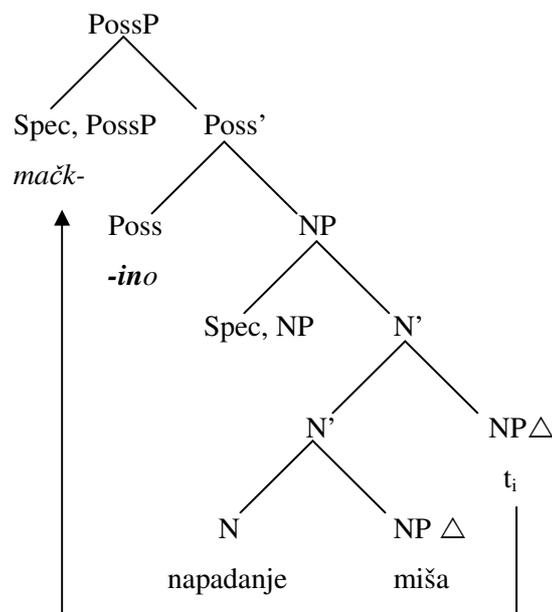
- (15) početak provedbe plana zbrinjavanja žrtava
beginning-NOM implementation-GEN plan-GEN care-GEN victims- GEN
rata
war-GEN
'the beginning of the implementation of the care programme for the war victims'

As evidenced by (14b), the linearisation of the nominal genitive arguments in (14a) does not seem to be crucial for the ungrammaticality of the given noun phrase. Although the genitive argument *mačke* 'cat-GEN' appears in front of the nominal head in (14b), the nominal expression is still ungrammatical, leading to the conclusion that certain structural aspects need to be taken into account. Consider the structural configuration of the ungrammatical NP introduced in (14a), adopted here from Kuna (2002:62):

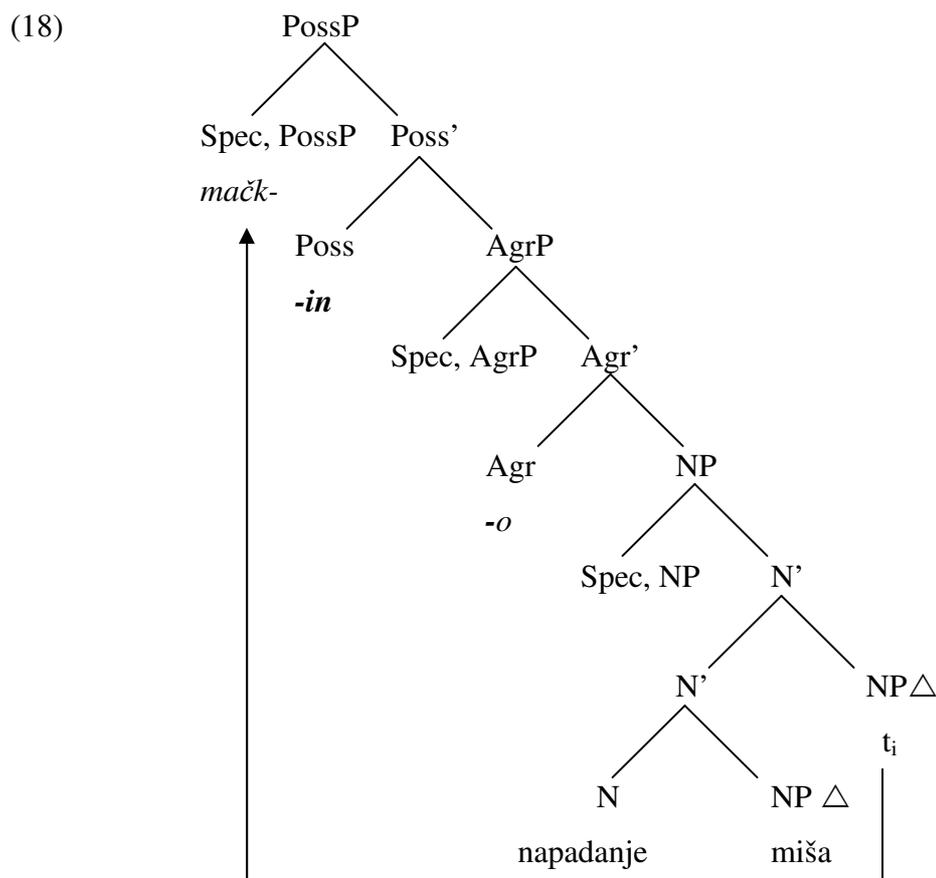


The structure given in (16a) shows that, although the principle of adjacency is satisfied, the noun *mačke* ‘cat-GEN’ cannot be assigned case. In the configuration given in (16b), there is no any potential case-assigner. Therefore, the noun *mačka* ‘cat’ needs to move out of this position into a position where it can be case-marked. There are two possibilities to save the structure: either by moving the NP to the [Spec, DP] position, or by the insertion of a dummy preposition *od* (*strane*) ‘by (on the part of)’, as occurred in (14c, d). On the basis of these considerations, the following tentative structure of complex transitive nominals in Croatian may be assumed (*ibid.*):

(17)



However, the possessive head in the above structure also accommodates, in addition to the possessive marker *-in*, the ending *-o*, which is the overt morphological marker of agreement for gender, number and case between the possessive noun *mačkino* and the noun *napadanje*. Therefore, one further functional category hosting this agreement marker should be inserted between the NP and PossP, namely the AgrP, giving rise to the following structure:



7.5. Conclusion

Contrary to Bošković's claim that two nominal genitive arguments are not allowed in SerBoCroatian, it is clear that such constructions (with the preposition *od* (*strane*)) are available and licit as an alternative to possessive constructions. Due to the lack of case that cannot be assigned to the second genitive argument in its base-generated position (when it is not introduced by the preposition *od* 'by'),

movement of the caseless argument to [Spec, PossP] takes place. In this position the noun combines with the possessive suffix, changes its category and receives its case from the noun via spec-head agreement. The syntactic process outlined above demonstrates that we necessarily have two other functional layers above the NP, namely the PossP and AgrP, and it additionally provides evidence for DP-internal NP-movement.

CHAPTER 8

ARGUMENT-SUPPORTING NOMINALIZATIONS

8.1. Introduction

This chapter builds upon the analysis of possessive structures described in the previous chapter (cf. Kuna 2003). The primary aim of this chapter is to provide a deeper insight into the structure of deverbal transitive nominals and show that the complexity of their internal syntactic structure cannot be accounted for with a simple NP-analysis.

As has already been shown, the complex nominal transitive construction introduced in (14) in the previous chapter, repeated below as (1) for the sake of convenience, involves an agentive noun that takes two arguments: the external argument *mačka* ‘cat’, realized in [Spec, PossP], and the internal argument *miš* ‘mouse’, realized as a complement to N.

- (1) a. *mačkino* napadanje miša
cat-POSS attacking-NOM mouse-GEN

In addition to the structural distribution of arguments described above, the internal structure of the noun *napadanje* ‘attacking’ itself also seems to be of a rather complex nature. The noun *napadanje* ‘attacking’ describes a repetitive and continuing process of attacking sequences. This temporal property of deverbal nouns is captured by the grammatical category of aspect (cf. Alexiadou 2001), which leads to an assumption that the syntactic structure of (1) includes further functional projections and that it cannot be reduced solely to one NP being enriched by NP-adjuncts.

This chapter is organized as follows. Since deverbal nouns are derived from the corresponding (im)perfective verbs, section 8.2 introduces the notion of aspect and its distinction in the Croatian verbal system. It also shows how

different aspectual meanings of Croatian verbs are derived (either through the attachment or the omission of verbal affixes). After a brief outline of the morphological properties of deverbal nouns in 8.3.1, section 8.3.2 will investigate the syntactic behaviour of *-nje* and *-će* deverbal nouns, with the aim of shedding further light onto their syntactic structure. According to Grimshaw (1990), deverbal nouns can be subdivided into complex event and result nominals. The former license argument structure, whereas the latter do not. However, the application of her tests to Croatian nouns yields surprising results, showing that both noun groups share a number of related properties. This significantly affects their assumed syntactic structure. Section 8.4 deals with a possible number and types of functional categories involved into their syntactic structure. Following Alexiadou et al. (2010), we will see that complex deverbal nominals, or, as they call them, argument-supporting nominalizations (ASNs), include further functional categories, such as nP, VP, AspectP, ClassP and NumberP. This section, therefore, questions whether Croatian deverbal nouns display the same functional make-up. The results of this discussion and its implications for the syntactic structure of Croatian noun phrases are summarized in 8.5.

8.2. The Notion of Aspect and Its Distinction in the Croatian Verbal System

The notion of *aspect* refers to a specific grammatical category found in the Slavic verbal system. While the verb tense relates the action described by the verb to the time of speaking, aspect describes how this action is distributed through time (cf. Kunzmann-Müller 1999). Rijkhoff (1991) makes a distinction between nominal and verbal aspect. The verbal aspect refers to the “properties and relations in the temporal dimension” that “can be characterized in terms of the typically temporal features BEGINNING and ENDING” (Rijkhoff 1991:291). The combination of these temporal features yields **four** verbal aspects, schematically represented in table 8.1 below. Rijkhoff (1991:292) points out that these aspectual distinctions “may not only be expressed grammatically, i.e. by means of inflectional morphology, but also by lexical elements or in periphrastic construction”.

TIME	<i>beginning</i> unmarked	<i>beginning</i> marked
<i>ending</i> unmarked	IMPERFECTIVE	INGRESSIVE
<i>ending</i> marked	EGRESSIVE	PERFECTIVE

Table 8.1. Verbal Aspects (Rijkhoff 1991:292)

Consider the English examples in (2) below. A comparison of (2a) and (2b) reveals that the distinction between the two is of an aspectual nature:

- (2) a. Sarah wrote a dissertation in 2009.
 It was completed in September.
 # I think she is still working on it.
 # She never finished it, for she died in September of that year.
- b. Sarah was writing a dissertation in 2009.
 It was completed in September.
 I think she is still working on it.
 She never finished it, for she died in September of that year.

(de Swart 2011:2)

The internal temporal structure of the process of dissertation writing is different in the above sentences due to the presence of the progressive form in (2b). Whereas the writing process is completed in (2a), in (2b) Sarah may still be working on her dissertation. Therefore, as de Swart (*ibid.*) points out, (2a) cannot “be followed by sentences that deny completion of the event in the past”, while (2b) allows either its completion, continuation or termination without ever being completed. The grammatical aspect marker in (2b) needs to be distinguished from the lexical

aspect (Aktionsart)⁶¹, which bears on the inherent features of the verb. Although there is no overt aspectual marker in (3), the verbs in (3a-c) describe states, processes or events with a different internal temporal structure. This different internal temporal structure and the aspectual differences of the described event in each of the sentences result from verb choice and not from the verbal inflection marker (de Swart 2011:3):

- (3) a. Bill was in love with Susan.
b. Sarah wrote a dissertation.
c. Carl reached the top of the mountain.

With respect to the grammatical category of aspect, Slavic verbs are subdivided in two classes: **perfective** and **imperfective**. The perfective-imperfective distinction in Slavic languages is taken to be encoded in the lexicon, which means that imperfective and perfective versions of one and the same verb have a separate lexical entry (cf. Aljović 1999, de Swart 2011 for Russian). Comrie (1987:16) describes the difference between the imperfective and perfective aspect as follows: the **imperfective** aspect “pays essential attention to **the internal structure of the situation**” whereas the **perfective** aspect “indicates the view of **a situation as a single whole**, without distinction of the various separate phases that make up that situation“. According to him, the perfective aspect often indicates completion of a situation. In terms of a completed action the perfective may take on a resultative meaning, e.g. the Russian *ja ugovoril^{Perf}* vs. *ja ugovorival^{Impf}* correspond to the English ‘*I succeeded in persuading him*’ vs. ‘*I tried to persuade him*’ (Comrie 1987:20).

In some languages (e.g. Ancient Greek, Spanish, Russian, Mandarin Chinese) the perfective can also have the ingressive meaning, where it is used to indicate the beginning of a situation. The Russian example given in (4a) includes both characterizations and it additionally shows that perfective verbs appear with

⁶¹ Some authors (Verkuyl 1993, Borik 2002) use different terms to refer to lexical (Aktionsart) and grammatical aspect: in their terminology INNER ASPECT corresponds to *Aktionsart* and OUTER ASPECT to grammatical aspect.

in-adverbials rather than *for*-adverbials. The completed events in the past, that are expressed by the perfective verbs, as exemplified in (4b), are not compatible with identical situations occurring at the time of speaking (de Swart 2011:9).

- (4) a. On ot-kryl^{Perf} okno *(za) dva časa.
 he open-PAST.PERF window.ACC *(in) two hours.
 ‘He opened (the/a) window in two hours/*two hours (long).’
- b. Ja pro-čitalp^{Perf} knigu. **entails** Ja (bol’še) ne čitajui^{Impf} knigu.
 I THROUGH-read-PAST.PERF book.ACC I (anymore) not read.PRES book
 ‘I read the book’ entails ‘I am not reading the book anymore.’
- (de Swart 2011:8)

As mentioned previously, the imperfective indicates a situation in progress and explicitly refers to the internal temporal structure of a situation. (Comrie 1987:25) puts forward the following subdivision of imperfective into a number of different categories, which capture the most typical aspectual values of imperfectivity:

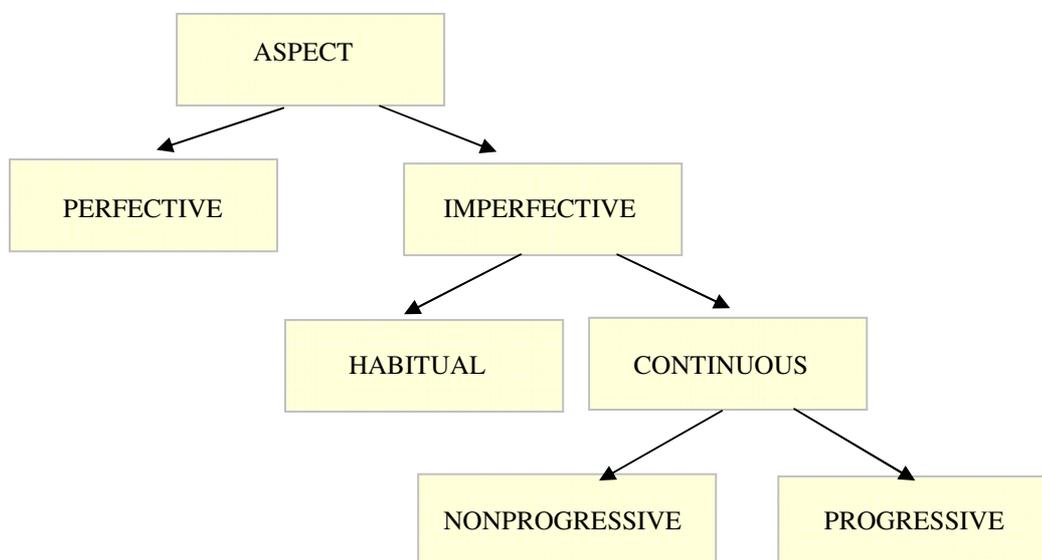


Figure 8.1: Classification of Aspectual Oppositions

The most prominent interpretations of the imperfective are the plain stative reading (5a), the ongoing process reading (5b) and the habitual reading⁶², as shown in (5c):

- (5) a. Vanja gologdal^{Impf}
Vanja was starving.IMP
- b. Petja perese^{Impf} etot kanal kogda načalsja š^{perf}orm
Peter cross.IMP.PAST.SG.MASC this channel when PERF-begin-
PST.SG.MASC storm
'Peter was crossing this channel when the storm began.'
- c. On odin iz šesti detej, I ego otec byl^{Impf} takim sil'nym, čto, kogda
synov'ja klal^{Impf} na stol orech, on - raz pal'cem! - raskalyval^{Impf} ego
lučše, čem ščipcy dlja orechov. (Hrabal, *The Mermaid*)
'He is one of six children, and his father was so strong that, whenever
the sons put a nut on the table, he - once with a finger - cracked it better
than a nutcracker.'

(de Swart 2011:9)

Different aspectual meanings of verbs in SerBoCroatian emerge either through the attachment or the omission of verbal affixes (cf. Kunzmann-Müller 1999, Arsenijević 2006). The following examples, taken from Arsenijević (2006:201), illustrate the described change in aspect caused by the addition of different verbal affixes:

- (6) a. Jovan je gur-ao^{Imperf.} kolica.
Jovan AUX push-PTC cart
'Jovan was pushing the cart.'

⁶² The examples given in de Swart are taken from Smith (1991:318), Borik (2002:48) and Berit Gehrke (personal communication), respectively.

b. Jovan je **od-gur-ao**^{Perf.} kolica.

Jovan AUX away-push-PTC cart

‘Jovan pushed the cart away.’

c. Jovan je od-gur-**av**-ao^{Imperf.} kolica.

Jovan AUX away-push-I_suff-PTC cart

‘Jovan was pushing the cart away.’

d. Jovan je **iz-od-gur-av-ao**^{Perf.} kolica.

Jovan AUX out-away-push-I_suff-PTC cart

‘Jovan completed the/some eventuality of pushing (the) carts away.’

The majority of non-affixed verbs is imperfective. This is also the case in (6a). The attachment of the prefix *od-* to the verb *gurati* ‘push^{Imperf.}’, in (6b) contributes a lexical meaning and causes a change in the aspectual value of the verb: the verb *odgurati* ‘push away’ is perfective. The infixation of the imperfective affix *-av* in (6c) does not cause any semantic shift in the meaning of the verb; it is a pure imperfective aspectual marker. The prefix *iz-* in (6d) again triggers an aspectual change, creating the perfective counterpart of the verb *odguravati* ‘push away^{Imperf.}’.

Imperfective verbs are related to atelicity, or homogeneity, whereas perfective verbs refer to telicity, or quantization (Arsenijević 2006:201). As pointed out above, the prefixation of imperfective simple verbs results in the perfective (7a, b):

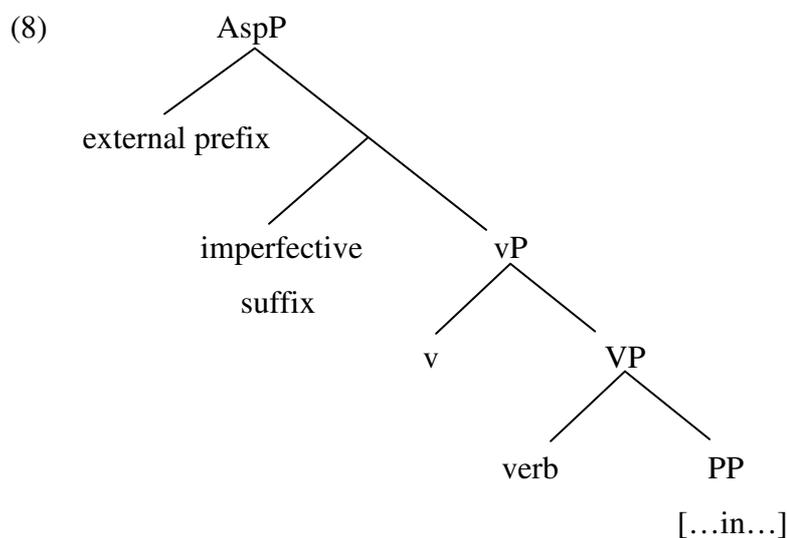
(7) a. *piti*^{Impf} ‘drink’ > *po-piti*^{Perf} ‘to drink up’

b. *čitati*^{Impf} ‘read’ > *pro-čitati*^{Perf} ‘to read over/through’

Affixes that contribute to the change of verbal aspect are subdivided into **internal** and **external** prefixes⁶³ (cf. Gehrke 2005, di Sciullo and Slabakova 2005,

⁶³ Svenonius (2004) uses the terms *lexical* (for internal) and *superlexical* (for external) prefixes.

Arsenijević 2006)⁶⁴. However, opinions regarding the contribution of affixes diverge. As (Arsenijević 2006:202) points out, “whether the prefixes mark perfectivity or whether they are simply a lexical semantic component and perfectivity is a consequence of some structural properties that the prefixes involve” remains an open issue. The term *internal prefixes* denotes those prefixes that turn simple imperfective verbs into perfective ones. The perfective aspect on such verbs can be “neutralized by the imperfective suffix *-va*” (Arsenijević 2006:203). According to this definition, the prefix *od-* in (6b) (*od-gurati*^{Perf} ‘push away’) qualifies as the internal prefix. External prefixes, on the other hand, are those “which make the verb perfective irrespective of the presence of the suffix *-va*” (ibid.). The prefix *iz-* contained in the verb ‘*iz-od-guravati*^{Perf}’ in (6d) is therefore an external prefix. Morphemes that qualify as both external and internal prefixes are basically the same. What is responsible for the distinction between the internal and external prefixes is **the different structural position** in which they appear. Prefixes can be either **within (internal)** or **out of (external) the scope of the secondary imperfective suffix *-va*** (Arsenijević 2006:211). Svenonius (2004), for instance, proposes the following structure (taken from Arsenijević 2006:212):



⁶⁴ For a detailed account of the differences between internal and external prefixes, see Svenonius (2004) and the references cited therein.

Internal prefixes attach to the (predominantly) imperfective verb stem, very often causing a change in the lexical meaning of the verb, as already shown in (7a, b). According to the above representation, internal prefixes are generated in the core of the lexical domain (deep inside the VP). Since the imperfective suffix *-va* changes the aspectual value of the prefixed perfective verbs, it obviously takes scope over the internal prefixes. For this reason Svenonius (2004) takes it to be derived in the head of the AspP. The effects triggered by the secondary imperfective suffix *-va* in Slavic are similar to those of the English progressive (Borer 2005). External prefixes can stack and they neutralize the effects of the imperfective suffix *-va*. Since they outscope the suffix *-va*, they are taken to be derived in [Spec, AspP].

Other suffixes, such as the semelfactive perfective suffix *-n(u)* and its imperfective variant *-ka/-ta*, also influence the temporal structure of the verb. For example, the semelfactive variant *vrisnuti* of the imperfective verb *vrištati* ‘to scream’ is assigned a punctual temporal interval. However, since nominals and not verbs are in the centre of my discussion, this topic will only be touched upon here. An interesting issue concerning aspect-sensitive nominals is the correlation and interaction between aspectual affixes and nominal syntactic structure.

8.3. Morphological and Syntactic Properties of Deverbal Nouns

8.3.1. Morphological Properties of Croatian *-nje/-će* Nouns

As Birtić (2008:93) points out, deverbal nouns are only one out of eleven semantic subgroups of Croatian nouns that are derived through the morphological process of suffixation. According to Croatian Grammar, deverbal nouns are defined as those that are used to denote action, including three different aspects of it: some nouns express either a state, e.g. *spavanje* ‘sleeping’, or an event, e.g. *sijevanje* ‘lightning’, while others, such as *obećanje* ‘promise’ or *pobjeda* ‘victory’, have a resultative reading (ibid.).

Deverbal nouns are derived from both imperfective and perfective verbs with the help of the following suffixes: *-nje*, *-enje*, *-će*, *-ø*, *-a*, *-ba*, *-idba*, *-ancija*, *-anija*, *-ava*, *-aj*, *-(a)k*, *-ež*, *-nja*, *-njava*. Here, only the nouns ending in *-nje* and

-će will be dealt with, since the literature on deverbal nouns in other Slavic languages (e.g. Polish, Bulgarian) discusses nouns with these endings, which allows for the cross-linguistic comparison of their syntactic behaviour. In addition, deverbal nouns ending with other suffixes are assumed to have an equal or, at least, a similar syntactic structure⁶⁵. The following description of their morphological properties is largely based on Birtić (2008:93ff.).

Opinions concerning the derivation of *nje*- and *-će* nouns diverge. For some, these nouns are **derived by adding the suffix *-je* to the passive participles of the corresponding verbs** ending in *-an*, *-en* and *-t*:

- (9) a. čitan^{PP} + *-je* > čitanje
read^{PP} + *-je* > reading
- b. otkrit^{PP} + *-je* > otkriće⁶⁶
discovered^{PP} + *-je* > discovery

Such a decomposition of *-nje* and *-će* nouns was proposed by Trezner (1970) and Skok (1971). In spite of having been recently adopted by some other linguists (cf. Bader 2010), this idea has been largely rejected, because some *-nje* nouns are derived from intransitive (unaccusative) verbs that have no passive participles. Even if they had one, their passive participles would end in *-t*:

- (10) a. vrenje^N > vreti^{Impf.V.} > *vret^{PP} => vret + je = *vreće
boiling^N > to boil^{Impf.V.} > *boilt^{PP}
- b. zrenje^N > zreti^{Impf.V.} > *zret^{PP} => zret + je = *zreće
maturing^N > to mature^{Impf} > *maturet^{PP}

⁶⁵ Birtić (2008:141ff.) also discusses the nouns ending in *-ø*, *-a*, *-aj*, *-ba*, *-idba* and *-(a)k*. For a detailed account, the reader is referred to her book.

⁶⁶ The change from *t* to *ć* is phonologically conditioned and results from the amalgamation of the sounds *t* and *j*. The term *iotation* is used to denote this phonological process.

c. tonjenje^N > tonuti^{Impf.V.} > *tonut^{PP} => tonut + je = *tonuće
sinking^N > to sink^{Impf.V.} > *sinkt^{PP}

In addition, as Birtić (2008:94) emphasizes, if we adopt such an analysis, it should be also applicable to other *-nje* nouns, such as *stajanje* ‘standing’, *spavanje* ‘sleeping’ or *trčanje* ‘running’, which are derived from the unergative intransitive verbs *stajati* ‘to stand’, *spavati* ‘to sleep’ and *trčati* ‘to run’, respectively. However, this is not the case, since the passive participles of these verbs⁶⁷ are not available in Croatian, as shown below:

- (11) a. *on je spavan / stajan / trčan
he is slept / stood / ran

The **alternative approach** favours a derivation from **the infinitival base** of a verb, **to which nominal suffixes**, among them also the suffixes *-nje* and its variants *-jenje* and *-enje* as well as the suffix *-će*, **are attached** (cf. Babić 1991). A choice of the suffix is phonologically conditioned and depends on the verb base. In contrast to the derivation proposed by Trezner (1970) and Skok (1971), this derivational process is extremely productive. Deverbal *-nje* nouns can be derived from the following verbs:

- imperfective transitive and intransitive verbs, see (12a, b)
- among the latter, both unergative (12c) and unaccusative verbs (12d), and
- perfective transitive verbs (12e).

⁶⁷ However, as Birtić (2008:142) points out, it is possible to form **impersonal** passives out of intransitive verbs. Yet, unlike impersonal passive participles that are formed from unergative verbs such as *trčati* ‘to run’ (e.g. *Po ovoj stazi je nedavno trčano* ‘This distance has been **run** recently’), impersonal passive participle constructions derived from unaccusative verbs such as *umirati* ‘to die’ are ungrammatical, e.g. **Ovdje je umirano* ‘*It was died here.’ The more common way to build impersonal passive constructions in Croatian is to use the active participle (*glagolski pridjev radni*) instead: *Po ovoj se stazi nedavno trčalo*.

Nouns derived from perfective intransitive verbs are extremely rare. The set is limited to a few examples, e.g. *pomanjkanje* ‘lacking’ or *okošćenje* ‘ossification’. The following examples provide an illustration:

- (12) a. *baca-ti*^{Impf.Inf.} > *baca* + *-nje* = *bacanje* impf.transitive verbs
 to throw^{Impf.} > throw + *-ing* = throwing
- b. *ljetova-ti*^{Impf.Inf.} > *ljetova* + *-nje* = *ljetovanje* impf. intransitive verbs
 to estivate^{Impf.} > *estivat(e)* + *-ing* = *estivating*
- c. *trča-ti*^{Impf.Inf.} > *trča* + *-nje* = *trčanje* unergative verbs
 to run^{Impf.} > run + *-ing* = *running*
- d. *leti-ti*^{Impf.Inf.} > *lete* + *-nje* = *letenje* unaccusative verbs
 to fly^{Impf.} > fly + *-ing* = *flying*
- e. *uništi-ti*^{Perf.Inf.} > *uništ* + *-enje* = *uništenje* perfect. transitive verbs
 to destroy^{Perf.} > destroy + *-ing* = *destroying/destruction

Deverbal nouns with the morphological *-će* ending are primarily derived from the verbal bases ending in *-i*, *-e*, *-u* and *-spjeti* of predominantly perfective verbs, which implies that there are also some nouns generated from imperfective ones, e.g. *ginuće* ‘dwindling/fading away’, *čeznuće* ‘yearning’ etc. According to Babić (1991), deverbal *-će* nouns result from the combination of either a transitive perfective (13a) or an intransitive perfective (13b) verbal base with the suffix *-će*:

- (13) a. *pokri-ti*^{T.Perf.Inf.} ‘to cover^{Perf.‘} > *pokri* + *-će* = *pokriće* ‘cover/covering’
 b. *potonu-ti*^{IT.Perf.Inf.} ‘to sink^{Perf.‘} > *potonu* + *-će* = *potonuće* ‘sinking’

Concerning the semantics of these nouns, there is a large interpretative difference between nouns that are formed from perfective and those that are

formed from imperfective verbal bases. For instance, nouns derived from imperfective verbs denote an ongoing process in most cases, but sometimes they can also have other readings. Sometimes they may denote both a process and a result of the action, e.g. *putovanje* ‘travel’(result) / *putovanje* ‘travelling’ (process), *buđenje* ‘rising’ (result) / *buđenje* ‘waking up’ (process), or *predavanje* ‘lecture’ (result) / *predavanje* ‘giving a lecture’ (process), as illustrated in the sentences below (Birtić 2008:143ff.):

- (14) a. Njegovo ***buđenje*** iz narkoze trajalo je čitav dan. (process)
his *waking up* from anaesthesia took the whole day
- b. *Buđenje* je svaki dan u osam sati. (result)
Rising is every day at eight o’clock.
- c. Markovo ***predavanje*** studentima trajalo je dva sata. (process)
Marco’s *giving lecture* to students took two hours
- d. Njegovo *predavanje* zadržali smo za tisak. (result)
His *lecture* kept are-1stP.PL.PAST for printing

The interpretative difference between the readings can occasionally be derived from differing stress, as is the case with the noun *putòvānje* ‘travel’ (result) / *putovánje* ‘travelling’ (process). Certain nouns (here nouns describing mental activities) that appear with the suffix *-nje* do not denote any verbal action at all, e.g. *znanje* ‘knowledge’ or *sjećanje* ‘remembrance’, while those derived from perfective verbal roots predominantly indicate the output of the action, e.g. *obećanje* ‘promise’, *izdanje* ‘edition/issue’ or *isključenje* ‘cutoff/ deactivation’. Like verbs, these nouns very often form their imperfective counterparts and build aspectual pairs through the infixation of the secondary imperfective suffix *-(a)va*, changing their meaning and associating them with an eventive reading:

- (15) a. *obecanje*^{Perf.} ‘promise’ vs. *obecavanje*^{Impf.} ‘promising’
b. *izdanje*^{Perf.} ‘edition/issue’ vs. *izdavanje*^{Impf.} ‘editing’
c. *isključenje*^{Perf.} ‘cutoff/deactivation’ vs. *isključivanje*^{Impf.} ‘cutting off’

The next subsection offers a detailed account of the syntactic behaviour of *-nje* and *-će* nouns and gives an insight into their syntactic structure.

8.3.2. Approaching Argument-Supporting *-nje/-će* Nominalizations (ASNs) (Grimshaw 1990, Birtić 2008)

According to Grimshaw (1990), deverbal nouns can be subdivided into **complex event nominals** and **result nominals**. The first group of nouns licenses argument structure, that is, they behave like verbs in requiring arguments of the noun to be realized within the DP. The result nouns lack argument structure and have no event interpretation, which means that they behave like all other nouns of non-verbal origin, e.g. *flower*, *house*, *cat* etc. (cf. Alexiadou & Grimshaw 2008). This difference is illustrated using the following examples, which clearly show that some nouns, here the noun *examination*, can be associated with more than two readings:

- (16) a. The examination of the patients took a long time. (Complex Event)
b. The examination took a long time. (Simple Event)
c. The examination was on the table. (Result)

(Alexiadou & Grimshaw 2008:2)

The difference between complex and simple event nominals pertains to the realization of their arguments. Simple event nouns also denote an event, but they “are not associated with an event structure and hence not with an argument structure” (ibid.). In order to identify the status of the examined noun, Grimshaw (1990) developed a set of criteria to determine the properties of each group and to allow us to keep them apart. A comparison of their syntactic behaviour is given in table 8.2 below:

RESULT NOMINALS	COMPLEX EVENT NOMINALS
1. Non-theta-assigner; no obligatory arguments	Theta-assigners; obligatory arguments
2. No event reading	Event reading
3. No agent-oriented modifiers	Agent-oriented modifiers
4. Subjects are possessives	Subjects are arguments
5. <i>By</i> phrases are non-arguments	<i>By</i> phrases are arguments
6. No implicit argument control	Implicit argument control
7. No aspectual modifiers	Aspectual modifiers
8. Modifiers like <i>frequent, constant</i> only with plural	Modifiers like <i>frequent, constant</i> appear with singular
9. May be plural	Must be singular

Table 8.2. Differences between result nominals and complex event nominals
(Alexiadou & Grimshaw 2008:3)

These criteria will here be applied to the discussed Croatian deverbal *-nje* and *-će* nouns. Intuitively, the potential candidates that qualify as being *argument taking* in Croatian and equivalent to English complex transitive nominals (or argument supporting nominals (ASNs) (cf. Alexiadou, Iordăchioaia and Soare 2010)) are those nouns ending with the suffix *-nje* (cf. Birtić 2008). However, as described in the previous section, the fact that both noun groups can be derived from either transitive or intransitive verbs tentatively leads to a conclusion that deverbal *-nje* and *-će* nouns in general can be both *argument taking* and *non-argument taking*. The main difference between the two concerns their aspect. But, before leaping to such conclusions, let us apply some of the Grimshaw's (1990) criteria to both noun types. For the sake of clarity, the above tests will be applied to nouns derived from imperfective verbal bases first, which predominantly affects the *-nje* nouns. These nouns are assumed to behave like complex event nominals in English. Subsequently the same tests will be applied to the nouns derived from

perfective verbs, which affects both perfective *-nje* and *-će* nouns. These nouns are assumed to display properties inherent to nouns with a resultative interpretation.

8.3.2.1. Imperfective *-nje* Nouns

Criterion No. 1: Argument supporting nominalizations (or complex event nominals in Grimshaw's terms), as their name reveals, assign theta-roles to their arguments, which must be realized within the DP. Alternatively, the external argument of the noun can be realized as a PP, headed by the preposition *by*. Result nominals take no obligatory arguments, as they do not assign theta-roles.

- (17) a. Saveznik **uništava** neprijateljske ciljeve napalm-bombama.
 allied forces-NOM destroy^{Impf.} enemy's targets-ACC napalm bombs-INSTR
 'Allied forces have been destroying enemy's targets with napalm
 bombs.'
- b. savezničko **uništavanje** neprijateljskih ciljeva napalm-bombama
 allied forces destroying^{Impf.} enemy's targets-GEN napalm bombs-INSTR

The deverbal noun *uništavanje* 'destruction^{Impf.}' in (17b), which is derived from the imperfective ditransitive verb *uništavati* 'destroy^{Impf.}', clearly preserves the properties of its verbal core, because the semantic relations established in the sentence in (17a) remain the same in (17b). Especially the assignment of genitive and instrumental case to its internal arguments in (17b) makes both the nominal and verbal characteristics of the noun *uništavanje* 'destruction^{Impf.}' obvious. Since the subject *saveznik* 'allied forces' does not refer to an individual⁶⁸, it does not

⁶⁸ According to Alexiadou (2001:103ff.), adjectival modification by group adjectives (also called *ethnic* (Alexiadou 2001, Alexiadou & Stavrou 2011) or *referential* adjectives (Giorgi & Longobardi 1991)) is licit only with result nouns in English, Greek and Romance languages. The example (17b) shows that, in Croatian, group adjectives can modify process nominals as well. This point is also raised by Birtić (2008:151), who observes the same, endorsing her claim with the following example: *njemačko bombardiranje Londona danima* 'German bombing^{Impf.} London-GEN for days'. Alexiadou & Stavrou (2011) draw a comparison between ethnic adjectives (EAs) and

napalm-bombama.

napalm bombs-INSTR

‘Allied forces have *deliberately* been destroying enemy’s targets with napalm bombs.’

- b. savezničko *namjerno* **uništavanje** neprijateljskih ciljeva napalm-
allied forces *deliberate* destroying^{Impf.} enemy’s targets-GEN napalm
bombama
bombs-INSTR

Criterion No. 3: ASNs are compatible with those aspectual modifiers that can appear with their verbal counterparts, result nouns are not.

- (19) a. Saveznik **je uništavao** neprijateljske ciljeve *danima* / **za jedan dan*.
allied forces is destroying^{Impf.} enemy’s targets-ACC *for days* /**in one day*
- b. savezničko **uništavanje** neprijateljskih ciljeva *danima*
allied forces destroying^{Impf.} enemy’s targets-GEN *for days*
- c. ?savezničko **uništavanje** neprijateljskih ciljeva *za/u jedan dan*
allied forces destroying^{Impf.} enemy’s targets-GEN *in one day*

As shown above, the ASN can be modified by the aspectual modifier (time adverbial) *danima* ‘for days’ that characterizes ongoing events that are unbounded or atelic in nature (cf. Birtić 2008:147). The appearance of the same noun with the PP *za jedan dan* ‘in one day’ is not completely ruled out, although it is much worse when compared to (19b).

Criterion No. 4: ASNs can be modified by aspectual adjectives such as *constant* or *frequent*, while result nouns cannot.

- (20) a. savezničko *konstantno/često* **uništavanje** neprijateljskih ciljeva
allied forces *constant/frequent* destroying^{Impf.} enemy's targets-GEN
napalm-bombama
napalm bombs-INSTR

Criterion No. 5: The prenominal genitive in ASN constructions is interpreted as an agent, whereas the same element, when associated with the result noun, receives a possessive reading.

- (21) a. ?/o.k. Markovo pregledavanje dugo je trajalo.
Marco-POSS examination^{Impf.} long is lasted
b. Markovo pregledavanje pacijenta trajalo je dugo.
Marco-POSS examination^{Impf.} patient-GEN lasted is long
(Birtić 2008:146)

In Croatian, the external argument of a complex eventive noun adopts the possessive form. As Birtić (2008:146) points out, in (21b) the possessive noun *Markovo* 'Marco's' is straightforwardly interpreted as the agent of the deverbal noun. The obligatoriness of the internal argument forces such interpretation. In cases where the object is left out, the ASN becomes less acceptable, as in (21a). There the possessive noun *Markovo* 'Marco's' can be interpreted either as the subject (agent) or object (experiencer) of the noun *pregledavanje* 'examination'. However, although the agentive reading is not completely ruled out (in spite of the missing internal argument) under the reading where the possessive *Markovo* 'Marco's' is assigned the role of experiencer (object), the example (21a) becomes much better and is fully acceptable.

Criterion No. 6: According to Grimshaw (1990), ASNs are of definite nature and cannot be preceded by the indefinite article *a* or the indefinite determiner *one*. By contrast, result nouns can appear with indefinite determiners.

- (22) a. *An examination of the cat was interrupted by the fireworks.
b. One exam was rejected because it was written in red ink.
c. *{the, some, a lot of} examinations of the cat
d. one exam, two exams

(Alexiadou et al. 2007:500)

This implies that ASNs behave like mass nouns and that they cannot be pluralized, as shown in (22c). This property of ASNs, although confirmed for the corresponding deverbal nouns in other Slavic languages like Polish or Bulgarian (cf. Alexiadou, Iordăchioaia and Soare 2010), does not seem to hold for their Croatian counterparts. As shown in (23), they do not seem to be incompatible with the indefinite determiner *jedan* ‘one’:

- (23) a. o.k./? Jedno Oskarovo trčanje trajalo je dva sata.
one Oscar-POSS running lasted is two hours.

- b. o.k./? Jedno Markovo pregledavanje pacijenta trajalo je
one Marco-POSS examination^{Impf.} patient-GEN.SG lasted is
tri sata.
three hours.

- c. o.k./? Jedno Markovo pregledavanje pacijenata trajalo je
one Marco-POSS examination^{Impf.} patient-GEN.PL lasted is
tri sata.
three hours.

(Birtić 2008:146)

In addition, they can pluralize, which is taken to be a property of result nouns only. For the sake of comparison between the resultative and process readings, both types of nouns are given in (24):

- (24) a. četiri Markova pregledavanja pacijenta / ?pacijenata (process)
four Marco-POSS examinations^{Impf.Pl.} patient-GEN.SG / ?patients-GEN.PL
- b. ?četiri Markova pregledavanja
four Marco-POSS examinations^{Impf.Pl.}
- c. četiri Markova pregleda pacijenta / pacijenata (result)
four Marco-POSS examinations^{Perf.Pl.} patient-GEN.SG / patients-GEN.PL
- d. četiri Markova pregleda
four Marco-POSS examinations^{Perf.Pl.}

(Birtić 2008:146)

The examples in (24a) and (24b) show that the imperfective ASN *pregledavanja* ‘examination’^{Impf.} can occur in plural. However, while the example with the internal argument marked for singular is perfectly fine, its plural variant seems to be less acceptable. Also the example with only one argument in (24b) is tagged with a question mark. The reason for this is the lack of an internal argument, which is again to the benefit of the claim regarding the necessity of argument realization, captured by criterion no.1. The perfective counterpart of the noun *pregledavanje*^{Impf.} ‘examination’^{Impf.}, namely the noun *pregled*^{Perf.} ‘examination’^{Perf.}, which can be undoubtedly classified as a result noun, licenses both the modification by numerals without the obligatory occurrence of the internal argument (24d) as well as the singular or plural marking of the internal argument *pacijent* ‘patient’ in (24c). The possessive *Markovo* ‘Marco’s’ in (24d) is interpreted as the undergoer of the verbal action, that is, as the object (experiencer) of the noun *pregled* ‘examination’^{Perf.}.

Since the judgement concerning the pluralized internal argument within the ASN in (24a) proposed by Birtić (2008) does not seem to be straightforward, further examples are needed to either confirm or invalidate her observation. That the imperfective *-nje* ASNs, along with their internal arguments, can be marked for plural, is evidenced by a range of appropriate examples, some of them given below, where the pluralized ASNs are modified by adjectives such as *numerous*, which are inherently related to number, or time-relating adverbials, which can appear as adjectives in Croatian. They not only emphasize the durative but also the repetitive nature of the given events:

- (25) a. Svakodnevna online **pregledavanja** Excel datoteka postala su rutinom
everyday online browsing^{Impf.Pl} excel files-G.PL became are routine
za djelatnike našega odjeljenja.
for employees our department-GEN
- b. Brojna tjedna **pretraživanja** web stranica od strane policije
numerous weekly scanning^{Impf.Pl} web sites-GEN.PL by police
pomogla su suzbijanju kriminala na području grada Zagreba.
helped are combating^{Impf.} crime on area city-GEN Zagreb-GEN
- c. Višesatna **preslušavanja** zatvorenika prošloga tjedna
many hours cross-examination^{Impf.Pl} prisoners-GEN.PL last week
iscrpila su trojicu činovnika zaduženih za taj posao.
exhausted are three prisoner officials in charge of that task
- d. Svakogodišnja **obavještavanja** građana o prednostima
every year informing^{Impf.Pl} citizens-GEN.PL about advantages
ulaska u Uniju koja su kućanstvima pismeno dostavljena...
entry-GEN in EU which are households-D.PL in writing communicated

Another noteworthy distinctive property of imperfective deverbal ASNs in Croatian is their ability to build negated counterparts by virtue of the verbal negative particle *ne-*, which reinforces the claim concerning their verbal origin (cf. Alexiadou 2001). The same has been reported for Polish (cf. Fokker 1966, Rozwadowska 1997). Examples are given below:

- (26) *nespavanje* ‘non-sleeping’, *neopotrebljavanje* ‘non-using’, *nerazumijevanje* ‘non-understanding’, *neosposobljavanje* ‘non-training/non-qualification’, *neshvaćanje* ‘non-comprehension’, *neprepoznavanje* ‘non-recognition’, *negledanje* ‘non-watching’, *nezamaranja* ‘non-bothering’, etc.

Summarizing the results of the application of Grimshaw’s (1990) tests, we may conclude that imperfective *-nje* nouns in Croatian display properties claimed to be inherent to ASNs or, in her terms, complex deverbal nominals. Unlike English ASNs, nouns derived from ditransitive verbs realize both internal arguments, one of which is assigned genitive and the other instrumental case. Another very striking difference concerns their plurality feature. As shown above, they can pluralize, which is due to their nominal nature, and they can even be negated by the verbal negative particle *ne-*, which can be clearly traced back to their verbal source. These properties certainly influence their syntactic structure. But, before dealing with that, deverbal *-nje* and *-će* nouns derived from perfective verbs will be discussed next. For the sake of clarity, the criteria related to result nouns will be quoted there once more.

8.3.2.2. Perfective *-nje/ -će* Nouns

Criterion No. 1: Result nominals take no obligatory arguments, since they do not assign theta-roles.

(27) a. Saveznik **je uništio** neprijateljske ciljeve napalm-bombama.
allied forces-NOM destroyed^{Perf} enemy's targets-ACC napalm bombs-INS
'Allied forces destroyed enemy's targets with napalm bombs.'

b. savezničko **uništenje** neprijateljskih ciljeva napalm-bombama
allied forces destruction^{Perf.} enemy's targets-GEN napalm bombs-INS

c. Kolumbo **je otkrio** Ameriku.
Columbus-NOM is discovered^{Perf.} America-ACC

d. Kolumbovo **otkriće** Amerike
Columbus-POSS discovery^{Perf.} America-GEN

Being derived from the perfective verbs *uništiti* 'to destroy' and *otkriti* 'to discover', both nominal expressions can realize the argumental complements of the relevant verbs. These arguments are also assigned theta-roles. Nevertheless, one of the arguments can be left out. In such cases, the argument realized as the possessive adjective within the noun phrase is interpreted as the object of the deverbal noun, as shown in (28a-c), here adopted from (Birtić 2008:148/160):

(28) a. Markovo poniženje
Marco-POSS humiliation^{Perf.}

b. *Markovo poniženje Ivana
Marco-POSS humiliation^{Perf.} Ivan-GEN

c. Ivanovo smaknuće
Ivan-POSS beheading^{Perf.}

d. Kolumbovo otkriće
Columbus-POSS discovery^{Perf.}

However, in spite of the absence of the internal argument *Amerike* ‘America’ in (28d), the possessive adjective *Kolumbovo* ‘Columbus’ is interpreted as the agent of the perfective deverbal noun *otkriće* ‘discovery’ (Birtić 2008:160). Alternatively, this argument can be realized within a PP, headed by the preposition *od* ‘by’. Contrary to expectations, we can conclude that result nouns (perfective deverbal *-nje* and *-će* nouns) in Croatian behave differently from their English counterparts with respect to the realization of arguments and that they do not abide by the generalization postulated by Grimshaw (1990).

Criterion No. 2: Result nouns cannot take agent-oriented modifiers.

(29) a. Saveznik **je namjerno uništio** neprijateljske ciljeve.
allied forces-NOM is deliberately destroyed^{Perf} enemy’s targets-ACC
napalm-bombama.
napalm bombs-INSTR
‘Allied forces deliberately destroyed enemy’s targets with napalm
bombs.’

b. savezničko *namjerno uništenje* neprijateljskih ciljeva napalm-
allied forces deliberate destruction^{Perf.} enemy’s targets-GEN napalm
bombama
bombs-INSTR

- c. Kolumbo **je nenamjerno otkrio** Ameriku.
Columbus-NOM is accidentally discovered^{Perf.} America-ACC
- d. Kolumbovo *nenamjerno otkriće* Amerike
Columbus-POSS accidental discovery^{Perf.} America-GEN

As the above examples show, result nouns in Croatian can take agent-oriented modifiers.

Criterion No. 3: Result nouns are not compatible with the aspectual modifiers that can accompany their imperfective counterparts, such as *satima* ‘for hours’:

- (30) a. Saveznik **je uništio** neprijateljske ciljeve napalm-bombama
allied forces-NOM destroyed^{Perf.} enemy’s targets-ACC napalm bombs-INS
*za dva sata /*satima.*
*in two hours/*for hours.*
‘Allied forces destroyed enemy’s targets with napalm bombs in two hours.’
- b. savezničko **uništenje** neprijateljskih ciljeva napalm-bombama
allied forces destruction^{Perf.} enemy’s targets-GEN napalm bombs-INSTR
*za dva sata /*satima.*
*in two hours/*for two hours.*
- c. Kolumbo **je otkrio** Ameriku ?*za dva mjeseca*
Columbus-NOM is discovered^{Perf.} America-ACC *in two months*
*/*mjesecima*
*/*for months.*
- d. Kolumbovo **otkriće** Amerike ?*za dva mjeseca*
Columbus-POSS discovery^{Perf.} America-GEN *in two months*
*/*mjesecima*
*/*for months*

The aspectual modifier *za dva sata* ‘in two hours’ is perfectly fine with the examples given in (30a, b). The aspectual modifier *satima* ‘for hours’ makes the examples ungrammatical. Less acceptable are the examples with time adverbials that accompany both the perfective verb *otkriti* ‘to discover’ and its deverbal counterpart in (30c, d) (cf. also Birtić 2008:161). According to Birtić (ibid.), deverbal *-će* nouns can be easily combined with the verb *početi* ‘to begin’ or *biti u tijeku* ‘to take place’, which is regarded to be possible only with complex event nominals, as shown in (31) below:

- (31) a. **Otkriće** genoma od strane svjetskih znanstvenika *je u tijeku*.
 Discovery^{Perf.} genome-GEN. by world’s scientists is taking place
 b. Počelo je neprijateljevo **zauzeće** brda.
 Begin-P.PART is enemy’s occupation^{Perf.} mountain-GEN

(Birtić 2008:161)

Criterion No. 4: Result nouns cannot be modified by aspectual adjectives such as *constant* or *frequent*.

- (32) a. *savezničko *konstantno/često* **uništenje** neprijateljskih ciljeva
 allied forces *constant/frequent* destroying^{Impf.} enemy’s targets-GEN
 napalm-bombama
 napalm bombs-INST
 b. *Kolumbovo *konstantno/često* **otkriće** Amerike
 Columbus-POSS *constant/frequent* discovery^{Perf.} America-GEN

Criterion No. 5: The prenominal genitive in ASN constructions is interpreted as an agent, while the same element, when associated with the result noun, receives a possessive reading.

As already shown in (28), prenominal possessives in Croatian are interpreted either as theme (experiencer) or agent of the result noun, contrary to Grimshaw's (1990) assumption.

Criterion No. 6: Result nouns can appear with indefinite determiners such as the indefinite article *a* or the indefinite determiner *one*. In addition, they behave like count nouns, that is, they can be accompanied by numerals and can be pluralized:

- (33) a. jedno Markovo **poniženje**
one Marco-POSS humiliation
- b. pet Markovih poniženja
five Marco-POSS humiliations-GEN.PL
- c. jedno sutkinjino **ukinuće** zabrane
one judge-POSS repeal prohibition-GEN
- d. tri Markova promaknuća zaposlenika
three Marco-POSS promotions-GEN.PL employees-GEN.PL

(Birtić 2008:148/161)

As we can see, the syntactic properties of the deverbal *-nje* and *-će* result nouns in Croatian do not entirely follow the subdivision proposed by Grimshaw (1990). In some respects they behave like imperfective ASNs, as exemplified by the results of Grimshaw's test related to criteria 1, 2 and 5. Under these tests, result *-nje* and *-će* nouns in Croatian are shown to assign theta-roles to their arguments, which are consistently interpreted as either agent or theme (experiencer) of the related deverbal noun. In addition, they can take agent-oriented modifiers. What distinguishes them from imperfective ASNs is their

incompatibility with aspectual modifiers of the type *for hours/days/weeks/months* as well as the aspectual adjectives *constant/frequent*. Since imperfective ASNs can also be marked for plural, the latter property seems to be the only valid criterion for their differentiation in Croatian. Their eventive or resultative reading is carried by their imperfective/perfective aspect marking. Since both groups of nouns obviously share a number of properties, the question is how this affects their syntactic structure and whether any significant differences should be assumed there.

8.4. The Syntactic Analysis of *-nje/-će* ASNs

8.4.1. Argument Structure

Before proceeding to compare Croatian ASNs with their Polish and Bulgarian counterparts (as represented in Alexiadou, Iordăchioaia and Soare 2010), the question arises as to which functional categories are generally assumed within the syntactic representation of ASNs. The syntactic structure of ASNs is believed to be similar to that of verbs, because they license and require arguments (cf. Alexiadou et al. 2007).

Like the realization of verbal arguments, the principal arguments of the head noun within a DP are hierarchically ordered (cf. Grimshaw 1990, Longobardi 2001). Thematic subjects (e.g. Agents) appear before direct and indirect objects (e.g. Themes)⁶⁹. Subjects are consistently taken to occupy higher syntactic positions within both CP and DP than the objects of relative verbs or deverbal nouns. Unlike verbs, DPs license “another argument or quasi-argument to appear, the so-called Possessor or R-related phrase [...], which does not exist in clausal structures” (Longobardi 2001:562). Based on the evidence provided by the Romance languages, Longobardi (2001) concludes that Possessors appear higher than Subjects, yielding the following hierarchy: Possessor > Subject > Object.

Since the external arguments of deverbal nouns take on a possessive form in Croatian, as evidenced by the numerous examples introduced so far, following

⁶⁹ The thematic hierarchy assumed in Grimshaw (1990:8), here taken from Alexiadou et al. (2007:503), is as follows: Agent > Experiencer > Goal/Source/Location > Theme.

Longobardi (2001), we might assume that possessives, although interpreted as agents (subjects of the corresponding DP) might occupy a different structural position than their non-possessive counterparts functioning as nominal subjects in other languages. In addition, possessors interpreted as subjects (agents) in e.g. *Kolumbovo otkriće Amerike* ‘Columbus’ discovery of America’, and those that do not have an agentive reading but only express a possessive relation, such as *Kolumbova odjeća* ‘Columbus’ garments’, might also be taken to occupy a different syntactic position within a DP⁷⁰. However, this topic is too complex to be dealt with here.

What is responsible for the realization of arguments within DP?⁷¹ According to some proposals (cf. Hazout 1991, 1994, Alexiadou 2001, Borer 1993, 2003, 2005, among others), the realization of arguments within a DP is linked to the presence of the VP node within the syntactic structure of these nouns. The projection of the VP node within the DP is endorsed by the fact that some essential properties associated with VPs (e.g. the argument realization alluded to above, adverbial modification or case assignment) appear with ASNs. In the case of Croatian ASNs, as we have seen in (17) and (27) for instance, repeated below for the sake of convenience as (34a) and (34b) respectively, the

⁷⁰ Birtić (2008:156) also admits to this possibility. She refers back to Zlatić (1997b), who provides evidence related to an asymmetry observed with respect to the binding properties of the complex event vs. result nouns. According to Zlatić (1997b:469-471), whose examples are adopted here from Birtić (2008:155), complex event nouns are opaque to binding from outside the NP, see (3a), whereas result nouns are not (3b):

- (3) a. Jovan_i je primetio_{NP}[Marijinu_j lošu brigu o sebi_{i/*j}].
Jovan is noticed_{NP}[Mary’s_j bad care about self_{i/*j}].
- b. Jovan_i je pročitao_{NP}[Marijin_j članak o sebi_{i/*j}].
Jovan_i is noticed_{NP}[Mary’s_j article about self_{i/*j}].

⁷¹ Within the verbal domain, different aspectual notions (measure, delimiter, incremental theme, telicity and accomplishment) have been included among the semantic determinants of argument realization (cf. Hopper & Thompson 1980). According to Arad (1998:59), “aspect, or event structure, is that part of a verb’s meaning which is relevant for its interface with the syntax.” This view is also favoured by Tenny (1994), who assigns aspect the crucial role in syntactic argument realization. He formulates the ASPECTUAL INTERFACE HYPOTHESIS, according to which “the universal principles of mapping between thematic structure and syntactic argument structure are governed by aspectual properties” (Tenny 1994:2). For an overview regarding different syntactic approaches to complex event nominals and event structure, see Alexiadou et al. (2007:507ff.).

arguments of the noun are assigned nominative (possessor agrees with the head noun), genitive and instrumental case:

- (34) a. savezničko **uništavanje** neprijateljskih ciljeva napalm-bombama
allied forces destroying^{Impf.} enemy's targets-GEN napalm bombs-INST
- b. savezničko **uništenje** neprijateljskih ciljeva napalm-bombama
allied forces destruction^{Perf.} enemy's targets-GEN napalm bombs-INST

The appearance of the prenominal possessor along with the assignment of genitive case is a typical characteristic of nouns and noun phrases. The assignment of the nominative via Spec-head agreement and the assignment of instrumental case, however, are not. This fact, along with the ability of ASNs to inherit the aspectual specification of their related verbs and to assume the verbal negative particle *ne-*, as attested by the examples in (26), are evidence of their verbal origin and the projection of the VP node within a DP.

8.4.2. Functional Categories within ASNs

With respect to the **number** and **type of functional categories** included in the structure of argument supporting nominals, different proposals have been made. In these proposals, various functional categories, such as the AspectP, EventP/vP, VoiceP, TP, NumP, GenP etc., also need to be realized as a necessary part of their syntactic structure (cf. Picallo 1991, van Hout & Roeper 1998, Alexiadou 2001, Borer 2003, 2005 etc.). The parametric variation observed in nominalizations across languages results from the presence or absence of these functional categories in the internal structure of nominals. Based on the Marantz's (1997) distributed morphology approach and, to the large extent, on the work of Alexiadou (2001), Birtić (2008:159) suggests the inclusion of the following functional categories within Croatian argument-supporting *-nje* nominalizations: [DP [PossP [NumP/F [AspP [vP [PerfP [LP]]]]]]].

According to Alexiadou (2001:144-145), A- vs. A'-status of [Spec, DP] is a source of a cross-linguistic parametric variation: the presence of D in the structural representation of a noun phrase turns the nominal construction into an argument. With respect to the relevance of [Spec, DP] being an A- or A'-position, she says: "Languages in which Spec, DP is an A-position permit transitive nominalizations e.g. *John's destruction of the city*, while languages in which Spec, DP is an A'-position do not allow them" (ibid.).

What about Croatian, where the presence of a D layer is not assumed? As has already been shown, deverbal nouns are obviously transitive, which implies that the functional projection hosting the subject (possessive adjective/agent) of a deverbal noun must be an A-position. Further evidence for this comes from the binding data already alluded to, since possessive adjectives bind anaphors:

- (35) Markovo_i darivanje svoje_i sestre
 Marco_i-POSS giving a present his_i sister-DAT

(Birtić 2008:155)

However, since possessive adjectives can be preceded by demonstrative pronouns and indefinite determiners, which are assumed to occupy [Spec, DP] (cf. Leko 1999), the specifier position that hosts possessive elements is believed to be the [Spec, PossP] position (Leko 1999, Kuna 2003). Birtić (2008), however, emphasizes one issue that appears to be rather problematic to the assumptions set out above: specifier positions usually contain entire maximal projections (XPs)⁷², while a possessive adjective ordinarily surfaces as a single lexical element. The question remains open whether possessive adjectives are base-generated in [Spec, PossP] or rather move to this site⁷³.

In contrast to Grimshaw (1990), according to whom the functional category **Number** (NumP) is not included in the structural representation of

⁷² This issue was already raised in Section 4.4.2, although in a different context.

⁷³ In English transitive nominalizations, the agent "cannot be merged in Spec,vP, but rather it is located in the specifier of a different functional head, one that can license such arguments. The functional head that comes to mind is D. [...] the DP expressing the 'actor' is never generated in Spec,vP, but in Spec, DP" (Alexiadou 2001:153).

process nominals, Birtić (2008) follows Alexiadou (2001) in assuming the presence of NumberP within ASNs. The syntactic realization of NumP is motivated by the plural morphology of ASNs (compare (24) and (25)). As far as the nature of the **little v projection** is concerned, Birtić (2008:153) takes it to be agentive and intransitive⁷⁴. However, the vP cannot be assumed within the syntactic structure of result nominals. Hence, according to (Birtić 2008:163), the result nominals in Croatian include the following functional categories: [DP [PossP /NumP/F [PerfP [LP]]]].

AspectP contains features that relate to the semantic properties of the event denoted by the verb: perfective aspect describes a completed event, whereas the imperfective denotes an ongoing one. As introduced previously, process nominals are assumed to contain two aspect projections, one above the vP (AspP) and the other one below (PerfP). With respect to this, Birtić (2008:158) notes that this conflicts with principal assumptions of distributed morphology, which allows only one aspectual head. Therefore, she alternatively proposes that, in order to distinguish between process nominals and other nominals that also display aspectual properties (e.g. agentive (-*er*) nominals), only one aspectual head should be assumed. Within the structure of process nominals, the AspP is located above vP. Other nouns, such as the above mentioned *-er* nominals, have the AspP located below the vP. Result nouns also include an aspectual head (PerfP), but lack the vP.

⁷⁴ According to Alexiadou (2001:17), and references therein, little v is associated with the following properties:

- (i) it contains features relevant to the licensing and interpretation of external arguments (locus of agentivity),
- (ii) it contains features related to eventivity,
- (iii) it contains the case features, and finally,
- (iv) it is twofold: one type introduces an external argument, whereas the other one does not.

The source of parametric variation concerning vP pertains to the features *agentivity* and *transitivity*. Thus, little v can be non-agentive and intransitive (process nominals, English mixed nominalizations), agentive and intransitive (agentive nouns, that is, *-er* nominals in English/Greek), and agentive and transitive e.g. gerund constructions in English (Alexiadou 2001:137).

8.4.3. Alexiadou, Iordăchioaia and Soare's (2010) Approach and Its

Implication for the Structure of Croatian *-nje/će* ASNs

Bearing in mind the mixed (nominal and verbal) properties of ASNs evidenced across languages, Alexiadou, Iordăchioaia and Soare's (2010) approach to the syntactic structure of ASNs captures **two** different **variation parameters**. The first parameter relates to **the availability of a nominalizer within ASNs**. According to this parameter, the internal structure of an ASN either includes a nominalizer or it does not. If a nominalizer is available, the question then becomes **where it appears within the structure of ASN**. Concerning the place of its attachment, the nominalizer is assumed to be attached either to VP or AspP.

In many languages, ASNs apparently do not realize morphological plural. Alexiadou, Iordăchioaia and Soare (2010:538) relate this property of ASNs to their internal structure: "We relate the (un)availability of morphological plural to the internal structure of ASNs, which is the result of the interaction between their aspectual properties and their primarily nominal/verbal behaviour." What is the **relationship between aspect and number**? The semantic approaches to number and aspect draw an interesting parallel, according to which the distinction between count and mass nouns in the nominal domain corresponds to aspectual differences within the verbal domain. Thus, the common property shared by **count nouns** and **telic (completed)/perfective events** is that they are both BOUNDED, while **mass nouns** and **atelic (incompleted)/imperfective events** are UNBOUNDED. This semantic distinction is syntactically mapped onto the functional projection of Number (NumP) in the nominal domain and AspP in the verbal domain.

Although all ASNs contain some semantic information concerning aspect and number, not all of them are believed to project these functional categories (Alexiadou et al. 2010:539). Since, according to Grimshaw (1990), ASNs cannot be pluralized, they predominantly have a verbal structure and therefore do not include NumP, which is a purely nominal characteristic. However, languages other than English (e.g. German, French, Italian) provide counterevidence to Grimshaw's claim, which also does not hold for Croatian. Due to the inconsistent ability of ASNs to realize morphological plural cross-linguistically, Alexiadou et

al. (2010), following Picallo (2006), postulate a Class(ifier)P⁷⁵ within the syntactic structure of ASNs, to which they assign two values, either [+count] or [-count]. This allows them to account for the existing asymmetry observed between bounded and unbounded entities/events: bounded entities can be pluralized, whereas unbounded ones cannot.

What is the implication of this for the structure of ASNs? As they (2010:540) put it, “ASNs with telic inner aspect have ClassP [+count] and project NumP, while ASNs with atelic inner aspect have ClassP [-count], which blocks the realization of NumberP.” Thus, the functional categories that are capable of appearing within the syntactic structure of ASNs are the following: [DP [NumP [ClassP [nP [AspP [VP]]]]]]. The projection of nP is headed by a nominalizer⁷⁶, which is responsible for the nominalization of the whole structure. The nominalizer introduces the AspP and leads to the projection of ClassP and NumP. The complementary distribution of Number and Aspect observed in Romance and Germanic languages has led to the formulation of the following two generalizations:

- 1st Generalization: The projection of aspect blocks number.
- 2nd Generalization: Only bounded (perfective) ASNs allow plural, while unbounded (imperfective) ones do not.

However, the evidence from Slavic languages (Polish and Bulgarian) runs counter to at least one of them. Like Croatian *-nje/će* ASNs, the Polish *-nie/-cie* ASNs also take over the aspectual values of their related verbs, which indicates that they project an AspP in the syntax (Alexiadou et al. 2010:563):

- (36) a. Jan **przeczytał**/***czytał** gazetę w dwie godziny.
Jan read.PF / read.IMP newspaper in two hours
'Jan read the newspaper in two hours.'

⁷⁵ ClassP hosts gender and case features. Its presence is a prerequisite for the projection of NumP.

⁷⁶ ASNs that lack nP, such as supines and verbal gerunds, but include VP, are embedded under D (Alexiadou et al. 2010:540).

- b. **przeczyta-nie/*czyta-nie** gazety w dwie godziny.
read.PF-NIE / read.IMP-NIE newspaper in two hours

Following the generalization set out above, the projection of aspect should block the pluralization of the corresponding ASNs. However, as the examples below illustrate, the pluralization of perfective (bounded) ASNs is perfectly fine, (37a), whereas the corresponding imperfective ASN rejects plural marking, as in (37b):

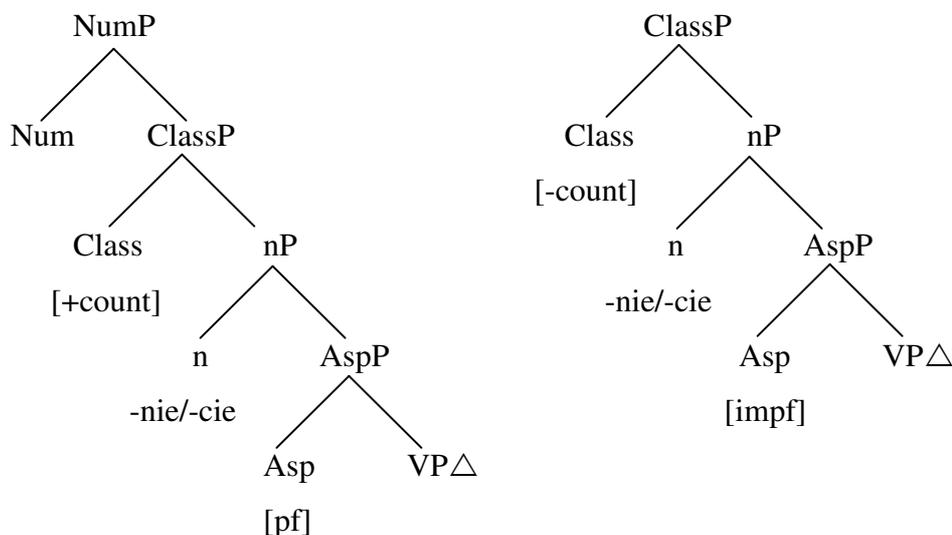
- (37) a. częste opóźnione **przyby-cia** /**odejś-cia** pociągu
frequent delayed arrive.PF-CIE.PL /depart.PF-CIE.PL train.GEN
- b. *częste opóźnione **przybywania** /**odjeżdżania** pociągu
frequent delayed arrive.IMP-NIE.PL./depart.IMP-NIE.PL train.GEN

(Alexiadou et al. 2010:563/564)

Thus, the evidence from Polish rules out the 1st generalization, which predicts that the projection of aspect will block the morphological realization of number. The 2nd generalization obviously holds. Within the structure of the Polish *-nie/-cie* ASNs, we find morphological evidence for both their verbal and nominal features. The suffixes *-nie* and *-cie* are nominalizers. The aspectual information is encoded on the verbal root (either the perfective prefix (e.g. *prze-*) or the imperfective suffix *-wa-*). Therefore, Polish ASNs contain both nP and AspP. The availability of nP entails the projection of ClassP, resulting in the syntactic structure illustrated in (38) for both types of ASNs. Considering the different syntactic behaviour of perfective and imperfective ASNs in Polish, Alexiadou et al. (ibid.) conclude that “assuming that Polish does not project a DP, *-nie/-cie* ASNs are either NumPs or ClassPs”.

(38) a. PERFECTIVE *-nie/-cie* ASNs

b. IMPERFECTIVE *-nie/-cie* ASNs



(Alexiadou et al. 2010:565)

What about Croatian *-nje/-će* ASNs? The imperfective ASNs derived from perfective verbs with the help of the secondary imperfective suffix *-va* (*obećavanje* ‘promising^{Impf.}’, *uništavanje* ‘destroying^{Impf.}’) obviously preserve the verbal aspectual morpheme in their structure. The ASNs shown above exhibit aspectual pairs, just like their verbal counterparts. As outlined in the previous section, the secondary imperfective suffix *-va* applies only to perfective verbal bases. This means that its insertion is not always necessary, e.g. in cases where a particular verb already has an imperfective verbal core (compare *gledati* ‘to watch^{Impf.}’, vs. *gledanje* ‘watching’). Yet, in the absence of an overt grammatical aspectual marker (the suffix *-va*), the aspectual information of the verb remains preserved on its deverbal noun. Like the Polish suffixes *-nie* and *-cie* mentioned above, the suffixes *-nje* and *-će* nominalize the verbal structure in Croatian ASNs. Therefore, both AspP and nP need to be syntactically realized. Given that ClassP hosts the nominal information of a noun (gender, case), which is morphologically visible on Croatian nouns, the ClassP introduces the n-layer and serves as input for NumP. However, there is one significant difference between Polish and

Croatian imperfective deverbal nouns: while they cannot be pluralized in Polish, in Croatian they can be, as shown in (24) and (25) before, repeated below as (39):

- (39) a. četiri Markova pregledavanja pacijenta
four Marco-POSS examinations^{Impf.Pl.} patient-GEN.SG
- b. brojna tjedna pretraživanja web stranica od strane policije
numerous weekly scanning^{Impf.Pl.} web sites-GEN.PL by police

This implies that both types of ASNs in Croatian have a [+count] feature on ClassP; therefore, they obligatorily project a NumP. This data runs counter to the 2nd generalization, which assumes that unbounded (imperfective) ASNs do not allow plural marking. A further question that remains open concerns the projection of a DP in Croatian.

8.4.4. The Syntactic Position of the Prenominal External Argument (Possessive Adjective) in Croatian

While in languages with articles deverbal nouns can be accompanied by a determiner (e.g. *Emma's / The reading of the poem* (Alexiadou et al. 2010:551)), syntactically realized under D, in articleless languages there is no element equivalent to the article *the*. However, ASNs require the realization of arguments that surface as possessive elements in a prenominal position, creating structures parallel to the English one given above. As already mentioned before, possessive elements are not in complementary distribution with determiners (e.g. demonstratives) in Croatian common nouns⁷⁷:

⁷⁷ However, it is interesting to note that the appearance of demonstratives is not as equally acceptable with deverbal nouns with an eventive reading as it is with those interpreted as result nouns:

- (4) a. ?/*Ovo/to Markovo **hvtanje** studenta trajalo je dva sata.
this/that Marco-POSS chasing^{Impf.} student-GEN lasted is two hours
- b. To hvatanje je bilo nerazumno.
That chasing^{Perf.} was absurd (Birtić 2008:154)

- (40) taj Markov kaput
that Marco-POSS coat

(Birtić 2008:154)

This has led to the assumption that they occupy [Spec, PossP], while determiners that are not articles appear in [Spec, DP] (Leko 1999, Kuna 2003, Birtić 2008). The D head is left empty. If this view is adopted, the whole structure above NumP in deverbal nouns, as already pointed out in chapter 7, should also include AgrP, since the overt morphological agreement marking links the possessor with the head noun.

In chapter 7 we saw that the possessive suffix that serves as a definiteness marker affects the definiteness status of the whole noun phrase, along with the overt morphological realisation of the successive adjectival modifiers:.

- (41) a. MarijinØ star-**i** rođak
Mary-POSS old-**DEF** cousin
- b. *Marij-*in*-**i** star-**i** rođak
Mary-*POSS-DEF* old-**DEF** cousin
- c. *MarijinØ starØ rođak
Mary-POSS old-**INDEF** cousin

(Kuna 2003:258)

When the prenominal possessive appears in combination with other adjectival modifiers, these adjectives have to be marked *definite*. Unlike the descriptive adjective, which needs to be marked definite⁷⁸ by the definiteness

⁷⁸ In the SerBoCroatian (SBC) linguistic literature (cf. Zlatić 1997, Progovac 1998, Kuna 2003, Silić 2000, among others), the suffix *-i* has been regarded a definiteness marker *per se*. Aljović (2002), however, argues that the short and long form of adjectives in SBC mirrors the semantic opposition between non-specific and specific readings, hence treating the suffix *-i* as a specificity marker. On the other hand, both Pranjković (2000) and Silić (2002) point out that the indefinite/definite distinction expressed via short and long adjectival inflection respectively has no

suffix *-i*, the derivational suffix *-in* contains a strong definiteness feature. Hence, the possessive noun does not need an additional definiteness marker. When the definiteness marker *-i* is attached to the possessive adjective, the entire nominal phrase becomes ungrammatical, as illustrated in (41b). In (41c) the DP is ungrammatical, because the descriptive adjective *star* ‘old’ fails to be marked for definiteness. The contribution of possessives affixes to the (in)definiteness and (un)specificity of a nominal expression has also been noted by Mićanović (2000), as cited previously in footnote 68.

Bearing this in mind, the external argument of a deverbal noun contributes to the (in)definiteness status of the entire nominal construction. Conceiving of the structure of nouns as being parallel to the structure of the clausal domain (in that it consists of three different areas (*determination* area, *morphosyntactic* area and an area where the *thematic* relations are established, cf. Alexiadou et al. 2007:51)) allows for the assumption that possessive adjectives are base-generated somewhere lower in the nominal structure, in a position where they get their theta-role⁷⁹ (theta domain). Due to the fact that possessive adjectives add to the (in)definiteness status of the entire noun phrase, they obviously surface (somewhere) in the determination area of the noun. This allows us to conclude that the latter position is derived by movement from the theta domain to the determination domain. The syntactic structure of the determination area will be dealt with in chapter 10. For the time being, we may assume that Croatian ASNs include the following functional categories: [DP [AgrP [NumP [ClassP[nP [AspP [VP]]]]]]].

real significance any more, because, as they observed, nominal expressions containing long form of adjectives regularly appear with the indefiniteness marker *jedan* ‘one’, e.g. *jedan visoki čovjek* ‘one tall-DEF man’. According to some speakers, the constructions including *possessive element + short form of adjectives* (e.g. *Marijin star rođak* ‘Mary’s old-INDEF cousin’) seem to be acceptable as well. As we may see, the picture regarding this issue is rather blurred and obviously in need of further investigation. For this reason, I will limit myself to and offer an analysis of the constructions that have been discussed and treated in the same way in the SerBoCroatian linguistic literature so far, such as the one given in (41) above.

⁷⁹ In order to be theta-marked by its predicate, the possessive noun needs to appear in a certain structural configuration (m-command). In the NP-Theories possessive elements are treated as adjectives and are claimed to be either adjoined to the NP or attached to N’. However, their placement in this position does not satisfy the above mentioned structural configuration requirement.

8.5. Conclusion

The primary goal of this chapter was to show that the morpho-syntactic structure of certain types of nouns in Croatian provides clues as to the complexity of their syntactic structure. The displayed complexity of the examples discussed cannot be accounted for with a simple NP-analysis in which all prenominal elements are treated as NP-adjuncts. Especially the case of prenominal possessives, which function as subjects of the head noun, poses a problem for this analysis.

As we saw, argument-supporting nominalizations (ASNs) inherit not only the aspectual specification of their related verbs, but also other verbal properties, such as their argument structure and case assignment. Based on Grimshaw's (1990) subdivision of deverbal nouns into complex event and result nominals, it was interesting to see whether Croatian deverbal *-nje* and *-će* nouns comply with the proposed criteria meant to distinguish them. A very detailed discussion of their syntactic behaviour with respect to these criteria has shown that the assumed correlation between their aspectual specification and expected syntactic behaviour (e.g. perfective aspect = result noun = non-theta-assigner/non-argument-taking) does not necessarily hold. Further differences were also able to be established compared to the properties displayed by their English counterparts, on which Grimshaw's (1990) criteria catalogue is based. Apart from these nouns being *argument taking*, and due to the fact that all other implications arise from this, the most important issue was to show that they evidently contain various functional categories that need to be realized as a necessary part of their syntactic structure. Certainly, the proposed solution is not a final one. However, this brief discussion has shown that there is much more syntactic structure within Croatian nominals than has been assumed by the proponents of the NP-approach.

One issue in particular is very interesting and of an extremely high relevance for the syntactic structure of Croatian noun phrases. Kuna (2003) has shown that the PossP is needed. However, the postulation of the PossP does not tell us anything about whether we need a DP-layer. In my opinion, the analysis of ASNs has provided further indications with respect to this issue. Since external

nominal subjects are theta-marked by the head noun, they are base-generated within the nominal theta-domain. They further move up to PossP, where they merge with the possessive suffix (cf. also Kuna 2003). Do they stay there or do they have to move out of this position, and if so, what triggers their internal movement? As already suggested in the previous subsection, due to the fact that possessive adjectives contribute to the (in)definiteness status of the entire noun phrase, they obviously surface somewhere in the determination area of the noun. This, in turn, justifies the postulation of further functional categories and the existence of the nominal left periphery. An appropriate analysis of these structures focusing on the position of possessive elements will be given in chapter 10.

PART III
THE SYNTACTIC ANALYSIS OF CROATIAN
NOUNS

CHAPTER 9

(IN)DEFINITENESS AND THE OPTIONALITY OF DETERMINERS IN CROATIAN

9.1. Introduction

The extensive discussion of the different claims made with respect to the syntax of nominal expressions in SerBoCroatian (undertaken in Part II of this thesis) has shown that many of these are inconclusive. The syntactic behaviour of various prenominal elements and, in particular, the syntactic behaviour of ASNs, shows that Croatian nominal expressions are not simple NPs and that they have to be approached in a different way. But, before I move on to their syntactic analysis in the next chapter, I want to first address one other important issue. This issue concerns the optionality of determiners within the Croatian noun phrase.

As argued by Zlatić (1998:4), within a nominal complex the noun is an obligatory constituent, whereas the determiner (*ovaj* ‘this’) is optional:

- (1) (Ovaj) **student** voli Mariju.
this student loves Mary
‘This/the student likes Mary.’

The fact that determiners in SerBoCroatian nominal expressions are non-obligatory, unlike (in)definite articles in English or German DPs is one of the main reasons why nouns have been assumed not to project a DP. Recall that the proponents of the DP-Hypothesis in articleless languages generally assume a D-head. However, this position is predominantly empty, serving primarily as the landing site for DP-internal movement operations. So, under the assumption that there is a DP-layer, which elements qualify as possible D-heads in articleless languages?

Although determiners are generally claimed to be non-obligatory in SerBoCroatian, demonstrative determiners, in particular, are, at the same time, assumed to take over the functions of definite articles. As is known, the use of indefinite and definite articles in English is tightly connected with the notion of (in)definiteness, and is considered to be the formal syntactic means used to express this category. According to Lyons (1999:1), definiteness within the noun phrase stems from the presence of articles:

“...a noun phrase may contain an element which seems to have as its sole or principal role to indicate the definiteness or indefiniteness of the noun phrase. This element may be a lexical item like the definite and indefinite articles of English (*the, a*), or an affix of some kind like the Arabic definite prefix *-al* and indefinite suffix *-n*.”

The following examples illustrate this:

- (2) a. Someone left *a cat* on my doorstep this morning.
b. Someone left *the cat* on my doorstep this morning.

(Alexiadou et al. 2007:56/57)

The interpretative difference between the DP expressions ‘*a cat*’ and ‘*the cat*’ in (2) above arises as a consequence of their contextual accessibility. Since the entity referred to in (2a) is introduced into the universe of discourse for the first time, the DP denoting it appears with the indefinite article. Its definite counterpart in (2b) implies that the referent is no longer unfamiliar to the hearer.

Nouns that refer to the whole class of a specific entity (generic nouns), however, display different syntactic behaviour. Consider the following examples:

- (3) a. There are *cats* in our garden. *The cats* are jumping around.
b. *Cats* are beautiful animals, but there are people who don’t like *cats* at all.

The examples in (3) illustrate the two readings of bare plurals in English - the existential reading and the generic reading. When the plural noun *cats* is interpreted existentially, as in (3a), it is obligatorily accompanied by the definite article in the subsequent sentence (anaphoric reference). When the plural noun *cats* refers to the whole class (generic use), as in (3b), it has to appear articleless. Although nouns are obligatorily accompanied by definite and indefinite articles in languages like English, the above examples show that in certain syntactic contexts they have to appear without articles. Their articleless appearance does not lead to ungrammaticality.

The differentiation between definite and indefinite readings of nouns is not only expressed via definite and indefinite articles, as outlined in chapter 1. Recall that even definite DPs can be interpreted differently, depending upon their syntactic position in a sentence, as illustrated by the Hungarian examples below:

- (4) a. Anna lemaradt *a vonatrol*.
Anna down-stayed the train-from
'Anna missed the train.'
- b. *A vonatrol* lemaradt Anna.
the train-from down-stayed Anna
'Anna missed the train [specific].'

(Ihsane & Puskás 2001:41)

While the postverbal definite DP *a vonatrol* 'the train' in (4a) is interpreted as non-specific, in (4b) that very same DP is interpreted as specific when it occurs preverbally.

The examples in (2) - (4) show that, in DP-languages, articles contribute to different readings of nouns. Hence, they are not only used to express (in)definiteness, but also to indicate whether the noun used in the current linguistic context is specific or non-specific. The question then arises as to how such nominal reference is established in articleless languages. Does the lack of

articles mean that nouns remain uninterpreted? What is the role of determiners in comparable linguistic environments and how does the necessity of establishing the nominal reference influence the *optionality* of certain determiner types?

This chapter is organized as follows. As will be briefly introduced in section 9.2, there is a general disagreement concerning the grammaticalization of (in)definiteness in Croatian. Section 9.3 will show, however, that Croatian nouns obtain different interpretations despite missing articles. Based on this insight, I will question the optional nature of demonstrative determiners in the sections to follow, along with their different uses. Section 9.4 briefly sketches different functions of D-elements (articles and demonstratives). In section 9.5 I will examine the use of demonstrative pronouns within Croatian nominal expressions, focusing primarily on their necessity in the introduced contexts. Having answered the question as to whether they are obligatory or optional with the noun phrase, I will give a survey of other syntactic (in)definiteness markers in Croatian in section 9.6. Showing that various functional categories contribute to the grammatical realisation of (in)definiteness in Croatian will allow me to conclude that further functional layers are needed to accommodate them.

9.2. Grammaticalization of (In)Definiteness in Croatian: Two Different Views

As noted previously, in DP-languages such as English or German, the category of (in)definiteness is primarily, if not exclusively, expressed by definite and indefinite articles. Since SerBoCroatian does not have articles, opinions differ as to whether and how the category of (in)definiteness is expressed in these languages. While some linguists argue that nouns are not obligatorily marked for definiteness by any grammatical markers in SerBoCroatian (cf. Trenkić 2001, 2004), others have a different view. Silić (2000:401), for instance, says the following:

“Kategorija je neodređenosti/određenosti rezultat apstraktnoga mišljenja, koje je u svih naroda isto. Ako je to tako, onda nema jezika za koji bi se moglo reći da nema načina njezina izražavanja. U svim se jezicima ona izražava, ali ne na isti način. Prema tome je i logička i lingvistička univerzalija. [...] Gdje god se pak spominje, bilo u posebnim raspravama bilo u gramatikama (u nas ni u jednim ni u drugim), daje joj se status morfološke kategorije. A ja mislim da je ona sintaktička [...]”

[The category of indefiniteness/definiteness is a result of abstract thinking, which all people have in common. If this is so, then there is no language for which one could say that it has no ways of expressing it. The category of (in)definiteness is expressed in all languages, but not in the same manner. Therefore, it is a universal in terms of both logic and linguistics. [...] However, wherever it has been mentioned, either in distinct discussions or in grammar books (in Croatia in neither one of the two), it has been attributed a status of a morphological category. But I think that it is a syntactic one [...].”

(Translation DZC)

Under the assumption that the category of (in)definiteness represents a universal property of nouns⁸⁰, it has been proposed that the category of (in)definiteness in SerBoCroatian is expressed by categories other than articles (cf. Hlebec 1986, Progovac 1998, Zlatić 1997, Leko 1999, Silić 2000, Pranjković 2000). The most prominent example in this respect is the definite adjectival inflection. Although definite adjectival endings have been regarded as the only and most prominent overt (in)definiteness markers in SerBoCroatian, word order, verbal aspect, case and number, among others, have also been claimed to fulfil the same function.

As mentioned earlier, Trenkić (2001, 2004), for instance, argues that the category of definiteness is not grammaticalised in SerBoCroatian. Nevertheless, demonstrative determiners in particular have often been identified “as potential ‘translation equivalent’ of the English definite article” (cf. Trenkić 2004, and the references therein). However, the presence of demonstrative pronouns (and other determiners) within the noun phrase is optional (cf. Kordić 1992, Zlatić 1998, Bošković 2005, among others)⁸¹. In contrast to this prevalent opinion, I will argue that in certain contexts demonstratives (and other determiners) obligatorily

⁸⁰ Silić (2000:401) further says:

“Čitajući literaturu o lingvističkim univerzalijama, nisam naišao na to da se među njima spominje kategorija neodređenosti/određenosti. A ja mislim da ona to jest.”
[While reading the literature on linguistic universals, I have not noticed that the category of (in)definiteness has been mentioned as one of them. But I think that it should be, because it is a linguistic universal].

(Translation DZC)

⁸¹ Kordić (1992:29) says:

“Atribut i determinator samo posredno sudjeluju u vršenju rečenične funkcije čitave NS-e. Stoga njihova prisutnost u NS-i i nije obavezna.”
[Attributes and determiners only indirectly contribute to the function of the noun phrase within a sentence. Their presence within the noun phrase is, therefore, non-obligatory.]

(Translation DZC)

accompany nouns. In these contexts, their omission results in the unacceptability of the given sentences, as illustrated in (5) below:

- (5) *(Onaj razgovor sa svećenikom, dok je još bio dijete,
that conversation with priest while is still been child
pretvorio se u sjećanje.
turned itself into memory
*'The conversation with the priest, when he was still a child, came to be
a mere memory.'*

Here the adverbial clause *dok je još bio dijete* 'when he was still a child' creates a particular referential context which makes the demonstrative determiner obligatory⁸².

For this reason, I argue that the assumed optionality of determiners in Croatian is context-sensitive. The necessity of their use is closely related to the existing contextual accessibility of nouns.

9.3. Towards an Analysis: Interpretation of Croatian Nouns

If we compare the subject noun phrases in the following sentences, we can see that in each of the languages below they are interpreted in the same way:

- (6) a. **Mjesec** je jako svijetlio prošle noći. (Croatian)
moon-DEF is very shine-P.PART last night
'The moon was shining bright last night.'
- b. **Der Mond** leuchtete sehr hell letzte Nacht. (German)
the moon shine-PAST very bright last night
- c. **The moon** was very bright last night. (English)

⁸² The example in (5) is taken from Paulo Coelho's book *The Fifth Mountain* (Croatian Edition).

In spite of the missing definite article in (6a), the noun *mjesec* ‘moon’ is interpreted as being definite, in the same manner as its German or English counterpart. Due to his or her general knowledge, which originates in the extralinguistic context, the hearer of the languages in (6a-c) above will obviously identify the entity denoted by the noun *moon* as what it is - the unique celestial body revolving around the earth. Compare now the example (6a) with the example in (7) below:

- (7) **Mjesec** je bio kišovit.
(?this) month is been rainy
‘It was rainy this month / a rainy month.’

As we may see, the nouns *mjesec* ‘the moon’ and *mjesec* ‘a/the month’ in Croatian have the same morpho-syntactic form (they are homophonous). Isolated from the appropriate context, these nouns cannot be properly interpreted. Once the context has been provided, they receive different interpretations. Although they look alike, the noun *mjesec* in (6a) is definite and specific, while the noun *mjesec* in (7) can be interpreted as being either definite or indefinite, depending upon the hearer’s situational knowledge. The hearer in (7) will understand that the speaker is talking about the time span covering a period of approximately four weeks. However, on the basis of this sole utterance, he still does not know whether the speaker is referring to the current month or to some other month (although the first assumption is more likely). If the hearer had not spent the previous four weeks in the same geographic area as the speaker, he would make sure that he has properly understood what the speaker had told him. Therefore, his normal reaction to this utterance would be to ask *koji mjesec?*, meaning *which month?*. Although there is no article in (7), the hearer can interpret the noun *mjesec* as either definite or indefinite, depending on his situational knowledge. These examples basically show that nouns in Croatian receive their (in)definite and/or (non)specific interpretation in their relative context.

Now imagine a different situation. Two people are preparing a meal in the kitchen. The one person tells to the other to give her the knife:

(8) a. Molim te, daj mi nož!

Please you, give me-DAT.SG knife-ACC.SG

‘Please, give me the knife!’

b. Molim te, daj mi **taj** nož!

Please you, give me-DAT.SG that knife-ACC.SG

‘Please, give me the/that knife!’

As is obvious, in (8a) the NP *nož* ‘knife’ appears bare; in (8b) it is accompanied by the demonstrative determiner *taj* ‘that’. Both examples have different readings, although both of them describe the same situation. In (8a), a knife the speaker is referring to may not necessarily be within either her or the hearer’s sight. It could be any of the knives in the kitchen at that moment. The speaker is basically conveying that she wants *a knife*, and not a fork or a spoon. According to the definition of definiteness and specificity proposed by Ihsane & Puskás (2001), the NP *knife* in (8a) is definite, but not specific.

The example in (8b) has two different readings. In both readings the knife is necessarily within the speaker’s and hearer’s sight (e.g. the knife is lying on the kitchen worktop in front of them). The first reading results from the following situation: There is only one knife on the worktop. The person who wants it points in its direction, saying *Molim te, daj mi taj nož!* ‘Please, give me **that** knife!’ The demonstrative *taj* ‘that’ is used here for emphatic reasons (**emphatic** deictic use), which means that it can also be left out, without affecting the proper interpretation of the noun. However, we can also imagine a slightly different situation in which the speaker utters the very same sentence. In the second scenario, there are two knives lying on the kitchen worktop. In order to make its reference clearer, the speaker points to the entity he has in mind, backing up his nonverbal pointing towards the chosen entity by the use of the demonstrative determiner *taj* ‘that’.

The deictically used demonstrative pronoun *taj* 'that' is employed **for the purpose of selecting between the two identical objects**. In such case, it cannot be omitted (selective deictic use). To summarize, the example in (8b) can have the following two different readings:

- (i) one knife = **emphatic** deictic use (the determiner can be left out)
- (ii) two knives = **selective** deictic use (the determiner cannot be left out)

The examples in (8) above describe one of the typical contexts in which demonstrative pronouns generally appear (*situational use*). In such contexts they are mostly used for emphatic reasons and are, therefore, optional. As we can see, though, in the above context, the demonstrative pronoun *taj* 'that' additionally contributes to the specific interpretation of the nominal expression *nož* 'knife'. Hence, in addition to being [+definite], the NP *nož* 'knife' in (8b) is also [+specific] due to the presence of the demonstrative pronoun *taj* 'that'.

9.4. The Universal Uses (Functions) of Demonstrative Pronouns

As illustrated in the Figure 9.1 below, demonstrative pronouns and definite articles exhibit a functional overlap (Himmelmann 1996, 1998, Cyr 1993). For instance, both demonstrative pronouns and definite articles are used anaphorically, meaning that they are used to pick up on the referent previously introduced into the linguistic discourse. In addition to their **anaphoric use**, Himmelmann (1998) identifies, based on the Hawkins' (1978) classification of adnominal definite and indefinite elements, three other *first-mention-uses*, in which both elements fulfil the same semantic/pragmatic function. They are:

- the **situational** use,
- the **discourse deictic** use, and
- the **recognitional** use.

When demonstrative pronouns and definite articles denote the entity (the referent) present at the moment of speaking, we speak of *the situational use* of D-elements. When the determiner within the noun phrase refers back to “a preceding stretch of discourse” (Himmelmann 1998:322), demonstrative pronouns and definite articles are said to be used *discourse deictically*. When the intended referent is identified through the speaker’s and addressee’s shared specific knowledge, we speak of *the recognitional use* of these items, as in e.g. *those dusty kind of hills that they have out here by Stockton and all* (ibid.).

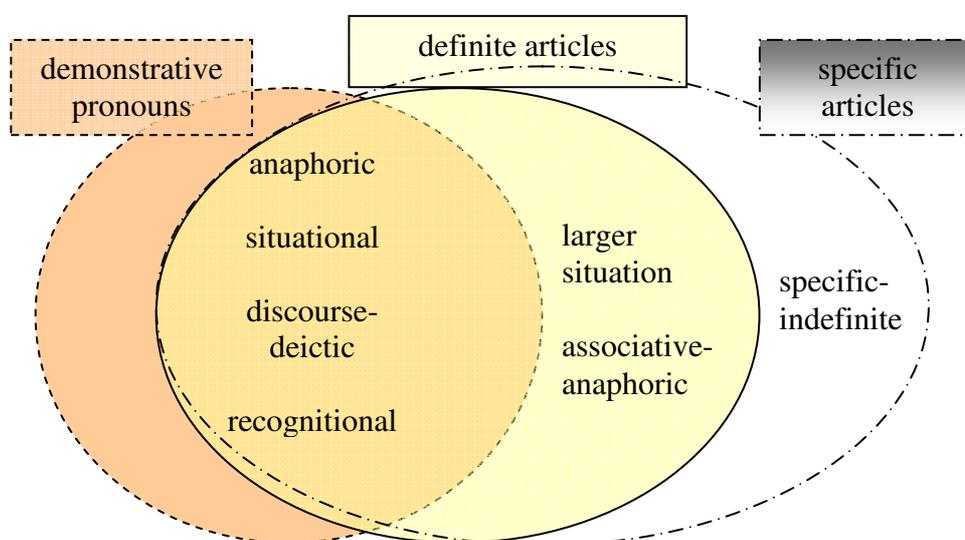


Figure 9.1: Semantic/pragmatic functions of D-elements
(based on Himmelmann 1998/2001)

Which of the above uses are typical of Croatian demonstrative pronouns? Do demonstrative pronouns cover the same reference domain that is covered by the English definite articles? Recall that, according to Trenkić (2001, 2004), “demonstratives as potential translation equivalents of the English definite article are restricted to the immediate situation and anaphoric uses” only (Trenkić 2004:1408). Following Zlatić (1998), among others, demonstrative pronouns (and determiners in general) in SerBoCroatian are optional within the noun phrase. The following subsections seek to answer these questions.

9.5. Functions of Demonstrative Pronouns in Croatian

9.5.1. Situational and Anaphoric Use

In addition to the situational (exophoric) use of demonstrative pronouns (illustrated in (8b) above), demonstrative determiners in Croatian are used to refer back to an entity previously introduced into the linguistic discourse (anaphoric use). Whereas in languages like English articles can be used to establish the desirable reference (cf. Figure 9.1), in Croatian only determiners can fulfil this function:

- (9) a. Blistajući na tamnopotom licu, njene su zelene oči bile prikovane uz
shining on dark face, her are green eyes been fixed to
Ilijine; on nije uspijevaao prozreti što su mu *te* oči govorile⁸³.
Elijah's; he not is managing to decipher what are him **these** eyes telling
- b. Blistajući na tamnopotom licu, njene su zelene oči bile prikovane uz
Ilijine; on nije uspijevaao prozreti što su mu *oči govorile.

*'Her green eyes, which shone in her dark face, remained fixed on
Elijah's; he was unable to decipher what they meant.'*

In the above example, the demonstrative pronoun *te* 'these' is used in order to establish the reference to the previously introduced NP *njene zelene oči* 'her green eyes'. The omission of the demonstrative determiner *te* 'these' would result in the uninterpretability of the noun *oči* 'eyes'. In the above context, however, the demonstrative pronoun *te* 'these' can be replaced by some other determiner (e.g. *Jezebel's*, *her*). The crucial fact, though, is that the noun *oči* 'eyes' cannot occur on its own.

- (10) a. Znam koji je razlog – reče svećenik – **Jedna** žena te
know-1stP.PRES.SG which is reason – said priest – **one** woman you

⁸³ P. Coelho (2006:25), from *Peta gora* 'The Fifth Mountain' (Croatian edition).

natjerala u bijeg?⁸⁴ **Ta** je žena najljepše stvorenje koje sam
forced to flee **that** is woman most beautiful being that am
ikada vidio u svom životu.
ever seen in self life

- b. Znam koji je razlog – reče svećenik – ?Žena te natjerala u bijeg?
*Žena je najljepše stvorenje koje sam ikada vidio u svom životu.

*'I know the reason,' said the high priest. 'Was it a woman who made you
flee?' 'In all my life, that woman was the most beautiful creature I have
ever met.'*

In the sentence in which the speaker introduces the noun *žena* 'woman' into the discourse for the first time, the noun *žena* 'woman' is accompanied by the indefinite predeterminer *jedan* 'one'. In order to refer to the same entity in the following sentence, the interlocutor uses the definite demonstrative pronoun *ta* 'this'. The omission of both is ruled out, because both nouns would fail to be properly interpreted in each of the cases. In (10b), however, the noun *žena* 'woman' can appear without a determiner, but in that case it would be interpreted as the wife of the hearer (hence definite). Still, in the following sentence a determiner is needed in front of the noun.

- (11) a. Da bi nevolja bila veća, udovičin sin je obolio,
in order for trouble be-PAST.PART bigger, widow's son is become ill,
bez ikakvog očiglednog uzroka. Susjedi su **tu** nevolju
without any obvious reason neighbours are **that** trouble
pripisali prisutnosti stranca u njihovu domu⁸⁵.
attributed to presence-GEN foreigner-GEN in their house

'To complicate matters further, the widow's son fell ill for no apparent

⁸⁴ P. Coelho (2006:47), from *Peta gora* 'The Fifth Mountain' (Croatian edition).

⁸⁵ P. Coelho (2006:51), from *Peta gora* 'The Fifth Mountain' (Croatian edition).

*reason. Neighbours attributed the fact to the presence of the foreigner in her house.*⁸⁶,

- b. Da bi *nevolja* bila veća, udovičin sin je obolio, bez ikakvog očiglednog uzroka. Susjedi su **nevolju* pripisali prisutnosti stranca u njihovu domu.

In (11) once again, the anaphoric use of the definite determiner *tu* 'this' contributes to the identification and interpretation of the noun *nevolja* 'trouble' introduced in the previous sentence. In the English text we find the definite article *the* in this context (discourse-deictic use). There, the nominal expression *the fact* refers to the proposition communicated in the preceding stretch of discourse.

9.5.2. Discourse Deictic Use

Discourse deictically used demonstratives do not refer to any entity or a location, but rather "point to the meaning content of an immediately adjacent discourse segment. Within these constraints, the type and size of the discourse segment vary" (Cleary-Kemp 2007:335). Hence, a demonstrative pronoun can either refer to the *preceding* or to the *following* discourse (anaphoric vs. cataphoric use), as illustrated in the following examples.

- (12) a. **(Onaj) razgovor* sa svećenikom, dok je još bio dijete,
that conversation with priest while is still been child
pretvorio se u sjećanje.
turned itself into memory
'*The conversation with the priest, when he was still a child, came to be a mere memory.*'
- b. *The conversation* with the priest, when he was still a child, came to be merely a remote memory.

⁸⁶ P. Coelho (2004:42), from 'The Fifth Mountain' (English edition).

- b' **Conversation* with the priest, when he was still a child, came to be merely a remote memory.

As already briefly described in section 9.2, the adverbial clause *dok je još bio dijete* 'when he was still a child' creates a particular referential context in this sentence, which makes the demonstrative determiner obligatory. Hence, the NP *razgovor* 'conversation' in (12a) is accompanied by the distal demonstrative *onaj* 'that', which establishes reference to a conversation that took place at some point in the past, here the childhood of the person being spoken of. The English equivalent in (12b) shows that the noun *conversation* necessarily appears with the definite article *the*. Its omission violates the grammaticality of the sentence, as (12b') shows. In addition, a replacement of the definite article *the* by a demonstrative pronoun is ruled out here.

- (13) a. Ako On može sve, zašto ne poštedi od patnje one koji ga
if He can everything, why not spare from suffering those who him
ljube? Zašto nas ne spasi, umjesto što daje moć i slavu svojim
love why us not save instead of that gives power and glory self's
vlastitim neprijateljima?
own enemies
Ne znam - odgovori levit. - Ali postoji razlog i nadam se da ću
not know answers levite but exists reason and hope self that will
ga uskoro saznati.
him soon learn
Ti nemaš odgovor na *to* pitanje⁸⁷.
you not have answer to **that** question

'If He is all-powerful, why doesn't He spare the suffering of those who love him? Why doesn't he save them, instead of giving might and glory to His enemies?'

⁸⁷P. Coelho (2004:7), from *The Fifth Mountain* (English edition); Croatian edition (2006:18).

'I don't know', said the Levite. 'But a reason exists, and I hope to learn it soon.'

'You have no answer to **this** question.'

- b. Ti nemaš odgovor na * \emptyset pitanje. (discourse-deictic)
you not have answer to question

In (13) the noun *pitanje* 'question' appears with the definite demonstrative *to* 'that-DIST', indicating that the noun refers to the preceding conversation. Since two questions have been posed, the noun *pitanje* 'question' does not refer to either of them specifically, but rather to a general question that arises out of them. Therefore, the omission of the determiner *to* 'that-DIST' would cause confusion, because the referent of *question* would remain unclear.

9.5.3. Recognitional Use

The *recognitional use* of demonstrative pronouns is characterized by the following: the intended referent is identified through the speaker's and addressee's shared specific knowledge, rather than the context. Consider the following example:

- (14) a. Da, sjećam se **te** žene⁸⁸.
yes remember-1st.P.SG. self **that** women-GEN.SG
'Yes, I remember that woman.'

- b. Da, sjećam se * \emptyset žene.
yes remember-1st.P.SG. self women-GEN.SG

If the demonstrative pronoun *te* 'that-DIST' in (14b) is omitted, the intended referent of the nominal expression fails to be identified.

⁸⁸ P. Coelho (2006:38), from *Peta gora* 'The Fifth Mountain' (Croatian edition).

In the following instances of non-deictic use of demonstrative pronouns, which are very likely used in the same way as in the equivalent English contexts, the omission of the demonstrative pronouns *tog-NEUT* ‘that’ in (15) and *te-FEM* ‘that’ in (16) is definitely ruled out by native speakers:

- (15) a. **Tog** popodneva, dok je završavao jedan stol u svojoj radionici...
that afternoon-GEN while is finishing one table in self shop
‘One afternoon, as he was finishing a table in his shop...’
- b. * \emptyset popodneva, dok je završavao jedan stol u svojoj radionici...
afternoon-GEN while is finishing one table in self shop
- (16) a. Ilija nije spavao **te** noći.
Elijah not is slept **that** night
‘Elijah did not sleep that night.’
- b. Ilija nije spavao *noći.
Elijah not is slept night

The introduced examples clearly show that demonstrative pronouns contribute to the definiteness and specificity of denoted referents in a given context.

As has already been mentioned, in her discussion of definiteness markers in Serbian, Trenkić (2001, 2004) argued that Serbian (SerBoCroatian) does not obligatorily mark its nominals for definiteness. Moreover, definiteness is not grammaticalized in SerBoCroatian. With respect to the role of demonstrative pronouns as definiteness markers, she partially rejects earlier proposals in which demonstratives are claimed to be potential translation equivalents of the English definite article (Djordjević 1989), and as such, are taken to cover a part of its reference domain (Mišeska-Tomić 1974). Questioning these claims, she hypothesizes that, in the case that they are correct, demonstrative pronouns in

Serbian would be expected to appear with a significantly higher frequency than their English counterparts. The results of her corpus analysis (English and Serbian texts from internet newspaper resources) allowed her to conclude that “Serbian speakers do not employ demonstrative determiners with a significantly higher frequency than English speakers do” (Trenkić 2001:119). Furthermore, she claims that “Serbian demonstratives as potential translation equivalents of the English definite article are restricted to the immediate situation and anaphoric uses” (Trenkić 2001:120).

For my part, I think that the frequency of use does not tell us anything about the function of demonstrative pronouns. The above examples show that the stipulated universal functions of demonstratives, as classified and postulated by Himmelmann (1998), can be also confirmed for Croatian. Whether Croatian demonstrative pronouns cover a part of the reference domain covered by the English definite article is an issue that should be further examined.

The discourse-deictic use of demonstrative pronouns, as illustrated in section 9.5.2, argues against Trenkić’s (2001) claim that “demonstratives as potential translation equivalents of the English definite article are restricted to the immediate situation and anaphoric uses”. Moreover, since the anaphoric and immediate situation uses are typical for both English articles and demonstratives to the same extent, we also cannot say for sure that SerBoCroatian demonstrative pronouns are only the translation equivalents of the English demonstratives. A random comparison of a two-page text and the following sentences taken from Paulo Coelho’s *The Fifth Mountain* shows that Croatian demonstrative pronouns are also used in contexts in which they do not appear in the English version:

(17) a. But for Elijah there was no choice: *everything* was happening through his own fault⁸⁹.

b. No Ilija nije imao izbora: *sve se to* dogadalo njegovom krivicom.
but Elijah did not have choice *all REFL. that* happened his-INS fault-INS

⁸⁹ P. Coelho (2004:5), from ‘*The Fifth Mountain*’ (English edition); Croatian edition (2006:17).

- (18) a. *It was an angel of the Lord* who obliged me to speak to the King Ahab.
b. *Anđeo Gospodnji bio je taj* koji me je poslao kralju Ahabu.
angel-NOM Lord-POSS was that who me-ACC is sent king Ahab-DAT
- (19) a. Princess Jezebel will already have destroyed all who remain loyal to the Lord⁹⁰.
b. Princeza Izebela već će kazniti sve one koji ostanu vjerni Gospodu.
Princess Jezebel allready will punish all those who remain loyal Lord-DAT
- (20) a. Since we've been locked in here, I have died a hundredfold⁹¹.
b. Za ovo vrijeme koje smo ovdje zatvoreni, umro For this time that are-1stP.PL.NOM here locked died sam već stotinu puta.
am-1stP.SG.NOM already hundred times
- (21) a. Elijah walked beside the Levite, feeling that behind each door and window was someone watching him - and blaming him for what had happened⁹².
b. Ilija je hodao uz levita, s osjećajem da ga, iza svakog od tih prozora ili vrata, netko krišom promatra – okrivljujući of these windows or doors somebody secretly watches blaming ga za sve što se zbivalo.
him for everything that was happening

⁹⁰ P. Coelho (2004:6), from *The Fifth Mountain* (English edition); Croatian edition (2006:17).

⁹¹ *ibid.*, English edition (2004:7); Croatian edition (2006:18).

⁹² *ibid.*, English edition (2004:8); Croatian edition (2006:20).

9.6. (In)Definiteness Markers in Croatian

9.6.1. Adjectival Inflection

“U jezicima se s članom neodređenost i određenost formalizira neodređenim i određenim članom, a u hrvatskome jeziku neodređenim i određenim pridjevom.”

[In languages with articles, indefiniteness and definiteness are formally expressed with either an indefinite or a definite article, while in Croatian they are expressed with the indefinite and definite form of adjectives.]

Silić (2000:403); Translation DZC

As already indicated previously in this thesis, adjectives in Croatian can have two different forms: the first is considered to be the indefinite form (see (22a)), whereas the second one, overtly marked by the ending *-i* (see (22b)), represents its definite counterpart (*ibid.*):

(22) a. Pred vratima stoji visok čovjek.
in front of door stands tall-INDEF man
‘There is *a tall man* standing at the door.’

b. Pred vratima stoji visoki čovjek.
in front of door stands tall-DEF man
‘*The tall man* is standing at the door.’

In constructions in which the noun appears without an adjective, the indefiniteness of the noun needs to be indicated in a different way. The most appropriate grammaticalized way to mark the noun as indefinite is to use the numeral *jedan* ‘one’, as in (22c), which functions here as an indefinite article⁹³ (Silić 2000:404):

(22) c. Pred vratima stoji jedan čovjek.
in front of door stands one-INDEF. man
‘There is *a man* standing at the door.’

⁹³ In contrast to the lexical item *jedan* ‘one’ being used as an adjective or a numeral, *jedan* ‘one’ in its function as an indefinite article is not stressed (Silić 2000:404).

The omission of the numeral *jedan* ‘one’ in front of the noun in (22d) does not result in the ungrammaticality of the sentence:

- (22) d. Pred vratima stoji čovjek.
in front of door stands man
‘The man is standing at the door.’

However, although nouns appearing bare are considered to be definite, such constructions are *komunikacijski nedovršene* ‘communicatively incomplete’ (ibid.), which means that these nouns need to be further specified.

Silić (2000) points out that the distinction between the indefinite and definite forms of adjectives has become morphologically blurred⁹⁴. The long form of adjectives has prevailed over the short one. In concrete terms, the morphologically marked form, e.g. *visoki* ‘tall-DEF.’, has replaced the unmarked one, e.g. *visok* ‘tall-INDEF.’. For this reason, when a noun appearing with an adjective should be marked as indefinite, the long form of adjective necessarily occurs together with the numeral *jedan* ‘one’ (Silić 2000:404):

- (22) e. Pred vratima stoji **jedan visoki** čovjek.
in front of door stands one tall-DEF. man
‘There is a tall man standing at the door.’

⁹⁴ Pranjković (2000:344) confirms this observation. He says:

„ [...] primarni (gramatikalizirani) način izražavanja te kategorije (određenosti/ neodređenosti) preko neodređenih i određenih oblika pridjeva sve više ustupa mjesto drugim, sekundarnim načinima izražavanja određenosti ili neodređenosti onoga što se označuje imenicom.“

[...the primary (grammaticalized) way of expressing the category (definiteness/ indefiniteness) via indefinite and definite forms of adjectives is increasingly being replaced by other, secondary ways of expressing the definiteness or indefiniteness of the entity denoted by a noun.] (Translation DZC)

9.6.2. Case

A difference between definite and indefinite object noun phrases can also be expressed by case marking. Genitive case (partitive genitive) in (23b) marks indefiniteness, while accusative case in (23a) serves as a definiteness marker. However, as Pranjković (2000:345) points out, the definite/indefinite distinction via case marking is restricted to certain noun groups: to nouns denoting substances such as *kruh* ‘bread’, *sol* ‘salt’ or *cement* ‘cement’, and plural forms of nouns that primarily denote small objects, such as *knjige* ‘books’, *čavli* ‘nails’ or *kolači* ‘cakes’, as opposed to *kuće* ‘houses’, *rudnici* ‘mines’ or *brodovi* ‘ships’, where the distinction between definite/indefinite via accusative/genitive opposition does not work (23c):

- (23) a. kupiti kruh / sol / čavle (accusative: [+definite])
to buy bread-ACC.SG.MASC / salt-ACC.SG.MASC / nails-ACC.PL.MASC
- b. kupiti kruha / soli / čavala (genitive: [-definite])
to buy bread-GEN.SG.MASC / salt-GEN.SG.MASC / nails-GEN.PL.MASC
- c. *kupiti kuća / rudnika / brodova (genitive: *[-definite])
to buy houses-GEN.PL.FEM / mines-GEN.PL.MASC / ships-GEN.PL.MASC

In addition, the so-called *slavonski genitiv* ‘Slavic genitive’ can also be used to denote indefiniteness. In negative constructions with verbs such as *vidjeti* ‘to see’, *voljeti* ‘to love/like’, *čitati* ‘to read’ etc., genitive case marks indefiniteness and accusative definiteness:

- (24) a. Ne vidi stola/stolova. (genitive: [-definite])
Not see-3rd P.SG. table-GEN.SG / tables-GEN.PL
- b. Ne vidi stol/stolove. (accusative: [+definite])
Not see-3rd P.SG. table-ACC.SG / tables ACC.PL

9.6.3. Number

Another category used to express the opposition between indefinite and definite nouns is the category of number: plural is associated with indefiniteness (see (25a)), while nouns marked for singular often have a definite reading, especially in combination with the accusative case (25b) (ibid.):

(25) a. kupiti *knjige / knjiga* (plural + accusative/genitive: [-definite])
to buy books-ACC.PL / books-GEN.PL

b. kupiti *knjigu* (singular + accusative: [+definite])
to buy book-ACC.SG

Some nouns that usually do not have a plural form, e.g. *Amerika* ‘America’ in (26), receive an indefinite reading when they are marked for plural (ibid.):

(26) U nas se ipak ne živi tako dobro kao u *Amerikama*.
in us self still not live that good like in America-PL.INDEF
‘We still do not live so good like people in America.’

In the same manner, the difference between distributive singular and plural is sometimes employed to mark the indefinite/definite distinction, as in (27). In (28), where it is obvious that singular is meant, the plural form of the noun is often used instead in order to indicate the non-identifiability of the referent:

(27) žene u *bikiniju / u bikinijima*
women in bikini-SG.DEF / in bikinis-PL.INDEF

(28) *Vojnici* su mu ukrali kapu.
Soldiers-N.PL.INDEF are him-D.SG. stole-P.PART.ACTIVE cap.
‘His cap was stolen by a soldier.’

(Pranjeković 2000:346)

When talking about classification of animals, for instance, number is also used to narrow down the choice of possible referents. A noun marked for singular usually denotes a representative of a family (kind), while the plural form denotes the whole family. Kind is taken to be more specific and is therefore marked definite by singular, while the family is less specific and less identifiable, which is indicated by the plural form of the corresponding noun. For instance, the singular *golub gušan* ‘pouter pigeon’ denotes the kind, while the plural *golubovi* ‘pigeons’ denotes the whole family (cf. Pranjković 2000:346).

9.6.4. Indefinite and Definite Determiners

In addition to the various possibilities of the morpho-syntactic marking of (in)definiteness in Croatian outlined above, different lexical means are, of course, predominantly employed to mark this opposition as well. As already introduced in the previous chapter, demonstrative pronouns *ovaj* ‘this’, *taj* ‘that-MEDIAL’, *onaj* ‘that-DISTAL’; personal pronouns *ja* ‘I’, *ti* ‘you’, *mi* ‘we’, etc., along with other pronouns such as *ovakav* ‘this kind/such’, *takav* ‘that kind/such’; or possessive forms like the possessive adjectives (e.g. *Markov* ‘Marco’s’) and possessive pronouns *svoj* ‘one’s own’, *moj* ‘my’, *tvoj* ‘your’, etc., are used to indicate definiteness of the nominal referent. In addition, proper names and certain quantifiers, e.g. *svaki* ‘each’, *svi* ‘all’, also refer to a particular entity or groups of entities.

Indefiniteness markers include indefinite pronouns such as *neki* ‘some’, *nekakav* ‘some’, *poneki* ‘a few/several’, *kojekakav* ‘any’, indefinite quantifiers *mnogo* ‘many’, *malo* ‘little/few’, *dovoljno* ‘enough’, etc., and the numeral *jedan* ‘one’, which very often takes over the role of an indefinite article. As Pranjković (2000:347) points out, this is particularly evident in contexts where the numeral *jedan* ‘one’ co-occurs with the demonstrative *taj* ‘that’, where the former functions as the indefinite and the latter as the definite article:

- (29) Poslije polusatne ugodne šetnje došli su do *jednoga trga* i
after half-hour pleasant walk arrived are to *one square* and

na *tom* se *trgu* zadržali do kasnih večernjih sati.

at *that* are *square* stayed till late evening hours.

‘After having pleasantly walked for half an hour they arrived at a square where they stayed until late in the evening.’

9.6.5. Other (In)Definiteness Markers

In addition to the (in)definiteness markers set out above, other means such as prosody (stress), word order both within a DP and on a clausal level, verbal aspect, and both restrictive and non-restrictive relative clauses can be used to express (in)definiteness (cf. Pranjković 2000). Except for the word order variations within a nominal phrase itself, these phenomena appear either on the clausal level or manifest themselves in a different submodule of grammar, e.g. the use of different stress patterns as a means of indicating definiteness applies very late in the derivational process - at PF. For this reason, since the above stated alternatives are obviously not DP-internal phenomena, they are regarded as irrelevant for the analysis of the nouns here, because they do not affect their internal syntactic structure.

9.7. Conclusion

In addition to the fact that demonstrative pronouns in Croatian contribute to the definiteness and specificity of referents in a given context, the examples discussed in this chapter also illustrate that, contrary to the wide-spread opinion, they are not optional, but, in many cases, rather obligatory elements within the nominal complex. This allows me, therefore, to draw a conclusion endorsing my initial assumption: the assumed optionality of demonstrative pronouns in Croatian is context-sensitive and the necessity of their use is closely related to the existing contextual accessibility of nouns. This, in turn, implies that, when the nominal reference is made explicit by other syntactic means in a given context, demonstratives will not be used. Otherwise, they are obligatory.

What is the relevance of this observation for the structure of nominal expressions in Croatian? Recall that one of the main arguments in favour of the NP-analysis of nominal constructions in SerBoCroatian was that noun phrases appear without determiners. In this section I showed that this argument does not hold. Therefore, if there are structures in Croatian that necessarily include functional categories of this type, these structures must be accounted for. Even if determiners were not obligatory, the fact that complex nominal expressions of the type *one tvoje prve plave tenisice* ‘these your first blue sneakers’ occur, urges us to provide a syntactic structure that can accommodate all these elements.

CHAPTER 10

A SPLIT DP-ANALYSIS OF CROATIAN NOMINAL EXPRESSIONS

10.1. Introduction

The optimal exchange of information, which is the primary goal of communicative interaction between the sender and the recipient, affects the way in which this informational content is structured at the time of utterance. Much of this information structuring occurs at the clausal level. However, as noted in chapter 1, the process of information structuring sets in already at the subclausal level. Within a DP, discourse-related information, e.g. the speaker's assumptions about the hearer's familiarity with a certain referent, is reflected in his choice of various determiners that specify the referent of the denoted noun (cf. Aboh et al. 2010). In languages with articles, indefinite and definite articles are primarily employed for this purpose. Languages that lack articles have found other ways to express the same notions.

Under the assumption that the interpretation of nouns is conceptually equal across languages, it is justified to ask why some languages are supposed to have DP and others are not? Given that the nominal left periphery is associated with D-related features such as (in)definiteness, specificity and referentiality (cf. Aboh 2004b), this allows us to conclude that the absence of articles does not necessarily exclude the projection of the nominal left periphery in articleless languages.

Building upon this insight, a parallel can be drawn between languages that have articles and those that do not, in assuming the same underlying syntactic structure for both. Adopting the idea proposed by Lyons (1999), who regards DP as a definiteness phrase, and building upon the works of Aboh (2004b), Länzlinger (2005b, 2010), Giusti (2005) and, especially, that of Ihsane & Puskás (2001), I argue for a split-DP analysis of nominal expressions in Croatian. In concrete terms, I will argue that the overt morphological markers of

(in)definiteness, such as possessive elements or the numeral *jedan* ‘one’ in its function as an indefinite article, for instance, occupy the head position of the DefP. Being endowed with the features [+specific, +definite] (cf. Espinal 2011, Ihsane & Puskás 2001), demonstrative pronouns, by contrast, check their [+specific] feature in TopP. As is known, feature checking is a movement-triggering operation. This implies that these elements are base-generated either in the inflectional or the theta domain of the nominal projection.

This chapter is organized as follows: Section 10.2 briefly reviews some of the main empirical arguments provided in favour of the extended nominal structure in DP languages, making comparisons with Croatian. As mentioned earlier in this thesis, co-occurrences of different determiners within the nominal domain, along with their systematic re-arrangements, give rise to different interpretations and readings. In light of this observation, in sections 10.3 and 10.4 I will first reconsider the neutral word order of prenominal elements in Croatian, along with their various rearrangements, and elaborate on their syntactic structure within the scope of the split DP-approach. Subsequently, I will deal with noun/pronoun asymmetries in section 10.5, followed by detailed accounts of possessive and vocative constructions in sections 10.6 and 10.7, respectively. Section 10.8 concludes this chapter.

10.2. Reanalysis of NP as a DP: Some Fundamental Considerations

As outlined at the very beginning, in chapter 1 of this thesis, the reanalysis of NP as a DP in languages with articles was based on very compelling morphological, syntactic and semantic evidence (cf. Bernstein 2001a, Alexiadou et al. 2007 for an overview). Some of the main empirical arguments in favour of an extended nominal structure concerned the co-occurrence of determiners, established parallelisms between the nominal and clausal domains, and various DP-internal movement patterns. Before moving on to the syntactic analysis of Croatian nouns, I will briefly go through these arguments again, this time comparing DP-languages and Croatian.

1. **The co-occurrence of determiners.** Recall that, in many languages, various determiner types (articles, demonstratives, possessives) may co-occur, generating perfectly grammatical nominal constructions:

- (1) a. *il suo libro* (Italian)
the his book
'his book'
(Ihsane 2010:14)

Although Croatian does not have articles, various determiner types may also co-occur in its nominal structure:

- (2) *one tvoje plave tenisice*
these your blue sneakers

As is known, one of the typical functions of determiners in DP-languages is to indicate that the noun has been previously mentioned in discourse (anaphoric function). In addition, determiners are also used to indicate that given nouns are known to the speaker and the hearer, or to mark specificity, for instance. While all these functions are (can be) realized by definite and indefinite articles in DP-languages, in Croatian they are carried out by demonstrative pronouns (and other determiners). In my opinion, this parallelism should be the foundation upon which any assumptions on the architecture of noun phrases is built, and not the presence of (in)definite articles as the prototypical instantiation of the D-head.

Without explicating here further details concerning the different roles of articles in DP-languages⁹⁵, I refer to Alexiadou et al. (2007:79), who, in their summary on this issue, hold that the article “does not unequivocally encode definiteness or related semantic notions”. This observation motivates the postulation of the functional D head independently of the availability of articles, because “these properties [definiteness and/or related semantic notions] must be

⁹⁵ For an overview, see Alexiadou et al. (2007:55ff.).

derived from another source; arguably that source is the functional head D itself' (ibid.). Therefore, if the above arguments hold for DP-languages, there is no evident reason why they should not hold for Croatian (despite the fact that the article is lacking).

2. **Parallelisms between the nominal and clausal domains.** As has already been shown, deverbal nouns share the same argument structure as the verbs from which they are derived. Chomsky's (1970) well-known examples *Rome destroyed Carthage* vs. *Rome's destruction of Carthage* (Bernstein 2001a:540) exemplify the parallelism between the clausal and nominal structure, where nouns, just like verbs, take both external and internal arguments. As extensively discussed in chapter 8, argument-supporting nominalizations in Croatian display the same behaviour:

- (3) a. Saveznik **uništava** neprijateljske ciljeve napalm-bombama.
 allied forces-NOM destroy^{Impf.} enemy's targets-ACC napalm bombs-INST
 'Allied forces have been destroying enemy's targets with napalm
 bombs.'
- b. savezničko **uništavanje** neprijateljskih ciljeva napalm-bombama
 allied forces destroying^{Impf.} enemy's targets-GEN napalm bombs-INST

The noun *uništavanje* 'destruction^{Impf.}' in (3b) shows argument structure relations equivalent to its verbal counterpart in (3a), thereby endorsing and confirming the observed cross-linguistic parallelism between the nominal and clausal domain for Croatian as well.

3. **Movement.** Analogous to various movement phenomena in the clausal domain (head movement of a verb to functional heads within CP, or phrasal movement to specifier positions, e.g. raising of the clausal subject from [Spec,VP] to [Spec, IP]), plenty of evidence has been provided for both DP-internal head and phrasal movement in DP-languages. Head movement inside the nominal projection implies that the noun moves from its base-generated position in the lexical domain to a higher functional projection above NP (N-raising). DP-

internal phrasal movement is analogous to clausal *wh*-movement. Like [Spec, CP], [Spec, DP] serves as an escape hatch (for extraction out of the nominal phrase).

Is there any evidence for either DP-internal phrasal or head movement in Croatian? As outlined in one of the previous chapters, Kuna (2003) has suggested that the structural alternation between the postnominal genitive and its prenominal possessive alternative (e.g. *kovčeg putnika* vs. *putnikov kovčeg* ‘passenger’s suitcase’) results from the movement of NP to the specifier of the higher functional projection above NP, [Spec, PossP]. Recall that Progovac (1998) also argued in favour of DP-internal head movement. On the basis of observed *noun-pronoun* asymmetries (e.g. *I samu Mariju to nervira* ‘and alone Mary that irritates’ vs. *I nju samu to nervira* ‘and her alone that irritates’), Progovac (1998) assumes that pronouns, being base-generated in N^0 , or in one of the functional projections between N and D, raise to D^0 . It seems appropriate to quote Longobardi (1994:610) here, who says: “[...] if movement can be argued to apply in some language from inside NP to a position inside DP (e.g. from specifier position to specifier position or from the position of N^0 to that of D^0), then the structure $[_{NP} DP [_{N'} N]]$ will immediately be discarded, under any current theoretical approach, by the ban against movement to a non-c-commanding position”.

The above examples show that all the theoretical and empirical arguments that led to the reanalysis of NP as a DP in various languages apply to Croatian as well. Based on the linguistic data provided so far, a simple NP-analysis of nominal expressions in Croatian can be ruled out. Since the lack of articles has been the main reason why the DP-analysis has not been uniformly accepted for articleless languages, I want to argue for a slightly modified proposal and for a structure of the nominal phrase that does not build upon the presence versus absence of one single lexical item (the functional category *article*), but rather captures other properties and features of nominal expressions, which are *inter alia* captured by the definite article in languages that have one. As discussed earlier, the notions of specificity and definiteness manifest themselves in different ways

and obviously vary from language to language. Since nominal expressions in Croatian are evidently endowed with these features, Ihsane & Puskás' (2001) approach provides the basis for the subsequent syntactic analysis of Croatian nouns.

10.3. Prenominal Elements and Their External Merge Position

Before providing an analysis of the syntactic structure of Croatian nominal expressions, two other questions need to be answered first. The first question concerns the syntactic status of prenominal elements in Croatian; the second pertains to their external merge position.

10.3.1. The Syntactic Status of Prenominal Elements

In Part II of this thesis, I presented some evidence in favour of the head analysis of prenominal determiners. Due to their number-determining and case-assigning properties, the subgroup of determiners consisting of **cardinal numerals** and **quantifiers** obviously displays head-like syntactic behaviour. The **pre-determiners** *svi* 'all' and *svaki* 'each' are responsible for the number specification of the associated nominal complement, which is a characteristic typical of heads. As far as **possessive adjectives** are concerned, they cannot be modified by degree adverbs (**jako moj* '*very my'). Their binding properties also offer further support for their non-XP-status. In addition, possessive adjectives behave differently from English possessives, because possessive suffixes in Croatian do not attach to XPs (see (4b)), but only to heads, as illustrated below:

- (4) a. prijatelj_{ev} automobil
friend's car
- b. *[moj najbolji prijatelj]-*ev* automobil
my best friend -s car
- c. [my best friend]'s car

Leko (1999:248ff), however, argues that all prenominal elements are adjectival in nature, not only because they modify the noun, but because they also agree with it in case, number and gender. Even though he postulates a few functional projections between the DP and NP (referring to this structure as a ‘split DP’), these constituents appear in the specifier position of each postulated functional category as adjectival phrases (APs). The reason why he claims that these elements are phrasal categories comes from the following examples, which show that they can be modified:

- (5) a. iskreno tvoj prijatelj vs. *iskreno prijatelj
sincerely your friend
- b. nadmoćno prvi atletičar vs. *nadmoćno atletičar
convincingly first athlete

Leko (1999:249)

However, the example given in (5a) is not a good argument for the phrasal status of possessive elements, because the above pattern is not productive, as shown in (6) below:

- (6) a. *povjerljivo / *vjerno / *dobro / *pouzđano tvoj prijatelj
trustworthily / faithfully / well / reliably your friend
- b. iskreno *njegov / *bratov / *Ivanov prijatelj
sincerely his / brother’s / John’s friend

Adverbials derived from the adjectives *povjerljiv* ‘trustworthy’, *vjerman* ‘faithful’, *dobar* ‘good’ or *pouzđan* ‘reliable’ cannot modify the possessive pronoun *tvoj* ‘your’. In addition, a replacement of the possessive pronoun *tvoj* ‘your’ with any other possessive form, such as *njegov* ‘his’, *bratov* ‘brother’s’ or *Ivanov* ‘John’s’,

does not yield an acceptable result either. The ungrammaticality of the examples in (6) therefore confirms the idiosyncratic nature of the expression given in (5a).

As far as **numerals** are concerned, quantifiers and cardinal numerals display head-like properties. Ordinal numerals, by contrast, are less restrictive in their c-selection than the other two subgroups. They neither assign case nor determine the number of their complements, but they do agree in case, number and gender with the head noun. Certainly, more in-depth research into the nature of ordinal numerals would be appropriate, but will not be pursued here. That they are not ordinary adjectives was already shown in Chapter 5 due to their different morphological and syntactic behaviour. As also has been shown by Leko (1999:242), ordinal numerals precede descriptive adjectives, but appear after possessives, which provides evidence for their higher structural position with regard to descriptive adjectives within a nominal structure. While reversing the order between them and descriptive adjectives results in ungrammaticality, this is not so in cases where they co-occur with possessives:

- (7)
- | | | | |
|----|----------------|----------------|------------------|
| a. | prve | crvene | zastave |
| | first-NOM.F.PL | red-NOM.F.PL | flags-NOM.F.PL |
| b. | *crvene | prve | zastave |
| | red-NOM.F.PL | first-NOM.F.PL | flags-NOM.F.PL |
| c. | moj | prvi | stroj |
| | my-NOM.M.SG | first-NOM.M.SG | machine-NOM.M.SG |
| d. | ?prvi | moj | stroj |
| | first-NOM.M.SG | my-NOM.M.SG | machine-NOM.M.SG |

I will return to these examples later on. For the time being, since ordinal numerals contribute to the specificity of the nominal referent, I assume the head status of ordinal numerals as well, in spite of (5b), which is, in my opinion, restricted to some fixed expressions of the type given above.

Bearing all this in mind, the question is whether **demonstratives**, as the sole category within the class of determiners, should be treated as XPs, and if so,

why? Cross-linguistic evidence from many languages has provided support for the fact that demonstratives and articles do not occupy the same structural position:

- (8) a. *ez a haz* (Hungarian)
this the house
- b. *afto to vivlio* (Greek)
this the book (Alexiadou et al. 2007:106)

A corollary following directly from the co-occurrence of demonstratives and articles was the abandonment of Jackendoff's (1977) model of phrase structure, which stated that demonstratives, together with articles, occupied the leftmost specifier position of the NP (cf. Alexiadou et al. 2007:105 ff). Transferring this approach to Abney's (1987) phrase structure model resulted in the placement of demonstrative elements in the specifier of DP. It was only in this manner that the co-occurrence of demonstratives and articles could be properly accounted for. This necessarily led to the conclusion that the categorial status of demonstratives must be that of a maximal projection. However, under the split-DP approach, demonstratives do not necessarily have to be regarded as XPs, since the co-occurrence of both demonstratives and articles can be easily captured and explained by it.

The second substantial argument in favour of the XP-status of demonstrative pronouns concerned their autonomous appearance within a sentence, a property not intrinsic to definite articles, as shown below in (9). In addition, the morphological and phonological appearance of demonstratives is also noun-independent (Alexiadou et al. 2007:106):

- (9) a. I like that. vs. I like the *(book).
- b. *Ho visto quello.* vs. *Ho visto il *(ragazzo).*
I have seen that I have seen the (boy)

As is known, demonstrative pronouns in Croatian show overt morphological agreement with the succeeding adjectives and the head noun within a DP. It may be for this reason that only the independent appearance of the neutral demonstrative seems to be permitted, as in (10a). In this case the demonstrative may either refer to something previously mentioned or to an entity being denoted by a noun marked for neutral gender. Examples in which a demonstrative carries either a feminine or a masculine ending are, in this case, rather marginal, but would be conceived of as perfectly fine in contexts involving noun ellipsis, as shown in (10d, e):

- (10) a. (Ja) to volim.
(I) that- ACC.N.SG like-1st P.SG.
b. ??Volim tu.
like-1st P.SG. that-ACC.F.SG
c. ??Volim taj.
like-1st P.SG.that-ACC.MASC.SG
d. On voli ovaj automobil, a ja volim taj (automobil).
He likes this car, but I like that (car).
e. On voli ovu knjigu, a ja volim tu (knjigu).
He likes this book, but I like that (book).

Furthermore, the English demonstrative *that* can be used as a degree modifier in adverbial and adjectival phrases, being comparable to the degree adverb *so* or *such*, both of which are assumed to occupy [Spec, DP] in English (Alexiadou et al. 2007:108):

- (11) a. I did not expect it to happen [_{AdvP} *that* quickly].
a'. Nisam očekivala da će se to dogoditi [_{AdvP} *ovo/ *to / *tako* brzo].
b. I did not expect [_{DP}[_{AP} *that* big] an audience].
b'. Nisam očekivala [_{DP}[_{AP} *ovu/ *tu / *tako* veliku] publiku].

By contrast, Croatian demonstrative pronouns *ovo/to/ono* ‘*this/that-MED /that-DIST*’ cannot appear as modifiers in such syntactic constructions, see (11a’, b’). Instead, another type of a demonstrative pronoun is used, which explicitly refers to the quality of a described event or noun, the demonstrative *tako*.

The above examples clearly show that no one-to-one relation holds between the use of Croatian demonstratives and their English counterparts. For this reason, I assume that the syntactic status of demonstrative elements in Croatian does not differ from that of other determiners; that is, they should also be treated as heads. One further issue in favour of this view was raised in one of the previous chapters. Here I cite Newson et al. (2006:132), who said the following: “[...] the determiner looks suspiciously like a word and to analyse it as a phrase by itself begs the question of why determiners never have complements, specifiers or adjuncts of their own.”

10.3.2. The External Merge Position and Ordering of Prenominal Elements

What about the position in which determiners are externally merged? There are at least two options: all these elements are either base-generated in the inflectional domain of the noun and then move upwards to the left periphery in order to check relevant features, as suggested by Ihsane & Puskás (2001), or as Laenzlinger (2010:59) proposes, they are merged directly in the left periphery which contains projections related to focalization, topicalization, informational prominence and quantification. Irrespective of the approach we choose to stick to, the fact is that the nominal left periphery cannot be dispensed with. A possible alternative to the above solutions would be a division of labour between the inflectional/theta domain and the left periphery. In concrete terms this would imply that the lexical and functional elements that directly contribute to the (in)definiteness and specificity of the corresponding nominal expression, such as demonstratives or possessives, are merged in the left periphery, while all other (pre)nominal items move from their base-generated position from within the inflectional or the theta-domain to the nominal left periphery in the absence of

these constituents. This movement is motivated by the necessity of checking relevant features, such as (in)definiteness, focus or specificity.

The question is whether we need the prenominal items to be base-generated somewhere and, if so, why? Recall the three possibilities concerning their placement. Under the assumption that all these elements are merged directly in the left periphery, the question arises as to how we can then account for different word orders within a DP. This seems to pose a serious problem for the direct-left-periphery-merge proposal. Merging all these elements partly in the inflectional domain and partly in the left periphery does not seem to be plausible either, for the same reason. Therefore, the only option left that allows for the explanation of various word order phenomena within DP is to adopt the view that these items are base-generated under their dedicated functional projections within the inflectional domain, moving obligatorily out to the left periphery in order to check relevant features. This view captures both the word order alternations and the idea that (in)definiteness and specificity can assume different morphosyntactic forms and can be realized by different lexical/functional items.

As extensively discussed in chapters 2 and 3, the following example mirrors the neutral word order of prenominal constituents within SerBoCroatian nominal expressions (Leko 1999:249):

- (12) *onaj tvoj prvi crveni šivaći stroj*
this your first red sewing machine
'that first red sewing machine of yours'

The word order illustrated above roughly corresponds to the universal word order proposed by Greenberg (1966) and Hawkins (1983), the only difference being the co-appearance of possessives between demonstratives and numerals in Croatian.

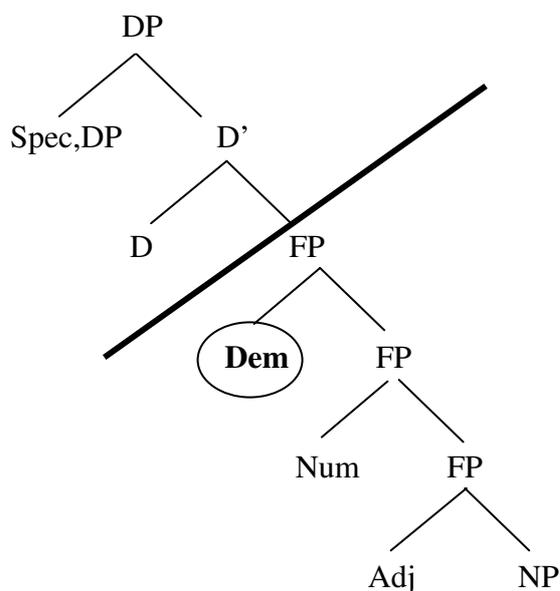
- (13) a. **Universal base order**
Demonstrative > Numeral > Adjective > Noun

- | | | | | |
|----------|------|--------|--------|-----------|
| b. Diese | fünf | großen | Häuser | (German) |
| c. These | five | large | houses | (English) |

(Ihsane & Puskás 2001:45)

Both Greenberg (1966) and Hawkins (1983) assume that all the above-mentioned prenominal elements are generated in the inflectional domain of the noun. Adopting this view and following Giusti (1994), Ihsane & Puskás (2001:45) take the position that demonstratives are generated in the specifier position of the highest functional projection of the inflectional system, directly below the DP area, to which they move in order to check their [+specific] feature:

(14)



Can DemP be regarded as the highest functional projection within the inflectional domain cross-linguistically? The following examples seem to contradict this assumption, at least in Croatian:

- (15) a. [*Svi ti dokazani slučajevi*] detaljno
all-NOM.PL these-NOM.PL proven-NOM.PL cases-NOM.PL in detail
su bili dokumentirani tijekom posljednjih godina.
are been documented during last years

‘All the proven cases have been documented in detail during the last years.’

- b. [*Svih tih nekoliko tisuća dokazanih*
all-GEN.PL these-GEN.PL several thousand-GEN.PL proven-GEN.PL
slučajeva] detaljno je bilo dokumentirano ...
cases-GEN.PL in detail is been documented ...

The example given in (15a) mirrors the neutral word order within a DP, where the demonstrative appears in front of all other constituents, preceded only by the universal quantifier *svi* ‘all’. In addition, all prenominal elements agree with the noun in number, gender and case. However, in spite of the preserved word order in (15b), both the universal quantifier *svi* ‘all’ and the demonstrative determiner *ti* ‘that-MED.PL’ are marked for genitive, although *nekoliko* ‘several’ quantifies *tisuće dokazanih slučajeva* ‘thousands of proven cases’. The same phenomenon can also be observed in cases in which a cardinal number is inserted into the structure:

- (16) a. [*Prve godine života*] su veoma važne.
first-NOM.PL years-NOM.PL life-GEN.SG are very important
‘The first years of life are very important.’
- b. [*Prvih pet godina života*] prošlo je/prošle su
first-GEN.PL five years-GEN.PL life-GEN.SG passed is/passed are
bez većih iznenađenja.
without greater surprises
- c. [*Mojih prvih pet rečenica*] odnosile su se na...
my-GEN.PL first-GEN.PL five sentences-GEN.PL referred are self to...

As soon as the cardinal numeral *pet* ‘five’ appears in the nominal expression, all preceding constituents are marked for genitive. Additionally, the example given in (16c) shows that ordinal and cardinal numerals may co-occur, which implies that they do not occupy the same syntactic position and cannot be subsumed under the same category. However, we may also note here that the use of other ordinal numerals together with cardinals sounds very odd and yields an ungrammatical result (being filtered out by semantics), e.g. *mojih *drugih/*trećih pet rečenica* ‘my *second/*third five sentences’.

Bašić (2004:14) says that quantifiers may appear in several positions, bringing about different readings:

- (17) a. Prodao je [**nekoliko ovih** knjiga].
sold aux several these books
‘He sold several of these books.’
- b. Prodao je [*ovih* **nekoliko** knjiga].
sold aux these several books
He sold these several books.

When the quantifier precedes the demonstrative determiner, as in (17a), we obtain the partitive reading. However, in spite of the difference in reading, which arises as a consequence of the different word order, the question is how we can explain the genitive case on the demonstrative in (17b) and all other prenominal items introduced in the examples above. The only plausible explanation is to assume that both quantifiers of the above type and cardinal numerals occupy the highest functional projection within the inflectional domain, thus appearing even above pre-determiners and demonstratives. This allows all prenominal items to be case-marked when they appear in constructions with cardinal numerals and certain quantifiers. After having been assigned case in their base-generated position within the inflectional domain, some prenominal items subsequently move out of

it to the left periphery, where they check their specificity, focus and (in)definiteness features.

If we adopt the partitioning of DP into three domains, we can conclude that each domain contains the following projections at the very least:

- a) the left periphery: [DP [TopP [FocP [DefP...]]]]
- b) the inflectional domain: [QP [DemP [PossP [NumP [FPAdj ...]]]]]
- c) the theta domain: [_{nP} [NP [N]]].

The number of functional projections depends on the structure of the nominal expression. In the case of deverbal nominals, for instance, further functional categories may be projected, such as AspP, NumP or ClassP. Since each prenominal element shows agreement with the head noun, several FP_{Agr} projections must be inserted between various functional projections in the inflectional domain.

10.4. Deriving the Syntactic Structure of the Neutral Word Order

Consider the following examples, concentrating on the elements that appear in the left periphery:

(18) a. *jedan* čovjek
one man
'a man'

b. *visoki* čovjek
tall man
'the tall man'

c. *jedan visoki* čovjek
one tall man
'a tall man'

As has already been introduced in this work, the unstressed version of the numeral *jedan* ‘one’ is used to indicate the indefiniteness of the nominal referent and functions as a real indefinite article (cf. Silić 2000). At this point I want to present some further undisputable morphosyntactic evidence, which has not been taken into consideration in the linguistic literature until now and which endorses the view that the numeral *jedan* ‘one’ in Croatian is a pure indefiniteness marker, along with the assumption that a DP-layered structure of nominal expressions is necessary.

According to Himmelmann (2001:837ff.), **indefinite articles** generally have their source in the numeral *one*. The numeral *one* and the indefinite article are segmentally identical in many languages, e.g. German *ein/eine* or Italian *uno/una*. In languages where they have different morphosyntactic structure, as it is the case in English (*a/one*), they do not co-occur (**a one book*). An exception to this rule is found in Sinhala, the native language of Sri Lanka, where what appears to be an indefinite article co-occurs with numerals. Himmelmann (2001:838) gives the following example: *pota-k* “a book” (book.SG-INDEF), *pot eka-k* “one book” (book.PL one-INDEF). The major formal criterion for distinguishing indefinite articles from numerals when they are identical on the morpho-syntactic/segmental level is their different accentuation. That indefinite articles are unstressed is, according to Himmelmann (2001), a rather weak criterion for their distinction from numerals, since numerals in most languages need not be stressed. An additional distinguishing feature of indefinite articles is provided by the rather infrequent phenomenon of **plural use**, although indefinite articles are in general restricted to use with singular count nouns. In Spanish, for instance, the indefinite article derived from the numeral *one* may be used in plural expressions, e.g. *un libro* ‘a book’ vs. *unos libros* ‘some/a few books’.

In Croatian, which is regarded an articleless language, we may observe the same phenomenon. As attested by the following examples, the indefiniteness marker *jedan* ‘one’, as I will designate it from now on, is regularly used with plural nouns:

- (19) a. Još se sjećam savjeta koji su mi dali
still self remember advice which are me-DAT give-PAST PART. ACTIVE
*jedni prijatelji moje majke [...]*⁹⁶.
one-NOM.PL friends-NOM.PL my-GEN.SG mother-GEN.SG
'I still remember the advice that some friends of my mother gave me.'
- b. Dok *jedna djeca* nemaju roditelje, odnosno
while *one-NOM.PL children-NOM.PL* not have parents, that is
roditelji su im nepoznatog podrijetla, drugi pak imaju sreću [...]⁹⁷.
parents are them-DAT unknown origin, others but have luck
'While some children do not have parents, that is, their parents cannot be
traced back, others are still lucky [...]
- c. Ja se sjećam *jednih jako lijepih*
I self remember *one-GEN.PL very-GEN.PL beautiful-GEN.PL*
bijelih konja u ovom parku [...]⁹⁸.
white- GEN.PL horses-GEN.PL in this park
'I remember some very beautiful white horses being in this park.'
- d. *Jedni brojevi* nam nisu dobri, na druge se javlja
one-NOM.PL numbers-NOM.PL us not are good, on others self answers
automatska tajnica⁹⁹.
answering machine
'While some phone numbers are not valid any more, other phone calls
are answered by an answering machine.'

⁹⁶ Source: <http://hr.opusdei.org/art.php?p=38496>, accessed on November 4, 2011.

⁹⁷ Source: http://www.lobor.net46.net/web-ucenika_2003/Razno/SOCIJALNIPROBLEMI-3a_rac4/www4-3a/roditelji_i_djeca.htm, accessed on November 4, 2011.

⁹⁸ Source: https://www.facebook.com/permalink.php?story_fbid=425147140781&id=182218655781, accessed on November 4, 2011.

⁹⁹ Source: <http://zemljokrug.blog.hr/2011/07/1629352326/21svibnja-2011.html>, accessed on November 4, 2011.

e. Na redu su još *jedni savjeti za vašu kosu*¹⁰⁰.

Follow are still *one-NOM.PL advices-NOM.PL for your hair*

‘There still follows some advice concerning your hair.’

f. Poklonio sam stare novine *jednim ženama*.

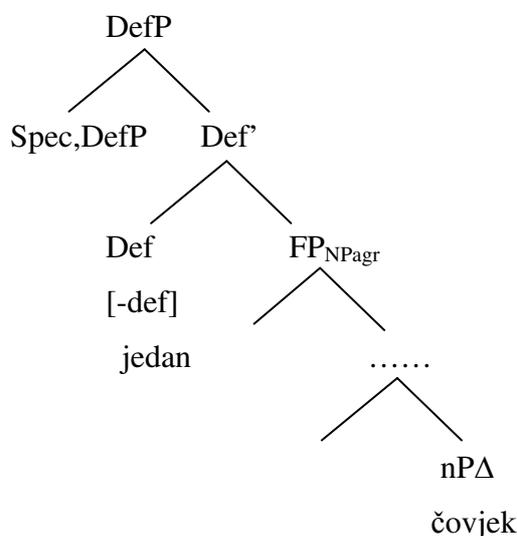
give-MASC.SG am old-ACC.PL newspapers-ACC.PL one-D.PL women-D.PL

‘I gave old newspapers to some women.’

The above examples clearly show that the lexical item *jedan* ‘one’ behaves as an indefiniteness marker. As the indefiniteness marker, *jedan* ‘one’ is base-generated in Def⁰, a position where both definite and indefinite articles in DP-languages occur.

Let us now return to the analysis of the examples given in (18). On the basis of what has been previously established, the syntactic structure of (18a) is rather straightforward:

(20)

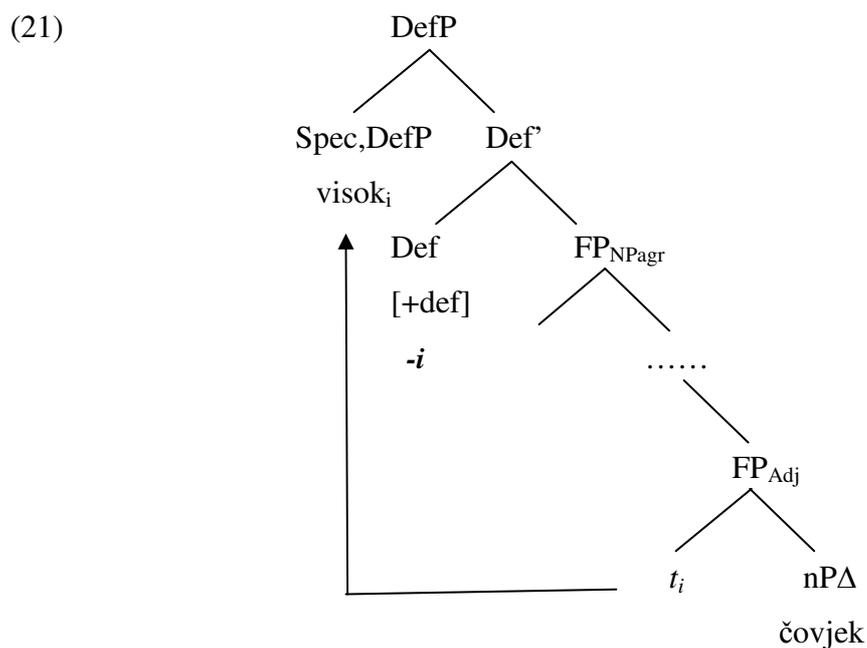


In (18a), *jedan* ‘one’ is base-generated under Def⁰ in the left periphery and the noun *čovjek* ‘man’ appears in the theta-domain. Recall that, according to Silić

¹⁰⁰ Source: <http://videoteka.novativ.hr/multimedia/oblak-film-o-luki-ritzu.html>, accessed on November 4, 2011.

(1992), *jedan* ‘one’ is considered to have the same syntactic status as pre-determiners *svi* ‘all’ and *svaki* ‘each’, because they appear before demonstrative determiners when they co-occur. Whether *jedan* ‘one’ and the pre-determiners *svi* ‘all’ and *svaki* ‘each’ have the same syntactic status is an issue that needs to be examined in more detail. The observed linear precedence of *jedan* ‘one’ with respect to demonstrative determiners, however, can be derived from its higher base-generated syntactic position. Adopting the view that demonstrative determiners move up to TopP in order to check their [+specific] feature, allows for the assumption that in such constructions *jedan* ‘one’ moves further up to DP.

In (18b) we have an example of a definite adjective appearing together with the noun, which is consistently interpreted as [+definite]. Here the overt definiteness marker *-i* appears under Def⁰ and the adjective moves from its specifier position from within the inflectional domain up to [Spec, DefP], where it internally merges with the overt definiteness morpheme *-i*:



The indefinite variant of (18b) assumes either the unmarked adjectival form *visok* ‘tall-INDEF’, otherwise the long form of the adjective appears necessarily together

with the indefiniteness marker *jedan* ‘one’, as is the case in (18c). Since (in)definiteness is already lexicalized by the indefiniteness marker *jedan* ‘one’, the morphological ending *-i* on the adjective *visok* ‘tall’ can be regarded as a mere adjectival inflection. Remember that articles, which prototypically occupy Def⁰ in DP-languages, trigger different inflectional endings on the succeeding descriptive adjectival modifiers. The above structure is therefore equivalent to structures of the type found in some DP-languages, such as the German *ein großer Mann* ‘a tall man’, where adjectives carry different inflectional endings depending on the type of determiner that appears in front of them. The resulting syntactic structure of (18c) looks as follows: [DP [TopP [Top [FocP [DefP [Def *jedan* [...[FPAdj *visoki* [nP [NP *čovjek*]]]]]]]]].

What is the analysis of Leko’s (1999) examples, introduced in (12) and (7c, d), repeated here as (22) and (23), respectively?

- (22) a. *onaj tvoj prvi crveni šivaći stroj*
this your first red sewing machine
‘that first red sewing machine of yours’

- (23) a. *moj prvi stroj*
my-NOM.MASC.SG first-NOM.MASC.SG machine-NOM.MASC.SG
b. *?prvi moj stroj*
first-NOM.MASC.SG my-NOM.MASC.SG machine-NOM.MASC.SG

Since demonstratives contribute to the specific interpretation of the noun, they move to a position in which their [+specific] feature is checked, which is the head of the TopP projection. Possessive suffixes, as will be shown in more detail in the next section, are strong definiteness markers (cf. Kuna 2003). As they are headed by possessive suffixes, possessive elements affect the definiteness status of the entire nominal expression, moving out to the head of DefP, where their definiteness feature is checked. Both the ordinal numeral *prvi* ‘first’ and the adjective *red* ‘*crveni*’ stay in their base-generated position. Hence, the syntactic

structure of (22) looks as follows: [DP [TopP [Top onaj_i [FocP [DefP [Def tvoj_j [... [DemP t_i [PossP t_j [NumP prvi [FPAdj crveni [nP [NP šivaći stroj]]]]]]]]]]]]].

The example in (23a) has basically the same structure, which is derived in a similar way to the one given in (22). The unacceptability of (23b), which is marked with a question mark, results from the ordering of pronominal elements. However, when the ordinal numeral is emphasized, the structure becomes fully acceptable. If we look at the functional projections generated in the left periphery, we can see that the functional projection FocP is generated above DefP, allowing us to explain the acceptability of the emphasized alternative version of (23b), where the numeral *prvi* ‘first’ moves up to FocP: [DP [TopP [Top [FocP [Foc prvi_i [DefP [Def moj_j [... [PossP t_j [NumP t_i [nP [NP stroj]]]]]]]]]]]]].

10.5. Noun/Pronoun Asymmetries: A Reanalysis

According to Enc (1991:9), proper names and pronouns are definite descriptions. Consistently, we expect definite items to move to a position where their [+definite] feature is checked in the absence of other (in)definiteness markers. Longobardi (1994) has proposed that proper names in Italian move to D, which is basically in accordance with Enc’s (1991) classification and definition of definite descriptions. However, we may remember that Progovac (1998) has proposed that in SerBoCroatian only pronouns move to D, based on observed noun/pronoun asymmetries in which pronouns precede and nouns follow certain intensifying adjectives. Her analysis implies that only pronouns as definite descriptions check their (in)definiteness feature, while all other expressions do not. According to Progovac (1998:167) the ordering ‘intensifying adjective *sam(a)*-noun’ is fine, while the ordering ‘intensifying adjective *sam(a)*- pronoun’ is ungrammatical:

- (24) a. I **samu Mariju** to nervira
 and alone Mary that irritates
 ‘That irritates even Mary.’

- b. ?*I **Mariju samu** to nervira.
- c. ?*I **samu nju/mene** to nervira.
and alone her/me that irritates
'That irritates even her/me.'
- d. I **nju/mene samu** to nervira.

However, below I will provide a number of random examples, found on various webpages, which show that such strict noun/pronoun asymmetries do not exist. While nouns generally follow the intensifier '*sam/sama*', pronouns can either precede or follow them. In addition, the ordering 'intensifying adjective *sam(a)*-pronoun' obviously represents quite a regular syntactic pattern:

- (25) a. Makar se svima pa i **samome tebi** činilo da
although self everybody even and alone-DAT you-DAT appeared that
kasni[...] ¹⁰¹.
is late

'Even if it appeared to everybody and to you yourself as well that he/she is late [...].'

- b. Prisutan si, radiš i stvaraš, a sve to **tebi**
present are, work-3rd.P.PR and create, but all that you-DAT
samome prolazi nekako neprimjetno. ¹⁰²
alone-DAT passes by somehow unnoticeably

'You are available, you work and create, and, even to you, all this somehow passes by without you being aware of it.'

¹⁰¹ Source: http://zupa-jalzabet.com/19nkg_11.html#rz, accessed on November 6, 2011.

¹⁰² Source: <http://www.fashion.hr/vijesti/lifestyle/film-glazba/prisutan-si-radis-i-stvaras-a-sve-to-tebi-samome-prolazi-nekako-neprimjetno>, accessed on November 6, 2011.

- c. Možda je greška u *samoj meni* što¹⁰³ ...
Maybe is mistake in alone-DAT me-DAT that
'It is probably my own fault that...'
- d. Ne samo da je imala izvanredne rezultate, nego ni
not only that is have-P.PART.ACT.FEM excellent results, but neither
samoj njoj nije bilo jasno kako je to sve SUPER prošlo¹⁰⁴.
alone-DAT her-DAT not is been clear how is that all super passed
'Not only that she has achieved excellent results, but she hasn't even
realized how fantastic everything was.'
- e. On mora biti spreman vidjeti da se izvor problema nalazi
He must be ready to see that self source problems-GEN resides
unutar *samoga njega*¹⁰⁵.
within alone-GEN him-GEN
'He has to be willing to realize that the source of the problem resides
within him himself.'
- f. Nisam mogla izdržati, uvjeravala sam *samu sebe* da je
Not am could bear up, convincing am alone-ACC self-ACC that is
tako najbolje¹⁰⁶.
that way best
'I couldn't stand it, I kept convincing myself that it was better that way.'

So, the question is how we can approach and analyse these structures. Let us concentrate on the example pair given in (25a) and (25b).

In (25a) the intensifying adjective *samome* 'alone-DAT' precedes the pronoun *tebi* 'you-DAT'. The intensifying adjective in this construction is

¹⁰³ Source: <http://ljubavjeto.blogger.ba/arhiva/?start=20>.

¹⁰⁴ Source : <http://www.zupagornjibogicevci.hr/literat/duhov/Andeli%20i%20arkandeli.pdf>.

¹⁰⁵ Source: <http://www.alternativa-forum.com/samoiscjeljenje/4812-ho-oponopono.html>.

¹⁰⁶ Source: <http://ivanavk.blog.hr>, accessed on November 6, 2011.

emphasized. This means that it has to move to FocP. Since FocP is higher in the structure than Def⁰, the syntactic analysis of this construction is pretty straightforward¹⁰⁷: [DP [TopP [Top [FocP samome_i [Foc [DefP [Def tebi_j [...[FPAdj t_i [nP [NP t_j]]]]]]]]]]].

In (25b) we have the reversed word order: the pronoun *tebi* ‘you-DAT.’ precedes the intensifying adjective *samome* ‘alone-DAT’. This nominal expression has two different structures, because both constituents can be emphasized, but of course, not at the same time. In the regular reading, the stress is placed on the intensifying adjective *samome* ‘alone-DAT’, which implies that it has to appear in FocP. In order to derive the above word order, the pronoun *tebi* ‘you-DAT’ therefore moves further up through Def⁰ and Top⁰, where it checks its [+definite] and [+specific] features, to D⁰: [DP [D tebi_j [TopP [Top t_j [FocP samome_i [Foc [DefP [Def t_j [...[FPAdj t_i [nP [NP t_j]]]]]]]]]]]. In the second reading, the emphasis is placed on the pronoun *tebi* ‘you-DAT’. Here the pronoun raises to Foc⁰, and the adjective remains behind in its base-generated position: [DP [TopP [Top [FocP [Foc tebi_i [DefP [Def t_i [...[FPAdj samome [nP [NP t_i]]]]]]]]]]]. The structure found in the construction ‘intensifying adjective *sam(a)*-noun’ is derived in the same manner as in the construction ‘intensifying adjective *sam(a)*- pronoun’ described above.

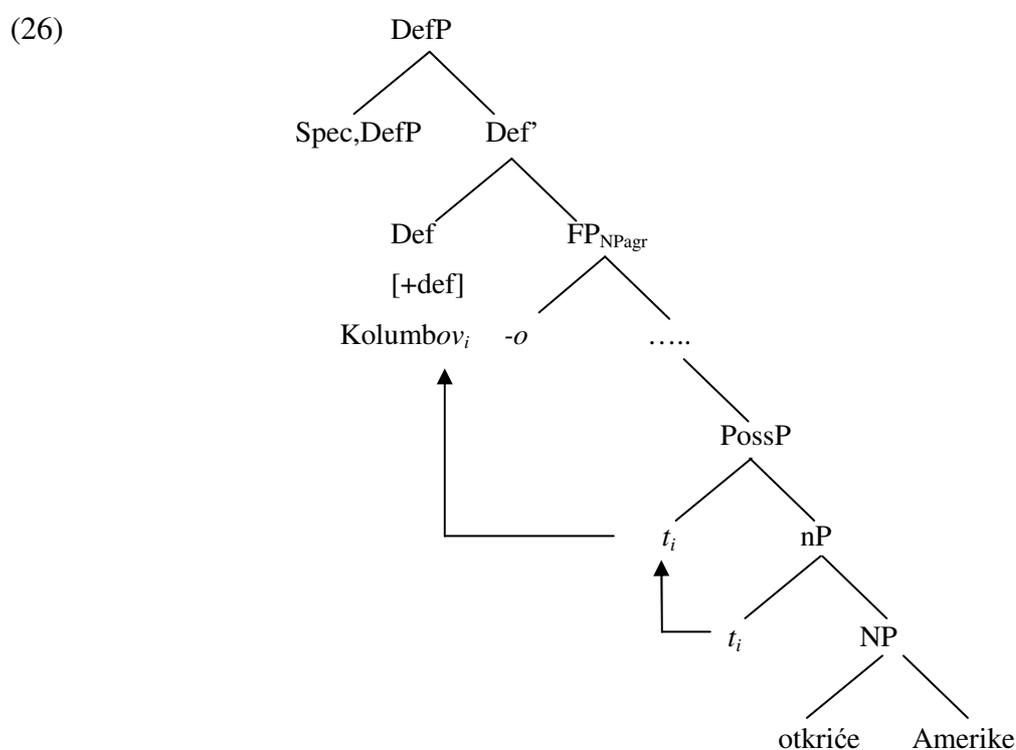
In order to complete the picture of this split DP-analysis for Croatian nominal expressions I will additionally briefly discuss possessive and vocative constructions in the next two subsections, before coming to a final conclusion.

10.6. Possessive Constructions

As shown in Chapter 8, the complex internal structure of ASNs in Croatian cannot be accounted for by the simple NP-analysis. One of the nominal arguments within ASNs is realized as a possessive adjective. Since the possessive element is c-selected and theta-marked by the noun, it must be generated in a position where it receives its theta-role, that is, within the nP-shell. Due to the fact that it

¹⁰⁷ As shown in chapter 5.2.2, pronouns and demonstratives are mutually exclusive. This being the fact implies that pronouns, like demonstratives, also need to check their [+specific] feature in Top⁰. For this reason, in the above case we need to assume a covert movement of the pronoun through Top⁰ to D.

contributes to the definiteness status of the whole nominal expression, it moves to the nominal left periphery, where these features are checked. I adopt here the view proposed by Kuna (2003), who argued that the possessive suffixes *-ov*, *-ev*, *-in*, etc. are generated in the head position of PossP. However, I think that, after having been theta-marked by the head noun, the nominal argument internally merges with the corresponding possessive suffix in Poss⁰ and moves to Def⁰. The syntactic structure of the argument-supporting nominal expression *Kolumbovo otkriće Amerike* ‘Columbus’ discovery of America’, given in (26) below, captures the idea outlined above, albeit in a very simplified way:



That possessive elements occupy Def⁰ in Croatian is further supported by the definite adjectival inflection, which has been considered the most prominent overt realization of definiteness in SerBoCroatian. As already noted and pointed out by Kuna (2003:258), the possessive suffix *-in* (as a definiteness marker) affects the definiteness status of the whole phrase in (27), along with the overt morphological realisation of the successive adjectival modifiers. When the

possessive adjective appears in combination with other adjectival modifiers, they have to be marked definite, as the following examples illustrate:

- (27) a. MarijinØ star-**i** rođak
 Mary-POSS old-**DEF** cousin
- b. *Marij-*in*-**i** star-**i** rođak
 Mary-*POSS-DEF* old-**DEF** cousin
- c. *MarijinØ starØ rođak
 Mary-POSS old-**INDEF** cousin

Unlike descriptive adjectives, which need to be marked definite by the definiteness suffix *-i*, the derivational suffix *-in* contains such a strong definiteness feature that the possessive noun does not need any additional definiteness marker (Kuna 2003). If the definiteness marker *-i* is attached to the possessive adjective, the complete nominal phrase becomes ungrammatical, as shown in (27b). In (27c) the DP is ungrammatical, because the descriptive adjective *star* 'old' fails to be marked for definiteness.

How can we explain the interdependence between the adjectival inflection and the possessive form shown above? Well, the above data fit nicely into the picture of the split nominal left periphery. Recall that, according to Giusti (2005) and Ihsane & Puskás (2001), articles as a prototypical instantiation of (in)definiteness occupy Def⁰. In some languages they trigger different inflection on adjectival modifiers. This is exactly what we observe in (27). Having moved to Def⁰, the possessive adjective triggers inflection on the succeeding descriptive adjective. Since the possessive suffix itself is a definiteness marker and occupies the head of DefP, an additional *-i* need not be attached to it.

Although the adjectival marking *-i* has been regarded as the most prominent overt morphological realization of the definiteness feature in SerBoCroatian (cf. Progovac 1998), both Silić (2000) and Pranjković (2000) point

out that the distinction between the indefinite and definite forms of adjectives has become morphologically blurred. The long form of adjectives (-i-form) has prevailed over the short one. In concrete terms, the morphologically marked form, e.g. *visoki* ‘tall-DEF’ in (28a), has replaced the unmarked one, e.g. *visok* ‘tall-INDEF’ in (28b). For this reason, when a noun accompanied by an adjective is to be marked as indefinite, the adjective necessarily occurs together with the numeral *jedan* ‘one’, which functions here as a real indefinite article (Silić 2000:404):

(28) a. Pred vratima stoji *jedan visoki* čovjek.

in front of door stands one tall-DEF man

‘There is *a tall man* standing at the door.’

b. Pred vratima stoji *visok* čovjek.

in front of door stands tall-INDEF man

‘There is *a tall man* standing at the door.’

The above observation also confirms the waning importance of the adjectival inflection as (in)definiteness marker *per se* in Croatian in favour of other lexicalized forms. It also conforms with the above analysis, where it is assigned the status of an adjectival inflection only.

10.7. Vocative Constructions

A vocative expression is an expression of direct address (Wikipedia 2011)¹⁰⁸. While all languages have vocative phrases, only some of them have vocative case, which implies that their analysis involves at least two different levels: discourse pragmatics and syntax (Hill 2007:2078).

Concerning the formal accounts of vocative phrases, vocatives are taken to either lack a D head (Longobardi 1994, Szabolcsi 1994) or are regarded as regular DPs (Moro 2003) that allow for definite articles and adjectival modification (cf. Hill 2007:2079). According to Moro (2003), vocative DPs occupy the structural

¹⁰⁸ Source: http://en.wikipedia.org/wiki/Vocative_case, accessed on September 21, 2011.

position above ForceP, the highest functional projection within the CP domain. As Hill (2007:2079) puts it, in this position “vocative DPs are outside the thematic grid of the verb and its extended domain, but still relate to it through propositional and deictic information”. She also assumes a separate functional domain (labeled RoleP) that hosts vocative phrases and selects for a DP as its complement, in agreement with Espinal (2011), who, in a similar manner, postulates a separate functional projection called VocP above DP, whose head Voc⁰ is endowed with a strong interpretable deictic [+DX] feature (cf. also Moro 2003, Stavrou 2009).

The purpose of this section, however, is not to give an extensive syntactic analysis of vocative constructions, but simply to offer a possible explanation for the observed impossibility of demonstratives and simple nouns marked for vocative case to co-occur within the Croatian DP. Consider the following examples:

- (29) a. ova moja lijepa kuća b. *kuća moja lijepa ova
 this my beautiful house *house my beautiful this

In the neutral word order in (29a), both determiners and adjectives appear before the noun. Their postposition is ungrammatical, as evidenced by (29b). However, in vocative constructions these lexical items display a different behaviour. Whereas adjectives or possessives¹⁰⁹ may accompany the vocative noun in (30a, b), the determiner *ta* in (30c) cannot appear with it:

- (30) a. lijepa djevojka / Djevojko lijepa!
 beautiful-NOM.F.SG girl-NOM.F.SG / girl-VOC.F.SG beautiful-VOC.F.SG
 beautiful girl / Beautiful girl!
- b. moja djevojka / Djevojko moja!
 my-NOM.F.SG girl-NOM.F.SG / girl-VOC.F.SG my -VOC.F.SG
 my girl / My girl!

¹⁰⁹ To my knowledge, the possible exceptions are restricted to the possessives *moj* ‘my’ and *naš* ‘our’, and the numeral *jedan* ‘one’, e.g. we can say *Dijete moje/naše!* ‘child my/our’ or *Kukavico jedna!* ‘coward one’, but not: **Dijete tvoje!* ‘child your’.

- c. ta djevojka / *Djevojko ta! / Djevojko!
 that-NOM.F.SG girl-NOM.F.SG / *girl-VOC.F.SG that /girl-VOC.F.SG
 that girl / *Girl that! / Girl!

Adopting the view that both vocatives and demonstratives are endowed with the features [+specific, +definite] (cf. Espinal 2011, Hill 2007, Ihsane & Puskás 2001) straightforwardly accounts for the ungrammaticality of (30c). If the elements equipped with the [+specific] feature occupy the head position of TopP, as proposed by Ihsane & Puskás (2001), both the demonstrative *ta* ‘that’ and the noun *djevojko* ‘girl’, which is assigned vocative case, are competing for the same position.

This is not the case in (30a, b). Since possessive pronouns are [+definite, non-specific], the co-occurrence of the vocative noun and the possessive pronoun is not ruled out, as shown in (30b). There, the vocative noun *djevojko* ‘girl’ moves to Top⁰, where it checks its [+specific] feature, leaving the possessive pronoun *moja* ‘my’ behind in Def⁰, thus yielding the following structure: [DP [TopP [Topdjevojko [FocP [DefP [Defmoja]]]]]].

Consider the neutral word order depicted in (29a): we can establish that the demonstrative pronoun *ova* ‘this’ and the possessive pronoun *moja* ‘my’ are not mutually exclusive. Their co-occurrence is not ruled out, because they occupy different structural positions: the demonstrative pronoun *ova* ‘this’ sits in Top⁰, while the possessive pronoun *moja* ‘my’ appears below, in the head position of DefP: [DP [TopP [TopOva [FocP [DefP [Defmoja [FP lijepa [NP [Ndjevojka]]]]]]]]]. The word order alternations in the following examples can be explained in a similar manner:

- (31) a. Djevojko moja lijepa!
 girl-VOC my beautiful
- b. Djevojko lijepa moja!
 girl-VOC beautiful my

The vocative noun *djevojko 'girl'* in (31a) moves from its base-generated position to Top^0 , where it checks its [+specific] feature (as in (30b)). The possessive pronoun *moja 'my'* stays behind in Def^0 . The adjective *lijepa 'beautiful'* remains within the inflectional domain, but probably moves upwards within the same domain to the FP_{NPagr} , since it agrees with the head noun in gender and case¹¹⁰. The assumed syntactic structure of the nominal expression in (31a) therefore looks as follows: $[\text{DP} [\text{TOPP} [\text{TOP} \text{djevojko} [\text{FocP} [\text{DefP} [\text{Def} \text{moja} [\text{FP}_{\text{NPagr}} \text{lijepa}_i [\text{FP}_{\text{Adj}} t_i]]]]]]]]]$. The alternative word order, given in (31b), is perfectly acceptable if the adjective *lijepa 'beautiful'* is emphasized. This word order is presumably derived by the movement of the adjective *lijepa 'beautiful'* farther up to the specifier position of FocP .

10.8. Conclusion

The syntactic analysis of prenominal elements and certain nominal structures provided in previous chapters has indicated that NP cannot be regarded as the highest maximal projection within the nominal complex, hence ruling out the view that Croatian noun phrases are simple NPs.

Having started with an overview of some of the principal empirical arguments in favour of a rich functional structure above the NP, which has allowed for its reanalysis in terms of an extended DP projection in many other languages, I drew a parallel to Croatian, and showed that these arguments also apply to Croatian nominal expressions.

Departing from the observation that all noun phrases are endowed with D- and N-semantics, which nominal expressions display irrespective of the presence or absence of D- and N-elements and which assume different morphosyntactic forms cross-linguistically, special attention has been paid to the syntactic realization of the DP-internal notions of information structure, such as (in)definiteness and specificity, which are assumed to be realized on different syntactic heads within the nominal left periphery. In order to morphosyntactically

¹¹⁰ The syntactic structure of the inflectional and theta-domain based on Laenzlinger (2010) is given in (14) in Chapter 1, section 1.4.2.

express these discourse-related notions, a language like English makes extensive use of indefinite and definite articles, along with other (in)definiteness and specificity markers, e.g. referential indefinite *this*. Croatian compensates for its lack of articles by employing other (in)definiteness and specificity markers, such as demonstrative pronouns, possessive suffixes, adjectival inflection or the indefiniteness marker *jedan* ‘one’.

Building upon this parallelism, I have assumed the same syntactic structure for both languages. Following Ihsane & Puskás (2001), I adopted the split DP-analysis for Croatian nouns, according to which the nominal left periphery includes the following functional categories: DP > TopP > FocP > DefP. The lowest functional projection within the nominal left periphery, the DefP, is occupied by articles in DP languages. As shown in various examples, lexical and functional items such as *jedan* ‘one’, possessive adjectives, the morphological marker *-i* on definite adjectives, or personal pronouns may appear in this syntactic position within the Croatian nominal left periphery.

Adopting the split-DP analysis for Croatian nouns has allowed me to explain certain syntactic phenomena in Croatian, such as the word order variations of prenominal elements, obligatory definite adjectival inflection in possessive constructions, and the observed incompatibility of demonstratives and nouns in vocative constructions.

CHAPTER 11

CONCLUSION AND QUESTIONS OPEN FOR FUTURE RESEARCH

11.1. Conclusion

The main aim of this thesis was to investigate the internal structure of nominal expressions in Croatian, which regularly appear without articles, and to provide a syntactic analysis for them. In order to elaborate on this, I examined the nature of prenominal elements, such as demonstrative pronouns, possessive adjectives, quantifiers, and numerals (e.g. the numeral *jedan* ‘one’), which are very often used to denote nominal reference (like definite and indefinite articles in DP-languages do), along with different structures and patterns that provide clues as to the syntactic architecture of Croatian noun phrases.

As is known, languages with articles project a DP, whose head is occupied by definite and indefinite articles. Articles have long been regarded as the only true instantiation of the D-head. Since Croatian does not have definite and indefinite articles, the principal question has been whether articleless nominal expressions project a DP on top of NP, and, if so, which elements qualify as possible D-heads. Since Croatian provides no empirical evidence for the existence of the DP (hence posing a challenge to the DP-Hypothesis), some linguists have refused the DP-analysis altogether and argued instead in favour of the simple NP-analysis (cf. Zlatic 1997, 1998, Bošković 2005, 2009a,b, 2011). According to these linguists, all prenominal elements are categorially adjectives (phrasal adjuncts). Correspondingly, they occupy either the specifier position of the NP (multiple specifiers) or are adjoined to the NP. The logical consequence of this assumption is that the NP is the highest nominal projection within the nominal complex. However, proponents of the universal DP-Hypothesis have argued that noun phrases in articleless languages also project a DP, in spite of the fact that the D head is predominantly empty in most cases (cf. Progovac 1998, Dimitrova-Vulchanova and Giusti 1998, Leko 1999, Rutkowski 2002, Bašić 2004,

Pereltsvaig 2007, among others). The only elements that can occupy the D head are personal pronouns (cf. Progovac 1998).

Departing from these controversial initial assumptions about the structure of the noun phrase in Croatian, my discussion and subsequent analysis of some of the more influential arguments provided in favour of the NP-analysis, along with an analysis of prenominal adjectival modification, possessive constructions and argument-supporting nominalizations has yielded different results.

First, according to Zlatić (1998), Slavic noun phrases are unequivocally headed by the lexical category N. In addition, determiners are optional elements within the noun phrase, because their omission does not influence the grammaticality of nominal expressions. Regarding the first claim, I have shown that determiners (like nouns) also carry phi-features and display head-like behaviour. Determiners (e.g. *svi* 'all', *svaki* 'each', *nekoliko* 'several', *dovoljno* 'enough' etc.) not only impose very tight restrictions with respect to the number specification of their associated complements, but they also c-select and case-mark their complements. The fact that they c-select their complements goes against the claim concerning their phrasal status. Possessive adjectives, for instance, behave differently from their English counterparts, because possessive suffixes in Croatian do not attach to XPs. In addition, their binding properties, as already shown by Bašić (2004) and Zlatić (1997), offer further support for their non-XP-status. On top of all this, in argument-supporting nominalizations they act as nominal subjects, are theta-marked by the head noun and contribute to the definiteness of the entire noun phrase. The numeral *jedan* 'one' is primarily used to indicate the indefiniteness of its nominal referent. As was shown, the lexical item *jedan* 'one' regularly accompanies plural nouns, and can, therefore, be said to function as the indefinite article in Croatian (as already proposed by Silić 2000). In spite of being treated as XPs cross-linguistically, demonstrative pronouns in Croatian display a slightly different behaviour. The main reason for their cross-linguistic XP-treatment had to do with their co-occurrence with definite articles and their autonomous appearance within a sentence. The consequence of the former was that they must occupy a different structural

position than articles ([Spec, DP]). This problem is resolved with the split DP-approach, according to which they can both be heads. This is the view that I have come to adopt for Croatian demonstrative pronouns. While demonstratives appear autonomously in the sentence and they are cross-linguistically independent on the noun both morphologically and phonologically, in Croatian they show overt agreement with the noun in case, number and gender. As has been shown, in many contexts demonstrative pronouns contribute to the definiteness and specificity of referents in the given context and are, therefore, not optional, but rather obligatory elements within the nominal context. As hypothesized, their appearance is context-sensitive and closely related to the existing contextual accessibility of nouns.

As for the adjectival nature of prenominal elements, I have provided a range of arguments which underline that determiners and adjectives are two distinct categories. Due to their different morphological and syntactic behaviour, determiners cannot be syntactically treated in the same manner as adjectives. As is known, adjectives are XPs, whereas determiners are not (for the reasons stated above). The discussion of adjectival premodification in coordinated noun phrases, however, has shown that both determiners and adjectives behave in a similar manner in modifying each of the nouns within coordinated NP-constructions. Apart from the displayed agreement with only the first element within the coordinated construction, which basically shows that coordinated NPs cannot be regarded as a single plural constituent, adjectival premodification also shows that neither determiners nor adjectives are part of either of the conjoined NPs. Instead, they must be NP-external. This, in turn, implies that NP cannot be treated as the highest maximal projection within the nominal complex.

That NP is not the highest maximal projection in Croatian is further supported by constructions involving transitive deverbal nouns, in which nominal subjects regularly surface as possessive adjectives. They are also consistently case-marked and assigned different thematic roles. Kuna's (2003) discussion of thematic genitives, which show structural alternation, appearing either in postnominal position as genitive complements of the head noun (e.g. *kovčeg*

putnika ‘suitcase passenger-GEN’) or in prenominal position as possessive elements (e.g. *putnikov kovčeg* ‘passenger-POSS suitcase’), provided evidence for the necessity of postulating other functional projections above NP, namely PossP. Based upon this insight and a detailed discussion of argument-supporting nominalizations, I reached the conclusion that neither the complexity of argument-supporting nominalizations nor the syntactic behaviour of possessive adjectives in such constructions can be explained by the simple NP-analysis. All the data presented and discussed in Part II have implied that the syntactic analysis of Croatian nouns has to be approached in a different way.

Under the assumption that the interpretation of nouns is conceptually equal across languages irrespective of the presence or absence of certain morpho-syntactic markers, the comparison of Croatian noun phrases with their English counterparts has shown that they are interpreted in the same way. While English nouns are mainly accompanied by articles, nouns in Croatian predominantly appear bare. Nevertheless, they are very often accompanied by other prenominal elements, such as demonstrative and possessive pronouns, for instance. The logical conclusion arising out of this observation was that form and meaning necessarily need to be dissociated. In concrete terms, while (in)definiteness and specificity of the nominal referent are primarily expressed via definite and indefinite articles in DP-languages, these features manifest themselves in a different way in articleless languages. This means that the function of definite and indefinite articles in DP-languages must be assumed by other elements or expressed in a different manner. Recall that, apart from the fact that (in)definiteness as a separate grammatical category in SerBoCroatian has been a matter for dispute so far, definite adjectival inflection has been claimed to function as the marker of (in)definiteness *per se* in SerBoCroatian. However, as shown in chapter 9, the difference between definite and indefinite nouns in Croatian can be expressed in a number of different ways. Many of them, such as the word order within a clause, verbal aspect or different stress patterns, are not DP-internal phenomena. Still, many lexical items, such as the indefiniteness

markers *jedan* ‘one’, or demonstrative and possessive pronouns, serve as morphosyntactic markers of (in)definiteness and specificity in Croatian.

Building upon these insights and following the idea that the semantic interpretation results from the underlying syntactic structure, I adopted the split DP-analysis for Croatian noun phrase. The splitting of the nominal left periphery into various functional projections, such as DefP, FocP or TopP, allows for the explanation of various syntactic phenomena within the Croatian noun phrase.

Within the split DP-approach, definite and indefinite articles in DP-languages (as markers of (in)definiteness) occupy the functional projection DefP. By analogy, the overt morphological markers of (in)definiteness in Croatian, such as the numeral *jedan* ‘one’, definite adjectival inflectional endings or possessive (pro)nouns, also occupy the head position of DefP. The co-occurrence of demonstratives and definite articles in DP-languages can also be captured by the split DP. Adopting the view that the nominal left periphery is discourse-related, and hence is associated with D-related features such as (in)definiteness, specificity and referentiality (cf. Aboh 2004b), allows us to assume that discourse-related elements, such as deictically used demonstrative pronouns and emphasized elements, along with definite and indefinite articles (or (in)definiteness markers in general), appear in this domain. Demonstrative pronouns, as has been shown, check their [+specific] feature in TopP. As is known, feature checking is a movement-triggering operation.

One other issue that needed to be dealt with was the relatively free order of prenominal elements in Croatian, whose rearrangements apparently followed no rules. Recall that the proponents of the NP-analysis suggested that these elements are adjoined to the NP, while DP-supporters, at least to my knowledge, have not dealt with this question at all. As was extensively discussed and noted in chapter 3 of this thesis, however, the permutation of prenominal elements is not as arbitrary as it seems to be at first glance, meaning that certain word orders are ruled out. The necessity arising out of this observation was the postulation of the neutral, unmarked word order of prenominal elements (cf. Silić 1992, Zlatić 1997, Leko 1999, among others). The logical consequence following out of this, in turn, was

that other prenominal word order combinations must be derived by movement (at least in my opinion).

Conceiving of the noun phrase as being subdivided into thematic, inflectional and determination areas posed the questions of where and in which order prenominal elements are externally merged within the Croatian noun phrase. My discussion of this issue allowed me to conclude that they are base-generated in the inflectional and/or theta-domain of the noun (in line with Ihsane & Puskás 2001), moving upwards to the nominal left periphery in order to check relevant features, such as (in)definiteness, focus or specificity. Prenominal possessives, which function as nominal subjects within argument-supporting nominalizations, are externally merged in the thematic domain of the noun. All other elements are base-generated in the inflectional domain, with the quantifier phrase appearing in the highest position in the inflectional domain, directly below the lowest functional projection of the determination area, Def^0 . Recall that the numeral *jedan* 'one' has been regarded as a *pre-determiner* by some authors (e.g. Silić 1992). According to my analysis, which has shown that the lexical item *jedan* 'one' functions as the indefiniteness marker, *jedan* 'one' is merged directly in the nominal left periphery (Def^0). This also explains why it precedes all other determiners, having been rightly considered a pre-determiner.

After discussing the syntactic structure of the prenominal neutral word order in Croatian nouns, I subsequently dealt with and provided an analysis for constructions involving *noun-pronoun* asymmetries, possessive elements and vocatives.

Concerning noun-pronoun asymmetries, recall that Progovac (1998) has proposed that personal pronouns occupy the D position, after having moved there from the head position of NP. Her analysis is based on an observed noun-pronoun asymmetry: personal pronouns precede, while nouns follow certain intensifying adjectives. However, the numerous examples containing these constructions have shown that both orders 'intensifying adjective - pronoun' and 'pronoun - intensifying adjective' represent the regular syntactic pattern in Croatian, which is problematic for her analysis, because the difference in the syntactic behaviour of

nouns and pronouns is not as obvious as it has been assumed. In addition, as I have already pointed out in 10.5, Progovac's (1998) analysis implies that only personal pronouns as definite descriptions check their definiteness feature, while all other nominal expressions do not. The split DP-analysis also predicts that pronouns check their [+definite] feature in Def^0 (which corresponds to D), hence allowing me to arrive at the same conclusion, albeit in a different way. However, the split DP-analysis can also explain the alternations in the word order in these constructions, along with the fact as to why the 'intensifying adjective' is emphasized in such constructions. As has been shown, within the split DP-approach, the 'intensifying adjective' appears in FocP.

As far as possessive constructions are concerned, the nominal subject within the ASN, which regularly surfaces as the possessive adjective, is c-selected and theta-marked by the head noun. After having been theta-marked by the head noun in the nP-shell, the nominal argument internally merges with the possessive suffix in Poss^0 (inflectional domain), moving farther up to Def^0 (the left periphery), where it checks its definiteness feature. Recall that possessive suffixes have been claimed to be strong definiteness markers in Croatian (cf. Kuna 2003). That possessive elements occupy Def^0 in Croatian is endorsed by the definite adjectival inflection. As was described, when possessive adjectives coincide with descriptive adjectives, the latter have to be marked definite (with the inflectional suffix *-i*). Here again, a parallel can be seen between DP-languages and Croatian. While definite and indefinite articles occupy Def^0 in DP-languages, triggering inflection on the succeeding adjectival modifiers (e.g. German), the same effect can be observed in constructions involving possessive elements in Croatian. The brief discussion of vocative structures has revealed why the co-occurrence of demonstrative pronouns and nouns marked for vocative case is ruled out in Croatian. Since both are endowed with a strong interpretable deictic feature, they compete for the same position (here Top^0).

All in all, the split-DP approach to the analysis of Croatian nouns has allowed me to account for a number of different syntactic phenomena, many of which cannot be explained neither by the NP-analysis nor by the DP-analyses of

Slavic noun phrases which have been suggested and discussed in the literature so far.

11.2. Questions Open for Future Research

The analysis of Croatian nouns within the split DP-approach, as has been presented in this thesis, allows us to explain different syntactic phenomena within the Croatian DP. However, a range of other topics and issues concerning nouns in articleless languages is still in need of further research and elaboration. I will mention only few of them.

One of the most influential arguments in favour of the NP-analysis of nominal expressions in SerBoCroatian concerns the extraction of the left-most constituent out of the nominal phrase. While the movement of prenominal elements from within the NP is ungrammatical in many languages, SerBoCroatian, along with other Slavic languages, allows left branch extraction (LBE). LBE has been argued to depend on the presence versus absence of definite and indefinite articles (Corver 1992, Bošković 2005). In spite of various other explanations of this phenomenon (e.g. remnant AP-fronting (Franks & Progovac 1994), the copy and delete analysis (Ćavar & Fanselow 2000), among others), the possibility of LBE out of the noun phrase in articleless languages has been regarded as the argument against the DP-Hypothesis in these languages. However, other instances of LBE, such as *deep LBE* (extraction out of the complement of the noun) or *double AP LBE* (impossibility of AP-extraction in the presence of another AP) are disallowed. If all prenominal elements are considered to be APs (hence adjuncts), *double AP LBE*, in particular, should not be ruled out. Bošković (2005) provided an explanation for the impossibility of double AP LBE, by referring to McGinnis' (1998) Principle of Lethal Ambiguity. Nevertheless, since prenominal elements are not categorially equal, as has been shown in this thesis, the phenomenon of LBE as an argument against the DP is certainly one of the issues that needs to be reconsidered.

Another interesting question concerns the topic of *bare nouns* (bare plurals; mass, proper and generic nouns in DP-languages) and their interpretation

in languages with and without articles. According to the Nominal Mapping Parameter (Chierchia 1998), nominal phrases are defined in terms of the binary features [+/- arg] and [+/-pred]. Noun phrases in Romance languages, for instance, are [-arg, +pred]. This implies that noun phrases are by definition predicates, meaning that, in order to become arguments, they need to be embedded under D. Hence, noun phrases in these languages are DPs (Alexiadou et al. 2007:192). If D turns the NP into an argument, does this mean that NPs cannot become arguments in languages that are supposed to lack the DP-layer? Of what language type is Croatian? What is the consequence of its classification for the structure of its nominals?

Argument-supporting nominalizations are also quite interesting. If the argument realization within ASNs is obligatory (as it seems to be), according to the extended projection principle (EPP), deverbal nouns (ASNs) without an overtly realized external argument should include an empty category in their structure. Compare the following sentences:

- (1) a. Građani pažljivo prate [vladino **diskutiranje** novoga zakona o
*Citizens carefully follow [government's **discussing**^{Impf.} new bill-GEN on*
promjeni poreza].
tax change].'
- b. Građani pažljivo prate [*pro* **diskutiranje** novoga zakona o
*Citizens carefully follow [pro **discussing**^{Impf.} new bill-GEN on*
promjeni poreza].
tax change].'

In (1a) the subject of the deverbal noun (*vladino* 'government-POSS') is overtly realized. Although the external argument of the noun '*diskutiranje*' *discussing*^{Impf.} (here: *government*) is not morphologically realized in (1b), the sentence still implies that somebody is involved in the current discussion of a new bill. This empty category is assumed to be small *pro*. Its clausal counterpart is assigned case

(cf. Carnie 2002:274). Since the external argument of the argument-supporting nominalization (possessive adjective in Croatian) agrees in case with the head noun (it is assumed to be assigned case via spec-head agreement), the assignment of case by any other element in the sentence must be ruled out (cf. Rizzi's (1990) relativized minimality condition on government¹¹¹). For instance, case assignment by the verb of the matrix clause to the subject of the ASN occurring in object position (*government* in (1a)) must be ruled out. The verb should only be able to case-mark the entire DP and not its subparts. This presupposes that some XPs must be projected above NP and that these XPs function as barriers, hence excluding the verb from being a governor and a potential case assigner for the subject of the deverbal noun. The question is which of the two competing analyses (a simple NP- or a DP-analysis) would offer a better account for the above described. In addition, the issue of case assignment within DPs in general would also be interesting to look at.

That the lexical item *jedan* 'one' (appearing with the noun) is not only a numeral was shown in chapter 10. Unlike numerals, *jedan* 'one' can be combined with plural count nouns. This shows that *jedan* 'one' obviously functions as an indefiniteness marker in Croatian. As is known, Croatian is claimed to have no definite and indefinite articles. Now, after witnessing the contribution of demonstrative pronouns and the indefiniteness marker *jedan* 'one' to the (in)definiteness of noun phrases in this thesis, the grammatical status, contribution and various uses of *jedan* 'one', along with other (in)definiteness markers, should be questioned and discussed more extensively. In particular, the interplay between information structure and syntax, both on the clausal and DP-internal level, is obviously in need of further research.

I hope that this thesis sheds new light on the syntactic structure of noun phrases in articleless languages and offers a solid basis for further investigation. I

¹¹¹ **Minimality** (Rizzi 1990:7):

X α -governs Y if there is no Z such that

- (i) Z is a typical potential α -governor for Y,
- (ii) Z c-commands Y and does not c-command X.

also hope that a discussion of the topics set out above will contribute to this issue and that I will be able to offer answers, at least to some of these issues, in my future research.

REFERENCES

- Abney, Steven P. (1987). *The English NP in Its Sentential Aspect*. Ph.D. Dissertation. MIT, Cambridge, Mass.
- Aboh, E. (2002). *Morphosyntaxe de la Périphérie Gauche Nominale*. *Recherches Linguistiques de Vincennes* 31, 9-26.
- Aboh, E. (2004a). *The Morphosyntax of Complement-Head Sequences: Clause Structure and Word Order Patterns in Kwa*. New York: Oxford University Press.
- Aboh, E. (2004b). *Topic and Focus within D*. *Linguistics in the Netherlands* 21, 1-12.
- Aboh, E.O. (2010). *Information Structuring Begins with the Numeration*. *Iberia: An International Journal of Theoretical Linguistics*, Vol. 2.1, 12-42.
- Aboh, E., Corver, N., Dyakonova, M., van Koppen, M. (2010). (Eds.) *DP-Internal Information Structure: Some Introductory Remarks*. In: *Lingua* 120, 782-801.
- Alexiadou, A. (2001). *Functional Structure in Nominals: Nominalization and Ergativity*. Amsterdam: John Benjamins.
- Alexiadou, A., Haegeman, L. & Stavrou, M. (2001). *On Nominal Functional Projections: On Noun Morphology, Movement and Ellipsis*. In: *Proceedings of IATL 8*, A. Grosu (Ed.), 1-16. Tel Aviv.
- Alexiadou, A. (2004). *Inflection Class, Gender and DP Internal Structure*. In: *Exploration in Nominal Inflection*, G. Müller et al. (Eds.), 21-50. Berlin/New York: Mouton de Gruyter.
- Alexiadou A., Haegeman, L. & Stavrou, M. (2007). *Noun Phrase in the Generative Perspective*. Berlin: Mouton de Gruyter.

- Alexiadou, A. & Grimshaw, J. (2008): *Verbs, Nouns and Affixation*. In: Working Papers of the SFB732 *Incremental Specification in Context* 01 (2008):1-16, Schäfer, Florian (Ed.).
- Alexiadou, A., Iordăchioaia, G. and Soare, E. (2010). *Number/Aspect Interactions in the Syntax of Nominalizations: A Distributed Morphology Approach*. *J.Linguistics* 46, 537-574.
- Alexiadou, A. & Stavrou, M. (2011). *Ethnic Adjectives as Pseudo-Adjectives: A Case Study in Syntax-Morphology Interaction and the Structure of DP*. To appear in: *Studia Linguistica*.
- Aljović, N. (1999). *Unaccusativity and Aspect in SerBoCroatian*. Vienna: Proceedings of the 8th ConSOLE Conference, 1-15.
- Aljović, N. (2002). *Long Adjectival Inflection and Specificity in Serbo-Croatian*. *Recherches linguistiques de Vincennes* 31, 27–42.
- Arad, M. (1998). *Are Unaccusatives Aspectually Characterized?* MIT Working Papers in Linguistics, 32, Papers from the Upenn/MIT Roundtable on Argument Structure and Aspect, 1-20.
- Arsenijević, B. (2006). *Inner Aspect and Telicity. The Decompositional and the Quantificational Nature of Eventualities at the Syntax-Semantics Interface*. PhD Thesis, Leiden University (LOT Dissertation Series 142).
- Babić, S. (1991). *Tvorba Riječi u Hrvatskom Književnom Jeziku*. Zagreb: Hrvatska akademija znanosti i umjetnosti - Globus.
- Bader, M. (2010). *Monoargumental Verbs in Serbian: Participles and Nominalizations*. University of Tromsø/CASTL. Handout 03.07.2010.
- Barić, E., Lončarić, M., Malić, D., Pavešić, S., Peti, M., Zečević, V., Znika, M. (1995), *Hrvatska gramatika*, Zagreb.
- Bašić, M. (2004). *Nominal Subextractions and the Structure of NPs in Serbian and English*. MA Thesis: University of Tromsø.

- Beavers, J. (2003). *More Heads and Less Categories: A New Look at Noun Phrase Structure*. In: Proceedings of the 2003 HPSG Conference. CSLI Publications, Stanford, CA.
- Belletti, A. (Ed.) (2004). *Structures and Beyond. The Cartography of Syntactic Structures*. Oxford: OUP.
- Bernstein, Judy B. (1993). *Topics in Syntax of Nominal Structure across Romance*. Ph.D. Dissertation, City University of New York.
- Bernstein, Judy B. (1997). *Demonstratives and Reinforcers in Romance and Germanic Languages*. *Lingua* 102, 87-113.
- Bernstein, Judy B. (2001a). *The DP Hypothesis: Identifying Clausal Properties in the Nominal Domain*. In: Baltin, M. and Collins, C. (eds.) (2001). *The Handbook of Contemporary Syntactic Theory*. Oxford: Blackwell.
- Bernstein, Judy B. (2001b). *Focusing the "Right" Way in Romance Determiner Phrases*. *Probus* 13-1, 1-29.
- Birtičić, M. (2008). *Unutarnja Struktura Odglagolskih Imenica u Hrvatskome Jeziku*. Institut za hrvatski jezik i jezikoslovlje, Zagreb 2008.
- Bloomfield, L. (1933). *Language*. New York: Henry Holt.
- Borer, H. (1993). *Parallel Morphology*. Ms., University of Massachusetts at Amherst.
- Borer, H. (2003). *Exo-Skeletal vs. Endo-Skeletal Explanations*. In: *The Nature of Explanation in Linguistic Theory*, J. Moore & M. Polinsky (eds.). Chicago: CSLI and University of Chicago Press.
- Borer, H. (2005). *Structuring Sense, Volume 2: The Normal Course of Events*. Oxford: Oxford University Press.
- Borik, O. (2002). *Aspect and Reference Time*. Ph.D. Dissertation, University of Utrecht.
- Bošković, Ž. (2005). *On the Locality of Left Branch Extraction and the Structure of NP*. *Studia Linguistica* 59, 1-45. Available at: <http://web.uconn.edu/boskovic/papers/leftbranch.pdf>.

- Bošković, Ž. (2006). *Case and Agreement with Genitive of Quantification in Russian. Agreement Systems*, ed. Cedric Boeckx, 99-121. Amsterdam/Philadelphia: John Benjamins.
- Bošković, Ž. (2008). *What will you have, DP or NP?* Proceedings of NELS 37: 101-114.
- Bošković, Ž. (2009a²). *More on the no-DP Analysis of Articleless Languages*. *Studia Linguistica* 63 (2), 187-203.
- Bošković, Ž. (2009b). *Good Monsters are Back, Now We Need to Rename Them*. Paper presented at the University of Utrecht, July 2, 2009 (Conference: Atoms and Laws of the Noun Phrase).
- Bošković, Ž. & Gajewski, J. (in press). *Semantic Correlates of the DP/NP Parameter*. Proceedings of NELS 39.
- Bošković, Ž. (2011). *More on the DP/NP Analysis of Languages with and without Articles*. Paper presented at the Conference on Languages with and without Articles, Paris (CNRS/Paris 8), March 3-4, 2011.
- Boucher, P. (2003). *Determiner Phrases in Old and Modern French*. In: Coene, M./D'hulst, Y. (Eds.). *From NP to DP. Volume 1: The Syntax and Semantics of Noun Phrases*. Amsterdam/Philadelphia: John Benjamins.
- Brame, M. (1982). *The Head-Selector Theory of Lexical Specifications and the Nonexistence of Coarse Categories*. *Linguistic Analysis*, 10.4, 321-325.
- Browne, W. & Nakić, A. (1975). *Fixed Word Order in Serbo-Croatian*. *Contrastive Analysis of English and Serbo-Croatian* 1, 87-96.
- Browne, W. (1993). *Serbo-Croat*. In: Comrie, Bernhard & Greville G. Corbett, (Eds.). *The Slavonic Languages*. Routledge, London.
- Bruening, B. (2009). *Selectional Asymmetries between CP and DP Suggest that the DP Hypothesis is Wrong*. In: University of Pennsylvania Working Papers in Linguistics, Vol.15, Issue 1, Proceedings of the 32nd Annual Penn Linguistics Colloquium, 27-35.
- Büring, D. (2005). *Semantics, Intonation and Information Structure*. Available at: <http://semanticsarchive.net/Archive/GQ0YjgxM/buring.information.structure.v2005.pdf>.

- Cardinaletti, A. (1993). *On the Internal Structure of Pronominal DPs*. University of Venice Working Papers in Linguistics 3.2., 1-20.
- Cardinaletti, A. (1998). *On the Deficient/Strong Opposition in Possessive Systems*. In: Alexiadou, A., Wilder, C., (Eds.): *Possessors, Predicates and Movement in the Determiner Phrase*. John Benjamins, Amsterdam, 17-53.
- Carnie, A. (2002). *Syntax. A Generative Introduction*. Oxford: Blackwell.
- Ćavar, D. & Fanselow, G. (2000). *Discontinuous Constituents in Slavic and Germanic languages*. University of Hamburg and University of Potsdam.
- Chafe, W. (1976). *Givenness, Contrastiveness, Definiteness, Subjects, Topics and Point of View*. In: Li, C. (Ed.): *Subject and Topic*. Academic Press, New York, 25-56.
- Chierchia, G., (1998). *Reference to Kinds Across Languages*. *Natural Language Semantics* 6, 339–405.
- Chomsky, N. (1970). *Remarks on Nominalization*. In: R. Jacobs and P. Rosenbaum (Eds): *Readings in English Transformational Grammar*, Waltham MA: Ginn, 184-221.
- Chomsky, N. (1972). *Deep Structure, Surface Structure and Semantic Interpretation*. In: Noam Chomsky (Ed.) *Studies on Semantics in Generative Grammar*. The Hague: Mouton, 69-119.
- Chomsky, N. (1986). *Barriers*. Cambridge MA: MIT Press.
- Chomsky, N. (1995). *The Minimalist Program*. Cambridge, Mass.: The MIT Press.
- Cinque, G. (1994). *On the Evidence for Partial N-Movement in the Romance DP*. In: G. Cinque, J. Koster, J.-Y. Pollock, L. Rizzi & R. Zanuttini (Eds.), *Paths towards Universal Grammar. Studies in Honour of Richard Kayne*, 85-110. Washington DC: Georgetown University Press.
- Cinque, G. (1999). *Adverbs and Functional Heads*. Oxford: OUP.
- Cinque, G. (2003). *The Dual Source of Adjectives and XP vs. N-Raising in the Romance DP*. Available at: http://www.sinc.sunysb.edu/Clubs/nels/handouts/cinque_nels_2003.pdf.

- Cleary-Kemp, J. (2007). *Universal Uses of Demonstratives: Evidence from Four Malayo-Polynesian Languages*. *Oceanic Linguistics*, Volume 46, 325-347. University of Hawai Press.
- Coelho, P. (2004). *The Fifth Mountain*. Harper Torch, New York.
- Coelho, P. (2006). *Peta Gora*. Zagreb, VBZ. Tiskarna Ljubljana d.d., Ljubljana.
- Comrie, B. (1987). *Aspect: An Introduction to the Study of Verbal Aspect and Related Problems*. Cambridge: Cambridge Univ. Press, 1987 (reprinted version).
- Corbett, G. C. (1993). *The Head of Russian Numeral Expressions*. In: Greville G. Corbett, Norman M. Fraser & Scott McGlashan (Eds.) (1993). *Heads in Grammatical Theory*. Cambridge: Cambridge University Press, 11-35.
- Corver, N. (1992). *On Deriving Certain Left Branch Extraction Asymmetries: A Case Study in Parametric Syntax*. *Proceedings of the Northeast Linguistic Society* 22, 67-84. University of Delaware.
- Corver, N. und van Koppen, M. (2006). *A Focus Projection in the Left Periphery of DP: Evidence from Noun Ellipsis*. Available at: [http://www.let.uu.nl/~Marjo.vanKoppen/personal/handouts/Cyprus, Focus in DP.pdf](http://www.let.uu.nl/~Marjo.vanKoppen/personal/handouts/Cyprus_Focus_in_DP.pdf).
- Cyr, Danielle. (1993). *Cross-Linguistic Quantification: Definite Article vs. Demonstratives*. *Language Sciences* 15(3), 195-229.
- Delsing, L. O. (1993a). *On Attributive Adjectives in Scandinavian and Other Languages*. *Studia Linguistica* 47(2), 105-125.
- Delsing, L. O. (1993b). *The Internal Structure of Noun Phrases in Scandinavian Languages. A Comparative Study*. Ph.D. Dissertation, Lund University.
- De Swart, H. (2011). *Verbal Aspect Across Languages*. In: Robert Binnick (Ed.). *Handbook of Tense and Aspect*, Oxford: Oxford University Press (to appear). A Prefinal Version. Available at: <http://www.let.uu.nl/~Henriette.deSwart/personal/VerbalAspect.pdf>.
- Di Sciullo, A. M. & Slabakova, R. (2005). *Quantification and Aspect*. In: Angeliek van Hout, Henriëtte de Swart and Henk Verkuyl (Eds.). *Perspectives on Aspect*. Dordrecht: Springer, 61-80.

- Dimitrova-Vulchanova, M. and Giusti, G. (1998). *Fragments of Balkan Nominal Structure*. In: A. Alexiadou and C. Wilder (Eds). *Possessors, Predicates and Movement in the Determiner Phrase*. Amsterdam/Philadelphia: John Benjamins, 333-360.
- Djordjević, R. (1989). *Engleski i Srpskohrvatski Jezik: Kontrastivna Gramatika Imeničke Grupe*. Beograd: Naučna knjiga.
- Ebert, K. (1970). *Referenz, Sprechsituation und die Bestimmten Artikel in einem Nordfriesischen Dialekt*. Doctoral Dissertation, Universität Kiel.
- Enç, M. (1991). *The Semantics of Specificity*. *Linguistic Inquiry* 22, 1-25.
- Espinal, T. M. (2011). *On the Structure of Vocatives*. Available at: <http://filcat.uab.cat/clt/publicacions/reports/pdf/GGT-11-04.pdf>.
- Firbas, J. (1975). *On the Thematic and Non-Thematic Section of the Sentence*. In: Ringbom (1975), 317-334.
- Franks, S. & Progovac, Lj. (1994). *On the Placement of Serbo-Croatian Clitics*. *Indiana Linguistics Studies* 7, 69-78.
- Fokker, A. A. (1966). *Nouns from Verbs. A Contribution to the Study of Present-Day Polish Word Formation*. Amsterdam: North-Holland Publishing Company.
- Frleta, T. (2005). *Razlika Između Determinanta i Opisnog Pridjeva*. *Suvremena lingvistika*, Vol. 59-60, No. 1-2, 71-80.
- Gallaso, J. (2001). *Non-Count Noun Determiners: Where is the Feature?* California State University, Northridge. Available at: <http://www.csun.edu/~galasso/dcount.pdf>.
- Gallmann, P. & Lindauer, T. (1994). *Funktionale Kategorien in Nominalphrasen*. In: *Beiträge zur Geschichte der deutschen Sprache und Literatur* 116/1. Tübingen, Niemeyer, 1-27.
- Gehrke, B. (2005). *The Aspectual Nature of Slavic Prefixes*. Handout presented at the LAGB Satellite Workshop on Perfectivity and Telicity in Cambridge, September 3-4, 2005.
- Giorgi, A. & Longobardi, G. (1991). *The Syntax of Noun Phrases*. Cambridge: Cambridge University Press.

- Giusti, G. (1992). *Heads and Modifiers among Determiners: Evidence from Romanian and German*. University of Venice Working Papers in Linguistics 2.1.4, 1-19.
- Giusti, G. (1993). *La Sintassi dei Determinanti*. Unipress: Padova.
- Giusti, G. (1994). *Enclitic Articles and Double Definiteness: A Comparative Analysis of Nominal Structure in Romance and Germanic*. *The Linguistic Review* 11, 231-255.
- Giusti, G. (1996). *Is There a FocusP and a TopicP in the Noun Phrase Structure?* University of Venice Working Papers in Linguistics 6 (2), 105-128.
- Giusti, G. (1997). *The Categorical Status of Determiners*. In: L. Haegeman (Ed.), *The New Comparative Syntax*, 95-123. Harlow: Addison Wesley Longman.
- Giusti, G. (2002). *The Functional Structure of Noun Phrases: A Bare Phrase Structure Approach*. In: Cinque, G. (Ed.) (2002). *Functional Structure in DP and IP. The Cartography of Syntactic Structures, Volume 1*. New York, Oxford University Press, 54-90.
- Giusti, Giuliana. (2005). *At the Left Periphery of the Romanian Noun Phrase*. In: M.Coene & L. Tasmowski (Eds.), *On Space and Time in Language*. Cluj: Clusium.
- Grandfeldt, J. (1999). *Sur la Structure du DP Dans les Langues Scandinaves*. Presentation in the DES seminar, Geneva.
- Greenberg, J. (1966). *Some Universals of Grammar with Particular Reference to the Order of Meaningful Elements*. In: J. H.Greenberg, (Ed.), *Universals of Language* (2nd ed.), Cambridge, Mass.: MIT Press.
- Grimshaw, J. (1990). *Argument Structure*. MIT Press.
- Haegeman, L. (1994²). *Introduction to Government and Binding Theory*. Oxford UK & Cambridge USA: Blackwell.
- Haegeman, L. (2000). *Inversion, Non-Adjacent Inversion and Adjuncts in CP*. *Transactions of the Philological Society* 98, 121-160.

- Haegeman, L. (2004). *DP-Periphery and Clausal Periphery: Possessor Doubling in West Flemish*. In: Adger, D., Cat, C., de Tsoulas, G. (Eds.) *Peripheries*. Kluwer, Dordrecht, 211-240.
- Hale, K. (1983). *Warlpiri and the Grammar of Non-Configurational Languages*. *Natural Language and Linguistic Theory* 1, 5–47.
- Halliday, M. A. K. (1967). *Notes on Transitivity and Theme in English, Part II*. *Journal of Linguistics* 3, 199-244.
- Hawkins, John A. (1978). *Definiteness and Indefiniteness*. London: Croom Helm.
- (1991). *On (In)Definite Articles: Implicatures and (Un)Grammaticality Prediction*. *Journal of Linguistics* 27, 405-422.
- Hawkins, J. A. (1983). *Word Order Universals*. New York: Academic Press.
- Hazout, I. (1991). *Verbal Nouns: Theta-Theoretical Studies in Hebrew and Arabic*. PhD Dissertation. University of Massachusetts, Amherst.
- Hazout, I. (1994). *Nominalizers in Theta Theory*. *The Linguistic Review* 11 (1994), 5-48.
- Heycock, C. & Zamparelli, R. (2005). *Friends and Colleagues: Plurality and NP-Coordination*. *Proceedings of NELS* 30, 341-352.
- Hill, V. (2007). *Vocatives and the Pragmatics-Syntax Interface*. *Lingua* 117, 2077-2105.
- Himmelmann, N. P. (1996). *Demonstratives in Narrative Discourse: A Taxonomy of Universal Uses*. In: B.Fox (Ed.), *Studies in Anaphora*, 205-254. Amsterdam: John Benjamins.
- Himmelmann, N. P. (1998). *Regularity in Irregularity: Article Use in Adpositional Phrases*. *Linguistic Typology*, 2, 315-353.
- Himmelmann, N. P. (2001). *Articles*. Article 62. In: Martin Haspelmath, Ekkehard König, Wulf Oesterreicher & Wolfgang Raible (Eds.), *Language Typology and Language Universals*, Berlin: de Gruyter, 831-841.
- Hlebec, B. (1986). *Serbo-Croatian Correspondents of the Articles in English*. In: *Folia Slavica* 8, 29-50.
- Hopper, P. J. & Thompson. S. A. (1980). *Transitivity in Grammar and Discourse*. In: *Language*. Bd. 56, Heft 2, 1980, 251–299.

- Hudson, R. A. (1987). *Zwicky on Heads*. In: *Journal of Linguistics*, Vol. 23, No.1, 109-132.
- Ihsane, T./Puskás, G. (2001). *Specific is not Definite*. *GG@G (Generative Grammar in Geneva) 2* (2001), 39-54.
- Ihsane, T. (2010). *The Layered DP: Form and Meaning of French Indefinites*. Amsterdam/Philadelphia: John Benjamins.
- Ionin, T. (2006). *'This' is Definitely Specific: Specificity and Definiteness in Article Systems*. *Natural Language Semantics* 14, 175-234.
- Ivić, M. (1983). *Lingvistički Ogledi*. Prosveta, Beograd.
- Jackendoff, Ray S. (1972). *Semantic Interpretation in Generative Grammar*. Cambridge, MA: MIT Press.
- Jackendoff, Ray S. (1977). *X'-Syntax. A Study of Phrase Structure*. Cambridge, Mass.: MIT Press.
- Kordić, S. (1992). *Determinator - Vrsta Riječi ili Funkcionalni Razred?* In: *Suvremena Lingvistika*, god. 18, br. 33, 27-32.
- Kuna, B. (2002). *Atributni Genitiv u Hrvatskome Standardnom Jeziku*. Ph.D Thesis. Zagreb, 2002.
- Kuna, B. (2003). *NP-Pomicanje i Posvojni Genitiv*. In: *Jezikoslovlje* 4.2 (2003), 245-261.
- Kunzmann-Müller, B. (²1999). *Grammatikhandbuch des Kroatischen unter Einschluß des Serbischen*. Heidelbergerver Publikationen zur Slavistik: A, Linguistische Reihe; Bd. 7, Frankfurt am Main: Peter Lang.
- Laenzlinger, C. (2005a). *French Adjective Ordering: Perspectives on DP-internal Movement Types*. *Lingua* 115, 645-689.
- Laenzlinger, C. (2005b). *Some Notes on DP-Internal Movement*. *Generative Grammar in Geneva GG@G*, Vol. 4, 227-260.
- Laenzlinger, C. (2010). *The CP/DP Parallelism Revisited*. *Generative Grammar in Geneva GG@G*, Vol. 6, 49-107.
- Lambrecht, K. (1994). *Information Structure and Sentence Form. Topic, Focus and the Mental Representations of Discourse Referents*. Cambridge University Press, Cambridge.

- Larson, Richard K. (1988). *On the Double Object Construction*. *Linguistic Inquiry* 19, 335-392.
- Leko, N. (1999). *Functional Categories and the Structure of the DP in Bosnian*. In: Dimitrova-Vulchanova, M., Hellan, L. (Eds.). *Topics in South Slavic Syntax and Semantics*. John Benjamins, Amsterdam, 229-252.
- Linde-Usiekiewicz, J. & Rutkowski, P. (2006). *NP Coordination as a New Argument in the Debate on the DP-analysis of Polish*. In: LSO Working Papers in Linguistics, Vol. 6: Proceedings of WIGL 2006, ed. Blake H. Rodgers, Madison: Department of Linguistics, University of Wisconsin-Madison, 103-117.
- Longobardi, G. (1994). *Reference and Proper Names: A Theory of N-Movement in Syntax and Logical Form*. *Linguistic Inquiry* 25 (4), 609-665.
- Longobardi, G. (2001). *The Structure of DPs. Principles, Parameters and Problems*. In: *Handbook of Syntactic Theory*, M. Baltin & C. Collins, 562-603. Cambridge, Mass./Oxford: Blackwell.
- Longobardi, G. (2009). *How Universal is DP?* A paper presented at the International Workshop *Converging Linguistics and Cognitive Science: Nominal Systems Across Languages*, September 14-16, 2009, Barcelona.
- Lyons, C. (1999). *Definiteness*. Cambridge: Cambridge University Press.
- Maclaran, R. (1982). *The Semantics and Pragmatics of the English Demonstratives*. PhD Dissertation, Cornell University.
- Marantz, A. (1997). *No Escape from Syntax: Don't Try Morphological Analysis in the Privacy of Your Own Lexicon*. University of Pennsylvania Working Papers, 4/2, 201-225.
- McGinnis, M. (1998). *Reflexive External Arguments and Lethal Ambiguity*. Proceedings of WCCFL 16, 303-317.
- Mićanović, K. (2000). *Posvojni Pridjevi i Izražavanje Posvojnosti*. SL 49-50, 111-123.
- Mišeska-Tomić, O. (1974). *The Definite Determiner in English and Serbo-Croatian*. In: Filipović, R. (Ed.), *Reports 9*. Zagreb: Institute of Linguistics, 76-89.

- Moro, A. (2003). *Notes on Vocative Case: A Case Study in Clause Structure*. In: Quer, J., et al. (Eds.), *Romance Languages and Linguistic Theory 2001. Selected Papers from Going Romance*. John Benjamins, Amsterdam, 247-261.
- Mrazović, P. & Vukadinović, Z. (1990). *Gramatika Srpskohrvatskog Jezika za Strance*. Dobra Vest, Novi Sad.
- Newson, M. et al. (2006). *Basic English Syntax with Exercises*. Budapest: Bölcsész Konzorcium.
- Nthelitheos, D. (2004). *Syntax of Elliptical and Discontinuous Nominals*. MA Thesis, UCLA.
- Pereltsvaig, A. (2006). *Passing by Cardinals: In Support of Head Movement in Nominals*. *Formal Approaches to Slavic Linguistics 14: The Princeton Meeting*. Eds. J. Lavine, S. Franks & H. Filip, 277-292. Ann Arbor, MI: Michigan Slavic Publications.
- Pereltsvaig, A. (2007). *On the Universality of DP: A View from Russian*. *Studia Linguistica* 61 (1), 59–94.
- Picallo, M. Carme (1991). *Nominals and Nominalizations in Catalan*. *Probus* 3: 279-316.
- Picallo, M. Carme (2006). *Some Notes on Grammatical Gender and I-Pronouns*. *Fachbereich Sprachwissenschaft, Arbeitspapier 119, Universität Konstanz*, 105-121.
- Pollock, J. Y. (1989). *Verb Movement, Universal Grammar and the Structure of IP*. *Linguistic Inquiry* 20, 365-424.
- Postal, P. (1969). *On So-Called 'Pronouns' in English*. In: Reible, D., Shane, S. (Eds.), *Modern Studies in English*, Englewood Cliffs, N.J. Prentice Hall, 201-224.
- Pranjković, I. (2000). *Izražavanje Neodređenosti/Određenosti Imenica u Hrvatskome Jeziku*. In: *Riječki filološki dani, Zbornik radova* 3, Rijeka, 343-350.

- Pranjkočić, I. (2000). *Izražavanje Neodređenosti/Određenosti Imenica u Hrvatskome Jeziku*. In: Riječki filološki dani, Zbornik radova 3, Rijeka, 343-350.
- Pranjkočić, I. (2002). *Hrvatska Skladnja. Rasprave iz Sintakse Hrvatskog Standardnog Jezika*. Zagreb: Hrvatska sveučilišna naklada.
- Prince, E. (1981). *Towards a Taxonomy of Given-New Information*. In: Cole, P. (Ed.): *Radical Pragmatics*. Academic Press, New York, 223-255.
- Progovac, Lj. (1998). *Determiner Phrase in a Language Without Determiners*. *Journal of Linguistics* 34, 165-179.
- Quirk, R., Greenbaum, S., Leech, G. & Svartvik, J. (1985). *A Comprehensive Grammar of the English Language*. London: Longman.
- Radford, A. (1993). *Head-Hunting: On the Trail of the Nominal Janus*. In: Corbett, Greville G., Norman M. Fraser & Scott McGlashan, (Eds.). *Heads in Grammatical Theory*. Cambridge University Press, Cambridge, 73-114.
- Radford, A. (2004). *Minimalist Syntax: Exploring the Structure of English*. Cambridge: Cambridge University Press.
- Radovanović, M. (1990). *Spisi iz Sintakse i Semantike*. Izdavačka knjižarnica Zorana Stojanovića i Dobra vest, Novi Sad.
- Rappaport, G. (1998). *The Slavic Noun Phrase*. Position paper presented at the Workshop on Comparative Slavic Morphosyntax, Spencer, Indiana, June 5-7, 1998. Available at: <http://www.indiana.edu/~slavconf/linguistics/rapp.pdf>
- Rappaport, G. (2001). *Extraction from Nominal Phrases in Polish and the Theory of Determiners*. To be published in: *Formal Approaches to Polish Syntax*, ed. by Ewa Willim and Piotr Banski. *Journal of Slavic Linguistics* 8(3). Available at: <http://www.utexas.edu/courses/slavling/grapp/papers/polext.pdf>.
- Richards, M. (2008). *Phrasenstruktur I*. Available at: <http://www.unileipzig.de/~richards/syn5.pdf>.
- Rijkhoff, J. (1991). *Nominal Aspect*. *Journal of Semantics* 8 (4), 291-309.

- Ritter, E. (1991). *Two Functional Categories in Noun Phrase: Evidence from Modern Hebrew*. In: S. Rothstein (Ed.): *Perspectives on Phrase Structure* [Syntax and Semantics 25], 37 - 62. New York NY: Academic Press.
- Ritter, E. (1993). *Where's Gender?* *Linguistic Inquiry* 24, 795-803.
- Rizzi, L. (1990). *Relativized Minimality*. Cambridge, Mass.: MIT Press.
- Rizzi, L. (1997). *The Fine Structure of the Left Periphery*. In: L. Haegeman (Ed.), *Elements of Grammar*, 281-337. Dordrecht: Kluwer.
- Rizzi, L. (2004). *The Structure of CP and IP. The Cartography of Syntactic Structures*. Oxford: OUP.
- Rozwadowska, B. (1997). *Towards a Unified Theory of Nominalizations. External and Internal Eventualities*. Wydawnictwo Uniwersytetu Wrocławskiego, Wrocław.
- Ross, J. R. (1967). *Constraints on Variables in Syntax*, Ph.D. Dissertation, MIT. Online available at: <http://dspace.mit.edu/handle/1721.1/15166>.
- Ross, J. R. (1986). *Infinite Syntax!* Norwood, NJ. Ablex Publishing. (First published as *Constraints on Variables in Syntax*, Ph.D. Dissertation, MIT, 1967).
- Rutkowski, P. (2002). *Noun/Pronoun Asymmetries: Evidence in Support of the DP Hypothesis in Polish*. *Jezikoslovlje* 3.1-2, 159-170. Available at: http://www.plm.uw.edu.pl/rutkowski/index_pliki/Downloads/Rutkowski_Noun_Pronoun_Asymmetries_Jezikoslovlje.pdf.
- Rutkowski, P. & Linde-Usiekniewicz. J. (2006). *NP Coordination as a New Argument in the Debate on the DP-analysis of Polish*. In: LSO Working Papers in Linguistics, Vol.6: Proceedings of WIGL 2006, ed. Blake H. Rodgers, Madison: Department of Linguistics, University of Wisconsin-Madison, 103-117.
- Sadler, L. & Arnold D. J. (1994). *Prenominal Adjectives and the Phrasal/Lexical Distinction*. *Journal of Linguistics* 30, 187-226.

- Scott, J. G. (2002). *Stacked Adjectival Modification and the Structure of Nominal Phrases. Functional Structure in DP and IP*. Ed. G. Cinque, 91–122. Oxford: Oxford University Press.
- Sgall, P., Hajičová, E., Panenová, J. (1986). *The Meaning of the Sentence in its Semantic and Pragmatic Aspects*. Dordrecht: Reidel.
- Shlonsky, U. (2004). *The Form of the Semitic Noun Phrase*. *Lingua* 114 (12): 1465-1526.
- Silić, J. (1992). *Aktualizator 'jedan' u Hrvatskom Jeziku (Uvodna Razmišljanja)*. *Filologija, Knjiga 20-21*. Zagreb, 403-411.
- Silić, J. (2000). *Kategorija Neodređenosti/Određenosti i Načini Njezina Izražavanja*. In: *Riječki filološki dani, Zbornik radova 3*, Rijeka, 401-406.
- Siloni, T. (1991). *Noun Raising and the Structure of Noun Phrases*. *MIT Working Papers in Linguistics* 14, 255-170.
- Skok, P. (1971). *Etimologijski Rječnik Hrvatskoga ili Srpskoga Jezika*. Zagreb: Jugoslavenska akademija znanosti i umjetnosti.
- Smith, C. (1991). *The Parameter of Aspect*. Dordrecht: Kluwer.
- Stavrou, M. (2009). *Vocative!* Ms. Aristotle University of Thessaloniki.
- Strunk, J. (2004). *Possessive Constructions in Modern Low-Saxon*. MA Thesis, Stanford University.
- Strunk, J. (2005). *Struktur der Nominalphrase*. Available at: <http://www.linguistics.ruhr-uni-bochum.de/~strunk/StrukturderNominalphrase.pdf>.
- Svenonius, P. (2004). *Slavic Prefixes Inside and Outside VP*. *Nordlyd*, Vol. 32, Nr.2 - Slavic Prefixes, 205-253.
- Szabolsci, A. (1983). *The Possessor That Ran Away From Home*. *Linguistic Review*, 3, 89-102.
- Szabolsci, A. (1987). *Functional Categories in the Noun Phrase*. In: István Kenesei (Ed.), *Approaches to Hungarian, Vol 2. Theories and Analyses*. 167-274. JATE, Szeged: Jate.

- Szabolsci, A. (1994). *The Noun Phrase*. In: F. Kiefer and Katalin E. Kiss (Eds.), *Syntax and Semantics. The Syntactic Structure of Hungarian*. Vol. 27, 179-274. New York: Academic Press.
- Szendrői, K. (2004). *Focus and the Interaction Between Syntax and Pragmatics*. *Lingua* 114 (3), 229-254.
- Taraldsen, T. (1990). *D-Projections and N-Projections in Norwegian*. In: Nespor, M. & Mascaró, J. (Eds): *Grammar in Progress*, 419-431. Dordrecht: Foris.
- Tenny, C. (1994). *Aspectual Roles and Syntax-Semantics Interface*. Dordrecht: Kluwer Academic Publishers.
- Travis, L. (1984). *Parameters and Effects of Word Order Variation*. Doctoral Dissertation, MIT, Cambridge, Mass.
- Trenkić, D. (2001). *Establishing the Definiteness Status of Referents in Dialogue (in languages with and without articles)*. In: Working Papers in English and Applied Linguistics 7. Research Centre for English and Applied Linguistics, Cambridge, 107-131.
- Trenkić, D. (2004). *Definiteness in Serbian/Croatian/Bosnian and Some Implications for the General Structure of the Nominal Phrase*. In: *Lingua* 114, 1401-1427.
- Trezner, T. (1970). *Glagolske Imenice na -nje*. *Jezik*, 2/18, 50-54.
- Uriagereka, J. (1988). *On Government*. PhD Diss., University of Connecticut.
- Van Hout, A. & Roeper, T. (1998). *Events and Aspectual Structure in Derivational Morphology*. MIT Working Papers in Linguistics, 32, 175-200.
- Verkuyl, H. (1993). *A Theory of Aspectuality: The Interaction between Temporal and Atemporal Structure*. Cambridge: Cambridge University Press.
- Vukojević, L. (1995). *Vrste, Položaj i Uloga Determinatora*. *Rasprave Zavoda za Hrvatski Jezik*, Sv.21, Zagreb, 227-238.
- Willim, E. (2000). *On the Grammar of Polish Nominals. Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. R. Martin, D. Michaels & J. Uriagereka, 319–346. Cambridge, MA: MIT Press.

- Williams, E. (1982). *Another Argument that Passive is Transformational*. *Linguistic Inquiry* 13, 160-163.
- Zlatic, L. (1997). *The Structure of the Serbian Noun Phrase*. Ph.D. Dissertation, University of Texas at Austin.
- Zlatic, L. (1997b). *Process Nominals and Anaphor Binding in Serbian*. Fourth Formal Approaches to Slavic Linguistics Conference Proceedings, edited by Wayles Browne et al. 464-487. Ann Arbor: Michigan Slavic Publications.
- Zlatic, L. (1998). *Slavic Noun Phrases are NPs not DPs*. Paper presented at the Workshop on Comparative Slavic Morphosyntax, Bloomington, Indiana, June 8, 1998. Available at: <http://www.lztranslation.com/pdf/SlavicNPsAsNPs2.23.03.pdf>.
- Zlatic, L. (1998b). *Slavic Noun Phrase*. In: Churchill, B. (Ed.). *Linguist List* 9.943. Available at: <http://linguistlist.org/issues/9/9-943.html>.
- Zwicky, A. (1985). *Heads*. In: *Journal of Linguistics* 21, 1-29.

EIDESSTATTLICHE ERKLÄRUNGEN

Verfassung dieser Dissertation

Hiermit versichere ich, dass ich diese Arbeit selbständig und nur mit den angegebenen Hilfsmitteln angefertigt habe, und dass ich alle Stellen, die dem Wortlaut oder dem Sinn nach anderen Werken entnommen sind, durch Angabe der Quellen als Entlehnung kenntlich gemacht habe.

Veröffentlichungen von Teilen dieser Dissertation

Ich erkläre hiermit, dass Teile meiner Dissertation auf folgenden Konferenzen vorgestellt bzw. im Rahmen dieser veröffentlicht worden sind:

- *Workshop on Languages With and Without Articles*, Université de Paris 8 & UMR 7023, March 3-4, 2011.
- *The 13th Seoul International Conference On Generative Grammar (SICOGG 13)*, Sogang University, Seoul, Südkorea, August 16-19, 2011.
- *The 6th Congress of the Slavic Linguistics Society (SLS 6)*, Université de Provence, Aix-en-Provence, September 1-3, 2011.
- *GLOW in Asia IX: Workshop for Young Scholars*, Mie University, Tsu, Mie, Japan, September 7-8, 2011.
- *9th European Conference on Formal Description of Slavic Languages (FDSL 9)*, University of Göttingen, December 7-9, 2011.
- Caruso, D. Z. (2011). *In Support of a DP-Analysis of Nominal Phrases in Croatian*. In: Soo-Min Hong (Ed.). *Parameters in Language Design*. Proceedings of the 13th Seoul International Conference on Generative

Grammar. The Korean Generative Grammar Circle, Sogang University, Seoul, 81-100.

Andere bisherige abgebrochene oder abgeschlossene Promotionsverfahren

Ich erkläre hiermit, dass ich mich keinem anderen Promotions- oder entsprechenden Prüfungsverfahren unterzogen habe.

Strafrechtliche Verurteilungen

Ich erkläre hiermit, dass keine strafrechtlichen Verurteilungen oder Disziplinarmaßnahmen gegen mich vorliegen. Solche Verfahren sind auch nicht anhängig.

Stuttgart, den 24. Januar 2012

Đurđica Željka Caruso