Aspects of the Syntax-Phonology Interface

Cliticization and Related Phenomena in Croatian

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Good sense is the most evenly shared thing in the world,

for each of us thinks he is so well endowed with it

that even those who are the hardest to please in all other respects

are not in the habit of wanting more than they have.

It is unlikely that everyone is mistaken in this.

It indicates rather that the capacity to judge correctly

and to distinguish true from false,

which is properly what one calls common sense or reason,

is naturally equal in all men, and consequently the diversity in our opinions

does not spring from some of us being more able to reason than others,

but only from our conducting our thoughts along different lines

and not examining the same things.

—René Descartes

Discourse on the Method

Acknowledgments

Karl Valentin said: "In mir denkt's alleweil." ("In me, it thinks continuously."). I felt the same in the last years. There are many people responsible for keeping it thinking in me. The driving force was Chris Wilder. Some years ago, in Frankfurt, I just asked him whether he could tell me what to do with some weird Croatian data. His answers never stopped, and neither did my questions. I owe him a dept of gratitude for being a good friend over the years, and for keeping the it active.

This one question opened the gate to a completely new world, where I had the opportunity to meet good scientist, and good friends. The list of names is nearly endless, I would not finish it in my lifetime. Thanks to all of you!

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1 Introduction

This thesis is concerned with cliticization phenomena in different Slavic languages, with the focus on Croatian. The analysis of cliticization phenomena in Slavic is the topic of a heated debate between linguistics from different special fields, i.e. syntax, phonology, and morphology. There is a reason for all these fields being involved in the discussion. The process of cliticization is not only a syntactic phenomenon, but also a phonological and a morphological one. Basically, this is the conclusion that is drawn in the end. Cliticization is covered up by manifold syntactic and phonological peculiarities, in such a way that approaching it is reminiscent of an odyssey through wide areas of the labyrinth of the respective language. The following thesis is a guided tour along the path I took through the grammar of Croatian. Certain views are described and discussed in detail, others are mentioned briefly. The choice of subtopics is the result of personal preferences, and determined by the importance I assigned to them for the main thesis defended here. The main theses are: (i.) cliticization in Croatian is a simple phonological process; (ii.) clitics are syntactic constituents, without any compromise.

This chapter introduces briefly in section 1.1 certain aspects of the syntax of the discussed languages, i.e. Croatian, Polish, and Czech, and the cliticization phenomena found in these languages. Finally, section 1.2 gives an overview of the structure of the dissertation.

Although large parts of the following discussion are formulated in a theory-neutral way, at certain points properties of syntactic and prosodic structures, and theoretical assumptions are discussed, that need further explanation. I decided not to include introduction into syntactic and prosodic theories here, but rather introduce the necessary concepts where needed.

1.1   Word Order and Clitic Placement

A well known fact about Slavic syntax is that word order is relatively free. The examples in (1) show that all possible sequences with a set of three morphemes are well-formed sentences of Croatian and Polish.

(1)   **Croatian:**   **Polish:**

    a.   *Ivan pije   vino.*   g.   *Marek pije   piwo.*

        I.   drink$_{3sg}$ wine   M.   drink$_{3sg}$ beer

        "Ivan drinks wine."   "Marek drinks beer."

    b.   *Ivan vino pije.*   h.   *Marek piwo pije.*

    c.   *Pije Ivan vina.*   i.   *Pije Marek piwo.*

    d.   *Pije vina Ivan.*   j.   *Pije piwo Marek.*

    e.   *Vina Ivan pije.*   k.   *Piwo Marek pije.*

    f.   *Vina pije Ivan.*   l.   *Piwo pije Marek.*

Still, the word order variations in (1) do not necessarily show that these two languages have free word order. On the one hand, only the examples in (1a) and (1g) are perceived as unmarked by native speakers. All the other examples require a special focus background structure or intonation contour, which implies that the underlying syntactic structure may be different in all the examples. On the other hand, certain constructions show up rigid word order constraints. In contrast to the relative word order freedom in the examples in (1), constructions in Croatian with clitics allow just for a limited variation, as illustrated in (2). All other sequences are ungrammatical.

(2)   a.   *Ivan **ga** pije.*   b.   *Pije   **ga** Ivan.*

        I.   it   drink$_{3sg}$ drink$_{3sg}$ it   I.

        "Ivan drinks it."

A well-known fact about clitics in Croatian is that they stick to the second position in

the clause. How exactly this second position has to be defined is subject to diverging views. Clitics are considered 'deficient' in several respects. Syntactically, they are assumed to lack certain structural properties (cf. Cardinaletti and Starke, 1994). Phonologically, they are assumed to be deficient in lacking certain prosodic properties, i.e. clitics are assumed to lack word accent and thus dependent on other stressed elements prosodically (cf. Zec and Inkelas, 1990). And in morpho-phonological terms, clitics might be considered to represent phrasal affixes, as opposed to word-level affixes. Basically, the standard assumption is that clitics are in some way 'light' elements, and that their weight is responsible for special syntactic, prosodic, and morphological behavior. The weight of clitics is measured in different ways. On the one hand, Cardinaletti and Starke (1994) describe the 'light' character of clitics as a lack of certain structural properties, purely in terms of syntax, but with consequences for other components of grammar. On the other hand, the 'light' elements are assumed to lack prosodic properties, i.e. they are not stressed, as lexical open class items are, and they cannot be stressed because of their 'deficient' prosodic structure.

There are several phenomena in the literature that are assumed to be related to weight of certain constituents. The examples in (3) show that placement of direct objects in English is more liberal, if the direct object is a heavy constituent.

(3)   a.   *John put* [*a bottle*] *into the fridge.*

        b.   * *John put into the fridge* [*a bottle*] *.*

        c.   *John put* [*all the bottles of beer*] *into the fridge.*

d.   *John put into the fridge* [*all the bottles of beer*] .

The so called 'heavy NP shift' constructions in (3) show that a heavy NP may be separated from the main verb, while the 'light' NP has to be located string adjacent to it. Although there might be a syntactic explanation for the contrast in (3), the basic question is, how can weight be expressed in syntactic terms. It seems that heaviness of the type in (3c/d) can be better understood in terms of prosodic structure. While the direct object in (3a/b) is represented as one prosodic word in prosodic structure, it is a complex prosodic phrase with several prosodic words in (3c/d). As observed in Zec and Inkelas (1990) for Serbo-Croatian, a branching prosodic phrase that contains more than one prosodic word behaves differently from prosodic phrases that are projected from one prosodic word alone. Heaviness can be expressed in terms of prosodic representation, whereas the same notion appears to be rather difficult to express in syntactic terms.

Clitics in Croatian appear to be rather the opposite. They are extremely light morphemes, usually just single syllables. In comparison to the examples in (3), where a heavy NP shifts to the right, clitics in Croatian 'fly up' in the clause. They prefer a position in the initial sector of the clause. The lightness of clitics in Croatian is expressed in terms of prosody. Standard definitions refer to clitics as elements that cannot bear word accent, or that are prosodically deficient. Since the weight of enclitics is expressed best in terms of prosodic or phonological structure, the idea to explain the tendency of clitics to be placed in prominent positions in the clause in terms of prosody is not as absurd as some syntacticians take it to be. On the other hand, clitics are syntactic categories, i.e. elements that have a special function in the syntactic, as well as in the semantic representation. They are subject to a variety of word order constraints that are purely syntactic. The basic question, and in fact the main topic in the following chapters will be concerned with the question, how these, often conflicting, dependencies between syntactic and prosodic requirements of certain elements and the restrictions imposed by grammar interact, and basically, what their nature is. Before we continue the search for an answer, consider first some general syntactic properties of Croatian, and the other Slavic languages discussed in the following.

1.1.1 Basic Word Order

As mentioned above, the unmarked word order in Croatian is SVO. However, Croatian allows for extensive scrambling, i.e. verbal arguments may appear in various positions in the clause, as (4) shows.

(4)   a.   *Ivan kaže   da Marija daje   Ivanu   knjigu.*
           I.   say$_{3sg}$ that M.   give$_{3sg}$ I.   book
           "Ivan says that Maria gives the book to Ivan."

     b.   *… da   Marija   daje   knjigu Ivanu.*
           that M.   give$_{3sg}$ book   I.

     c.   *… da   Marija Ivanu   daje   knjigu.*
           that M.   I.   give$_{3sg}$ book

     d.   *… da   Marija Ivanu   knjigu   daje.*
           that M.   I.   book   give$_{3sg}$

     e.   *… da   knjigu Marija Ivanu   daje.*
           that knjigu M.   I.   give$_{3sg}$

The word order in the examples in (4) is a subset of all possible orders in embedded clauses. The word order in the example in (4a) is the unmarked word order, as illustrated in (5).

(5)   complementizer > subject > verb > indirect object > direct object

The only fixed position in the clause is the position of the complementizer. Most other elements are located in different positions, with varying relation to each other, as shown in the examples (4b-e). Complementizers appear only in initial position in Croatian. In some cases, they may be preceded by, for example, *wh*-phrases, as in (6).

(6) *Ivan se pita* [*što da kupi Mariji*].
     I.   self ask$_{3sg}$ what that buy$_{3sg}$ M.
     "Ivan asks himself, what to buy for Maria."

The complementizer can also be used in matrix clauses. In yes/no-questions, for example, either the finite verb appears in sentence initial position or the complementizer *da* is placed there, as illustrated in (7).

(7) a. *Daje li Mariji knjigu?*
         give$_{3sg}$ Pt M.   book
         "Does he give the book to Maria?"

     b. *Da li daje Mariji knjigu?*
         that Pt give$_{3sg}$ M.   book

The position of the complementizer is a reliable test for the position of other elements in the clause. A further observation is that in yes/no-questions, as in the examples in (7), the particle *li* is adjacent to the complementizer. The positions of both elements, i.e. the complementizer and the particle *li* is fixed. These elements cannot be placed in deeper positions in the clause. Such landmarks are crucial for the analysis of the syntactic properties of Croatian.

1.1.2 Pro-drop

The example in (6) and (7) also illustrates another property of Croatian. Croatian is a *pro*-drop language, i.e. the subject of the finite embedded clause is not overtly realized. The possibility to drop the overt realization of a subject does not extend to objects. The examples in (8) show that objects have to be realized overtly.

(8) a. *Ivan **je** sreo Mariju.*
     I. be$_{3sg}$ meet$_{ptc}$ M.
     "Ivan met Maria."

  b. * *Ivan **je** sreo Ø*
     I. be$_{3sg}$ meet$_{ptc}$

The possibility of relatively free word order and of *pro*-drop often obscure the underlying syntactic structure.

1.1.3 Discontinuous Constituents

In nearly all constructions, syntactic derivations displace parts of a constituent, i.e. verbal arguments are placed in the sentence initial position resulting in a discontinuous verbal phrase. Such cases of discontinuous constituents are analyzed in terms of movement of subconstituents in syntactic theories. The possibility to split syntactic constituents, as illustrated in (9), causes problems for theories that are restricted to movement of subconstituents.

(9) a. *Slavko **je** skočio na ravni krov.*
     S. be$_{3sg}$ jump$_{ptc}$ on flat roof
     "Slavko jumped on the flat roof."

  b. *Na kakav **je** Slavko krov skočio?*
     on what-kind-of be$_{3sg}$ S. roof jump$_{ptc}$
     "On what kind of roof did Slavko jump?"

In the example in (9b) the preposition is realized discontinuously. The head noun of the prepositional complement appears separated from the preposition and its adjective. It is not clear how constructions like (9b) can be analyzed in terms of movement of subconstituents.

1.1.4 Summary

The brief description of some word order phenomena in this section gives an idea of the problems one is confronted with in the analysis of Croatian syntax. As has been shown, there are certain regularities that can be used. Complementizers and the particle *li*, as well as clitics show a restricted behavior with respect to word order. In this sense, one may assume that the understanding of the properties of clitics is the key to the understanding of Croatian syntax. To what extend the study of clitics can contribute to a better understanding of word order phenomena and regularities in Slavic languages and the properties of natural languages in general, is the matter of the following discussion.

1.2 Overview

The thesis is structured as follows. In chapter 2 basic descriptive generalizations about syntactic, morphological, and phonological properties of clitics in Croatian are formulated. To my knowledge, some of the generalizations have not been discussed in the literature so far. They will turn out to be important in the further discussion. The basic conclusions drawn in this chapter are that the set of clitic elements in Croatian is not only restricted to pronouns and auxiliaries, but also consists of prepositions and particles. In fact, all function words can find a clitic realization in the prosodic representation. Further, it is demonstrated that clitics obey syntactic placement restrictions. In syntactic terms, however, clitics do not show the behavior of one uniform syntactic constituent type. Enclitic pronouns in Croatian seem to be structurally represented as maximal syntactic constituents, whereas enclitic auxiliaries show properties of syntactic heads.

Chapter 3 compares enclitic phenomena in Croatian with the corresponding phenomena in Polish and Czech. It is shown that the differences between these languages motivates two independent constraints on the placement of clitics. It is shown that enclitics in Polish are not restricted to the second position in the clause, whereas Croatian and Czech show a more or less strong second position requirement for enclitic

placement. Another difference groups Polish and Croatian together. In both languages there is a ban on string initial clitics, which does not exist in Czech. The differences between these languages motivate the division of the clitic placement restriction into two basic constraints.

Different approaches to clitic placement in Croatian are discussed in chapter 4. Two types of analyses are introduced which basically assume that clitic placement in (Serbo) Croatian is either a prosodic or a syntactic phenomenon. It is shown that only the syntactic approaches seem to be restricted enough to cope with different word order phenomena. In particular, it is shown that prosodic accounts are empirically and conceptually inadequate. Although syntactic approaches appear to be empirically adequate, all of them problematic on conceptual grounds.

Finally, in chapter 5 more empirical evidence for a syntactic analysis of clitic placement is presented. Different constructions which were argued to constitute strong empirical evidence for prosodic clitic placement find a syntactic analysis. In spite of this strong evidence for syntactic constraints on clitic placement, certain problems with a syntactic approach are pointed out. An alternative approach is suggested which does not assume that clitics are placed in the syntactic or in the phonological component. Instead of assuming that clitics are placed in some component of grammar, it is assumed that the surface form of pronouns and auxiliaries is derived in the phonological (and morphological) component. This proposal denies the special properties of enclitics in Croatian and argues that clitics are syntactic categories of the same type as the full form counterparts. The consequences for the analysis of clitic 'locations' are discussed, and it is pointed out that the surface form of clitics in Croatian depends on syntactic and semantic properties of the sentence in which they occur.

2 Clitics in Croatian

This chapter approaches descriptively the syntactic, prosodic and morphological properties of clitics in Croatian. The main focus, however, lies on a certain set of clitics, which is referred to as *special enclitics* (henceforth SE) in the literature. The term *special* is related to the taxonomy of clitics that was suggested in Zwicky (1977), and revised in Zwicky and Pullum (1983). *Special* clitics, due to this classification, not only have specific prosodic or phonological properties that determine their clitic-hood, but they also appear in *special* positions in the clause, where the non-clitic counterpart of the respective clitic cannot, or usually does not appear. Naming the respective set of clitics in Croatian *special enclitics* will be motivated in the following, without necessarily sharing other aspects of the taxonomy suggested in Zwicky (1977), Zwicky and Pullum (1983), and related work.

In this chapter the conclusion will be drawn that enclitics in Croatian not only show a special behavior with respect to word order, but also show different morphological and prosodic peculiarities.

After introducing different types of clitics in Croatian, the properties of the so called "second position clitics" will be discussed in more detail. The "second position clitics" are herafter referred to as special or sentential enclitics. In section 2.1.1 enclitic auxiliaries will be investigated and related to comparable phenomena in other languages. Section 2.1.2 is concerned with the properties of enclitic pronouns, and the contexts where these are licensed. The properties of the particle *li* are discussed in section 2.1.3. In particular, its use, its relation to other enclitic elements, and the syntactic constraint its realization in a clause imposes on verb movement are investigated. In section 2.1.4 the syntactic and phonological properties of the negation

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particle are discussed. The grouping of enclitics in second position in the clause is discussed in section 2.2. Certain syntactic generalizations with respect to the position of the clustering property are formulated in this section, as well as the internal order inside the clitic cluster itself.

2.1   Types of Clitics

In this section, the typology of clitics in Croatian will be introduced, in particular motivating the class of *special enclitics* (SE).

Nearly all function words in Croatian, i.e. most prepositions, some conjunctions, and all pronouns and auxiliaries may be realized as clitics in the phonetic surface representation of an utterance. Anticipating generalizations and conclusions drawn in the following sections and chapters, it should be emphasized that in Croatian only function words may appear as clitics. This generalization seems to hold for numerous other languages, perhaps for all languages.

While some of the function words in Croatian occur as either independent morphemes or clitics, other elements can only be realized as clitics. For example, the accusative of the third person singular pronoun realized as *njega* ("him") represents an independent morpheme, i.e. a morpheme that can receive its own word accent[1] and as such may appear independent of other morphemes. This pronoun however may also surface as the enclitic *ga*, under certain circumstances. As such it is not able to carry its own primary word accent, and thus depends on other morphemes. The particle *li*, on the other hand, only occurs in its enclitic form, i.e. it does not have a full form counterpart.

Furthermore, it can be observed that the cliticization direction of clitics in Croatian is specific to the different categorial types. Clitic forms of prepositions for example are always proclitic, while clitic pronouns are always enclitic, cf. table (11).

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[1] It is assumed here that function words in Croatian are not lexically specified for primary word accent, but rather are assigned word accent during the derivation of the prosodic representation that contains them, under certain conditions. A more detailed discussion of the properties of function words will be presented in the following sections.

Table (10) gives an overview of the categories that may appear as clitics in Croatian.

(10)

proclitics	enclitics	
simple	special	simple
prepositions	V-pronouns	P-pronouns
negation	auxiliaries	
conjunctions	particle *li*	

The notions 'V-' and 'P-pronouns' refer to two different enclitic forms of pronouns that are chosen depending on the syntactic context which licenses them. P-pronouns are enclitics that function as complements of prepositions, and they differ morpho-phonologically from pronouns that are realized as optional or obligatory arguments of a verb, hence V-pronouns. V-pronouns correspond to the class of enclitics named *special enclitics* (SE). In section 2.1.2 these differences are discussed in more detail.

In table (11) the function words that may appear as clitics are listed with respect to their cliticization direction (pro- vs. enclitics). The table in (11) gives a brief overview of the possible forms of some of the clitic elements in Croatian. The complete paradigms of the relevant elements will be discussed in the following subsections.[2]

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[2] The following notation for long and short vowels is used hereafter: a. [¯] a diacritic for long vowels, as in *nā*; b. no diacritic for short vowels, as in *na*. These diacritics do not belong to the orthographic system of Croatian. They are only used to point out the difference between full and clitic forms of the relevant elements, where necessary.

(11)

		forms			direction of cliticization
		full		reduced	
pronouns	acc. sg.	fem.	*njū*	*je/ju/nju*	←
		masc.	*njega*	*ga/nj*	←
auxiliaries	pos.	*jesam*		*sam*	←
	neg.	*nisam*			
prepositions		*nā*		*na*	→

The table in (11) shows that pronouns may have even up to four different morpho-phonological realizations. The full form of the pronoun *njū* (acc. fem. sg. *ona*, "she") can be realized as the enclitic *je* or *ju*. If it appears in the same clausal domain[3] of the homophonous enclitic auxiliary *je* (3rd sg. "to be"), it has to be realized as *ju*. In preposition phrases, a pronominal complement, like for example *njū* (acc. fem. sg. of *ona*, "her"), can appear in the full form or in the enclitic form, as the P-clitic *nju*. In fact, the enclitic form of a pronominal preposition complement *njū* may only be realized as *nju*, if the preposition is proclitic. The enclitic preposition *nju* differs from the full form just in vowel length.[4] The use of the form *je* or *ju* as complement of prepositions is ungrammatical, as well as the use of the form *nju* as an argument of the sentential predicate verb.

Similar constraints hold for the pronoun *njega* (acc. fem. sg. of *on*, "he"). The respective pronominal argument of the verb can be realized in its enclitic form as *ga*, and in complement position to a preposition as *nj*. The form *ga* cannot be used as a prepositional complement, and the form *nj* cannot function as an argument of the sentential predicate.

Auxiliaries, on the other hand, might be assumed to have two full forms. They can be

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[3] The relevant domain is the enclitic cluster. The domains of enclitics will be discussed in more detail in the following chapters. Generalizations with respect to the enclitic cluster are discussed in section 2.2.

[4] An enclitic pronominal preposition complement does not seem to be licensed in Serbian dialects (see e.g. Radanović-Kocić, 1996: 430). This could be due to the fact that prepositions in Serbian seem to be always proclitic, as claimed in Zec and Inkelas (1990: 367 ff.) for the Belgrade dialect.

realized as *jesam* (1st sg. of *biti*, "I am/have") in affirmative or emphatic affirmative contexts, or as *nisam* (1st sg. of *biti*, "I am/have not") in negative contexts. Only in neutral contexts, i.e. in non-negative contexts, without emphasis that is realized on the finite verb, like for example *verum focus*, they can appear as enclitics, realized for example as *sam* (1st sg. of *biti* "to be").

In the same way, prepositions appear either as independent full forms, like e.g. *nā* ("on"), or as proclitics, i.e. realized as *na*. The proclitic form cannot be used, if the complement of the preposition is enclitic, and the full form of the preposition cannot be used, if its complement is not enclitic, i.e. there is an asymmetry relation between the preposition and its complement with respect to clitic-hood.

Another peculiarity that splits the class of clitic elements into two groups is related to word order phenomena. While one group of clitics, namely the elements referred to as special enclitics (SEs) tend to occupy the second position in the clause, which is not the usual position for the respective full form counterparts, the other clitics appear in the position where their full form counterparts also tend to occur. The following examples show that only a subset of enclitics exhibits this 'special' behavior with respect to word order.

(12) a. *Što   Ivanu   nisi   prodao?*
          what   I.   NEG-be$_{2sg}$ sell$_{ptc}$
          "What didn't you sell to Ivan?"

      b. *Što   nisi   Ivanu   prodao?*
          what   NEG-be$_{2sg}$ I.   sell$_{ptc}$

      c. * *Što   Ivan   si   prodao?*
          what   I.   be$_{2sg}$ sell$_{ptc}$

      d. *Što   si   Ivan   prodao?*
          what   be$_{2sg}$ I.   sell$_{ptc}$
          "What did you sell to Ivan?"

This brief overview already shows how complex the phenomena and constraints related to clitics in Croatian are. However, beside the briefly sketched morphological and phonological properties of clitics in Croatian, there are also numerous syntactic and phonological phenomena to be discussed. The following subsections will examine in detail the properties of the different clitic categories and the contexts they may appear in.

2.1.1 Enclitic Auxiliaries

This section is concerned with the properties of auxiliary clitics. In particular, it is argued that clitic auxiliaries are always enclitics that occupy the second position of the clause. Furthermore, it is shown that enclitic auxiliaries that reflect the morphological root of the full form behave differently from those which are morphologically related to the suffix of the respective auxiliary.

Croatian makes use of two verb forms as auxiliaries. The finite form of the auxiliary *htjeti* ("want") together with an infinite form of a verb expresses the periphrastic future tense (Future I), while the finite and participle form of the auxiliary *biti* ("to be") are utilized in the periphrastic perfect and pluperfect. Both auxiliaries appear as either full forms or as special enclitics. Furthermore, copula constructions are build with the use of either the full form or the special enclitic form of the auxiliary *biti* ("to be").

The different contexts and constructions which make use of the special enclitic forms of the two auxiliaries will be discussed in the following sections in more detail.

2.1.1.1 Periphrastic Future

Future tense in Croatian is expressed by the present tense form of the auxiliary *htjeti* ("to want") and the infinitive form of the main verb or the copula *biti* ("to be"). The table in (13) compares the enclitic forms of the auxiliary *htjeti* ("to want") with the respective full forms in present tense.[5]

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[5] The table in (13) classifies the negative form of the auxiliary as a full form. However, strictly speaking it seems to be feasible and desirable to assume that the negative forms represent a combination of the full form of the negation particle *ne/ni* and the enclitic form of the respective auxiliary. See section 2.1.4 for

(13)

person	full form		enclitic form
	positive	negative	

singular:

1st	hoću	neću	ću
2nd	hoćeš	nećeš	ćeš
3rd	hoće	neće	će

plural:

1st	hoćemo	nećemo	ćemo
2nd	hoćete	nećete	ćete
3rd	hoće	neće	će

The finite auxiliary in the Future I constructions *htjeti* agrees with the syntactic subject of the clause in person (and number). The enclitic form of *htjeti* basically consists of the suffix that represents these features and, in addition, of a part of the root denoted by the palatalized consonant [*ć*].[6] Word accent is not realized on the enclitic forms, i.e. they appear as clitics, contextually dependent on prosodic constituents to the left.

In the following, two classifications of the enclitic form of the auxiliary *htjeti* are empirically justified. On the one hand, it is shown that the clitic forms are enclitic and, on the other hand, it is shown that they are 'special' in the sense that they underlie placement conditions that do not hold for the corresponding full forms.

The examples in (14) show the different possibilities of realizing the auxiliary.

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more details on this issue.

[6] In addition the paradigm shows in 1st and 2nd person plural an [e] between the prepalatal [ʨ] and the agreement suffix. This [e] might be analyzed as an epenthetic vowel, while the [e] for example in 3rd person singular represents in fact the agreement suffix. See chapter 5 for a more detailed discussion of the phonological properties.

(14) a. *Ivan hoće nazvati.*

      I.   want$_{3sg}$ call$_{inf}$

      "Ivan will call." or "Ivan wants to call."

    b. *Ivan neće nazvati.*

      I.   NEG-want$_{3sg}$ call$_{inf}$

      "Ivan will not call." or "Ivan doesn't want to call."

    c. *Ivan **će** nazvati.*

      I.   want$_{3sg}$ call$_{inf}$

      "Ivan will call."

The use of the full form of the auxiliary *htjeti* is limited to emphatic contexts, that involve for instance *verum focus*, as in example (14a). The enclitic form of the auxiliary is used in unmarked positive contexts, as in the example (14c), where the auxiliary is cliticized to the preceding subject DP.

    Sentence negation is expressed with the use of the negation particle *ne* or *ni*. While the negation particle combines (or procliticizes) to a main verb, as in (15a), it cannot be used in such a way with the full form of the auxiliary *htjeti*, as example (15b) shows. Only the negation particle allows for the enclitic form of the auxiliary to cooccur with it, as in (15c).

(15) a. *Ivan ne čita Krležu.*[7]

      Ivan   NEG read$_{3sg}$ K.

      "Ivan doesn't read Krleža."

    b. * *Ivan ne-hoće čitati Krležu.*

      I.   NEG-want$_{3sg}$ read$_{inf}$ K.

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[7] Although the negation and the main verb are orthographically separated in (15a), they form a prosodic unit, with the negation particle procliticizing to the main verb. See section 2.1.4 for a detailed description of the properties of the negation particle.

c. *Ivan ne-će čitati Krležu.*

I. NEG-want$_{3sg}$ read$_{inf}$ K.

"Ivan will not read Krleža."

The full form of the auxiliary *htjeti* is homophones with the modal verb *htjeti* ("want"). The verb *htjeti* cannot be realized as an enclitic with the meaning "Ivan wants to have a car" in positive contexts, as the example (16b) shows. (16b) is only well formed, if understood as a Future I construction with VP-ellipsis, for example "Ivan will buy a car."

(16) a. *Ivan hoće auto.*

I. want$_{3sg}$ car

"Ivan wants a car."

b. * *Ivan će auto.*

I. want$_{3sg}$ car

Since the verb *htjeti* licenses infinitival complements, examples like (14a) and (14b) might be ambiguous between future tense and modal reading, compare with the examples in (17).

(17) a. *Ivan hoće nazvati.*

I. want$_{3sg}$ call$_{inf}$

"Ivan will call." or "Ivan wants to call."

b. *Ivan neće nazvati.*

I. NEG-want$_{3sg}$ call$_{inf}$

"Ivan will not call." or "Ivan doesn't want to call."

However, constructions with the enclitic form of *htjeti* are not ambiguous, and can only be understood as future tense constructions.

As already stated above, the enclitic form of *htjeti* appears in the second position of

the clause, while the full form does not necessarily has to be placed in such a position. In order to show this special behavior, in the following *wh*-questions will be used as test constructions, since Croatian is a language with overt *wh*-movement. The examples in (18) show that in *wh*-questions a *wh*-pronoun has to be fronted to the sentence initial position.

(18) a.   *Što$_i$ Ivan čita* t$_i$ *?*
          what I.   read$_{3sg}$
          "What does Ivan read?"

     b.   *Ivan čita   što?*
          I.   read$_{3sg}$ what
          "Ivan reads what?"

     c. * *Ivan što$_i$ čita   t$_i$?*
          I.   what read$_{3sg}$

While (18a) constitutes a well formed *wh*-question, (18b) can only be interpreted as an echo question. The *wh*-pronoun cannot appear in some intermediate pre-verbal position, as (18c) shows. However, (18c) can constitute a well formed *wh*-question, if the fronted subject DP is followed by a prosodic break, which might be interpreted as left dislocation of the subject DP, or some sort of a free hanging topic. In contrast, pronounced with a standard intonation (18c) constitutes neither a well formed *wh*-question, nor a well formed echo question.

This word order constraint, however, can be used as a test for the position of other elements in the clause. Disregarding the problems imposed by left dislocation or free hanging topics for the time being, the generalization seems to be that *wh*-pronouns in Croatian *wh*-questions occupy the leftmost position in the clause.

Utilizing this generalization, the examples in (19) show that the enclitic form of *htjeti* has to occupy a position immediately following the initial *wh*-pronoun, while the full form can, but need not do so.

(19) a. *Što **će** Ivan čitati?*
    what want$_{3sg}$ I. read$_{inf}$
    "What will Ivan read?"

  b. * *Što Ivan **će** čitati?*
    what I. want$_{3sg}$ read$_{inf}$

  c. *Što Ivan hoće čitati?*
    what I. want$_{3sg}$ read$_{inf}$
    "What will Ivan read?"

  d. *Što hoće Ivan čitati?*
    what want$_{3sg}$ I. read$_{inf}$

In particular, the examples in (19) show that the enclitic form of *htjeti* has to appear after the initial *wh*-pronoun *što* (19a), and it cannot appear after the *wh*-pronoun and the subject in the third position (19b). The full form, however, may appear in both positions (19c-d).

   For embedded contexts, a similar line of argumentation can be constructed. On the basis of examples like (20) one can assume that complementizers in Croatian occupy the leftmost position inside embedded finite contexts. Only in sentential complements which are selected by a matrix verb that selects an embedded question, a *wh*-phrase may optionally precede the complementizer, as in (20c).

(20) a. *Ivan kaže* [*da čita Krležu*]
    I. say$_{3sg}$ that read$_{3sg}$ K.
    "Ivan says that he reads Krleža."

  b. * *Ivan kaže* [*čita da Krležu*]
    I. say$_{3sg}$ read$_{3sg}$ that K.

c. *Ivan se pita* [*što da čita*]

    I.   self ask$_{3sg}$ what that read$_{3sg}$

    "Ivan asks himself what he should read."

This word order regularity can also be used to test for the potential distributional variation of the enclitic and full form auxiliary *htjeti*. In the following, the test based on this word order regularity will be referred to as the *complementizer test*. The examples in (21) show a subset of possible distributions of the different forms of the auxiliary *htjeti*.[8]

(21) a. *Ivan kaže da hoće nazvati Mariju.*

        I.   say$_{3sg}$ that want$_{3sg}$ call$_{inf}$ M.

        "Ivan says that he will call Maria."

    b. *Ivan kaže da Mariju hoće nazvati.*

        I.   say$_{3sg}$ that M.   want$_{3sg}$ call$_{inf}$

    c. *Ivan kaže da **će** nazvati Mariju.*

        I.   say$_{3sg}$ that want$_{3sg}$ call$_{inf}$ M.

    d. * *Ivan kaže da Mariju **će** nazvati.*

        I.   say$_{3sg}$ that M.   want$_{3sg}$ call$_{inf}$

Again the placement of the full form of *htjeti* seems to be more liberal (21a-b), while the enclitic form of *htjeti* has to be string adjacent to the complementizer, as the contrast between (21c) and (21d) suggests. The observation with respect to the placement constraints of the enclitic form of *htjeti* made for matrix clauses above, also seems also to hold in embedded contexts.

    As the following examples show, similar conditions that were observed for the placement of enclitic forms of *htjeti* in matrix contexts, hold for embedded contexts as

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[8] The examples (21a) and (21b) are of course ambiguous between the modal and the future tense reading. Here only the future tense reading is relevant.

well.

(22) a. * *Ivan kaže* ***će*** *da nazvati Mariju.*

       I.   say$_{3sg}$ want$_{3sg}$ that call$_{inf}$ M.

    b. * *Ivan* ***će*** *kaže da nazvati Mariju.*

       I.   want$_{3sg}$ say$_{3sg}$ that call$_{inf}$ M.

Example (22a) shows that the enclitic form of *htjeti* cannot appear in the initial position in embedded contexts. Furthermore, it also cannot appear in some position in the matrix clause, as illustrated in (22b). Although it cannot be clearly shown that the enclitic form of *htjeti* is part of the embedded clause in (22a), the observation made in (22a) will turn out to be relevant in the following discussion.

    Another constraint on the placement of the enclitic form of *htjeti* can be formulated on the basis of examples like (23).

(23) a. * ***Će*** *Ivan čitati Krležu.*

       want$_{3sg}$ I.   read$_{inf}$ K.

    b. * ***Će*** *što Ivan čitati?*

       want$_{3sg}$ what I.   read$_{inf}$

The examples in (23) show that the enclitic form of *htjeti* cannot appear in the absolute string initial position, i.e. it cannot precede the subject DP, as in (23a), although it may in principle occupy some pre-subject position, as was shown in (19a). Furthermore, it cannot appear in a position preceding a *wh*-pronoun in a *wh*-question, as (23b) shows. Finally, the clitic form of *htjeti* may appear in some final position, as in the example (24).

(24) *Spavat* ***će.***

    sleep$_{inf}$ want$_{3sg}$

    "He will sleep."

This type of constraints is expected for enclitics, i.e. enclitics require a prosodic host to their left. Being enclitic, the auxiliary in (24) has a host to its left, while this condition is not met in examples (23). Thus, the classification of the clitic form of *htjeti* as enclitic seems to be appropriate. The observations so far can be summarized as follows:

(25) Clitic forms of the auxiliary *htjeti*

      a.   are enclitic, and

      b.   are compatible with the negation particle *ne*, while the full form is not, and

      c.   they are subject to specific word order constraints, i.e.

            i.   they cannot appear in a position deeper than the second position in the clause, while the placement of the full form is more liberal, and

           ii.   they cannot occur in an absolute initial position in the clause.

In the following sections, the syntactic constraints for enclitic placement, hence also the placement of the enclitic form of *htjeti* will be discussed in more detail.

2.1.1.2 **Periphrastic Perfect and Copula Constructions**

The finite auxiliary *biti* ("to be") together with a participial form of a verb is used to express perfect tense. The pluperfect consists of the finite auxiliary *biti* ("to be"), a second, participial form of the auxiliary *biti* ("to be"), and the participial form of a main verb. The table in (26) lists the enclitic and the full forms of these auxiliaries.

(26)

person	full form		enclitic form
	positive	negative	

singular:

	positive	negative	
1st	jesam	nisam	sam
2nd	jesi	nisi	si
3rd	jest/jē	nije	je

plural:

	positive	negative	
1st	jesmo	nismo	smo
2nd	jeste	niste	ste
3rd	jesu	nisu	su

In the perfect tense, e.g. (27), the finite auxiliary agrees in person (and number) with the syntactic subject, while the participle agrees with it in gender (and number). The morphological make-up of the enclitic forms consists basically of the agreement suffix and a root final consonant [s]. One exception in the enclitic paradigm is the enclitic auxiliary for 3rd person singular. The positive full form counterpart is the morpheme *jest*. The enclitic form *je* represents the reduced root of the full form, rather than the right part of the root and the agreement suffix. However, in certain contexts the form *jē* is used instead of the full form. *Jē* differs from the enclitic form just in vowel length. In the following discussion it will be assumed that *jē* is the underlying enclitic form that has undergone stress assignment. This is basically what makes *je* stand out in the paradigm. The examples in (27) shall illustrate the basic difference between the 3rd person singular enclitic form of *biti*, and the other forms.

(27) a.   *Ivan je/jē spavao.*

  I.   be$_{3sg}$ sleep$_{ptc}$

  "Ivan has/HAS slept."

25

b. (*Je)/Jē Ivan spavao.

   be$_{3sg}$ I.   sleep$_{ptc}$

   "Ivan HAS slept."

c. Ja sam/(*sām) spavao.

   I be$_{1sg}$ sleep$_{ptc}$

   "I have slept."

d. * Sam/Sām ja spavao.

   be$_{1sg}$ I sleep$_{ptc}$

The examples in (27) are supposed to show two things. On the one hand, the clitic form of the auxiliary in the 3rd person singular may appear in initial position, if the *nucleus* is lengthened, i.e. the form with a short vowel must not appear in initial position, while the long monosyllabic form may do so. The same does not hold for the other enclitic forms, as example (27c-d) shows for the 1st person singular. Instead, the full form of the auxiliary has to be chosen. The 3rd singular enclitic has the corresponding full form *jest*, which is not obligatory in constructions like (27b) in spoken language. Standard Croatian however requires the use of *jest* instead of *jē* in constructions like (27b), as shown in (28).[9]

(28) Jest Ivan spavao.

      be$_{3sg}$ I.   sleep$_{ptc}$

      "Ivan did sleep."

Once again, the only difference between the other enclitic forms and the 3rd singular is that the later resembles the root of the full form counterpart, i.e. the leftmost part of the full form morpheme, while the other forms resemble the rightmost edge of the corresponding full form. Apparently the difference between the morphological origin of the respective element, i.e. whether it is a root or a suffix, plays a crucial role for the ability to undergo vowel lengthening and putting down the clitic property.

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[9] See Raguž (1997: 161) on the differences between *jē* and *jest*.

The following examples show different possibilities of the use of the full and enclitic forms of the auxiliary *biti* in the periphrastic perfect tense.

(29) a. *Marija i   Ivan jesu čitali Krležu.*
        M.   and I.   be_{3pl} read_{ptc} K.
        "Maria and Ivan read Krleža."

    b. *Marija i   Ivan nisu   čitali Krležu.*
        M.   and I.   NEG-be_{3pl} read_{ptc} K.
        "Maria and Ivan didn't read Krleža."

    c. *Marija i   Ivan **su**   čitali Krležu.*
        M.   and I.   be_{3pl} read_{ptc} K.

The periphrastic pluperfect is expressed with the use of the finite auxiliary *biti*, a participial auxiliary *biti* ("to be"), and a participial main verb. Both participial forms agree with the subject in gender (and number), the finite auxiliary agrees with it in person (and number).

(30) a. *Marija i   Ivan jesu bili čitali Krležu.*
        M.   and I.   be_{3pl} be_{ptc} read_{ptc} K.
        "Maria and Ivan have read Krleža."

    b. *Marija i   Ivan nisu   bili čitali Krležu.*
        M.   and I.   NEG-be_{3pl} be_{ptc} read_{ptc} K.
        "Maria and Ivan haven't read Krleža."

    c. *Marija i   Ivan **su**   bili čitali Krležu.*
        M.   and I.   be_{3pl} be_{ptc} read_{ptc} K.

In present tense copula constructions, as in (31), the auxiliary *biti* ("to be") is used in the present tense.

(31) a. *Ivan i Marija **su** umorni.*
      I.   and M.   be$_{3pl}$ tired
      "Ivan and Maria are tired."

   b. *Ivan i Marija jesu umorni.*
      I.   and M.   be$_{3pl}$ tired

   c. *Ivan i Marija nisu umorni.*
      I.   and M.   NEG-be$_{3pl}$ tired

Example (31a) shows the unmarked neutral declarative copula construction, i.e. with an enclitic copula. In emphatic contexts, like in (31b), the positive full form of the copula has to be used, while in unmarked negative contexts the negative form of the copula is used, as in (31c).[10] Past perfect copula constructions are build with the use of the present tense copula and the participial form of the copula *biti*, as in (32).

(32) *Ja **sam**/jesam bio umoran.*
    I be$_{1sg}$ be$_{ptc}$ tired
    "I was tired."

The enclitic finite form of *biti* is monosyllabic and unstressed in all the perfective and copula constructions. In constructions that require focus on the finite verb, the full form of the auxiliary has to be used. Example (33) shows this for *verum focus*, where the context would be a preceding declarative, like "You liked the film" for (33a), and "You didn't like the film" for (33b-c).

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[10] As noted in footnote 5 above, the complex that is build by the negation particle *ni* and the person agreement suffix might be analyzed as a combination of negation particle and the enclitic auxiliary. This possibility is discussed in section 2.1.4.

(33) a. *Ja NISAM   volio taj film.*

      I   NEG-be$_{1sg}$ like$_{ptc}$ this film

      "I DIDN'T like this film."

   b. *Ja JESAM volio   taj film.*

      I be$_{1sg}$ like$_{ptc}$ this film

      "I DID like this film."

   c. * *Ja SAM volio   taj film.*

      I be$_{1sg}$ like$_{ptc}$ this film.

Independent of the construction type, i.e. whether in periphrastic tense constructions (33c), or in copula constructions, the enclitic auxiliary cannot be focused. This holds not only for the enclitic form of *biti*, but also for the enclitic form of *htjeti*, as discussed in the previous section.

Unlike in the cases, where sentential negation is realized as *ne*, i.e. in combination with the auxiliary or modal verb *htjeti*, and other main verbs, the negation used with the auxiliary *biti* is expressed with the particle *ni*. In examples like (34b), the negation particle carries the word accent (it is realized with a long vowel), whereas the word accent lies on the main verb in example (34a). This contrasts with constructions with modal or main verbs and sentential negation, where the verb carries primary accent, and the negation appears procliticized to the finite verb.

(34) a. *Ivan ne/(*nē) skače   sa   mosta.*

      I.   NEG   jump$_{3sg}$ from bridge

      "Ivan doesn't jump from the bridge."

   b. *Ivan (*ni)/nī-je skočio sa   mosta.*

      I.   NEG-be$_{3sg}$ jump$_{ptc}$ from bridge

      "Ivan didn't jump from the bridge."

As shown in (34), there is an asymmetry between the prosodic properties of the

negation particle with respect to the context. In Croatian the negation particle always appears attached to the finite verb, whether it is an auxiliary or a main verb. If the negation particle is realized with a finite main verb, it can only be realized with a short vowel, unaccented, and procliticized to the main verb, as in (34a). If, on the other hand, the negation particle appears in the context of a finite auxiliary, it has to be realized with a long vowel, in its accented form, as in (34b). This constraint holds for both, the auxiliary *htjeti* in periphrastic future constructions, as well as for the auxiliary *biti* in periphrastic perfect and copula constructions.

Another parallel between the behavior of the auxiliaries *htjeti* and *biti* can be seen, if the word order tests from the previous section are applied. The examples in (35) show that in the *wh*-test enclitic forms of *biti* behave in the same way as enclitic forms of *htjeti*.

(35) a. *Što   jesu   Marija i   Ivan   čitali?*
          what   be_{3pl} M.   and I.   read_{ptc}
          "What did Maria and Ivan read?"

      b. *Što   Marija i   Ivan   jesu   čitali?*
          what   M.   and I.   be_{3pl} read_{ptc}

      c. *Što   **su**   Marija i   Ivan   čitali?*
          what   be_{3pl} M.   and I.   read_{ptc}

      d. * *Što   Marija i   Ivan   **su**   čitali?*
          what   M.   and I.   be_{3pl} read_{ptc}

As in the case of the different forms of *htjeti*, the full form of *biti* seems to be more liberal with respect to placement constraints (35a-b), while the enclitic form can only appear in a position immediately following the initial *wh*-phrase (35c-d).

Another constraint on the placement of the enclitic *biti* that appears to be similar to the observations made for the auxiliary *htjeti* is related to the absolute initial position in the clause. As for the auxiliary *htjeti*, the clitic forms of *biti* may not appear in absolute

initial position in the clause.

(36) a. * **_Su_** _Marija i_ _Ivan_ _čitali_ _novine._
be$_{1pl}$ M.   and I.   read$_{ptc}$ newspaper

  b. * **_Su_** _što_ _Marija i_ _Ivan_ _čitali._
be$_{1pl}$ what M.   and I.   read$_{ptc}$

The examples in (36) show that the clitic forms of _biti_ belong to the class of enclitics in Croatian, because they are unable to appear in absolute string initial position, although they are, for example, able to occupy a position preceding the subject, as the comparison between (38c) and (36a) shows. On the other hand, the enclitic form of _biti_ may appear in sentence final position, as illustrated by the examples in (37).

(37) a. _Umoran_ **_sam_**.
tired   be$_{1sg}$
"I am tired."

  b. _Spavao_ **_sam_**.
sleep$_{ptc}$ be$_{1sg}$
"I slept."

The final position of the clitic form of _biti_ is possible in both, present tense copula constructions (37a), and in periphrastic perfect constructions (37b). Again, the behavior observed in constructions like (36) and (37) is expected for enclitics, i.e. classifying the clitic forms of _biti_ as enclitic appears to be fully justified.

    With respect to embedded contexts, the complementizer test shows the same result for the auxiliary _biti_ as for the auxiliary _htjeti_.

(38) a. _Marija i_ _Ivan_ _kažu_ _da jesu_ _čitali_ _novine._
M.   and I.   say$_{3pl}$ that be$_{3pl}$ read$_{ptc}$ newspaper
"Maria and Ivan say that they read the newspaper."

b. *Marija i Ivan kažu da novine jesu čitali.*
   M.   and I.   say₃pl that newspaper be₃pl readptc

c. *Marija i Ivan kažu da su čitali novine.*
   M.   and I.   say₃pl that be₃pl readptc newspaper

d. * *Marija i Ivan kažu da novine su čitali.*
   M.   and I.   say₃pl that newspaper be₃pl readptc

As for the auxiliary *htjeti*, the examples (38) show that the full form of the auxiliary *biti* is more liberal with respect to the placement, while the enclitic form has to be in an adjacent position to the complementizer. More precisely, in (38c) the enclitic form of the auxiliary is licensed in a position immediately to the right of the complementizer, and no element may intervene between the complementizer and the enclitic, as in (38d).

Furthermore, the enclitic form of the auxiliary *biti* may not be placed neither in initial position inside the embedded clause, nor in some position in the matrix clause, although this would be the absolute second position in the clause, as shown in (39).

(39) a. *Kažu da **su** čitali novine.*
        say₃pl that be₃pl readptc newspaper
        "They say that they read the newspaper."

    b. * *Kažu **su** da čitali novine.*
        say₃pl be₃pl that readptc newspaper

With respect to the behavior of enclitic forms of the auxiliary *biti*, the observations so far can be summarized as it has been done for the auxiliary *htjeti* in (25). One further observation has to do with the phonological properties of the enclitic forms of *biti*. All are monosyllabic, with short *nuclei*. The 3rd person singular form is an exception in that it is able to undergo lengthening in order to overcome its status as a clitic.

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2.1.1.3 Conditional

Conditional constructions make use of the (Aorist form of the) auxiliary *biti* and a participial form of a verb (Conditional I), as example (40a) shows. Conditional II consists of the aorist form of the auxiliary *biti* ("to be"), a participial form of the auxiliary *biti* ("to be"), and the participial form of a main verb, see example (40b).

(40) a. *Ti **bi** čitao novine.*

you be[2nd] read[ptc] newspaper

"You would read the newspaper."

    b. *Ti **bi** bio čitao novine.*

you be[2nd] be[ptc] read[ptc] newspaper

"You would have read the newspaper."

The complete paradigm for the auxiliary *biti* as used in conditional constructions is given in table (41).[11]

(41)

	singular		plural	
	full form	**enclitic**	**full form**	**enclitic**
1st	*bīh*	*bih*	*bīsmo*	*bismo*
2nd	*bī*	*bi*	*bīste*	*biste*
3rd	*bī*	*bi*	*bī*	*bi*

Compared with the paradigms of the auxiliaries *htjeti* in periphrastic future, and *biti* in periphrastic perfect constructions, there is a striking difference with respect to the morpho-phonological shape of clitic and full forms. All clitic forms in table (41) differ from their full form counterparts just in vowel length of the monosyllabic root.

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[11] See Raguž (1997: 207) for a complete paradigm of all forms of *biti*.

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The following examples illustrate the issue that the different morpho-phonological realizations are also sensitive to different placement conditions. In the examples (42) the *wh*-test shows that only the stressed form of conditional *biti* may appear in a position deeper than the second position (42b). The unstressed form may only appear in a position immediately following the initial *wh*-phrase, as the contrast between (42a) and (42b) shows.

(42) a. *Što   bȋ/bi Ivan kupio?*
          what be$_{3sg}$ I.   buy$_{ptc}$
          "What would Ivan buy?"

      b. *Što   Ivan bȋ/(*bi) kupio?*
          what I.   be$_{3sg}$ buy$_{ptc}$

With respect to the *wh*-test, the clitic forms of *biti* in conditional constructions behave in the same way as the enclitic forms of *htjeti* in future tense and *biti* in periphrastic perfect constructions. The initial *wh*-phrase marks the leftmost edge which the enclitic forms must follow. And, as for the enclitic forms used in periphrastic tense constructions, the enclitic form of *biti* in conditionals may not appear in the absolute initial position in the clause, see (43).

(43) *Bȋ/(*Bi) Ivan kupio auto.*
      be$_{3sg}$ I.   buy$_{ptc}$ car
      "Ivan would buy the car."

On the other hand, both versions may appear in the absolute final position, as it is shown in example (44).

(44) *Spavao bȋh/bih.*
      sleep$_{ptc}$ be$_{1sg}$
      "I would sleep."

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The observations made on the basis of the examples (43) and (44) are predicted, if the reduced or clitic forms of *biti* in conditional constructions are assumed to be enclitic. In this respect, the enclitic conditional *biti* behaves in the same way as the enclitic forms of the auxiliaries in periphrastic tense constructions, which have been discussed in the previous sections.

Furthermore, the examples (45) and (46) show that the conditional enclitic may neither appear in initial, nor in some deeper position inside an embedded clause, as it was the case with the other enclitic auxiliaries.

(45) a. *Ivan kaže da bī/**bi** čitao novine.*
     I.   say$_{3sg}$ that be$_{3sg}$ read$_{ptc}$ newspaper
     "Ivan says that he would read a newspaper."

    b. *Ivan kaže da čitao bī/(*bi) novine.*
     I.   say$_{3sg}$ that read$_{ptc}$ be$_{3sg}$ newspaper

    c. *Ivan kaže da novine bī/(*bi) čitao.*
     I.   say$_{3sg}$ that newspaper be$_{3sg}$ read$_{ptc}$

While both the full form and the enclitic form may occur in a string adjacent position to the right of the complementizer (45a), only the full form may appear in some deeper position, i.e. following the complementizer and the participle, e.g. (45b), or the fronted direct object, e.g. (45c). However, none of the forms may appear in the initial position inside the embedded clause, as the example (46) shows.

(46) * *Kaže bī/**bi** da čitao novine.*
     say$_{3sg}$ be$_{3sg}$ that read$_{ptc}$ newspaper

On the basis of the observations above, it can be concluded that the conditional finite auxiliary behaves in all respects like both the auxiliary *htjeti* in periphrastic future and the auxiliary *biti* in periphrastic perfect or copula constructions. With respect to placement in the clause, the enclitic forms of all three paradigms can be assumed to

belong to the class of *special* enclitics, because the placement constraints that apply to the enclitic forms differ from those of their full form counterpart.

A major difference between the three paradigms seems to be that the enclitic form of the conditional *biti* only minimally differs from the full form with respect to its morpho-phonological representation, i.e. the forms only differ in the length of the monosyllabic root of the morpheme *biti*. In this respect, the 3rd person singular form of the auxiliary *biti* in periphrastic (plu-)perfect or copula constructions, i.e. the morpheme *je*, display a similar behavior.

2.1.1.4 Stressed Clitics and Auxiliary Paradigms

A possible description of the difference between the auxiliary paradigms described in the previous section may involve reference to the root/suffix distinction, i.e. one can claim that only reduced forms that resemble or represent the root are subject to phonological lengthening processes under certain circumstances, which might be assumed to be related to the stress assignment in a non-syntactic component of grammar. In other words, while in Croatian enclitic auxiliaries that represent morphological suffixes never appear accented, those that represent reduced forms of the root seem to be able to host primary word accent. There does not seem to be a phonological condition involved, since both types of clitics, i.e. the root- and the suffix-type of clitics, are in most of the cases monosyllabic structures.

Consequently, although this might be seen as a *contradictio in adiecto*, since the basic property that defines a clitic seems to be the lack of word accent – the possibility of having stressed clitics is empirically shown to exist in Croatian. At least the 3rd person singular auxiliary *je* shows these three dimensions clearly, repeated here in table (47).

(47)

full form	**stressed enclitic**	**unstressed enclitic**
jest	*jē*	*je*

On the other hand, the conditional *biti* may be – and in fact the null hypothesis would be that it is – only realized in its enclitic form which undergoes stress assignment in the phonological component. In other words, it may be appropriate to assume that all full forms of the conditional *biti* are stressed enclitics.

The proposed three-dimensional taxonomy of enclitic auxiliaries is summarized in (48).

(48) a. a b c $\rightarrow$ a b ~~c~~ *jest* $\rightarrow$ *je*

                                              be_{3sg} $be_{3sg\text{-}cl}$

   b. a c $\rightarrow$ a b c *bih* $\rightarrow$ *bīh*

                                              $be_{1sg\text{-}cl}$ be_{1sg}

   c. a b c $\rightarrow$ ~~a~~ b c *jesam* $\rightarrow$ *sam*

                                              be_{1sg} $be_{1sg\text{-}cl}$

(48) basically aims to express that two types of clitics seem to be the result of reducing the complex full form by eliminating either the right part of the morpho-phonological structure, as in (48a), or the left part, as in (48c). (48a) represents the root-type, and (48c) the suffix-type of clitics. (48b) implies that the opposite effect occurs with a third type of clitics, namely the extension of a complex morpheme from an underlying clitic representation to a full form by for example the lengthening of the *nucleus* (of the stressed syllable), or an insertion of segments.[12] However, the operations expressed in (48a) and (48b) seem to be related to completely different principles or constraints. In the following, it will be proposed that they are related to phenomena that can be found in other components of grammar.

To sum up, beside the already discussed root/suffix-distinction, the types of

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[12] Example (48b) makes the assumption that the underlying lexical representation of conditional auxiliaries is the 'short' form, i.e. the form without long initial syllable. Two observations motivate this assumption. On the one hand it seems to be a cross-linguistic fact that function words are lexically not specified for word accent (e.g. Selkirk, 1995), and on the other hand, word accent on function words in Croatian is usually expressed by lengthening the *nucleus* of the stressed syllable. However, this assumption will be further motivated in the following discussion.

auxiliaries considered so far have the following morpho-phonological properties:

(49) a.   polysyllabic stressed full forms
      b.   polysyllabic enclitic forms that can be stressed
      c.   monosyllabic enclitic forms that can be stressed
      d.   monosyllabic enclitic forms that cannot be stressed

In the following sections the different properties will be discussed in more detail. These properties will be assumed to play a role in determining the basic formative morpho-phonological characteristics of clitics in Croatian.

2.1.2 Enclitic Pronouns

Beside verbal clitics, also pronominal clitics belong to the class of enclitics in Croatian. The following table shows the clitic pronouns and their full form counterparts. More precisely, table (50) shows the pronoun paradigm for accusative case. Beside the accusative case feature, the pronominal forms are specified for person, and in the third person singular even for gender.

(50)

person	gen.	full form	V-clitic	P-clitic

singular:

person	gen.	full form	V-clitic	P-clitic
1st		*mene*	*me*	
2nd		*tebe*	*te*	
3rd	masc./neuter	*njega*	*ga*	*nj*
	fem.	*njū*	*ju*/*je*	*nju*

plural:

person	gen.	full form	V-clitic	P-clitic
1st		*nās*	*nas*	
2nd		*vās*	*vas*	
3rd		*njīh*	*ih*	*nji*

The column "V-clitic" lists clitic forms of pronouns that are realized as optional or obligatory arguments of the main sentential predicate, i.e. clitic pronouns that can also be adjuncts of the predicate. "P-clitic", on the other hand, lists clitic forms of pronouns that can only be realized as complements of prepositions. The latter paradigm, that seems to be context sensitive with respect to the relevant syntactic context, does not seem to exist in Serbian dialects. Native speakers of Bosnian dialects judge the relevant examples to be archaic. P-clitics however are still actively used in Croatian dialects.

Table (51) lists the dative paradigm of pronouns in Croatian.

(50)

singular:

person	gen.	full form	V-clitic	P-clitic
1st		*mene*	*me*	
2nd		*tebe*	*te*	
3rd	masc./neuter	*njega*	*ga*	*nj*
	fem.	*njū*	*ju*/*je*	*nju*

plural:

person	gen.	full form	V-clitic	P-clitic
1st		*nās*	*nas*	
2nd		*vās*	*vas*	
3rd		*njīh*	*ih*	*nji*

The column "V-clitic" lists clitic forms of pronouns that are realized as optional or obligatory arguments of the main sentential predicate, i.e. clitic pronouns that can also be adjuncts of the predicate. "P-clitic", on the other hand, lists clitic forms of pronouns that can only be realized as complements of prepositions. The latter paradigm, that seems to be context sensitive with respect to the relevant syntactic context, does not seem to exist in Serbian dialects. Native speakers of Bosnian dialects judge the relevant examples to be archaic. P-clitics however are still actively used in Croatian dialects.

Table (51) lists the dative paradigm of pronouns in Croatian.

(51)

Dative pronouns				
person	Gender	full form	V-clitic	P-clitic

singular:

1st		*meni*	*mi*	
2nd		*tebi*	*ti*	
3rd	masc./ntr.	*njemu*	*mu*	*nj*
	fem.	*njoj*	*joj*	

plural:

1st		*nama*	*nam*	
2nd		*vama*	*vam*	
3rd		*njima*	*jim*	

Table (52) shows the different forms of reflexive pronouns.

(52)

reflexive pronouns			
case	full form	V-clitic	P-clitic
accusative	*sebe*	*se*	*se*
dative	*sebi*	*si*	

As observed in the literature, e.g. in Radanović-Kocić (1996), clitic pronouns in Serbo-Croatian cannot appear independently, i.e. they cannot be realized without context. Radanović-Kocić uses examples, comparable with example (53), to show that a question like (53a) cannot be answered with just a clitic pronoun, whereas it can be answered with the full form of the same pronoun, as in (53b).

(53) a. *Komu **si** dao knjigu?*
who be$_{2sg}$ give$_{ptc}$ book
"To whom did you give the book?"

b. *Njemu. / * **Mu**.

   him

One could assume, as assumed in Radanović-Kocić (1996: 430), that the ungrammaticality of examples like (53b) results from the fact that clitic pronouns cannot be "free" in some sense to be defined, or rather they cannot appear in the sentence initial position. The examples (54), however, just show that, independently of the position in the clause, clitic pronouns cannot be used as (contextual) antecedents of a *wh*-element in an answer.

(54) a. *Koga **si**   vidio?*

      who be$_{2sg}$ see$_{ptc}$

      "Who did you see?"

   b. *Vidio **sam**   njega.*

       see$_{ptc}$ be$_{1sg}$ him

       "I saw him."

   c. * *Vidio **sam** ga.*

       see$_{ptc}$ be$_{1sg}$ him

Example (54c) is a well-formed declarative clause, and it is only well formed with a non-interrogative reading, but not as an answer to the question in (54a). In contrast to the pronominal full forms, clitic pronouns cannot function as (discourse) antecedents to *wh*-pronouns, i.e. clitic pronouns cannot bear focus. Example (53b) can therefore be excluded for independent reasons, regardless of the position of the clitic pronoun in the clause.

   In the same way, it can be also argued that the lack of a relevant context is also the reason for ungrammaticality of the example (53b), as the contrast in (55) shows. The clitic pronoun cannot appear in the sentence initial position, as illustrated by (55b).

(55) a. *Kupi* **mi** *sladoled!*

        buy$_{imp}$ me ice

        "Buy me an ice!"

b. * **Mu** *kupi* *sladoled!*

        him buy$_{imp}$ ice

The clitic pronoun *mu* ("him", masc. sg. dat.) can however be realized in the sentence final position, as shown in (56).

(56) a. *Pomozi* **mu**!

        help$_{imp}$ him

        "Help him!"

b. *Pomaže* **mu**.

        help$_{3sg}$ him

        "He helps him."

On the basis of the contrasts in (55) and (56), one may conclude that independent of the sentence type and mood—whether the sentence is imperative, as in (56a), or indicative, as in (56b)—clitic pronominal arguments of verbs may appear in sentence final, but not in the sentence initial position.

This property of pronoun clitics in Croatian can be (descriptively) best understood, if it is assumed that, like auxiliary clitics, pronoun clitics in Croatian are enclitic. The ungrammaticality of examples like (55b) can be explained in terms of a mismatch between requirements of enclitics and the given context in the syntactic representation, i.e. due to some properties of enclitics, these cannot be realized in the absolute sentence initial position. Whether this property is a genuine syntactic property, or rather a morphological or phonological property, remains to be clarified.

The examples in (57) show phonological assimilation processes between enclitic pronouns in the second position and the fronted elements. While in example (57a) the assimilation of the place of the articulation between the final /n/ in *Ivan* and the initial

/g/ in *goni* is optional, and preferred in fast speech, the assimilation is obligatory in (57b).

(57) a.   *Ivan goni   zeca.*

         I.   chase$_{3sg}$ hare

         "Ivan chases the hare."

     b.   *Ivan **ga** goni.*

         I.   it   chase$_{3sg}$

         "Ivan chases it."

An assimilation of the type in (57b) points to the difference between enclitic pronouns and other substantives in Croatian with respect to their prosodic status. *Enclises* makes certain types of prosodic edge phenomena obligatory.

     The clitic pronouns in table (50), (51) and (52) that are labeled as "P-clitics", are—contrary to predicate related enclitic pronouns—only licensed as complements of prepositions, as illustrated in (58) and (59) show.

(58) a.   *Ivan skače   na   njega.*

         I.   jump$_{3sg}$ on it

         "Ivan jumps on it."

     b.   *Ivan skače   na-**nj**.*

         I   jump$_{3sg}$ on-it

     c. * *Ivan **nj** skače   na.*

         I.   it jump$_{3sg}$ on

The examples (58a) and (58b) show that both, the full form and the special clitic form of a pronoun can be realized as a complement of a preposition. The P-clitic, however, cannot be moved out of the PP, in order to be placed in some second position, as shown in example (58c). Furthermore, (59) shows that the P-clitic cannot function as a direct

object, i.e. it cannot be used in these constructions where the V-clitic can. V-clitics and P-clitics are in a full complementary distribution.

(59) * *Ivan **nj** goni.*
      I.   it chase$_{3sg}$

One standard cross-linguistic generalization that also holds for Croatian, is that enclitic pronouns[13] cannot be coordinated, as the examples in (60) show:

(60) a. *Ivan **je**   poljubio nju i   njega.*
          I.   be$_{3sg}$ kiss$_{ptc}$ her and him
          "Ivan kissed her and him."

     b. * *Ivan **je**   poljubio **ju** i   **ga**.*
          I.   be$_{3sg}$ kiss$_{ptc}$ her and him

One might assume that this generalization might be related to the properties of the conjunction *i*. As the examples in (61) show, the conjunction *i* is not able to host enclitics in clause coordination.

(61) a. *Ivan je   kupio roman, i   čita   **ga**.*
          I.   be$_{3sg}$ buy$_{ptc}$ novel and read$_{3sg}$ it
          "Ivan bought a novel and reads it."

     b. * *Ivan je   kupio roman i   **ga** čita.*
          I.   be$_{3sg}$ buy$_{ptc}$ novel and it   read$_{3sg}$

Example (61b) indicates that the conjunction itself is not a potential host for the enclitic

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[13] Enclitic pronouns are often referred to as 'deficient pronouns', where deficiency might be understood as lack of certain prosodic properties, or of structural properties, as for example assumed in Cardinaletti and Starke (1994). Nevertheless, it remains unclear, how such properties are related to the observations in (60).

pronoun. In fact, the conjunction *i* is proclitic in such constructions, and requires itself a host for cliticization. If the conjunction cannot host clitics, example (60) could be ruled out because of the lack of a host for the enclitic pronoun in the right conjunct.

However, the generalization that enclitics cannot be coordinated does not appear to be related to the properties of the conjunction, if the examples in (62) and (63) are taken under consideration.

(62) *Ivan je   dobio auto, ili **ga je**   kupio.*
      I.   be$_{3sg}$ get$_{ptc}$ car   or it be$_{3sg}$ buy$_{ptc}$
      "Ivan got the car, or he bought it."

(62) shows that other types of conjunctions may host enclitics, like for example the conjunction *ili* (Ćavar and Wilder, 1994). If two enclitic pronouns are coordinated with this conjunction, as in (63), the result is still ungrammatical.

(63) * *Ivan **je**   sreo   **ju** ili **ga**.*
      I.   be$_{3sg}$ meet$_{ptc}$ her or him

On the basis of the discussed examples, there is still a margin for uncertainty about the real reason for a ban on coordination of weak pronouns.

2.1.3 The Particle *li*

The particle *li* – usually wrongly named question particle – differs from the other clitics in several respects. One of the most significant differences is that, unlike the other clitics, the particle *li* has no full form counterpart. It is used in Croatian in several different contexts. Often it is used in sentential questions, and differentiates in the unmarked case a question from a declarative context, as can be seen in example (64).[14]

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[14] It is also possible to interpret (64a) as a sentential question, if the question intonation is used. Nevertheless, the unmarked case is represented in (64b).

45

(64) a. *Pije   Ivan pivo?*
     drink$_{3sg}$ I.   beer
     "Does Ivan drink beer?"

   b. *Pije   li Ivan pivo?*
     drink$_{3sg}$ Pt I.   beer

The particle *li* can also be used in simple *wh*-questions, adding a "dubitative" interpretation. The question interpretation in (65) is independent of the realization of the particle *li*. The particle is rather a simple predicative modifier in the example (65b).

(65) a. *Što je   Ivan pio?*
     what be$_{3sg}$ I.   drink$_{ptc}$
     "What did Ivan drink?"

   b. *Što li je   Ivan pio?*
     what Pt be$_{3sg}$ I.   drink$_{ptc}$
     "What might Ivan have drunk?"

The examples in (65) show that the term "question particle" that is used in the literature, referring to the particle *li* is not appropriate. Also examples like (66)-(78) show that the particle li should be referred to as "dubitative particle". It is not only used in questions, but also in a couple of different constructions, that are declarative in nature.[15] The exclamative contexts in (66) express surprise or astonishment. In both cases an argument (66a) or an adjunct (66b) is fronted (Raguž, 1997: 278).

(66) a. *On li je   to!*
     he Pt be$_{3sg}$ this
     "It is really him."

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[15] An overview of the functions and use of the particle *li* in Croatian can be found in e.g. Raguž (1997: 277 ff.).

b. *Dobro **li ga je** uredio!*

    good   Pt it   be$_{3sg}$ prepare$_{ptc}$

    "He prepared it really good."

The most appropriate translation of examples like (66b) appears to be "I don't believe how good he prepared it!".

In a similar way, the particle *li* can be used together with fronted and reduplicated predicates. The examples in (67) express that something is done extensively or in a very thorough way. In such constructions the predicate must be reduplicated (Raguž, 1997: 278).[16]

(67) a. Radi   **li**, radi!

    work$_{3sg}$ Pt work$_{3sg}$

    "He is really working a lot/good."

b. *Trudi **li** se, trudi!*[17]

    try$_{3sg}$ Pt self try$_{3sg}$

    "He is really trying hard."

Such predicate reduplication constructions,[18] as in (67) are also possible with transitive verbs. The examples (68), however, show that it is not the whole predicate phrase (or VP) that is reduplicated, but only the predicate head.

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[16] Such constructions are reminiscent of short dialogs, that first contain a question, that is answered repeating the predicate, as shown in (67a).

[17] Note that *truditi* ("to try (hard)") is an inherent reflexive verb in Croatian. In constructions like (67b), however, only one reflexive pronoun is licensed.

[18] Tonjes Veenstra (p.c.) pointed out that at the surface these constructions are similar to predicate cleft constructions in West African and creole languages (see Veenstra and Den Besten (1995), and the literature cited therein). The question whether these two types of constructions can be reduced to one another is left to future research.

(68) a. *Pije* ***li*** *pivo, pije!*

  drink₃ₛg Pt beer drink₃ₛg

  "He drinks really a lot of beer."

  b. * *Pije* ***li*** *pivo, pije pivo!*

  drink₃ₛg Pt beer drink₃ₛg beer

A further restriction with respect to such a predicate reduplication in the context of *li* is that it is not possible to front the complex predicate phrase, as can be seen in example (69).

(69) * *Pije pivo* ***li****, pije!*

  drink₃ₛg beer Pt drink₃ₛg

As argued in Rivero (1993), participles do not seem to be compatible with the particle *li* in yes/no-questions, in the sense that participles may not precede *li*. In sentential questions in Croatian, the finite verb, be it the finite main verb in simple tense, or the finite auxiliary in periphrastic tense, appears in the sentence initial position, immediately preceding the particle *li*. It is not possible for the participle to appear in the sentence initial position, preceding *li*, if the finite auxiliary is enclitic, as the example (70c) shows. The only possibility to generate a well-formed sentential question in periphrastic constructions is to locate some full form auxiliary in the initial position, be it the positive full form as in (70a) or the negative full form, as in (70b).

(70) a. *Jesi* ***li*** *čitao Krležu?*

  be₂ₛg Pt read_ptc K.

  "Did you read Krleža?"

  b. *Nisi* ***li*** *čitao Krležu?*

  NEG-be₂ₛg Pt read_ptc K.

  "Didn't you read Krleža?"

c. * *Čitao* **li si** *Krležu?*

    read$_{ptc}$ Pt be$_{2sg}$ K.

Furthermore, in constructions like (70a) and (70b) it is not possible to topicalize or left-dislocate some syntactic constituent. (71) shows this for the positive full form of the finite auxiliary.[19]

(71) a. * *Sinoć*   *jesi* **li** *čitao* *Krležu?*

      yesterday be$_{2sg}$ Pt read$_{ptc}$ K.

    b. * *Krležu jesi* **li** *čitao?*

       K.   be$_{2sg}$ Pt read$_{ptc}$

The same holds for finite main verbs, as in (72).

(72) a. * *U školi*   *čitaš* **li** *Krležu?*

      in school read$_{2sg}$ Pt K.

    a'. *Čitaš* **li** (*Krležu* *u* *školi*) *?*

       read$_{2sg}$ Pt K.   in school

       "Do you read (Krleža in school)?"

    b. * *Krležu čitaš*   **li?**

       K.   read$_{2sg}$ Pt

    b'. *Čitaš* **li** (*Krležu*) *?*

       read$_{2sg}$ Pt K.

       "Do you read (Krleža) ?"

Examples like (65b), additionally show that the particle *li* is compatible with *wh*-pronouns. Nevertheless, yes/no-questions do not allow for fronting of *wh*-pronouns,

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[19] The same generalization holds for the negative full form.

although they do allow for *wh*-pronouns to occur *in situ*, as shown in (73).

(73) a.   *Piješ*   **li**   *što?*
          drink$_{2sg}$ Pt what
          "Do you drink something?" |"Would you drink something?"

      b. * *Što*   *piješ*   **li***?*
          what drink$_{2sg}$ Pt

In this respect Croatian differs, for example, from German. In German, it is possible to realize a *wh*-pronoun *in situ*, as in (74a) (comparable with (73a)), but it is also possible to front the *wh*-pronoun, which results in a constituent question interpretation, i.e. the yes/no-interpretation is not possible in (74b). The difference is that a structure like (73b) is not possible in Croatian, not even with constituent question interpretation, compare (73b) and (74b).

(74) a.   *Trinkst*   *du*   *was?*
          drink$_{2sg}$ you what
          "Do you drink something?" or "Would you like to drink something?"

      b.   *Was*   *trinkst*   *du?*
          what drink$_{2sg}$ you
          "What do you drink?"

Alternatively to fronting the finite verb in yes/no-questions, it is possible to utilize a complementizer, as in (75).

(75) *Da* **li** *ti*   *čitaš*   *Krležu?*
      that Pt you read$_{2sg}$ K.
      "Do you read Krleža?"

On the basis of the above examples, one might conclude that in principle the particle *li*

is compatible with all kinds of syntactic constituents preceding it immediately to the left, i.e. adverbs (66b), non-*wh*-DPs (66a), finite verbs (64b) and participles (67), complementizers (75), as well as *wh*-pronouns (65b) may precede the particle. However, in yes/no-questions the set of elements that is allowed to precede the particle *li* is restricted to finite verbs, irrespective of whether it is an auxiliary or the main verb.

Given the assumption that the verb preceding the particle *li* is fronted in constructions like in (70), fronting of the participle across an enclitic auxiliary seems to be blocked in yes/no-questions, as (70c) shows. The basic conclusion drawn in Rivero (1993) is that participles are not compatible with the particle *li*. This assumption is used Bošković (1998) and related work as the main argument against certain kinds of participle movement and syntactic placement of enclitics in C^0, as proposed in Wilder and Ćavar (1994a). On the other hand, the fronting of participles is not blocked in declarative contexts like (76).

(76)   *Čitao* **si**   *Krležu.*
       read$_{ptc}$ be$_{2sg}$ K.
       "You read Krleža."

Whichever location one assumes for auxiliaries and main verb participles, there is no disagreement about the underlying order. The basic assumptions are that the main verb is dominated by the auxiliary in the underlying structure, and that the main verb is moved in (76), which results in the inversed word order.

Consequently, one might conclude that the possibility to locate a participle in front of the particle *li* is only excluded in interrogative contexts, i.e. it is not only excluded in yes/no-questions, but also in constituent questions with and without an overt *li*, as illustrated in (77).

(77) a. * *Što*   *radio*   **je**   *Ivan?*
          what work$_{ptc}$ be$_{3sg}$ I.

      b. * *Što*   *radio*   **li je**   *Ivan?*
          what work$_{ptc}$ Pt be$_{3sg}$ I.

Fronting of the participle is perfectly well formed in examples like (78), compare with (67), where only a declarative reading is allowed.

(78) *Pio* ***li je,*** *pio!*
      drink$_{ptc}$Pt be$_{3sg}$ drink$_{ptc}$
      "He drunk really a lot."

Constructions like the one in (78) and the relation between verb movement, cliticization, and the particle *li* will be discussed in detail in the following chapters. Nevertheless, the generalization seems to be that in yes/no-questions a participle, as well as any other non-finite verb form or maximal constituent, may not precede the particle *li*. This generalization might be related to incompatibilities between non-finite constituents and question operators in the relevant syntactic contexts. Yes/no-questions in Croatian seem to require a finite verb in a designated position cooccurring with the particle *li*. In some sense, such constructions are reminiscent of constructions with *verum focus*, which is expressed by fronting of a stressed finite verb. The function of the particle *li* might be understood as "doubt in the truth of the given statement". However, as should be clear from the discussion above, the ban on fronting a participle in the context of *li* does not seem to be related to the particle itself, as expressed in Rivero (1993), but rather to the independent properties of yes/no-questions and their incompatibility with non-finite elements in some operator position.

Other properties of the particle *li* are related to its placement in the clause. As pronominal and auxiliary clitics, the particle *li* has to occupy the second position in the clause. The examples in (79) show this point for matrix and embedded contexts.[20]

(79) a. *Što* ***li*** *Ivan pije?*
         what Pt I.   drink$_{3sg}$
         "What might Ivan drink?"

---

[20] The combination of the complementizer *da* and the particle *li* is considered to be lexical, i.e. example (79c) might not be a convincing argument for the second position placement of *li* in embedded contexts. However, example (79d) shows clearly that an independent realization of *li* has to place the particle in a position immediately to the right of an initial *wh*-phrase.

b. *Da **li** Ivan pije?*

that Pt I.　　drink$_{3sg}$

"Does Ivan drink?"

c. *Ne　znam* [*da **li** Marija spava*]

NEG know$_{1sg}$ that Pt M.　　sleep$_{3sg}$

"I don't know whether Maria sleeps."

d. *Pitam se* [*što　**li**　Marija radi*]

ask$_{1sg}$ self what Pt M.　　work$_{3sg}$

"I wonder what Maria might be doing."

In examples (79b) and (79c) the particle *li* is located immediately to the right of the complementizer. In (79a) and (79d) it appears immediately to the right of the initial *wh-*phrases. It cannot appear in some deeper position in matrix or embedded contexts, as the corresponding examples in (80) illustrate.

(80) a. * *Što　Ivan **li** pije?*

what I.　　Pt drink$_{3sg}$

b. * *Da Ivan **li** pije?*

that I.　　Pt drink$_{3sg}$

c. * *Ne　znam* [*da　Marija **li** spava*]

NEG know$_{1sg}$ that M.　　Pt sleep$_{3sg}$

d. * *Pitam se* [*što　Marija **li** radi*]

ask$_{1sg}$ self what M.　　Pt do$_{3sg}$

As with the second position constraint on the placement of enclitic auxiliaries and pronouns, which has been discussed in the previous sections, the placement of the

particle *li* underlies certain restrictions. In particular, it has to appear in the second position in the clause, as enclitic auxiliaries and pronouns do. The examples in (80) show that this restriction holds for matrix and for embedded contexts. The position of *li* cannot be deeper than the second position in either contexts. Similarly, the particle *li* may not appear in an absolute clause initial position, as exemplified in (81) and (82).[21]

(81) a. * ***Li*** *što*   *Ivan pije?*
          Pt what I.   drink$_{3sg}$

      b. * ***Li*** *pije,*   *pije.*
          Pt dring$_{3sg}$ drink$_{3sg}$

(82) a. * *Ne   znam* [***li*** *da   Marija spava*]
          NEG know$_{1sg}$ Pt that M.   sleep$_{3sg}$

      b. * *Pitam se* [***li*** *što   Marija radi*]
          ask$_{1sg}$ self Pt what M.   do$_{3sg}$

The examples in (81) show that *li* may not appear in the absolute string initial position in matrix clauses. The same holds for relative initial positions in embedded contexts, as in (82).

   To sum up the discussion concerning placement conditions, *li* behaves as the enclitic forms of auxiliaries and pronouns in both respects. First, the particle *li* has to appear in a string adjacent position to the right of overt complementizers in matrix and in embedded contexts. Second, it has to be right adjacent to the clause initial *wh*-phrases in both context types. With respect to its use and co-occurrence with other elements, it has been demonstrated that *li* is not a question particle, as wrongly assumed in the literature (cf. Rivero, 1993; Bošković, 1997b). It is compatible with a variety of categories and sentence types, i.e. it can be preceded by finite and non-finite verbs, as well as by different types of maximal syntactic constituents. *Li* behaves similar to enclitic auxiliaries and pronouns in that it is subject to the same placement restrictions.

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[21] Compare (81b) with (67).

However, *li* differs from other enclitic elements in not having a corresponding full form.

With respect to the relative position of *li* in a clitic cluster, the following generalization seems to be descriptively adequate: The particle *li* must be realized in the initial position in a clitic cluster.

2.1.4 The Negation Particle

To integrate the negation particle in a discussion about clitics requires certain presuppositions. The main presupposition is that the negation particle is realized as a clitic. The following discussion is supposed to support this assertion.

Sentence negation in Croatian is expressed with the use of the negation particle *ne/ni* in combination with a finite or infinite verb. In finite contexts, the negation particle appears left adjacent to the finite verb, be it a main verb, or an auxiliary, as in (83).[22]

(83) a.   *Ivan **ne**   pjeva.*
     I.   NEG sing$_{3sg}$
     "Ivan doesn't sing."

     b.   *Ivan **ni**je   pjevao.*
     I.   NEG-be$_{3sg}$ sing$_{ptc}$
     "Ivan didn't sing."

The morpho-phonological realization of the sentence negation as *ni* (83b) in verbal contexts is exclusively restricted to contexts with present tense auxiliaries and the copula *biti* ("to be"). In all other verbal contexts, sentence negation is realized as *ne* (83a).

In examples like (83a) and (83b), the negation particle has to be left adjacent to the finite verb, i.e. it is not possible for other material to intervene between the particle and the verbal head, as the examples in (84) demonstrate.

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[22] The normative grammar of Croatian dictates that the negation particle is to be separated from a main verb, but joined with an auxiliary orthographically, as in the examples in (83).

(84) a. * *Ivan* **ne** *danas pjeva.*

      I.   NEG today sing$_{3sg}$

b. * *Ivan* **ni** *jučer je pjevao.*

      I.   NEG yesterday be$_{3sg}$ sing$_{ptc}$

Furthermore, it is not possible for the negation particle to be realized adjacent to the main verb in periphrastic tense constructions, irrespective of the morpho-phonological realization. Compare (85) with (83b) and (84b).

(85) * *Ivan je jučer* **ne**/**ni** *pjevao.*

      I.   be$_{3sg}$ yesterday NEG sing$_{ptc}$

In other words, the examples above show that the location of the negation particle is restricted to the adjacent position immediately to the right of finite verbs in present and periphrastic perfect tense constructions. As illustrated in the examples in (84), adverbs may not intervene between the negation particle and the finite verb. This is not only true for adverbs, but also for other elements like full DPs or enclitic pronouns. Thus, the generalization might be formulated even stronger and one can claim that no element may intervene between the negation particle and the finite verb, not even enclitics. This is demonstrated in the examples in (86).

(86) a. *Ivan ne da Mariji knjigu.*

      I.   NEG give$_{3sg}$ M.   book

      "Ivan doesn't give the book to Maria."

b. * *Ivan ne Mariji da knjigu.*

      I.   NEG M.   give$_{3sg}$ book

c. * *Ivan ne* **ga** *da Mariji.*

      I.   NEG it give$_{3sg}$ M.

The combination of the negation particle and a finite auxiliary could be regarded as a combination of the negation particle and the enclitic form of the auxiliary. In fact, all possible morphemes from the paradigm of enclitic auxiliaries combine with the negation particle. The full form of the auxiliaries, however, does not. The examples in (87) show this contrast.

(87) a.   *Ja **ni-sam**   umoran.*
          I   NEG-be_{1sg} tired
          "I am not tired."

      b.   *Ja **sam**   umoran.*
          I   be_{1sg} tired

      c.   *Ja jesam   umoran.*
          I   be_{1sg}   tired

      d. * *Ja **ni**-jesam   umoran.*
          I   NEG-be_{1sg} tired

While (87b) represents the unmarked positive use of the finite auxiliary, (87a) and (87c) are the negative and positively emphasized representations respectively. (87c) demonstrates, for example, a well formed construction with *verum focus* on the finite verb. (87d) shows that the full form auxiliary is not compatible with the negation particle. Instead, the morpho-phonological form that corresponds to the enclitic auxiliary has to be used.

Thus, it appears appropriate to assume that the negative auxiliary is in fact a combination of the negation particle and an enclitic auxiliary, where the negation particle functions as the host for the enclitic auxiliaries. In the same way, the positive full form might be taken to represent the positive particle *je-* and the enclitic form of the auxiliary combined (Steven Franks, p.c.).

In fact, it can be observed that, for instance, the negation prefix *ne-* is realized with a long vowel *nē/nī*, i.e. as a bimoraic syllable, if it is combined with a finite auxiliary, as

in example (88).

(88)   (*__Ni__)/__nī-sam__   *umoran.*
        NEG-be₁ₛg   tired

On the other hand, it has to be realized with a short vowel *ne*, i.e. as a monomoraic short syllable, if it is a prefix to a main or modal verb, as in (89).

(89)   __Ne__/(*__Nē__) *spava.*
        NEG   sleep₃ₛg
        "He doesn't sleep."

Although the negation particle in (89) bears the word accent (since it is the first syllable), it cannot be realized with a long vowel, if it appears with a finite main verb. If it appears with a finite auxiliary, however, it has to be realized with a long vowel. Example (90) shows the same phenomenon for enclitic auxiliaries in periphrastic future constructions. The contrast between (89), on the one hand, and (88) and (90), on the other hand, shows clearly that, with respect to the different types of verbs, the two clitic forms are in complementary distribution.

(90)   (*__Ne__)/__Nē-ću__   *spavati.*
        NEG-want₁ₛg   sleepₚₜc

The enclitic auxiliary cannot be accented. The negation particle, however, can and, in fact, has to bear primary word accent in a construction where it combines with a finite auxiliary, as in (90).

    The negation particle is not only used with finite verbs to express sentence negation, but also with other types of categories like nouns or adverbs. The examples in (91) show the use of negation with scope over different types of DPs in contrastive constructions.

(91) a. *Ivan je htjeo ne Mariju nego Senku poljubiti.*

       I.   be$_{3sg}$ want$_{ptc}$ NEG M.   but S.   kiss$_{inf}$

       "It was not Maria, who Ivan wanted to kiss, but Senka."

    b. *Ivan je htjeo ne nju nego njega sresti.*

       I.   be$_{3sg}$ want$_{ptc}$ NEG her but   him   meet$_{inf}$

       "It was not her, who Ivan wanted to meet, but him."

In both examples in (91), the negation prefix is realized with a short vowel, i.e. it represents a 'light' or monomoraic syllable. The same is true in exclamative contexts, as in (92).

(92) a. *Ne Mariju!*

       NEG M.$_{acc}$

       "Not Maria!"

    b. *Ne njega!*

       NEG him

       "Not him!"

The fact that for some reason the negation particle in such constructions is a proclitic to the noun (92a) or pronoun (92b), rather than a full form might explain why it cannot host enclitic pronouns, as (93) shows.

(93) * *Ne ga!*

    NEG him

As has been demonstrated above, in combination with an enclitic auxiliary, the vowel of the monosyllabic negation particle undergoes lengthening. However, vowel lengthening cannot apply to the monosyllabic negation particle in constructions like (93), i.e. it is not possible to realize (93) as "*Nē ga.*"[23] or, in other words, only the 'light' syllable is

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[23] Of course, vowel lengthening may not apply to the monosyllabic enclitic pronoun either.

available to express constituent negation. The ungrammaticality of examples like (93) could be the result of independent factors. On the one hand, constituent negation requires an emphasized constituent in its scope, where emphasis correlates with stress assignment. On the other hand, enclitic pronouns are rather the unstressed realization of a pronoun, hence, (93) represents a contradiction in this respect.

To sum up, the description of the properties of the negation particle has shown that the negation particle undergoes phonological changes depending on the context. Its morpho-phonological realization varies between 'light' and 'heavy' syllable, depending on the syntactic and phonological context. This alternation can be captured in terms of full and proclitic form of the negation particle. The appearance of the full form is restricted to the contexts with enclitic auxiliaries, while the proclitic form appears as sentence negation in combination with main verbs and as constituent negation. More precisely, whenever the negation particle is combined with an unstressed function word, it is realized as a heavy non-clitic syllable, and in all other contexts it surfaces as a single light and proclitic syllable. In this respect, the negation particle may be classified as a special clitic in the sense of Zwicky (1977) and Zwicky and Pullum (1983), i.e. there is a complementary distribution of full and enclitic form.[24]

2.2   Clustering Enclitics

With the exception of enclitic pronouns that are realized as complements of prepositions, all enclitics group together in the second position in the clause, which is the case in Croatian, as well as in other Slavic languages. Example (94) shows a complex enclitic cluster that contains the particle *li*, direct and indirect object enclitic pronouns, and a finite auxiliary.

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[24] Such a classification would probably not be adequate with the criteria postulated in Zwicky (1977), and Zwicky and Pullum (1983).

(94)   *Tko **li mu ga je**   dao   bez   pitanja?*
        who Pt him it   be$_{3sg}$ give$_{ptc}$ without question
        "Who gave it to him without asking?"

The enclitic cluster is a robust configurational unit. The single enclitics may not be separated from each other by non-enclitic material, as example (95) shows.[25]

(95) * *Tko **li** bez   pitanja **mu ga je**   dao?*
        who Pt without question him it   be$_{3sg}$ give$_{ptc}$

   Basically, all the placement constraints that apply to the individual items in the enclitic cluster, also apply to the enclitic cluster as such. More precisely, in the previous sections the basic placement constraints that apply to enclitics were that enclitics cannot appear in initial position, and that they cannot appear in some deeper position than second position in the clause. Example (94) might be considered a counterexample for the latter constraint, i.e. with the exception of the particle *li*, all other enclitics in principle do not appear in the second position in the clause. On the basis of (94) the second position generalization about clitic placement has to be altered in a way that it takes into consideration the clitic cluster. Given a definition of enclitic clusters as in (96), the second position generalization may be stated as in (97).

(96)   **Enclitic Cluster**
        An enclitic cluster contains all enclitics in the clausal domain, except of enclitic prepositional complements.

(97)   **Second Position (2P) Generalization on Enclitic Clusters**
        The enclitic cluster may not be placed in a deeper position than second position in the clause.

That the 2P-generalization holds for enclitic clusters can be shown by applying the *wh-*

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[25] (95) just shows this for the first enclitic in the cluster. Without presenting all the relevant examples, it is a fact that the PP in (95) may not appear between any of the enclitics.

and the complementizer test, mentioned in the previous sections. A comparison between the examples in (94) and (98) shows that the enclitic cluster has to be adjacent to an initial *wh*-phrase, in other words, no constituent, and in particular not the participle, may intervene between the initial *wh*-phrase and the enclitic cluster.

(98) a. * *Tko bez pitanja **li mu ga je** dao?*
      who without question Pt him it be$_{3sg}$ give$_{ptc}$

    b. * *Tko dao **li mu ga je** bez pitanja?*
       who give$_{ptc}$ Pt him it be$_{3sg}$ without question

In embedded contexts, the enclitic cluster must be right adjacent to an initial complementizer or a *wh*-phrase, as the examples in (99) show.

(99) a. *Marija se pita, tko **li mu ga je** dao bez pitanja.*
     M. self ask$_{3sg}$ who Pt him it be$_{3sg}$ give$_{ptc}$ without question
     "Maria asks herself, who might have given it to him without asking."

    b. * *…tko bez pitanja **li mu ga je** dao*
       who without question Pt him it be$_{3sg}$ give$_{ptc}$

    c. *Marija kaže, da **mu ga je** Stipe dao.*
     M. say$_{3sg}$ that him it be$_{3sg}$ S. give$_{ptc}$
     "Maria says that Stipe gave it to him."

    d. * *…da Stipe **mu ga je** dao.*
       that S. him it be$_{3sg}$ give$_{ptc}$

No constituent may appear between an initial *wh*-phrase (99b) or an initial complementizer (99d) and the enclitic cluster in embedded contexts. With respect to the 2P-condition, the properties of the enclitics extend to the whole cluster, as if the cluster would be a single constituent.

Naturally, the ban on initial enclitics extends to the enclitic cluster as well. Example (100) shows that an enclitic cluster may not appear in initial position in the clause. Compare (100a) with (94), and (100b) with (99c).

(100) a. * ***Li mu ga je***   tko   dao   bez   pitanja?
          Pt him it   be$_{3sg}$ who give$_{ptc}$ without question

     b. * …***mu ga je***   da   Stipe dao
            him it   be$_{3sg}$ that S.   give$_{ptc}$

On the basis of the observations above, the conclusion is that the enclitic cluster behaves with respect to the placement exactly in the same way as the single enclitics.

In the following section, basic properties of enclitic clusters will be investigated in more detail. In particular, in section 2.2.1 basic generalizations about enclitic clusters in finite clauses will be formulated, while section 2.2.2 will be concerned with enclitic clusters in non-finite contexts. The cluster internal order is discussed in detail in section 2.2.3. Section 2.2.4 concentrates on the question about the status of the enclitic cluster with respect to constituency, with focus on the question whether the cluster forms a syntactic or prosodic constituent, or whether the single items in the enclitic cluster are rather independent constituents. Questionable data with split enclitic clusters is discussed in section 2.2.5.

2.2.1   Enclitic Clusters in Finite Clauses

In a complex clause that, for instance, consists of a finite main clause and a finite complement clause, as in (101), two clitic groups can appear, one per clause. In this case, every finite clause has its own clitic cluster that contains enclitic elements that are elements of the local clausal domain.

(101) *Ivan **joj je**   rekao, da **me je**   Stipe vidio.*
     I.   her be$_{3sg}$ say$_{ptc}$ that me be$_{3sg}$ S.   see$_{ptc}$
     "Ivan told her that Stipe has seen me."

While the example in (101) contains two enclitic clusters – one in each clausal domain – simple finite clauses like (102) can only contain one enclitic cluster.

(102) a. *Ja **sam mu ga** jučer dao.*
      I be$_{1sg}$ him it yesterday give$_{ptc}$
      "I gave it to him yesterday."

    b. * *Ja **sam** jučer **mu ga** dao.*
      I be$_{1sg}$ yesterday him it give$_{ptc}$

    c. * *Ja **mu ga** jučer **sam** dao.*
      I him it yesterday be$_{1sg}$ give$_{ptc}$

It is not possible for the enclitic cluster to be split up, as in (102b) and (102c). This constraint also holds for embedded finite clauses, as the examples in (103) show.

(103) a. *Ivan je rekao [da **sam mu ga** dao]*
      I. be$_{3sg}$ say$_{ptc}$ that be$_{1sg}$ him it give$_{ptc}$
      "Ivan said that I gave it to him."

    b. * *Ivan je rekao [da **sam** dao **mu ga**]*
      I. be$_{3sg}$ say$_{ptc}$ that be$_{1sg}$ give$_{ptc}$ him it

    c. * *Ivan je rekao [da **mu ga** dao **sam**]*
      I. be$_{3sg}$ say$_{ptc}$ that him it give$_{ptc}$ be$_{1sg}$

The examples in (102) and (103) suggest a generalization as in (104), i.e. only one enclitic cluster is licensed in a single finite clause in Croatian. This, however, does not hold for complex sentences that contain one or more finite subordinate clause, but rather to finite clausal domains, as example (101) shows. One sentence may still contain more than one enclitic cluster, if this clause contains more than one finite domain. A

comparison with other Slavic languages will show that this generalization does not hold, for instance, for Polish.

(104) **Enclitic clusters in finite clauses**

Only one enclitic cluster is licensed in a single finite (clausal) domain.

With respect to finite clauses, it seems to be the case that in most constructions it is not possible for enclitics of a finite embedded clause to appear in the enclitic cluster of the matrix clause. In (105), for example, the enclitic pronoun *me* (acc. sg. "me") cannot appear in the enclitic cluster of the matrix clause (compare with (101) above).

(105) * *Ivan **joj me je** rekao, da **je** Stipe vidio.*

      I.   her me be_{3sg} say_{ptc} that be_{3sg} S. see_{ptc}

In chapter 5 it is shown in more detail that this extractability constraint does not hold for maximal syntactic constituents and other enclitic pronouns in Croatian, in other words, full form pronouns or complex DPs may be scrambled out of embedded clauses into the matrix clause, and *wh*-pronouns can be *wh*-moved out of finite embedded clauses, as illustrated in (106).

(106) a.   *Ivan je   [u Zagreb]$_I$ tvrdio [da je   Stipe otišao t$_i$]*

         I. be_{3sg} in Zagreb $claim_{ptc}$ that be_{3sg} S. go_{ptc}

         "Ivan claimed that Stipe went to Zagreb."

     b.   *Što$_i$ je   Ivan tvrdio [da je   Marija kupila t$_i$] ?*

         what be_{3sg} I. $claim_{ptc}$ that be_{3sg} M. buy_{ptc}

         "What did Ivan claim that Maria bought?"

The comparison between (105) and (106) demonstrates that apparently enclitics do not behave like maximal constituents with respect to syntactic constraints on movement. On the one hand, finite domains seem to offer just one slot for an enclitic cluster. On the other hand, enclitics seem to be trapped in their finite domain.

2.2.2 Enclitic Clusters in Non-finite Contexts

As opposed to finite clauses, the examples in (107) show that infinite complement clauses may not contain enclitic clusters.

(107) a. * *Ivan **je** htjeo* [*Mariji **ga** dati*]
  I. be$_{3sg}$ want$_{ptc}$ M. it give$_{inf}$

  b. *Ivan **ga je** htjeo* [*Mariji dati*]
  I. it be$_{3sg}$ want$_{ptc}$ M. give$_{inf}$
  "Ivan wanted to give it to Maria."

The example in (107a) is judged ungrammatical only for the unmarked reading and neutral intonation. (107a) is judged well-formed with a special intonation that will be referred to in the following as 'extraposition' or 'focus intonation'. The only possibility for (107a) to become grammatical is to realize focus intonation on *Marija* in the embedded infinitive. Nevertheless, although such exceptions are not rare in a language that makes extensive use of focus and allows certain word order regularities to be blurred by such phenomena, it is safe to say that in the unmarked case infinitival complements are transparent for 'clitic climbing' in Croatian. In fact, infinitival complements are not only transparent for extraction of enclitics, enclitics have to move out of such infinitives in the unmarked case.

On the one hand, (107) shows that an enclitic cluster – in the unmarked case – is not allowed to stay inside the domain of embedded infinitives. On the other hand, however, it seems to be possible to realize bare infinitives with enclitics, as in (108).

(108) a. *Čitati **ga*** b. *Dati **mu ga***
  read$_{inf}$ it   give$_{inf}$ him it

Therefore, licensing of enclitics in principle does not seem to be restricted to finite contexts. A comparison between (107) and (108) hints rather at the conclusion that the position of enclitics is derived in examples like (107b), i.e. enclitics are licensed in

infinitival contexts, but they preferably raise out of infinitives, if possible.

Other types of non-finite contexts that license enclitic elements are, for example, noun selected infinitives (109a) or progressives (109b).

(109) a. *Imao je*   [*želju* [*sresti ga*]]
            have_ptc be_3sg   wish   meet_inf him
            "He had the wish to meet him."

       b. *Ivan je*   skakao   [*udarajući se   po glavi*]
           I.   be_3sg jump_ptc   hit_prog   self on head
           "Ivan jumped, hitting himself on the head."

There seems to be, however, a difference between (109a) and (109b) with respect to extractability of the enclitic cluster. While the enclitic in (109a) may (more or less marginally) be extracted into the matrix clause (Milan Mihaljević, p.c.), the enclitic cluster containing the reflexive pronoun in (109b) cannot be extracted out of the progressive, as the following contrast seems to show.

(110) a. ? *Imao ga_i je*   *želju* [*sresti* t_i]
             have_ptc him be_3sg wish   meet_inf

       b. * *Ivan se_i (je)   skakao [*udarajući*   t_i *po glavi*]
          I.   self be_3sg jump_ptc   hit_prog   on head

Similar to complexes with embedded finite clauses, a complex clause that contains infinitive islands with enclitics, contains also two enclitic clusters.

Nevertheless, one might conclude that the occurrence of enclitics is not only restricted to finite clauses. This generalization is formulated in (111).

(111) **Enclitic clusters in infinite contexts**
       Enclitic clusters are licensed in infinite contexts.

Still the generalization (111) does not cover all the observations with respect to the examples above. In particular, it has to be pointed out that enclitics preferably climb out of infinitives if this movement is possible. Although the generalizations and constraints for clitic climbing out of infinitives will be discussed in detail in the following sections, let us formulate this observation as generalization (112).

(112) **Enclitic clusters in infinite contexts (B)**

Enclitic clusters preferably occur in finite contexts.

Given the generalizations in (111) and (112), there are still open issues in the descriptive analysis. If enclitic clusters are licensed in infinite contexts, why do they prefer not to 'stay' in such contexts?

2.2.3 Cluster Internal Order

All enclitic elements listed as special enclitics in (10), namely the particle *li*, enclitic auxiliaries, pronouns and reflexive pronouns may cluster together. In prescriptive grammars and in the literature, it is usually assumed that there is a fixed order of enclitics in the cluster. The following generalization, taken from Spencer (1991: 356), shows the basic assumption about the fixed order of enclitics inside the cluster.

(113) *li* > AUX > DAT > ACC/GEN > *se* > *je*

Pt.   self   be$_{3sg}$

The examples in (114) prove (113) to be true for the particle *li*.

(114) a. *Što li mu je   Ivan dao?*

what Pt him be$_{3sg}$ I.   give$_{ptc}$

"What might Ivan have given to him?"

b. * *Što   mu li je   Ivan dao?*

what him Pt be$_{3sg}$ I.   give$_{ptc}$

c. * *Što* **mu je**   **li** *Ivan dao?*

what him be$_{3sg}$ Pt I.   give$_{ptc}$

The examples (114b) and (114c) illustrate that the particle *li* cannot appear in the second or third position inside the enclitic cluster, following the Dative pronoun *mu* or the pronoun and the enclitic auxiliary *je*. With respect to the position of the particle *li*, the generalization (115) seems to be justified, which is a restatement of the generalization (113). Assuming that (113) is a generalization about slots in the enclitic cluster, the positions of the different enclitics will be expressed in terms of an 'absolute position in the sequence of slots'.

(115) **The position of the particle *li* in the cluster**

The particle *li* can only occupy the initial slot in the enclitic cluster.

Due to the generalization in (113), all enclitic auxiliaries occupy a cluster internal second slot, immediately following the particle *li*, if it is present in the cluster. One exception, however, is the enclitic auxiliary *je* (3rd sg. "to be"), which always has to appear in cluster final slot. The examples in (116) prove this generalization to be true for enclitic auxiliaries other than *je*.

(116) a.   *Ja **sam   mu   ga** dao.*

I   be$_{1sg}$ him it give$_{ptc}$

"I gave it to him."

b. * *Ja **mu   sam   ga** dao.*

I   him be$_{1sg}$ it give$_{ptc}$

c. * *Ja **mu   ga** **sam**   dao.*

I   him it be$_{1sg}$ give$_{ptc}$

The examples in (116) show that the enclitic auxiliary *sam* cannot appear in a position

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following the enclitic Dative pronoun *mu*, as in (116b), or both enclitic pronouns, as in (116c). As follows from generalization (115), if the enclitic particle *li* is realized in the enclitic cluster, as in (117), the enclitic auxiliary may not precede the particle *li*.

(117) a. *Što li sam mu rekao?*

what Pt be$_{1sg}$ him say$_{ptc}$

"What might I have told him?"

b. * *Što sam li mu rekao?*

what be$_{1sg}$ Pt him say$_{ptc}$

The status of the enclitic auxiliary *je* with respect to the observations in (116) and (117) is completely different and much more complex. Therefore, the relevant generalizations with respect to *je* are discussed in a separate section.

The observations in (116) and (117) are captured in the generalization (118).

(118) **The position of enclitic auxiliaries in the cluster**

With the exception of the enclitic auxiliary *je* (3rd sg.), all enclitic auxiliaries occupy the second slot in the enclitic cluster.

One further apparent constraint on the order of enclitics in the cluster – due to the generalization in (113) – seems to be that Dative enclitic pronouns always have to precede Accusative enclitic pronouns. The examples in (119) show this for the enclitic Dative pronoun *mu* and the enclitic Accusative pronoun *ga*.

(119) a. *Ivan mu ga daje.*

I. him it give$_{3sg}$

"Ivan is giving it to him."

b. * *Ivan ga mu daje.*

I. it him give$_{3sg}$

For further reference, this observation is stated in generalization (120).

(120) **The position of enclitic pronouns in the cluster**
Dative enclitic pronouns occupy the third slot, while Accusative enclitic pronouns occupy the fourth slot in the enclitic cluster.

Yet, this constraint does not apply to reflexive pronouns. Reflexive pronouns irrespective of their case have to appear apparently in a position following all other pronouns and preceding the enclitic auxiliary *je*.

The apparent fixed order of enclitics in the enclitic cluster was assumed to be the result of syntactic operations. Toman (1993) suggested an analysis of the clitic cluster in Czech that when applied to Croatian would assign a structure as in (121) to a clause containing an enclitic cluster.

(121)

```
              CP
             /  \
           C⁰    XP
                /  \
              li    XP
                   /  \
                 mu    XP
                      /  \
                    ga    XP
                         /  \
                       je    IP
```
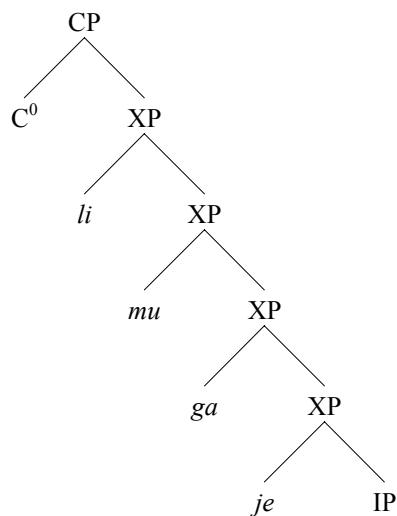
One might assume that every enclitic occupies a designated head position of a special syntactic projection that probably has a compatible feature specification. Alternatively, it might be assumed that enclitics are adjoined to some maximal projection (e.g. IP or any other functional projection). Both analyses, however, would predict that non-clitic elements may intervene between enclitics in the cluster. Enclitic clusters are closed units, i.e. only enclitics cluster together, and they cannot be separated by non-enclitic material. The examples in (122) and (123) show that no element may intervene between

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enclitics in the second position.

(122) a. *Ivan **mu je** jučer dao auto.*
       I.   him be₃ₛg yesterday giveₚtc car

"Ivan gave him the car yesterday."

  b. * *Ivan **mu** auto **je** jučer dao.*
       I.   him car   be₃ₛg yesterday giveₚtc

  c. * *Ivan **mu** jučer **je** dao auto.*
       I.   him yesterday be₃ₛg giveₚtc car

(123) a. *Ivan kaže da **mu je** Marija jučer dala auto.*
       I   say₃ₛg that him be₃ₛg M.   yesterday giveₚtc car

  b. * *Ivan kaže da **mu** Marija **je** jučer dala auto.*
       I   say₃ₛg that him M.   be₃ₛg yesterday giveₚtc car

  c. * *Ivan kaže da **mu** jučer **je** Marija dala auto.*
       I   say₃ₛg that him yesterday be₃ₛg M.   giveₚtc car

Neither in matrix clauses, as in (122), nor in embedded clauses, see (123), can syntactic constituents intervene between two enclitics in the cluster. Independent of the category and syntactic status of the intervening element, i.e. whether it is a direct object in (122b), a subject in (123b), or an adverbial in (122c) and (123c), a violation of the string adjacency requirement that holds between enclitics, leads to ungrammaticality. This descriptive generalization is formulated in (124).

(124) **String adjacency of enclitics**
Enclitics are always string adjacent to each other (with the exception of enclitic prepositional complements).

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None of the potential analyses above offers a description or explanation for the generalization in (124).

One further generalization, discussed in Wilder and Ćavar (1994a), turns out to be problematic for a syntactic analyses of the type mentioned above. Wilder and Ćavar (1994a) point out that there is a string adjacency requirement between complementizers in initial position of embedded clauses and the enclitic cluster. The examples in (125) show that no syntactic constituent may intervene between the complementizer *da* and the enclitic cluster.

(125) a. *Ivan kaže da **mu je** Marija jučer dala auto.*
            I   say$_{3sg}$ that him be$_{3sg}$ M. yesterday give$_{ptc}$ car
            "Ivan said that Maria gave him the car yesterday."

       b. * *Ivan kaže da Marija **mu je** jučer dala auto.*
            I.   say$_{3sg}$ that M. him be$_{3sg}$ yesterday give$_{ptc}$ car

       c. * *Ivan kaže da jučer **mu je** Marija dala auto.*
            I.   say$_{3sg}$ that yesterday him be$_{3sg}$ M. give$_{ptc}$ car

The relevant descriptive generalization is formulated in (126).

(126) **String adjacency between enclitics and complementizers**
       Enclitic clusters and complementizers are always string adjacent.

The fact that complementizers and enclitic clusters have to be string adjacent, and that non-clitic material may not appear between enclitics in the enclitic cluster constitute a problem for the analyses that assume enclitics to be independent constituents, either X^0 or XP constituents in terms of X-bar theory. It is not possible for non-clitic material to appear between the enclitics in the enclitic cluster, or between the complementizer and the cluster itself. Such adjacency constraints are typical for head adjunction structures in syntax, i.e. morpheme complexes that are syntactically represented as an X^0-constituent and result either from processes like head incorporation in the sense of

Baker (1988) or from base generation.

The more or less strict order among the enclitics in the cluster and the adjacency requirement are reminiscent of constraints on complex syntactic constituents resulting from head incorporation. One might assume that the enclitic cluster results from successive head incorporation, as proposed in Baker (1988). The linear order of enclitics in the cluster might, thus, be the mirror image of the basic hierarchical relations between the enclitics with respect to each other, in the sense of the *Mirror Principle* (Baker, 1985; 1988: 13).

(127) **Mirror Principle**

Morphological derivations must directly reflect syntactic derivations (and vice versa).

Such an analyses, however, faces empirical problems in Croatian. Wilder and Ćavar (1994a) and Ćavar (1996d) expressed doubt in the generalization that enclitics occupy a fixed position in the cluster. Examples like (128) (Wilder and Ćavar, 1994a) show that, for example, the position of the reflexive pronoun in the cluster may vary.[26]

(128)   *To **je**   ono, što   **je**   **se**   moralo dogoditi.*
          this be$_{3sg}$ that   what be$_{3sg}$ self must$_{ptc}$ happen$_{ing}$
          "That's what must have happened."

The example (128) shows that the enclitic reflexive pronoun can occupy a position to the right of an enclitic auxiliary *je*, if both are parts of the same enclitic cluster.

The sequence of enclitics in (113) is already problematic for a morpho-syntactic analyses of the structure of the enclitic cluster.

If one assumes that morpho-syntactic features are responsible for the order of elements inside the enclitic cluster, one expects the default or fixed position of the auxiliary clitic *je* (3rd sg. "to be") to be the same position as the position of all the other

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[26] The example (128) was uttered by a sports reporter during a life soccer match in Zagreb, after a goal. The sequence that would conform to (14) would be *se je* ("self be$_{3sg}$"). However, the auxiliary *je* is preferably dropped, if the reflexive pronoun is realized in the same cluster.

auxiliary clitics. Otherwise one is forced to make special stipulations with respect to the feature bundle [AUX, 3rd sg.].

Schütze (1994), among others, assumes such deviance from the norm to be dialectal peculiarities, therefore not necessarily relevant for an analysis of clitic placement for. So far, I am not aware of any detailed analysis of this phenomenon. Discussions of the internal structure of the clitic cluster usually refer to the generalizations stated in normative grammars. This was the main reason for me to start an experimental study with native speakers of Croatian ment to test the possibilities and constraints for the order of enclitics in the clitic cluster.

In the following, I will discuss data from the tests done with native speakers from the areas of Slavonia, Zagorje, Dalmatia and Herzegovina. All these areas also represent several different dialects of Croatian, i.e. the *ije-* and *i*-kavian variants of New-Štokavian.

The tests were based, on the one hand, on pure introspective grammaticality judgements, and, on the other hand, on data from small experiments that were designed to avoid direct reference to introspection and subjective judgements. In the experiments the informants were asked to repeat sentences, read texts aloud, and correct them where necessary, or sort cards with example sentences with respect to the acceptability of the sentences.

The data contained two types of structures, grammatical and ungrammatical. The ungrammatical structures contained different types of violations, syntactic and semantic. However, care has been taken that none of the violations have to do with enclitics and the clitic cluster. In the second step, in both types of structures the positions of different types of enclitics in the enclitic cluster was varied, as well as the position of the cluster itself.

The goal was to find out whether the informants accept certain orders of enclitics in the cluster, what kind of orders they prefer, and to what extend they are sensitive to deviations from the normative prescription with respect to the order of enclitics in the cluster.

The informants belong to the age group between sixteen and fifty-nine, with all kinds of different levels of education, i.e. primary school to academic degrees. Most of the older informants did not speak any other foreign language.

Since no electronic tools were used in these tests, there is also no timing information available. Furthermore, these tests are pre-tests, in other words, I just use them to confirm tendencies in the judgements of informants.

The tests show clearly that depending on the morpho-phonological form, certain enclitics may invert with others, which results in a deviance from the normative generalizations about the order of enclitics in the cluster. In periphrastic double object constructions, for example, in which both verbal arguments are realized as pronominal enclitics, as in (129a), most of the informants accept a cluster internal order as in (129b), some even prefer this order.

(129) a.   *Dao **mu ga je**   Ivan.*
             give$_{ptc}$ him it be$_{3sg}$ I.

       b.   *Dao **mu je**   **ga** Ivan.*
             give$_{ptc}$ him be$_{3sg}$ it   I.
             "Ivan gave it to him."

A sequence of enclitics as in (129b) was already in Ćavar and Wilder (1994) assumed to be well formed, causing criticism and doubt from different sides. However, most of the relevant data used in Ćavar and Wilder (1994) was elicited in a similar way as the described tests in Croatia, i.e. some informants were confronted with ungrammatical sentences, where the enclitic cluster was misplaced in noun selected infinitives, while the order of enclitics in the cluster was corresponding the order in (129b). The result was that the informants corrected the sentence by repositioning the enclitic cluster, but not changing the sequence of enclitics in the cluster. Ćavar and Wilder (1994) did not discuss this phenomenon further, and took the judgements of the relevant examples for granted, without noticing a contradiction between the data and the normative generalizations on the internal order of clitic clusters in Croatian. However, this phenomenon shows that the sequence [*je* accusative pronoun] inside a clitic cluster does not cause strict ungrammaticality, and in fact does not even occur to the informants as deviant. The examples in (130a) and (131a) give two random samples of different sets of test sentences, where the (b) examples represent the corrections performed by the

subjects.

(130) a. * *Tko jučer **mu je ga** dao?*
           who yesterday him be$_{3sg}$ it give$_{ptc}$

    b. *Tko **mu je ga** jučer dao?*
       who him be$_{3sg}$ it yesterday give$_{ptc}$
       "Who gave it to him yesterday?"

(131) a. * *Želja **ju joj** dati bila je velika.*
           wish it her give$_{inf}$ be$_{ptc}$ be$_{3sg}$ great

    b. *Želja dati **ju joj** bila je velika.*
       wish give$_{inf}$ it her be$_{ptc}$ be$_{3sg}$ great
       "The wish to give it to her was great."

The basic correction performed by the subjects was simple reordering (130), or inversion of the infinitival verb and the enclitic cluster (131). The relative order of elements inside the cluster was left untouched.

    The tests in Croatia have shown that examples like (132a), where an accusative enclitic pronoun precedes a dative enclitic pronoun, are judged to be marked. However, if the informants were presented a context before the relevant examples, in which the order of nominal arguments was corresponding to the order of enclitics, as in (132b), all informants accepted (132a) as completely well formed.

(132) a. *Dao **ga mu je** Ivan.*
          give$_{ptc}$ it him be$_{3sg}$ I.

    b. *Stipe **je** auto Ivanu dao.*   *Ne, dao **ga mu je** Drago.*
       S. be$_{3sg}$ car I. give$_{ptc}$ no give$_{ptc}$ it him be$_{3sg}$ D.
       "Stipe gave Ivan the car."   "No, Drago gave it to him."

Leaving aside a possible relation between the contextual priming of acceptable enclitic sequences and the answer in (132b), the conclusion is that sequences [accusative dative] of enclitic pronouns inside the clitic cluster is acceptable for native speakers of Croatian, although the prescriptive grammar denies this.

In the examples (133)-(134) the enclitic pronouns were varied with respect to their gender specification.

(133) a. *Ivan kaže   da **joj ju je**   dao.*
     I.   say$_{3sg}$ that her it be$_{3sg}$ give$_{ptc}$
     "Ivan says that he gave it to her."

 b. *Ivan kaže   da **ju joj je**   dao.*
     I.   say$_{3sg}$ that it her be$_{3sg}$ give$_{ptc}$

(134) a. *Ivan kaže   da **mu ju je**   dao.*
     I.   say$_{3sg}$ that him it be$_{3sg}$ give$_{ptc}$

 b. *Ivan kaže   da **ju mu je**   dao.*
     I.   say$_{3sg}$ that it him be$_{3sg}$ give$_{ptc}$

The tests have shown a clear preference for the sequence of enclitics as in (133b) and (134b). The enclitic pronoun *ju* (acc. fem. sg. "her") is used, if the enclitic auxiliary *je* (3rd sg. "to be") occurs in the same enclitic cluster, otherwise the pronoun is realized as *je*. However, these examples also justify the conclusion that there is a conflict between the judgements and preferences shown in the examples (133b) and (134b), and the generalization in (113). The examples in (133b) and (134b) show a preference for the order [accusative dative], contrary to what is stated in (113).

Furthermore, one might tentatively draw the conclusion that the preference for ordering enclitics inside the clitic cluster does not seem to be related to morpho-syntactic features of the enclitics, but perhaps rather to their morpho-phonological properties.

Facing the just sketched data and conclusions, it seems to be more than implausible

to look for a purely syntactic explanation for the order of enclitics in the clitic cluster in Croatian. It does not seem to be possible to derive the order of enclitics from their morpho-syntactic features without being forced to make a wide range of implausible stipulations. Neither did we find a confirmation for the normally assumed order [dative accusative] with respect to enclitic pronouns, nor is the cluster final slot the only available slot for the enclitic auxiliary *je* (3rd sg. "to be"). The only fixed position inside the clitic group seems to be the position of the enclitic particle *li*. Displacement of the particle *li* inside the clitic cluster leads generally to ungrammaticality.

2.2.4 Constituency of Enclitic Cluster

On the basis of the data discussed in the previous section, the question about the syntactic status of the enclitic cluster arises. First, consider example (110a), repeated here as (135).

(135) ? *Imao **ga**$_i$ **je**   želju* [*sresti* t$_i$]
         have$_{ptc}$ him be$_{3sg}$ wish   meet$_{inf}$

The status of (135) is unclear. One might consider a completely different analysis. It might be the case that the complex DP in (135) is indeed transparent, and that there are independent reasons for the marginality. Alternatives might be that the infinitive is intransitive, and that the direct object enclitic pronoun is an argument of the matrix verb. The marginal acceptability would result then exactly from this combination of two marginal phenomena. First, it is marginally possible to realize a similar construction to (135) without the infinitive, as in (136).

(136)   *Imala **ga je**   želju.*
          have$_{ptc}$ it   be$_{3sg}$ wish
          "She wanted it."

Second, constructions like (137) are possible, where in some sense the accusative enclitic pronoun is licensed by the nominative subject *želja*, in other words, the

accusative pronoun is independent of any other predicative structure.

(137)   *Želja*   **ga**   **je**   *mira.*
        wish$_{nom}$ him$_{acc}$ be$_{3sg}$ peace$_{gen}$
        "He wishes peace." or more literal: "The wish for him is peace."

On the basis of the data like (136) and (137), the origin of the accusative enclitic pronoun in (135) is less than clear. One more issue is that complex DPs of the type in (135) are transparent for other type of extractions. As example (138) shows, *wh-*movement out of the noun selected infinitive is possible.

(138)   *Koga$_i$ je*   *imao*   [$_{DP}$ *želju* [*sresti* t$_i$]] *?*
        who be$_{3sg}$ have$_{ptc}$ wish   meet$_{inf}$
        "Who did he want to meet?" literally: "Who did he have the wish to meet?"

Furthermore, topicalization and scrambling out of such complex DPs is also possible, as the examples in (139) show.

(139) a.   *Ivana$_i$ je*   *imao*   [$_{DP}$ *želju* [*sresti* t$_i$]]
            I.   be$_{3sg}$ have$_{ptc}$ wish   meet$_{inf}$
            "He had the wish to meet Ivan."

       b.   *Nije*   *Ivana$_i$ imao*   [$_{DP}$ *želju* [*sresti* t$_i$]]
            NEG-be$_{3sg}$ I.   have$_{ptc}$ wish   meet$_{inf}$
            "He didn't have the wish to meet Ivan."

The transparency of both the embedded infinitive and the complex DP predicts also extractability of pronouns, if there is a relation between the extracted full DPs and pronouns in structural terms. Example (140) demonstrates that full form pronouns can be extracted out of such complex DPs.

(140) a. *Njega_i je imao* [_{DP} *želju* [*sresti* t_i]]
　　　　 him be_{3sg} have_{ptc} wish meet_{inf}
　　　　 "He had the wish to meet him."

　　 b. *Nije njega_i imao* [_{DP} *želju* [*sresti* t_i]]
　　　　 NEG-be_{3sg} him have_{ptc} wish meet_{inf}
　　　　 "He didn't have the wish to meet him."

If extraction of enclitics, as in (135), is indeed marginal, there does not seem to be an obvious reason why it should be. On the other hand, the ungrammaticality of (110b) seems to be the result of a simple adjunct island violation. Extraction from progressives is excluded for *wh*-movement (141a), topicalization (141b), and scrambling (141c), as the following examples illustrate. Compare (141) with (110b).

(141) a. * *Koga_i Ivan je skakao* [*udarajući* t_i *po glavi*]
　　　　　 who I. be_{3sg} jump_{ptc} hit_{prog} on head

　　 b. * *Nekoga_i Ivan je skakao* [*udarajući* t_i *po glavi*]
　　　　　 somebody I. be_{3sg} jump_{ptc} hit_{prog} on head

　　 c. * *Ivan je Stipu_i skakao* [*udarajući* t_i *po glavi*]
　　　　　 I. be_{3sg} S. jump_{ptc} hit_{prog} on head

Again, if enclitics are elements with the same structural properties as other DPs, the ungrammaticality of (110b) is predicted. Since *wh*-movement (141a), topicalization (141b), and scrambling (141c) out of progressive adjuncts is blocked, extraction of enclitics should be blocked as well, if enclitics are DPs.

　　However, the question is, whether single items from the cluster can be extracted out of certain types of infinitives, or whether it is the cluster itself that undergoes movement. The expectation is that in infinitive double object constructions, two enclitic pronouns cluster together, as in (142b).

(142) a. *Ivan **je** govorio* [*dajući konju šećera*]

        I.   be_{3sg} talk_{ptc}   give_{prog} horse sugar

b. *Ivan **je** govorio* [*dajući **mu ga***]

        I.   be_{3sg} talk_{ptc}   give_{prog} it   him

Constructions like (109a) and (110a) apparently allow for optional extraction of enclitics out of the complex DP. However, extraction of a single pronominal enclitic leads to ungrammaticality, whether it is the direct or indirect object of the embedded infinitive, as (143a) and (143b) show.

(143) a. * *Imao **ga**_i je*   [*želju* [*dati*   **mu** t_i]]

          have_{ptc} it be_{3sg}   wish   give_{inf} him

b. * *Imao **mu**_i je*   [*želju* [*dati*   **ga** t_i]]

         have_{ptc} him be_{3sg}   wish give_{inf} it

Instead, either both of the enclitic pronouns have to be extracted, or both of them remain in the infinitive, as in (144a) and (144b).

(144) a. *Imao **mu**_j **ga**_i je* [*želju* [*dati* t_j t_i]]

         have_{ptc} him it   be_{3sg} wish   give_{inf}

b. *Imao je* [*želju* [*dati*   **mu ga**]]

         have_{ptc} be_{3sg} wish   give_{inf} him it

In this respect, extraction of enclitics, or more precisely, extraction of the enclitic cluster differs from extraction of other DPs. It is possible to extract two DPs out of complex DPs, as in (145).

(145) a. *Komu*ᵢ **je**   *Ivan poklon*ⱼ *želio* [*dati* tᵢ tⱼ] ?

       who   be₃ₛg I.   present wishₚₜc giveᵢₙf

       "Who did Ivan wish to give the present?"

b. *Ivan* **je**   *Mariji*ᵢ *auto*ⱼ *želio* [*dati* tᵢ tⱼ]

       I.   be₃ₛg M.   car   wishₚₜc giveᵢₙf

       "Ivan wished to give Maria the car."

c. *Mariji*ᵢ **je**   *Ivan auto*ⱼ *želio* [*dati.* tᵢ tⱼ]

       M.   be₃ₛg I.   car   wishₚₜc giveᵢₙf

It is also possible to leave just a single DP in the infinitive, and just *wh*-move (146a), or topicalize (146b) one of the objects. Compare (146a) with (145a), and (146b) with (145c).

(146) a. *Komu*ᵢ **je**   *Ivan želio* [*dati* tᵢ *poklon*] ?

       who   be₃ₛg I.   wishₚₜc giveᵢₙf present

b. *Mariji*ᵢ **je**   *Ivan želio* [*dati.* tᵢ *auto*]

       M.   be₃ₛg I.   wishₚₜc giveᵢₙf car

The extraction constraints with respect to enclitic clusters would rather suggest a treatment of the enclitic cluster as a single syntactic constituent, if one accepts movement as a test for constituency in syntax.

Since the previous section has shown that the order of enclitics inside the clitic cluster in Croatian doesn't appear to be undoubtedly syntactically driven, one might assume that the single items of the enclitic cluster are also not syntactic constituents.

In order to test the syntactic constituency of enclitics inside the enclitic cluster, and of the enclitic cluster as such, one might try to apply other simple constituency tests. Given the fact that the syntactic position of enclitic clusters seems to be fixed or highly restricted in Croatian, the possibilities to perform such tests are rather limited.

One applicable possibility seems to be to test whether individual enclitics and

enclitic clusters can be subject to ellipses in coordination, although enclitics and enclitic clusters as such may not be directly coordinated. Nevertheless, one might tackle the question, whether forward and/or backward deletion is applicable to enclitic clusters and individual enclitics in two sentential conjuncts.

The sentences in (147), for example, give an overview of the possibilities to apply forward deletion to elements of clitic clusters in the second conjunct.

(147) a. *Što **li mu je** Marija kupila, i što **li mu je** Ivan kupio?*
what Pt him be$_{3sg}$ M. buy$_{ptc}$ and what Pt him be$_{3sg}$ I. buy$_{ptc}$
"What might Maria have bought for him, and what might Ivan have bought for him?"

b. *…i što **li mu je** Ivan ~~kupio~~ ?*
and what Pt him be$_{3sg}$ I. buy$_{ptc}$

c. *… i što **li ~~mu~~ je** Ivan ~~kupio~~ ?*

d. * *… i što **~~li~~ mu je** Ivan ~~kupio~~ ?*

e. *… i što **li ~~mu je~~** Ivan ~~kupio~~ ?*

The examples in (147) show that in general it is possible to realize individual enclitics in the enclitic cluster in Croatian covertly. Thus, one might conclude that the enclitic cluster is not minimal syntactic constituent. The marginality of example (147e) could be a constraint on coordinated constituents. In other words, if the first conjunct is of type A, then the second conjunct has to be of type A too.

In principle, the question is, whether examples like (147) show that individual enclitics in the cluster undergo ellipsis, or whether it is possible that the element that has undergone ellipsis in the second conjunct is a full form pronoun or auxiliary. If the 'deletion' test is adequate, there is a contradiction between the results of movement tests and deletion tests. While the one shows that only the enclitic cluster is a syntactic constituent that may undergo movement, which is not possible for the single items of

the enclitic cluster, the other indicate rather that the single items of the enclitic cluster are syntactic constituents. Of course, the deletion test would show that the enclitic cluster as such is a syntactic constituent too, since it can also undergo deletion, as in (148).

(148)　　…*i　što　**~~li　mu　je~~**　Ivan　~~kupio~~*?
　　　　　　and what　Pt him be$_{3sg}$　I.　buy$_{ptc}$

Both tests have their weak points. On the one hand, in order to take the results of the deletion test serious, it is necessary to show that its not the full forms that have undergone ellipsis in the second conjunct.

The weaknesses of the movement test, on the other hand, are that it is not clear at all, whether the impossibility of an enclitic cluster to be extracted out of certain islands is reducible to the impossibility of the single items to be extracted, or rather applies to the enclitic cluster itself. In the same way, the impossibility to extract just one item of the enclitic cluster and leave the others behind, could be the result of an independent constraint on the occurrence or realization of enclitics. As mentioned earlier, the two examples in (149) do not represent genuine cases of optionality with respect to word order. While (149a) is the unmarked case, in (149b) the infinite verb has to be stressed, i.e. the infinitive itself constitutes a focus domain, or receives an 'extraposition intonation'.

(149)　a.　*Imao　**mu**$_j$　**ga**$_i$　je　[želju [dati t$_j$ t$_i$]]*
　　　　　　have$_{ptc}$ him　it　be$_{3sg}$ wish　give$_{inf}$

　　　　b.　*Imao　je　[želju [dati　**mu　ga**]]*
　　　　　　have$_{ptc}$ be$_{3sg}$ wish　give$_{inf}$ him it

More precisely, only if the infinitive has certain properties, be it syntactic, semantic, or prosodic properties, enclitics are licensed inside the infinitive in the surface representation. In unmarked cases the enclitics have to climb into the matrix clause. It could be the case that the ungrammaticality of examples like (150) is in fact resulting

from a mismatch between necessary conditions for the different landing sites, i.e. the one enclitic requires an unmarked infinitive to be able to climb to some matrix clause position, while the other requires some special properties of the infinitive in order to be licensed in the infinitival domain. Both requirements cannot be fulfilled at the same time.

(150) * *Imao* **mu**~i~ *je* [*želju* [*dati* t~i~ **ga**]]

      have~ptc~ him be~3sg~ wish give~inf~ it

In other words, it might be the case that the enclitic cluster is not as opaque for syntactic operations, as it might look on the first sight.

In the following section, certain constructions will be discussed that suggest that indeed the cohesion between the enclitics in the enclitic cluster doesn't seem to be that strong in syntactic terms.

2.2.5 Split Clitic Clusters

Croatian allows for constructions that are usually analyzed as topicalization of VP. In comparison, standard analyses of German VP-topicalization, for instance, dictate that such topicalization may either consist in the fronting of a complete VP, with a verbal head and all its arguments, or in the fronting of a remnant VP, i..e. a VP from which the arguments were evacuated (Webelhuth and Den Besten, 1987). The VP-topicalization analysis assumes that in constructions like (151b) and (151c) the VP is moved to a sentence initial specifier position which is assumed to be the specifier of CP position in terms of the X-bar theory.

(151) a.   *Peter hat*   [~VP~ *der Maria Rosen geschenkt*]

            P.   have~3sg~   the M.   roses present~ptc~

            "Peter gave Maria roses as a present."

  b.   [~VP~ *Der Maria Rosen geschenkt*] *hat*   *Peter.*

            the M.   roses present~ptc~   have~3sg~ P.

c.   [VP t$_i$ t$_j$ *Geschenkt*] *hat   Peter der Maria Rosen.*

present$_{ptc}$ have$_{3sg}$ P.   the M.   roses

The basic assumption in Webelhuth and Den Besten (1987) is that in cases like (151c) the remnant VP is topicalized, that is to say, in a first step the direct and indirect object are evacuated from the VP and in a subsequent step the remnant VP is fronted. In principle, the corresponding examples from Croatian, given in (152), could be analyzed in the same way.[27]

(152) a.   *Ivan nije*   [VP *kupio Mariji ružu*]

I.   NEG-be$_{3sg}$ buy$_{ptc}$ M.   rose

"Ivan didn't buy a rose for Maria."

b.   *Ivan nije   Mariji$_i$ ružu$_j$* [VP *kupio.* t$_i$ t$_j$]

I.   NEG-be$_{3sg}$ M.   rose   buy$_{ptc}$

c.   [VP *Kupio Mariji ružu*]$_i$ *Ivan nije* t$_i$

buy$_{ptc}$ M.   rose I.   NEG-be$_{3sg}$

d.   [VP *Kupio* t$_j$ t$_k$]$_i$ *Ivan Mariji$_j$ ružu$_k$ nije.*

buy$_{ptc}$ I. M.   rose NEG-be$_{3sg}$

Given that Croatian has an underlying SVO-order, as opposed to the underlying SOV-order in German, the natural account for the word order in (152c) is by fronting of the complete VP. Furthermore, since Croatian allows for clause internal argument scrambling, which might be understood as movement of the verbal arguments to some

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[27] Željko Bošković (p.c.) noticed that VP-topicalization is not possible in his dialect. Native speakers of Serbian from the area of Novi Sad vary in their judgements between marginally acceptable, and grammatical. Nedzad Leko (p.c.) judged with respect to (152) the corresponding Bosnian examples as acceptable with a special intonation. The special intonation, however, is also necessary for VP-topicalization in Croatian, as well as in German.

VP-external functional projection, (152d) might be analyzed as fronting of a remnant VP, as indicated.

If the verbal arguments and the auxiliary in (152a) are replaced by their enclitic counterparts, as in (153), VP-topicalization seems to result in decreased acceptability.

(153) a.   *Ivan **je**   [_{VP} *kupio Mariji ružu*]
             I.   be_{3sg}   buy_{ptc} M.   rose
             "Ivan didn't buy a rose for Maria."

       b.   *Ivan **ga**_i **je**   [_{VP} *kupio Mariji* t_i]
             I.   it   be_{3sg}   buy_{ptc} M.

       c. * [_{VP} *Kupio Mariji* t_i] **ga**_i **je**   *Ivan*
                buy_{ptc} M.   it   be_{3sg} I.

       d. * [_{VP} *Kupio* t_i *ružu*] **joj**_i **je**   *Ivan*
                buy_{ptc}   rose   her be_{3sg} I.

Irrespective of which object is cliticized, the direct (153c), or indirect object (153d), VP-topicalization is not accepted. However, there is a margin for acceptability, if the enclitic cluster is realized discontinuously, as in the examples in (154).

(154) a.   *Ivan i   Pavo **su**   jučer   kupili Mariji ružu.*
             I.   and P.   be_{3pl} yesterday buy_{ptc} M.   rose
             "Ivan and Pavo bought a rose for Maria yesterday."

       b.   *Kupili Mariji ružu **su**   Ivan i   Pavo jučer.*
             buy_{ptc} M.   rose be_{3pl} I.   and P.   yesterday

       c. * *Kupili ružu **su**   joj Ivan i   Pavo jučer.*
             buy_{ptc} rose be_{3pl} her I.   and P.   yesterday

d. * *Kupili Mariji **su** **ju** Ivan i Pavo jučer.*

   buy$_{ptc}$ M. be$_{3pl}$ it I. and P. yesterday

e. ? *Kupili **joj** ružu **su** Ivan i Pavo jučer.*

   buy$_{ptc}$ her rose be$_{3pl}$ I. and P. yesterday

The examples in (154) show two thing. On the one hand, VP-topicalization is excluded, if one of the verbal arguments is cliticized, as in (154c) and (154d), compare with (153c) and (153d). On the other hand, the acceptability improves dramatically, if the enclitics remain in the fronted VP, as in (154e). In such marginal cases the enclitic cluster may be realized discontinuously, with the enclitic pronouns being split from enclitic auxiliaries.

Further, it is worth emphasizing that in constructions with topicalized VPs (154c-e) enclitic pronouns apparently cannot be moved into some second position out of the VP that undergoes fronting. Instead, it appears that enclitic pronouns preferentially are moved with the whole VP together, occupying the second position inside the fronted VP. Violating the clustering requirement for enclitics, thus, appears less marginal than movement in such constructions. The paradox revealed here is the following. Enclitics are evacuated out of VP in standard cases, and appear in some second position in the clause. In this respect, enclitics behave similar to full DPs, which can also be moved out of VP, i.e. they can be scrambled or *wh*-moved, for example. When the VP is fronted in a subsequent step in the derivation, the resulting construction is ungrammatical, if the enclitics have been evacuated before. It is not ungrammatical, if full DPs have been evacuated out of the fronted VP in a preceding step.

The possibility to split enclitics from each other in one clausal domain is comparable to the generalizations about the grouping of enclitics in Polish. In Polish, pronominal clitics always group together in a clause, and they are string adjacent to each other, while enclitic auxiliaries do not have to be adjacent to the pronominal enclitics. This comparison is discussed in more detail in chapter 3.

2.3 Summary

This chapter has shown that Croatian has different types of clitics. The elements that appear as sentential clitics are exclusively enclitic pronouns, auxiliaries, and the particle *li*. These enclitics cluster together in the second position in the clause. It has been shown that enclitic auxiliaries and pronouns have several different surface forms. The choice of the morpho-phonological form of an enclitic pronoun for example depends on the syntactic context. Auxiliaries have apparently two full forms, and one enclitic form. The properties of the negation particle in combination with the finite auxiliary might suggest an analysis which treats the complex to consist of the negation particle and the enclitic auxiliary, rather than being a lexically specified full form.

It is worth pointing out that the particle *li* is not a question particle, as wrongly assumed in the literature. Its use is not restricted to yes/no- or constituent questions. In a variety of constructions different types of elements can host the enclitic particle *li*, this is in particular true for participles. The generalizations about the particle *li* will become crucial in the following discussion.

The order of elements in the enclitic cluster shows rigidity only with respect to the placement of the particle *li* which has to be initial in the cluster. The position of the other elements is more or less restricted. Datives preferably precede Accusative pronouns, whereas enclitic auxiliaries appear in a position immediately after the particle *li*, or in final position in the cluster. In certain aspects, the enclitic cluster behaves as one syntactic constituent, in other aspects, the individual items that cluster together can separate from the cluster in special contexts. In particular, enclitic pronouns seem to behave as their full form counterparts, i.e. they seem to be subject to syntactic constraints on maximal projections, whereas enclitic auxiliaries and their full form counterparts behave as syntactic heads.

3 Comparative Clitic Placement

Most Slavic languages make use of similar types of sentential enclitics as Croatian. In particular, enclitic pronouns and auxiliaries are found in Polish and Czech as well. The properties of these enclitic elements, and the placement constraints that apply to them, differ in several respects. While enclitics in Polish can be placed much more freely in the clause, placement of enclitics in Croatian and Czech is much more restricted.[28] Enclitics in Polish may be placed in lower than second position. In Czech and Croatian enclitics are placed in second position in the clause. On the other hand, sentential enclitics in Czech apparently may appear in the absolute sentence initial position in some constructions, while in Croatian and Polish the absolute string initial position for enclitics is excluded.

In the following chapter such differences between the three languages are worked out in more detail. In particular, section introduces briefly enclitics in Polish, pointing out, where the similarities, and differences between Croatian and Polish are. The differences between Polish and Croatian, on the one hand, and Czech, on the other, are discussed in section . In section the results from the previous section will be used to motivate two independent constraints for clitic placement on a cross-linguistic basis.

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[28] In fact, placement of enclitics in Czech seems to be more liberal than in Croatian, as will be seen in the following sections.

3.1   Clitics in Polish

The set of clitic elements in Polish is restricted to functional words like for example pronouns and auxiliaries.[29] In the following morpho-phonological properties of clitics in Polish will be discussed in detail,[30] as well as there syntactic status and properties. In section enclitic auxiliaries are described, with the focus on the question, whether they are syntactic constituents in Polish, or rather represent constituents in the morpho-phonological component, being subject to the rules and restrictions of (lexical) phonology. The phonological and syntactic properties of enclitic pronouns in Polish are discussed in section . Furthermore, the clustering properties of pronominal enclitics, and the diverging behavior of enclitic auxiliaries are the topic of section .

3.1.1 Auxiliaries

The perfect tense in Polish is build with the use of an l-participle, and a morpheme agreeing with the subject in person. The agreement morpheme is often treated as a suffix, or 'mobile inflection' (cf. Franks, 1998). Nevertheless, I will refer to it as clitic auxiliary in the following.

Prescriptive grammars of Polish treat the perfective verb form with the 'clitic' auxiliary as one morphological unit, and imply the affixal status of the clitic auxiliaries. Table (155), taken from Spencer (1991: 370), gives a short overview of the clitic auxiliary paradigm.

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[29] This statement may sound banal in the first site. However, the fact that in general substantives do not seem to show up as clitics requires an explanation. See Selkirk (1995) for a related discussion.

[30] For a detailed analysis of clitics in Polish in terms of the Principles- and Paramters framework, and in particular the Minimalist Program, see Witkoś (1998).

(155)

person	singular	plural
1st	*m*	*śmy*
2nd	*ś*	*ście*
3rd	—	—

Polish has no overt clitic auxiliaries in the third person. Furthermore, there are no full form counterparts of the enclitic auxiliary in the periphrastic past tense.

There are indeed some reasons to treat these morphemes in Polish as affixes of, for example, the verb rather than clitic auxiliaries. Booij and Rubach (1987) present several such arguments.[31] In the following, however, the placement restrictions of clitic auxiliaries will be in focus, leaving out the discussion about certain phonological and morphological properties.

The examples in (156) show that the enclitic auxiliary *śmy* (1st sg. "to be") may be placed in nearly any position in the clause (cf. Franks, 1998).

(156) a. *My znowu wczoraj poszli **śmy** do parku.*
          we again yesterday go$_{ptc}$ be$_{1pl}$ to park
          "We went again to the park yesterday."

      b. *My znowu wczoraj **śmy** poszli do parku.*
          we again yesterday be$_{1pl}$ go$_{ptc}$ to park

      c. *My znowu **śmy** wczoraj poszli do parku.*
          we again be$_{1pl}$ yesterday go$_{ptc}$ to park

      d. *My **śmy** znowu wczoraj poszli do parku.*
          we be$_{1pl}$ again yesterday go$_{ptc}$ to park

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[31] A detailed description of these arguments can be found in Spencer (1991). Bański (1996) criticizes these arguments and presents counterarguments against the analysis of Booij and Rubach (1987).

On the basis of the examples in (156) it should clear that basically any kind of syntactic category can host the enclitic auxiliary in Polish. Furthermore, different types of syntactic constituents are able to host the enclitic auxiliary, i.e. in (156a) the auxiliary is integrated in one prosodic constituent with a syntactic head, while in the other cases, it combines with maximal syntactic constituents.

Franks (1998) argues on the basis of (157) that enclitic auxiliaries may neither appear in initial position in the clause (157a), nor in the final position (157b).

(157) a. * ***Śmy*** *my znowu wczoraj poszli do parku.*
　　　　　be$_{1pl}$ we again yesterday go$_{ptc}$ to park

b. * *My znowu wczoraj poszli do parku **śmy**.*
　　　we again yesterday go$_{ptc}$ to park be$_{1pl}$

The example (157a) shows that the clitic auxiliary *śmy* has the basic properties of an enclitic, that is, it cannot appear in absolute string initial position. Further, Kipka (1989) (cited in Franks, 1998) argues that the enclitic auxiliary cannot be separated from the main verb, as example (158a) proves.

(158) a. * *Kupili lustro **śmy**.*
　　　　　buy$_{ptc}$ mirror be$_{1pl}$

b. *Kupili **śmy** lustro.*　　　　　c. *Lustro **śmy** kupili.*
　　buy$_{ptc}$ be$_{1pl}$ mirror　　　　　　　mirror be$_{1pl}$ buy$_{ptc}$
　　"We bought a mirror."

On the basis of (158a), Franks (1998) argues that the right edge for placement of enclitic auxiliaries is to the right of the main verb. On the basis of examples like (158), however, it does not appear appropriate to argue about placement of enclitic auxiliaries.

The example (158a) might be analyzed as a case of VP-topicalization, as shown in (159).

(159)

```
                          CP
                        /    \
                    VPᵢ        C'
                   /   \      /   \
               kupili   NP  C⁰    IP
                        |         /  \
                     lustro    pro    I'
                                     /   \
                                   I⁰     tᵢ
                                   |
                                  śmy
```
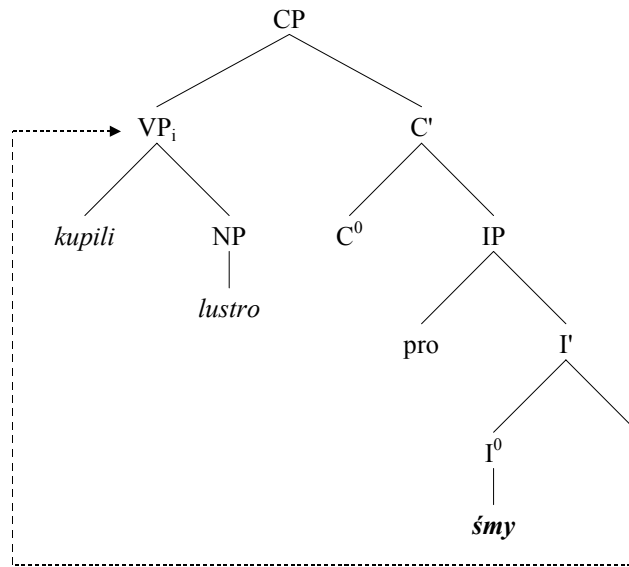
Given the basic assumptions that Polish is a SVO-language, and that the underlying base-position of the enclitic auxiliary is some functional head above of VP, the analysis in (159) for the example (158a) seems an adequate possibility. Alternatively, the VP might have been fronted independently of the direct object, which might have undergone scrambling to a functional projection. Whichever analysis one prefers, both are usually prosodically restricted. The ungrammaticality of (158a) could be the result of independent constraints on constructions with VP-topcialization, i.e. it could be that the final auxiliary does not license a special intonation that is necessary in such examples. Example (160) shows an improvement, if prosodic material follows the enclitic auxiliary.

(160)   *Kupili samochód **śmy** wczoraj.*
         buy_{ptc} car   be_{1pl} yesterday

On the basis of example (160) the generalization for placement of enclitic auxiliaries cannot be that the rightmost position of enclitic auxiliaries is to the right of participles. It has to be stated in structural terms. The examples above have shown that enclitic auxiliaries appear disjoint from the main verb if they precede it. Only in cases with VP-topicalization, enclitic auxiliaries can appear to the right of the main verb in linear terms, being disjoint from it. In structural terms these generalizations are captured by

assuming that the enclitic auxiliary is a syntactic head of a projection that dominates the VP. In the following discussion, it will be argued that other properties of the enclitic auxiliary support the head-analysis.

The examples in (161) show that enclitic auxiliaries may appear in any position in the embedded clause which is between the right adjacent position to complementizers and the left adjacent position to the main verb. The enclitic auxiliary may not appear in the matrix clause, as the example in (161d) shows.

(161) a. *Marek powiedział, że samochód kupili śmy.*
M. say$_{past}$ that car buy$_{ptc}$ be$_{1pl}$
"Marek said that we bought a car."

 b. *Marek powiedział, że samochód śmy kupili.*
M. say$_{past}$ that car be$_{1pl}$ buy$_{ptc}$

 c. *Marek powiedział, że śmy samochód kupili.*
M. say$_{past}$ that be$_{1pl}$ car buy$_{ptc}$

 d. * *Marek śmy powiedział, że samochód kupili.*
M. be$_{1pl}$ say$_{past}$ that car buy$_{ptc}$

The observation in (161d) suggests that the enclitic auxiliary is a syntactic head. The ungrammaticality of the example in (161d) can be explained as a violation of the HMC (cf. Travis, 1984), or *Relativized Minimality* in the framework of Rizzi (1990), i.e. the intervening complementizer which is also a head blocks extraction of the auxiliary head. The same conclusion was made in chapter 2 for the enclitic auxiliary in Croatian.

This section has shown that the placement of enclitic auxiliaries in Polish is more liberal than in Croatian. On the other hand, the enclitic auxiliary in Polish and Croatian behaves like a syntactic head. Furthermore, as auxiliaries in Croatian, the auxiliary clitic is enclitic. It cannot appear in the absolute initial position in the clause.

3.1.2 Enclitic Pronouns

The paradigm in (162) lists all the pronominal forms in Polish.

(162)

		Accusative		Genitive		Dative	
		full form	clitic	full form	clitic	full form	clitic

singular:

1st		*mnie*	*mię*	*mnie*		*mnie*	*mi*
2nd		*ciebie*	*cię*	*ciebie*	*cię*	*tobie*	*ci*
3rd	**m**	*jego*	*go*	*jego*	*go*	*jemu*	*mu*
	f	*ją*		*jej*		*jej*	
	n	*je*		*jego*	*go*	*jemu*	*mu*

plural:

1st		*nas*		*nas*		*nam*	
2nd		*vas*		*was*		*wam*	
3rd	**m**	*ich*		*ich*		*im*	
	f, n	*je*		*ich*		*im*	

The most striking difference between the pronominal paradigm of Polish and Croatian is that Polish does not have a clear set of full form and clitic pronouns. However, the forms in the paradigm can be divided into two sets. One set is constituted of elements that have a full form and a monosyllabic clitic counterpart, which is always an open syllable. The second set are pronouns that are monosyllabic, and with some exceptions also closed syllables. The difference between these sets is that while the latter provides clitic forms in the unmarked case, which can be stressed, the clitic forms of the former set are not stressable. In other words, all pronominal forms that are polysyllabic have a

monosyllabic clitic counterpart. All other pronominal forms are monosyllabic.

An explanation for this division might be found if one assumes that minimal words in Polish are either disyllabic, or bimoraic. Although there is no phonemic distinction between long and short vowels in Polish, there seems to be a phonetic effect that distinguishes, for example, the stressed and unstressed form of the pronoun *je*. The vowel in the stressed form of the pronoun *je* can be argued to be 'longer' than in the unstressed form (Małgorzata Ćavar, p.c.). Given that stress in Polish is expressed through intensity (loudness) on the stressed syllable, and probably duration of the nucleus of the stressed syllable, the differences between the stressed and the unstressed form of the pronouns might be expressed in terms of Moraic Theory. Assuming that all function words are unstressed by default (cf. Selkirk, 1995), the lexical forms of the monosyllabic pronouns are clitics in prosodic terms. Therefore, they should be rather listed in one column with clitic pronouns. The division in two sets could be expressed in morpho-phonological terms. One set consists of clitic elements whose full form counterpart is derived, i.e. it undergoes phonetic changes under stress assignment, whereas the other set consists of elements whose clitic forms are derived, i.e. they are phonetically (or phonologically) reduced full forms. Similar observations have been made for the two auxiliary paradigms in Croatian, discussed in the previous chapter. A detailed discussion of this correlation can be found in chapter 5. In the following, the focus will lie on the placement properties of clitic pronouns in Polish.

As demonstrated in the previous section, clitic auxiliaries in Polish are enclitic, i.e. they cannot appear in absolute string initial position in the clause. The same is true for clitic pronouns. The examples in (163) show that the full form pronoun *jego* may appear in the clause initial position, whereas the clitic pronoun cannot. On the other hand, the clitic pronoun may appear in the string final position, as the example in (163b) shows.

(163) a.   *Jego widziałem.*
          him   see$_{1sg}$
          "I saw him."

     b. * **Go** *widziałem.*
          him see$_{1sg}$

 c. *Widziałem **go**.*

     see$_{1sg}$ him

The contrast between (163b) and (163c) shows that clitic pronouns in Polish are enclitics and their cliticization direction does not vary. In this respect, enclitic pronouns do not differ from enclitic pronouns in Croatian.

 Another similarity between enclitics in Polish and Croatian is that enclitics cannot be coordinated. This is illustrated in the examples in (164).

(164) a. *Marek spotkał ciebie i mnie.*

     M. meet you and me

     "Marek met you and me."

  b. * *Marek spotkał cię i mię.*

     M. meet you and me

The use of enclitic pronouns in Polish is restricted to clauses. They cannot function as arguments of prepositions, as the examples in (165) show.32 The same restriction is found in Croatian.

(165) a. *Marek przyjechał do niego.*

     M. come$_{ptc}$ to him

     "Marek came to hime."

  b. * *Marek przyjechał do **go**.*

     M. come$_{ptc}$ to him

Polish dialects, however, allow enclitic pronouns to function as prepositional complements. These forms differ from the sentential enclitic pronouns, as the example

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[32] Polish uses different morpho-phonological forms of pronouns as prepositional complements. This has historical reasons which will not be discussed any further.

in (166) illustrates.33

(166)   *Marek skoczył na **ń**.*
       M.   jump$_{ptc}$ on it
       "Marek jumped on it."

The enclitic prepositional complement, conversely, cannot be used as a sentential enclitic, as the example in (167) shows.

(167) a.   *Marek spotkał **go**.*
           M.   meet$_{ptc}$ him
           "Marek met him."

      b. * *Marek spotkał **ń**.*
           M.   meet$_{ptc}$ him

A difference between Croatian and Polish is that enclitic pronouns in Polish may occupy different positions in the clause. They are not bound to the second position, as in Croatian. The examples in (168) show that the enclitic pronoun may be placed in any position between the right peripheral position to the left of the final adverb, and the left adjacent position to the complementizer.

(168) a.   *Marek powiedział, że Ilona kupiła Pawłowi **go** wczoraj.*
           M   say$_{ptc}$ that I. buy$_{ptc}$ P.   it yesterday
           "Marek said that Ilona bought it for Paweł yesterday."

      b.   *Marek powiedział, że Ilona kupiła **go** Pawłowi wczoraj.*
           M   say$_{ptc}$ that I. buy$_{ptc}$ it P.   yesterday

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33 Since I have not found a written version of comparable examples, I decided to transcribe the enclitic pronoun as 'ń'.

    c.   *Marek powiedział, że Ilona **go** kupiła Pawłowi wczoraj.*

        M   say$_{ptc}$ that I.   it buy$_{ptc}$ P.   yesterday

    d.   *Marek powiedział, że **go** Ilona kupiła Pawłowi wczoraj.*

        M   say$_{ptc}$ that it I.   buy$_{ptc}$ P.   yesterday

On the basis of the examples in (168), one could argue that the enclitic pronoun may appear in any position between its base position and the overt complementizer in embedded finite clauses.

It is not possible for enclitic pronouns to scramble out of finite clause, although this is possible for their full form counterparts, as the examples in (169) show.

(169) a.   *Marek jego powiedział, że Ilona kupiła Pawłowi wczoraj.*

         M   it   say$_{ptc}$ that I.   buy$_{ptc}$ P.   yesterday

    b. * *Marek **go** powiedział, że Ilona kupiła Pawłowi wczoraj.*

         M   it   say$_{ptc}$ that I.   buy$_{ptc}$ P.   yesterday

The ungrammaticality of (169b) does not necessarily show that the enclitic pronoun is syntactically different from the full form counterpart. The extraction of the full form pronoun in (169a) entails emphasis on the extracted element.34 This apparently is obligatory in Polish, but not in Croatian, as has been shown in the previous chapter. The enclitic pronoun in (169b), however, is not compatible with prosodic emphasis, i.e. it cannot be stressed. The ungrammaticality of examples like (169b) could be analyzed as a clash between required properties of the extracted elements and the impossibility to realize these requirements on the available morpho-phonological properties of the respective element, i.e. it is probably not a syntactic violation.

Extraction of enclitic pronouns out of bare infinitives is possible, as the examples in

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[34] The judgements for examples like (169b) vary between ungrammatical and marginally acceptable. Varying the context to force focus on other elements in the clause did not improve the result. Unfortunately, I did not manage to convince any native speaker to accept extraction of enclitic pronouns out of finite complement clauses.

(170) show (cf. Witkoś, 1998: 191).

(170) a. *Jan chciał* [*obudzić* **go** *o szóstej*] .
        J. want$_{ptc}$ wake-up$_{inf}$ him at six
        "Jan wanted to wake him up at six."

     b. *Jan go$_i$ chciał* [*obudzić* t$_i$ *o szóstej*] .
        J. him want$_{ptc}$ wake-up$_{inf}$ at six

One could argue on the basis of the examples in (170) that extraction of the enclitic pronoun out of the infinitival clause is a case of XP-movement. If it would be head movement, one would expect the infinitive verb to block extraction of the pronoun, if the pronoun is base-generated in complement position of the verb. If the assumption is that enclitics are heads of functional projections that dominate the VP, as it is assumed in Witkoś (1998), then this argumentation is not possible. On the other hand, the example in (168a) has demonstrated that the enclitic pronoun may be separated from the main verb by maximal syntactic constituents. This is not expected in Witkoś's (1998) approach, since the verb would violate constraints on head movement if it raises to a higher head position, skipping the head with the enclitic pronoun. The example in (171) illustrates Witkoś's (1998) assumption about the base-position of enclitic pronouns.

(171)
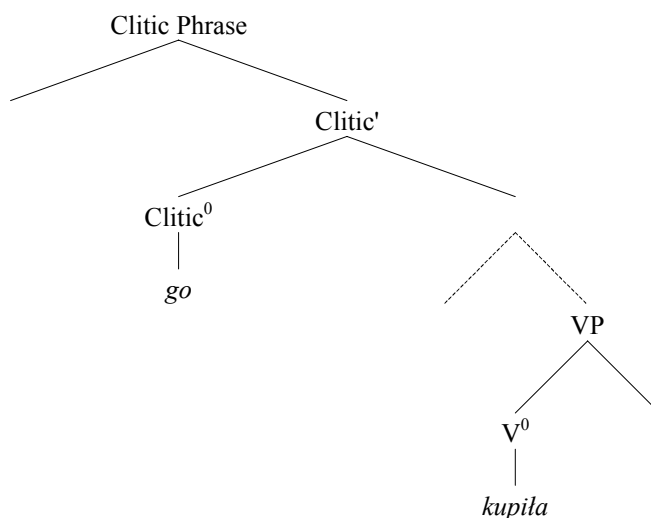
If the enclitic pronoun is a head of a functional projection of the clause, the word order in (168a) can only be explained if one allows for excorporation of elements out of complex heads (a complex V + enclitic pronoun), or long head movement, i.e. movement of the verb to a higher head skipping the clitic head. Both movement types are not desired, and unattested in syntax. The conclusion, therefore, is that enclitic sentential pronouns in Polish are base-generated in argument positions and moved as maximal syntactic constituents.

This section has shown that placement of enclitic sentential pronouns in Polish is much more liberal in comparison to Croatian. In both languages movement of enclitic sentential pronouns is subject to syntactic constraints on movement of maximal projections. On the other hand, in both languages enclitic pronouns cannot appear in absolute initial position in the clause.

3.1.3 Clustering of Enclitics

As in Croatian, some enclitic elements in Polish tend to cluster together independent of their relative position in the clause. The examples in (172) contain a pronominal enclitic *mi* in the dative and the reflexive pronoun *się*.35

(172) a.   *Ta książka **mi** **się** podobała.*
            this book   me self please$_{ptc}$
            "I like this book."

      b. * *Ta książka **mi** podobała **się**.*
            this book   me please$_{ptc}$ self

      c. * *Ta książka **się** podobała **mi**.*
            this book   self please$_{ptc}$ me

The relative order of enclitic pronouns in Polish with respect to each other seems to be

restricted as it is in Croatian. The examples in (173) show that the enclitic reflexive pronoun may not precede the dative enclitic pronoun.

(173) ? *Ta książka **się mi** podobała.*
      this book   self me please$_{ptc}$

Spencer (1991) assumes that there is a fixed order of enclitic pronouns in Polish. The following examples in (174) suggest the order [dative < accusative].

(174) a.   *Daj   **mi go**.*
            give$_{imp}$ me it
            "Give it to me."

      b. * *Daj   **go mi**.*
            give$_{imp}$ it   me

Native speakers of Polish however do not see the contrast depicted in the examples in (174), if other pronoun forms are chosen, as for example in (10).

(175) a.   *Daj   **je mu**.*
            give$_{imp}$ it   him
            "Give it to him."

      b.   *Daj   **mu je**.*
            give$_{imp}$ him it

This suggests that it is not a fixed hierarchy of morpho-syntactic features that determines the relative order of enclitic pronouns in Polish with respect to each other, but rather their morpho-phonological property. Enclitic pronouns may even cluster with enclitic auxiliaries, as the example in (176) shows.

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[35] The verb *podobać* ("to please") is inherently reflexive in Polish.

(176) a. *Dlaczecgo kupiła -ś ją wczoraj?*

why buy$_{ptc}$ be$_{2sg}$ it yesterday

"Why did you buy it yesterday?"

b. *Kiedy -śmy go zobaczyli?*

when be$_{1pl}$ him see$_{ptc}$

"When did we see him?"

The order between enclitic auxiliaries and enclitic pronouns seems to be fixed. The examples in (177) show that, the enclitic pronoun cannot precede the enclitic auxiliary, in the corresponding examples.

(177) a. * *Dlaczecgo kupiła ją -ś wczoraj?*

why buy$_{ptc}$ it be$_{2sg}$ yesterday

b. * *Kiedy go -śmy zobaczyli?*

when him be$_{1pl}$ see$_{ptc}$

As observed in Rappaport (1986) (cited in Franks (1998)), enclitic auxiliaries do not necessarily have to group with pronominal enclitics. The examples in (178) (Franks, 1998) show that an enclitic pronoun may be separated from an enclitic auxiliary.

(178) a. *Dlaczecgo ją kupiła -ś ?*

why it buy$_{ptc}$ be$_{2sg}$

"Why did you buy it?"

b. *Kiedy -śmy zobaczyli go?*

when be$_{1pl}$ see$_{ptc}$ him

"When did we see him?"

As the examples in (178) illustrate, the enclitic auxiliary may precede or follow the enclitic pronoun, being separated from it by the main verb. The examples above have

shown that enclitic auxiliaries do not necessarily cluster with enclitic pronouns, but if they do cluster together, a strict order has to be preserved.

However, Franks (1998) (citing Bański (p.c.)) notes that pronominal enclitics in Polish not necessarily have to cluster. Even the preferred linear order [DAT > ACC] does not have to be preserved.

(179)   *Kiedy **śmy** **go** wreszcie**mu** odebrali, ...*
        when be$_{1pl}$ it   at-last   him take-away$_{ptc}$
        "When we finally took it away from him …"

This section has demonstrated that the clustering properties of enclitics also differ from what was observed in Croatian in the previous chapter. Clustering of enclitics, however, is restricted. There seems to be a preferred order for enclitic pronouns, and a strict restriction on the position of enclitic auxiliaries in the cluster. Similar observations were made on the basis of Croatian data.

3.1.4 The Negation Particle

In the previous sections, the properties and placement restrictions of enclitics in Polish were discussed in detail. However, other types of clitics exist in Polish as well. Spencer (1991), for example, assumes that the negation particle *nie* in Polish is always proclitic to the main verb, as shown in example (180).

(180)   *Nie widziałem **go**.*
        NEG see$_{ptc-1sg}$ him
        "I didn't see him."

Furthermore, Spencer (1991) notes, an enclitic pronoun may not intervene between the negation particle and the main verb, as illustrated in (181).

(181) * *Nie **go** widziałem.*
        NEG him see$_{ptc-1sg}$

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The examples in (182) show that, in contrast to Croatian, enclitic auxiliaries in Polish may not cliticize to the negation particle.

(182) a. *My nie piliśmy   piwa.*
          we NEG drink$_{ptc-1pl}$ beer
          "We didn't drink beer."

    b. * *My nie-śmy   pili   piwa.*
          we NEG-be$_{1pl}$ drink$_{ptc}$ beer

One might assume that the contrast in (182) is related to properties or positions of the verb. In other words, the position of the negation particle might be the head of a functional projection that immediately dominates the VP. The adjacency requirement between the main verb and the negation would then result from the assumption that the main verb obligatorily incorporates into the head of this functional projection. However, the generalization also holds for copula constructions, as in (183).

(183) a. *My nie jesteśmy zmęczeni.*
          we NEG be$_{1pl}$ tired
          "We are not tired."

    b. * *My nie śmy zmęczeni.*
          we NEG be$_{1pl}$ tired

    c. *My śmy zmęczeni.*
          we be$_{1pl}$ tired

In Polish it is not possible to realize the copula as an enclitic in the scope of sentence negation, as the contrast in (183a) and (183b) shows. In positive constructions, as in the example in (183c), the enclitic auxiliary is licensed. The underlying assumption here is

that the copula *jeste śmy* (1st pl. "to be") is the full form of the auxiliary "to be".[36] Obviously, the sentence negation requires the full form of the auxiliary in copula constructions. This is comparable to English *do*-support or the constraints for full forms in Croatian. A difference between Croatian and Polish is that the full form of the auxiliary is not compatible with a main verb. The examples in (184) show that the main verb only licenses the enclitic auxiliary, independent of sentence negation or emphasis (as, for example, in constructions with verum focus).

(184)   a.   *My pili-**śmy**   piwo.*
             we   drink$_{ptc-1pl}$ beer
             "We drunk beer."

        b. * *My (jeste**śmy**) pili   (jeste**śmy**) piwo.*
             we   be$_{1pl}$ drink$_{ptc}$ be$_{1pl}$ beer

There are different possibilities to explain the differences between Polish on the one hand, and English and Croatian on the other. Ćavar and Wilder (1997) have argued that there is a strong correlation between the use of English *do*-support and the variants of auxiliaries in Croatian. *Do*-support in English is, for example, obligatory with sentence negation and with positive emphasis. In Croatian in the same context the full form auxiliaries are obligatory. Ćavar and Wilder (1997) extend this correlation even to the variation between weak and strong forms of auxiliaries in English and enclitic and full form auxiliaries in Croatian. Their analysis of negation and positive emphasis entails an extension of the set of functional projections assumed in the split-Infl. hypothesis (Pollock, 1989). Beside the three Infl. projections proposed in Pollock (1989), Ćavar and Wilder (1997) argue for a functional projection of Σ (Laka, 1990) which represents positive and negative emphasis. The difference between Polish and Croatian could be analyzed as differences in the structural properties of Σ. For Polish the Σ-projection is located lower than the base-position of auxiliaries, so that emphasis and negation are realized on the main verb, whereas in Croatian it is dominating the base-position of the

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[36] See Bański (1999) for an alternative view. In particular, Bański (1999) argues that the morpheme "*jeste śmy*" is a combination of the enclitic auxiliary and the full form copula.

auxiliary and, thus, selects the auxiliary, and not the main verb. In this analysis, the negation particle in Polish always selects the main verb. Therefore, the variation between proclitic and full form of the negation particle in different verbal contexts observed in Croatian is not present in Polish.

3.1.5 Summary

This section has shown that the placement of auxiliary and pronominal enclitics is more liberal in Polish than in Croatian. On the other hand, Polish and Croatian show similarities in not allowing for string initial enclitics. Furthermore, in both languages enclitic pronouns behave syntactically like maximal constituents, whereas auxiliaries behave like syntactic heads. Given the correspondence of many enclitic phenomena in both languages, the difference between Croatian and Polish with respect to the second position placement requirement of enclitics is striking. Although the following discussion will not provide a detailed explanation for this difference, it will play a major role in determining the domain for an explanation of enclitics placement in Croatian.

3.2   Clitics in Czech

In the following section I will present a very brief overview of sentential clitics in Czech. The main purpose of this section is to point out the basic typological differences with respect to sentential clitics between Czech and Croatian.

Czech is a clitic second language, i.e. clitic pronouns and auxiliaries appear in second position in the clause, they cannot be located in some deeper position than second position. The following examples show this for clitic pronouns (185), and clitic auxiliaries (186) (Veselovská, 1995).

(185) a.   *Petr **se jich** bál.*

P.   self them fear$_{ptc}$

"Peter was afraid of them."

b. * *Petr bál   se jich.*
   P.   fear$_{ptc}$ self them

(186) a. *Včera   jsi   to   řekl.*
      yesterday be$_{2sg}$ this say$_{ptc}$
      "You said that yesterday."

   b. * *Včera to jsi   řekl.*
      when this be$_{2sg}$ say$_{ptc}$

As in Croatian, clitics in Czech cluster together. The example in (187) illustrates that the two pronominal clitics cannot be separated by an adverbial.

(187) * *Petr se včera   jich bál.*
      P.   self yesterday them fear$_{ptc}$
      "Peter was afraid of them."

In the unmarked case, clitics in Czech are adjacent to the complementizer in embedded clause, as the example in (188a) shows. However, in constructions with a focused constituent which is adjacent to the complementizer, the clitic reflexive pronoun *se* may appear in relative third position in the embedded clause, as illustrated in (188b) (Fried, 1994).

(188) a. *Helena říkala, že se Petr odstěhoval.*
      H.   say$_{ptc}$ that self P.   move-away$_{ptc}$
      "Helena said that Peter had moved away."

   b. *Helena říkala, že PETR se   odstěhoval.*
      H.   say$_{ptc}$ that P.   self move-away$_{ptc}$

The general tendency of enclitics in Czech to appear in the second position in the clause

corresponds to the observations made on the basis of the Croatian data. Beside the exceptional behavior in constructions like (188b), clitics in Czech show further peculiarities. Toman (1996) observes that under certain circumstances clitic auxiliaries and reflexive pronouns in colloquial Czech may appear in absolute sentence initial position. The following examples show this for the auxiliary "be" in compound tense forms (189), and for the clitic reflexive pronoun *se* (190).[37]

(189) a.   *To **bych** netvrdil.*

         this be$_{cond-1sg}$ NEG-claim$_{ptc}$

         "I wouldn't claim this."

     b.   ***Bych** netvrdil.*

         be$_{cond-1sg}$ NEG-claim$_{ptc}$

(190) a.   *To **se** uvidí.*

         this self see$_{3sg}$

         "One will see."

     b.   ***Se** uvidí.*

         self see$_{3sg}$

The underlying assumption in Toman (1996) is that in both cases (189a) and (190a) the clitics are enclitic, while in the examples (189b) and (190b) they have to be proclitic. One might suspect that similar to the case of 3rd person singular auxiliary *je* in Croatian, the initial elements in (189b) and (190b) are stressed clitics. This possibility, however, is excluded on the basis of the observations in (191) which show that the clitic auxiliary *bych* cannot be used in isolation (Veselovská, p.c.; Franks, 1998).

(191) * ***Bych**.*

      be$_{cond-1sg}$

There are further arguments for the analysis that clitics in Czech alternate between the status of being enclitics and proclitics (cf. Toman, 1996; Franks, 1998).

To sum up, this short overview shows that with respect to placement restrictions on clitics, Czech and Croatian appear to be similar. In both languages clitics tend to be placed in second position in the clause. The major difference between Croatian and Czech is the possibility to place clitics in the absolute string initial position in the latter language.

3.3   Motivating Two Types of Constraints

In the following section I will summarize the basic differences between the three discussed languages. In particular I will argue that the differences between the languages motivate a division of constraints on the placement of clitics into two basic constraints, i.e. the *Second Position Constraint* (SPC) and the *Non-Initial Constraint* (NIC). As proposed in Wilder and Ćavar (1994a/b), I will try to explain the SPC in terms of syntax, and the NIC as a phonological phenomenon.

On the basis of the generalization formulated for enclitic placement in Croatian, one might assume that it is subject to the SPC. In other words, the constraint that enclitics in Croatian have to be placed in second position in the clause excludes placement of these elements in initial position. The two constraints SPC and NIC seem to be redundant.

A comparison between Polish and Croatian with respect to the placement constraints shows that the placement of enclitics is much more liberal in Polish. While enclitics in Croatian have to appear in second position, the same elements in Polish may appear in almost any position in the clause, except of the initial position. From the cross-linguistic perspective, a division in SPC an NIC appears to be plausible. That is, one constraint holds for both languages. Along this line of argumentation, enclitic placement in Croatian is constrained by both, the SPC and the NIC.

The discussion of clitic placement in Czech has shown that Czech differs from the other languages in that it allows clitic placement in initial position. However, Czech does not allow placement of clitics in a deeper position. Compared with the other two

languages, Czech fills another slot in this binary system. Enclitic placement in Czech is not constrained by the NIC, but it is constrained by the SPC.

The division of the placement restrictions in the different languages in two basic constraints appears to be well-motivated from a cross-linguistic perspective. The table in (192) shows the basic classification of the three languages with respect to the proposed placement constraints for clitics.

(192)

	NIC	SPC
Croatian	+	+
Czech	−	+
Polish	+	−

Nevertheless, it remains to be shown that such a split is adequate from an empirical perspective. Furthermore, it remains to be clarified, what kind of constraints the constraints in (192) are, i.e. are these constraints phonological and/or syntactic in nature.

Wilder and Ćavar (1994a/b) argued that the classification in (192) is empirically motivated in Croatian. In particular, they argue that the two constraints are the result of two separate restrictions in two independent components of grammar. The NIC (or Tobler-Mussafia effect in Wilder and Ćavar (1994b)was assumed to be a reflex of the phonological and lexical properties of enclitics in Croatian, i.e. enclitics in Wilder and Ćavar (1994a/b) were assumed to be lexically specified for prosodic subcategorization, as proposed in Inkelas (1989), and Zec and Inkelas (1990). Thus, placement of enclitics in the clause initial position violates prosodic requirements of enclitics at the level of Prosodic Structure. The SPC (or Wackernagel effect in Wilder and Ćavar (1994b)), however, was assumed to be the reflex of syntactic placement restrictions for enclitics, i.e. enclitics in Croatian are assumed to be placed in the highest head position of the clause. Given that the highest head position in a syntactic structure in terms of X-bar theory is the C^0-position, enclitics were analyzed as heads in the C^0-position in Wilder and Ćavar (1994a/b). Constructions with clause initial enclitics were considered well-formed syntactic structures. On the other hand, constructions with enclitics in deeper

positions in the clause were assumed to be well-formed prosodically, if the prosodic subcategorization frame is fulfilled by preceding prosodic words. Since enclitics in Croatian were assumed to always be placed in C^0, such constructions could not be generated in the approach formulated in Wilder and Ćavar (1994a/b).

Given the assumption that the two independent constraints NIC and SPC are responsible for placement regularities of enclitics in Croatian, one might assume that a parametric difference between Croatian and Polish is the passivity of the latter constraint in Polish. In other words, if Wilder and Ćavar (1994a/b) are right, enclitics in Polish are not placed in a fixed syntactic position. The prediction for Czech, on the other hand, is that clitics are either represented twice in the lexicon, with two different prosodic subcategorization frames, or that they are not specified for prosodic subcategorization at all. In other words, the difference between Czech and Croatian is predicted to be a phonological one.

3.4   Summary

The differences between Croatian, Czech, and Polish indicate a twofold analysis. As suggested in Wilder and Ćavar (1994a/b), and Ćavar and Wilder (1994), the observations with respect to clitic placement are best understood, if they are split into two separate constraints. The so called Tobler-Mussafia effect, i.e. the restriction that clitics cannot appear in absolute initial position is independent of the so called Wackernagel effect, i.e. the restriction that clitics are placed in second position in the clause. Wilder and Ćavar (1994a) suggest that the latter restriction can be explained in terms of syntactic clitic placement, while the former is a purely phonological restriction. The cross-linguistic variation discussed in his chapter supports this view.

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4 Analyses of Clitic Placement

As suggested in Bošković (1998) and Franks (1998), one can basically divide the approaches to second position clitic placement in (Serbo-) Croatian in two groups,[38] i.e. syntactic and phonological approaches.

The syntactic approaches hold that clitics in SC are placed in syntax. Their position is determined by the restrictions on syntactic structures and syntactic constituency. These approaches differ with respect to the amount other components of grammar might be involved in the resulting linear position of clitics. For example, in Wilder and Ćavar (1994a/b), Franks and Progovac (1994), Rivero (1994b), Dimitrova_Vulchanova (1995), Mišeska-Tomić (1996), Progovac (1996) it is assumed that the linear position of clitics is determined exclusively by the syntax. On the other hand, the approaches of Halpern (1992), Percus (1993), Schütze (1994), King (1996), Embick and Izvorski (1997) allow restricted movement operations to take place in the phonological component. Other types of syntactic approaches are represented, for example, in Bošković (1998), who assumes that the PF_component does not allow for some sort of readjustment of the position of clitics, but rather filters out those syntactically well formed structures which would lead to a violation in the phonological component itself.

Phonological approaches as, for instance, represented in Radanović_Kocić (1988) deny the existence of syntactic restrictions on the placement of clitics in (Serbo-) Croatian at all. Such approaches assume that extensive reordering of words is possible

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[38] There is probably a lot of disagreement about how to classify certain approaches, i.e. to what extend they are more syntactic or more phonological. The following classification is based on the underlying assumptions of the different approaches about which component is responsible for the placement of clitics, with the resulting position in the linear sequence of words.

in the PF component, and that the position of clitics is only determined by such operations. On the basis of the data discussed so far, and taking into account basic assumptions about language faculty, such analyses will not be discussed any further. On the other hand, certain phonological approaches state that placement of enclitics in Croatian is constrained phonologically, but takes place in syntax (cf. Zec and Inkelas, 1990). Basic assumptions, predictions, and empirical and conceptual problems with such approaches will be discussed in detail in the following sections. Still there are analyses which state that, additionally to prosodic constraints on placement of enclitics, there are certain *Last Resort* processes available on the level of PF which allow inversion of words. These will be investigated in more detail.

In the following sections the null hypothesis will be assumed that syntax is responsible for the placement of clitics in Croatian. The different arguments against this strong claim will be discussed in more detail, with focus on the theoretical alternatives proposed by the different approaches and their empirical consequences.

4.1 Prosodic Analyses

This section will be concerned with two different approaches to enclitic placement in Croatian which assume that the surface word order, and in particular the position of enclitic elements is determined prosodically. In section the analysis proposed in Zec and Inkelas (1990) is discussed which basically assumes that the placement of enclitics take place in syntax, but that it is prosodically restricted. In section the proposal formulated in Halpern (1992) and Schütze (1994) will be presented which assumes syntactic placement of enclitics, but utilizes a post-syntactic mechanism of *Prosodic Inversion*. The conceptual and empirical problems of such approaches are addressed in section . It will be shown that prosodic analyses face massive empirical problems, in being to restrictive in certain domains, i.e. they undergenerate massively, and in being to liberal in others, i.e. they also overgenerate massively.

4.1.1 Prosodic Constraints on Enclitic Placement

Zec and Inkelas (1990) observe that enclitics in Serbo-Croatian apparently may split syntactic constituents. The split of syntactic constituents and the problems that the placement of enclitics imposes in such construction were discussed in detail in early works by Browne (1968, 1974, 1975, 1976). It seems to be possible for enclitics to appear inside of fronted complex syntactic constituents. Such data is supposed to provide evidence for phonological or prosodic placement of enclitics. For Croatian, the examples in (193) show that the enclitic cluster may appear after a complex DP in sentence initial position (193b), or apparently 'inside' the complex DP, as in (193b).

(193) a. *Taj čovjek **joj ga je** poklonio.*
      this man her it be$_{3sg}$ present$_{ptc}$
      "This man presented it to her."

   b. *Taj **joj ga je** čovjek poklonio.*
      this her it be$_{3sg}$ man present$_{ptc}$

The enclitic cluster *joj ga je* in (193) can occupy a position after the sentence initial constituent, as instance, after a complex DP in (193a), and apparently inside a sentence initial DP following the first word, i.e. in the position between the demonstrative *taj* and the head noun *čovjek* in (193b). Such phenomena suggest an analysis which refutes a direct, or strong relation between syntactic constituent boundaries and the position of enclitics in Croatian. A syntactic account faces fundamental problems in explaining the different structures in (193). While for (193a) it might be assumed that the enclitic cluster is located lower than the fronted DP in some appropriate structural position, see (194a), the structure of (193b) at first sight looks like (194b).[39]

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[39] The structure (194b) indicates that enclitics might be attached to some DP internal projection. This is just a logical possibility explored here. Such assumptions are not expressed in Zec and Inkelas (1990), and related work.

(194) a.
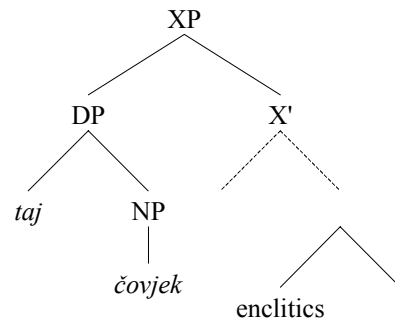
b.
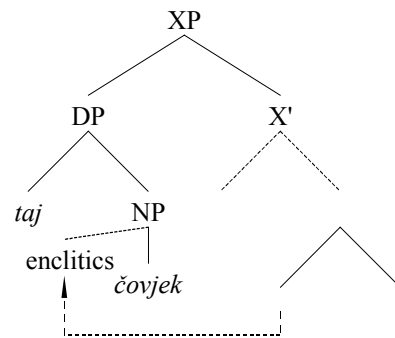
It has to be assumed that the complex DP is located in the specifier position of some projection XP or adjoined to XP. The syntactic representation in (194b) is odd for several reasons. One problem with such a representation is that it would have to be stipulated that enclitics move into some syntactic constituent that not only appears in a derived position, but also is a specifier or an adjunct of some other constituent. Such a derivation is not attested in syntax. Nevertheless, there might be some point to it. The syntax of constructions like (193b) will be discussed in more detail in the following. For the purpose here it should suffice to state that a syntactic approach to such structures faces certain problems.

The following examples show that enclitic clusters cannot split all types of syntactic constituents. A preposition phrase for example cannot be split by an enclitic cluster in a way that the preposition is separated from its complement (Zec and Inkelas, 1990: 367), as illustrated in (195c).

(195) a. *Petar**je** u kući.*

P. be$_{3sg}$ in house

"Petar is in the house."

b. *U kući **je** Petar.*

in house be$_{3sg}$ P.

c. * *U **je** kući Petar.*

in be$_{3sg}$ house P.

While the enclitic auxiliary *je* may occupy a position directly behind the fronted PP in (195b), it cannot follow the initial preposition in (195c), in other words, it cannot split the PP. The contrast between (193) and (195) finds a natural explanation in terms of Prosodic Theory. While a demonstrative, may be realized as an accented independent prosodic word, as in (193), the preposition in (195) may not, so the assumption of Zec and Inkelas (1990). They claim that prepositions in the Belgrade dialect are not able to bear stress on their own, therefore, they are not able to represent prosodic words in terms of Prosodic Theory. Although Zec and Inkelas (1990) do not discuss such a possibility directly, the difference between (193a) and (193b) could be that in (193a) the demonstrative, being a function word that is lexically not specified for word accent, is unstressed, and that it forms a prosodic word in Prosodic Structure (PS) together with the following head noun. In (193b), on the other hand, the demonstrative has to be realized as a stressed prosodic word on its own. The possible PS-representation on the level of prosodic words might be represented as in (196). Compare (196) with (193) above.

(196) a. [*Taj čovjek **joj ga je***]$_T$ [*poklonio*]$_T$

this man her it be$_{3sg}$ present$_{ptc}$

b. [*Taj **joj ga je***]$_T$ [*čovjek*]$_T$ [*poklonio*]$_T$

this her it be$_{3sg}$ man present$_{ptc}$

Given that the enclitics themselves are unstressed prosodic units, the only prosodic word in the first prosodic constituent in (196b) is the demonstrative. The enclitics join the projection of a prosodic word headed by the demonstrative in (196b). In (196a) the only prosodic word in the first constituent could be assumed to be the head noun. All other elements, namely the demonstrative and the enclitics are part of the prosodic word projected by the head noun in (196a). In this sense one could express the location of the enclitics in (196) as the position immediately to the right of the initial prosodic word, disregarding for the time being the question about the integration of the enclitics into the projection of the prosodic word. In the following, this hypothesis will be referred to as the *First Prosodic Word Hypothesis* (1W).

Further support for the 1W-hypothesis can be found in the data in (197). Zec and Inkelas (1990: 368) observe that some conjunctions may host clitics, if they are accented, i.e. if they bear a high tone or pitch accent. The examples in (197) show that the conjunction *ali* is able to support enclitics, as the example in (197b) shows.

(197) a. *Mi smo zvonili,**ali** nitko **nam** nije otvorio.*
           we be$_{1pl}$ ring$_{ptc}$ but nobody us NEG-be$_{3sg}$ open$_{ptc}$
           "We rang, but nobody opened us."

       b. *Mi smo zvonili,**ali nam** nitko nije otvorio.*
           we be$_{1pl}$ ring$_{ptc}$ but us nobody NEG-be$_{3sg}$ open$_{ptc}$

However, in (197b) the conjunction has to be accented. Only if the conjunction is accented, it is able to host the enclitic in (197b). In other words, if the conjunction is accented and as such represents a prosodic word at PS, enclitics are placed right adjacent to the conjunction.

The conclusion drawn by Zec and Inkelas (1990) is that the distribution of enclitics in (Serbo-) Croatian is prosodically restricted, i.e. word order in (Serbo-) Croatian is subject to prosodic constraints. Stating that enclitics have to be placed immediately to the right of prosodic words, however, requires certain assumptions about clitics in general. On the basis of Inkelas' (1990) assumptions about lexical properties of clitics, and the concept of prosodic subcategorization introduced therein, Zec and Inkelas

(1990) assume that clitics are lexically specified with a prosodic subcategorizaton frame. Such a subcategorization on the prosodic level is comparable to morphological subcategorization. The basic property of enclitics like the auxiliary *je* in Croatian is formulated as in (198). The subcategorization frame in (198) states that the auxiliary *je* requires a prosodic word to its left.

(198) *je*: [[   ]$_T$ __]$_T$

One might assume that the difference between morphological and prosodic subcategorization is more or less just a matter of labeling the subcategorization frames. While the nominal suffix '-*a*' (e.g. Genitive sg. masc.) in Croatian is specified for nominal categories as a morphological 'host', enclitics lack such categorial specification. They require a prosodic constituent with certain prosodic properties as a host. The prosodic subcategorization frame serves two functions. On the one hand, it differentiates non-clitics from clitics, since only the latter are specified for prosodic subcategorization. On the other hand, it specifies the special properties of clitics, given that the cliticization direction is an inherent property of the clitics, since the prosodic subcategorization frame requires a clitic to be integrated into a prosodic word to its left (for enclitic properties) or to its right (for proclitics).

However, the subcategorization frame in (198) makes further presuppositions. One major presupposition is that the combination of a prosodic word with a clitic results in a prosodic constituent that represents again a prosodic word. One could compare such structural properties with adjunction structures in syntax, where adjunction of some category to another category preserves the categorial properties of the latter. However, in Prosodic Theory such a claim is not unproblematic. In particular, the *Strict Layer Hypothesis* (Selkirk, 1986) states that at only constituents of type X combine to constituents of type Y, i.e. feet project to prosodic words, and prosodic words project prosodic phrases (see Selkirk (1995) for a related discussion). Structures like (199) are excluded by the *Strict Layer Hypothesis*.[40]

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[40] This problem imposed by cliticization phenomena was first brought to me by Tracy A. Hall (p.c.), who also discussed the recursivity problem in one of his classes at the Olomouc Summer School in Generative Linguistics.

(199)

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              PrP
             /    \
          PrWd     Σ
```
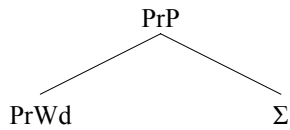
The structure in (199), which is excluded by the SLH, shows that a prosodic phrase (PrP) dominates directly a prosodic word (PrWd) and a foot (E). In this respect, the problem arises with enclitics in Croatian. Recursiveness of the type in (200) does not seem to be an option in *Prosody Theory* (cf. Selkirk, 1986; Nespor and Vogel, 1986; Hayes, 1989a). If the first enclitic in an enclitic cluster requires a prosodic word to its left, and all the following enclitics do the same, then the combination of a prosodic word and an enclitic, which itself is not a prosodic word,[41] has to result in a prosodic word, and so on. Otherwise the prosodic subcategorization frame stipulated in (198) would not be fulfilled. Compare (200) with (193b).

(200)

```
                    PWd
                   /    \
                 PWd     je
                /    \
              PWd     ga
             /    \
           PWd     joj
            |
           taj
```
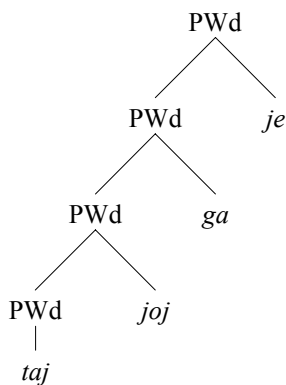
Such right recursive structures, however, are not attested in Prosodic Theory, and they would refute the *Strict Layer Hypothesis*, which postulates that prosodic words cannot dominate prosodic words.

On the basis of the data discussed above, a treatment of enclitic placement in terms

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[41] An enclitic cannot be a prosodic word, since it cannot function as a host for other enclitics. The same conclusion can be drawn, if one assumes that prosodic words are the prosodic domains that bear word accent.

of prosody appears to be adequate, if certain aspects of enclitics are taken under consideration. Enclitics, for example. are phonologically defined as unaccented units, that are not prosodic words. Likewise, the inherent property of function words (closed-class elements) seems to be that they are lexically not specified for word accent, while open-class elements are (see Selkirk (1995) for a discussion). As has been shown in the previous sections, clitics in Croatian belong exclusively to the class of function words. The difference between clitics and full forms is generally assumed to be related to word accent or stress. While substantives in general are able to bear word accent, some function words are not. The default assumption for function words in Croatian is that they are not specified for accent in the lexicon, and that they receive stress in certain configurations on the level of PS. Given the correlation between the basic prosodic properties of enclitics in Croatian and their special behavior with respect to placement, prosodic constraints for placement of enclitics appear to be plausible. However, the basic question is, how can placement be prosodically restricted, if it is basically a syntactic process, under the assumption that the syntactic component is not aware of prosodic properties of the elements it deals with.

In principle, there are several possibilities to explain this conflict. One might assume, and in fact this might be the underlying idea in the analysis of Zec and Inkelas (1990), that the prosodic representation is coexistent with the syntactic representation in the process of derivation. Zec and Inkelas (1990) explicitly assume that enclitics are placed in syntax, but the placement is constrained prosodically. The Placement of enclitics, thus, might be driven by the need to generate the optimal prosodic representation that satisfies *inter alia* the prosodic subcategorization requirements. The subcategorization requirement postulated in (198) *per se* does not suffice to explain why the enclitics in Croatian appear in the second position in the clause. Any position deeper than the second position would fulfill the prosodic subcategorization requirement, if at least one prosodic word would precede the enclitic. Zec and Inkelas (1990) need to state explicitly that the placement of enclitics takes place after the first, and only the first prosodic word in the clause. It is not that clear, how such a rule might be implemented in the syntactic component.

Another conceptual problem is imposed by the assumption that clitics are lexically specified for prosodic subcategorization. Given that the lexicon, conceptually, should

contain only language specific information, i.e. idiosyncrasies, only phenomena that cannot be explained as derivable should enter the lexicon. By postulating that clitics are lexically specified for prosodic subcategorization, Zec and Inkelas (1990) not only imply that the lexicon contains both, the full form and the clitic form of one element, but also that clitics cannot be derived from the full forms, neither their special property of being en- or proclitic. To illustrate the conceptual problems with empirical data, consider cliticization of the Italian pronoun *lo* in (201).

(201) a. *veder-lo*   b. *lo-vedo*

       see$_{inf}$-it   it-see$_{1sg}$

       "to see it"   "I see it."

While *lo* in (201a) is enclitic to the infinite verb, it is proclitic to the finite verb in (201b). In terms of the prosodic subcategorization hypothesis, one is forced to assume that the two instances of *lo* are specified in the lexicon, with two different prosodic subcategorization frames. Inkelas (1990) is forced to assume exactly this for similar examples in Greek, where the cliticization direction of certain clitics depends on the syntactic context (declarative vs. imperative). The examples in (202) show that the pronoun *to* in Greek is either enclitic, as in (202a), or proclitic, as in (202b).

(202) a. ***To-** pira.* $[\_\_ [\quad]_\omega]_\omega$

      it   take$_{past}$

      "I took it."

    b. *Par(e) **-to.*** $[[\quad]_\omega \_\_]_\omega$

      take$_{imp}$ it

      "Take it!"

As indicated, on the basis of the examples in (202), Inkelas (1990) has to assume that the lexicon contains two entries for the enclitic pronoun *to* which differ only with respect to their prosodic subcategorization frame. In the same line, the possibility for clitics in Czech to be realized as enclitics in some, and as proclitics in other

constructions, as discussed in chapter 3, is a problem for the prosodic subcategorization hypothesis. As the examples in (201) demonstrate, the cliticization direction of *lo* is controlled by the underlying syntactic structure, or, in other words, simply by the word order. If there is a way to explain the cliticization direction of *lo*, and also the cliticization direction of clitics in Croatian, the stipulation of prosodic subcategorization could be abandoned. In spite of the conceptual and empirical problems with prosodic subcategorization, these assumptions are wide spread in the literature about enclitics in (Serbo-) Croatian. Nevertheless, the assumption that enclitics in Croatian are placed after the first prosodic word in the clause is independent of the prosodic subcategorization concept.

However, such conceptual issues are less relevant, if empirically the analysis of Zec and Inkelas (1990) makes the right predictions. If it turns out to be adequate in the one sense, or the other, conceptual arguments might be considered in order to disfavor the proposal. The basic claims in Zec and Inkelas (1990) and related work is that there is a lexical specification of clitics interacting with a prosodic placement constraint.

The analysis proposed by Zec and Inkelas (1990) for placement of enclitics in (Serbo-) Croatian faces some problems. First, it is not clear why the constraint that enclitics have to follow the initial prosodic word is blocked in constructions like (197), i.e. it applies only to relative clausal domains, and not to absolute positions. The enclitic is obviously placed after the first prosodic word in the embedded clausal domain. This shows that further stipulations are necessary to loosen or relativize the prosodic placement constraint. Even more serious problems for an analysis that claims an absolute status of prosodic placement conditions arise on the basis of data as in (203).

(203) *U kakvoj   kući **je** Ivan živio?*
       in what-kind-of house be$_{3sg}$ I.   live$_{ptc}$
       "In what kind of house did Ivan live?"

In construction (203) the enclitic auxiliary *je* appears in a position after two prosodic words, both the *wh*-adjective and the head noun are stressed prosodic words. The situation is even worse in examples like (204), where the enclitic pronoun appears in a position following four prosodic words.

(204)   *Jedna zgodna   mlada cura **je**   šetala ulicom.*
        one   attractive young girl   be$_{3sg}$ walk$_{ptc}$ street
        "Some attractive young girl walked down the street."

However, in both examples, (203) and (204) the enclitic is placed in the position immediately after the first syntactic constituent. It seems that the placement constraints have to be reformulated. The strong form of the prosodic placement constraint obviously leads to massive undergeneration. So far, one might postulate a disjunctive placement constraint as in (205).

(205)   **Placement of Enclitics in Croatian**
        Enclitics in Croatian are placed after the first prosodic word, or after the first syntactic constituent in their clausal domain.

The constraint in (205), and the relevant empirical facts in (193b) and (204) are the underlying reason for Halpern (1992) to propose an analysis that tries to cope with both types of placement constraints for enclitics, i.e. the 1W- and the 1P-constraint. In the following section, this alternative approach will be discussed in more detail.

4.1.2 Prosodic Inversion

The alternative analysis proposed in Halpern (1992) assumes a basic distinction between 1P- and 1W-placement of enclitics. While the former is understood as a result of syntactic restrictions on the placement and potential landing sites for other syntactic categories, the latter is assumed to be a reflection of a prosodic operation called *Prosodic Inversion* (PI). The PI-analysis basically relies on the assumptions made in Zec and Inkelas (1990). In particular, it is assumed there that clitics are lexically specified for prosodic subcategorization, as formulated in (198) for the Croatian enclitic auxiliary *je*, in the previous section. Furthermore, Halpern (1992) assumes that enclitics in (Serbo-) Croatian occupy a fixed syntactic position, which is the adjunction position to IP, as shown in (206). The structure in (206) represents the basic assumptions about

the sentence structure of (Serbo-) Croatian in terms of X-bar theory.

(206)

```
                CP
               /  \
                   C'
                  /  \
               C⁰     IP
                     /  \
              enclitics   IP
                         /  \
                            I'
                           /  \
                        I⁰     VP
                              /  \
                           V⁰
```
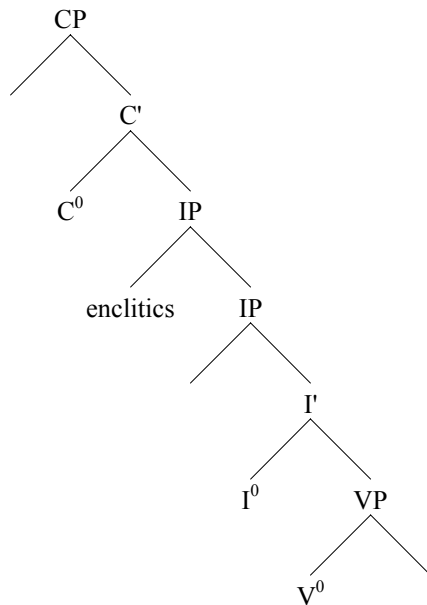
The difference between 1W- and 1P-placement of enclitics in Croatian is explained in the following way. In cases, where a syntactic constituent precedes an enclitic cluster (1P), this constituent is assumed to occupy a position in the functional projection of C^0. Examples like (207) are analyzed then purely in terms of syntax, with the corresponding structure in (208).

(207)   *Tko **ga** nije   vidio?*
        who him NEG-be$_{3sg}$ see$_{ptc}$
        "Who didn't see him?"

(208)

```
                        CP
                       /  \
                   DPᵢ    C'
                    |    /  \
                  Tko  C⁰    IP
                           /  \
                        Cl.    IP
                         |    /  \
                        ga  tᵢ   I'
                               /  \
                             I⁰    VP
                              |   /  \
                            nije V⁰
                                 |
                               vidio
```
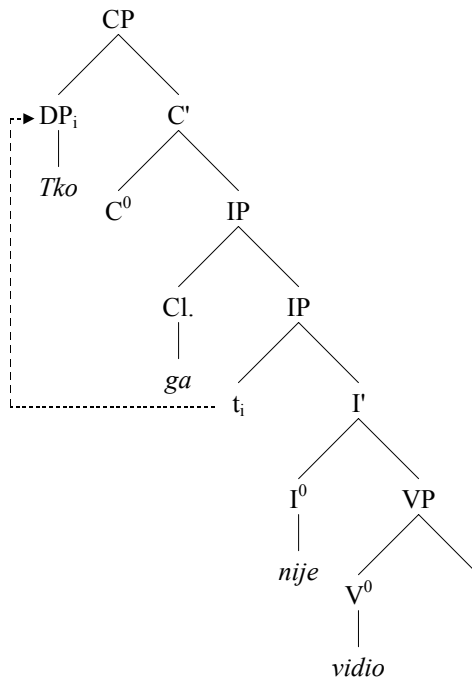
The prediction of this analysis is that enclitics can only be preceded in their clausal domain by maximal projections, or one head, or both. The CP-domain provides one specifier position for maximal syntactic constituents, and one head position. However, in principle, both CP and IP might be available adjunction sites for XPs.

1W-placement in the PI-approach is derived at the level of PS, i.e. syntactic representations that violate certain prosodic requirements are transformed into well formed prosodic representations with the use of *Prosodic Inversion* (PI). PI might be understood as some sort of *Readjustment Rule* in the sense of Chomsky and Halle (1968). More precisely, PI allows for a string initial enclitic to invert with a prosodic word to its right, if otherwise the prosodic subcategorization frame of the enclitic would not be fulfilled. This type of inversion is understood as some sort of Last Resort operation, triggered only if otherwise a violation of prosodic requirements would result. The definition of PI is given in (209) (Halpern, 1992: 81).[42]

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[42] The formulation in (209) is supposed to be an alternative for the Clitic Group Formation algorithm proposed in Nespor and Vogel (1986). Prosodic Inversion is rather the second clause of the definition in (209). Furthermore, a second point is eliminated, which states that non-directional clitics are simply adjoined to an appropriate host. This point is of no interest here, since all the clitics discussed here are

(209) **Prosodic Inversion**

For a DCL, X, which must attach to a ω to its left (respectively right),

a. if there is a ω, Y, comprised of material which is syntactically immediately to the left (right) of X, then adjoin X to the right (left) of Y,

b. else attach X to the right (left) of the ω composed of syntactic material immediately to its right (left).

The definition in (209) covers two scenarios. On the one hand, the first clause states that enclitics simply cliticize to a prosodic word to their left, if there is a prosodic word available. For proclitics, the cliticization direction and the necessary conditions are reversed in direction. The second clause introduces the mechanism of *Prosodic Inversion* (PI). It allows enclitics to invert with prosodic words to their right, preserving their cliticization direction. In other words, PI in (209b) allows for directional clitics (DCL) to invert with a prosodic word (T) to their left, or right, depending on the specification of the clitic as en-, or proclitic. The split of the DP in example (193b), discussed in the previous section, is accounted for in the PI-approach in terms of post-syntactic *Last Resort* application of PI, as shown in (210).[43]

(210) a. *taj **je** čovjek svirao klavir*

this be$_{3sg}$ man play$_{ptc}$ piano

"This man played piano."

_____

assumed to be directional clitics.

[43] The structure in (210) is very simplified, however, for the purposes here it shows the basic assumptions.

b.
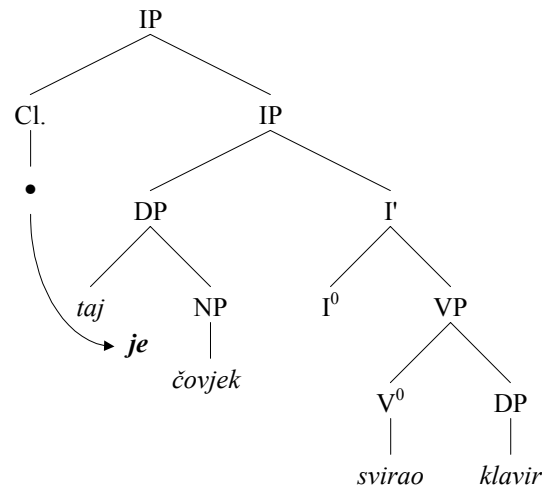
Thus, the surface structure in (210) does not correspond to the syntactic surface representation. Halpern's (1992) proposal assumes a mismatch between the surface syntactic representation and the phonetic representation, as illustrated in (211).

(211) a.   Syntactic: *je taj čovjek svirao klavir*

       b: Phonetic: *taj **je** čovjek svirao klavir*

Given the basic assumptions about the base position of enclitics in (Serbo-) Croatian, and the mechanism of PI, the predictions are as follows. On the one hand, enclitics are expected to follow maximal syntactic constituents and/or one head. On the other hand, they are expected to follow the first prosodic word of the syntactic constituent immediately to the right, if no prosodic word is available in cliticization direction.

There are several conceptual problems with the PI-approach. One problem, related to the basic assumption that enclitics in Croatian are lexical, and furthermore, that they are specified for the cliticization direction, has been discussed in the previous section. Another basic problem with the PI-approach is the stipulation that enclitics occupy a fixed syntactic position in the clause. The PI-approach postulates that enclitics are adjoined to IP, without providing empirical evidence for this stipulation. Other problems are empirical. Assuming that enclitics are adjoined to IP, would allow for material to appear between a complementizer head and the enclitics, if one assumes that

scrambling in Croatian can be analyzed as adjunction to IP (or any other functional projection). The following examples show that Croatian allows for objects and adjuncts to appear between an overt complementizer and the subject.

(212) a.   *Ivan kaže, da auto Pavo Mariji kupuje.*
          I.   say$_{3sg}$ that car P.   M.   buy$_{3sg}$
          "Ivan says that Pavo buys a car for Maria."

     b.   *Ivan kaže, da sutra   Pavo Mariji auto kupuje.*
          I.   say$_{3sg}$ that tomorrow P.   M.   car buy$_{3sg}$
          "Ivan says that tomorrow Pavo buys a car for Maria."

As already mentioned in chapter 2, enclitics are string adjacent to the complementizer *da* in embedded and matrix contexts. It is not possible for objects or adjuncts to intervene between the complementizer and the enclitic cluster, as illustrated in (213).

(213) a. * *Ivan kaže, da auto **je**   Pavo Mariji kupio.*
          I.   say$_{3sg}$ that car be$_{3sg}$ P.   M.   buy$_{ptc}$

     b. * *Ivan kaže, da sutra   će   Pavo Mariji auto kupiti.*
          I.   say$_{3sg}$ that tomorrow want$_{3sg}$ P.   M.   car buy$_{inf}$

The same holds for constituent questions. A standard assumption is that in *wh*-questions (only) one *wh*-phrase is moved to the specifier of CP position. Enclitic clusters have to be string adjacent to the initial *wh*-phrase, if no complementizer is realized, as the contrast in (214) shows.

(214) a.   *Što **je**   Ivan čitao?*
          what be$_{3sg}$ I.   read$_{ptc}$
          "What did Ivan read?"

b. * *Što Ivan **je** čitao?*
      what I.   be$_{3sg}$ read$_{ptc}$

In order to exclude examples like (213) and (214b) in the PI-approach, it has to be assumed that no constituent may be adjoined to IP, if enclitics are adjoined to it. Alternatively, one is forced to provide a good reason for a ban on scrambling to IP in such constructions. One might conclude that the PI-approach overgenerates structures like (213) and (214b).

    An alternative that remedies at least this last problem was proposed by Schütze (1994). In Schütze's (1994) approach the only change to the PI-approach presented above affects the base position of enclitics. In particular, it is assumed that enclitics are adjoined to the C^0 head position, as in (215).

(215)
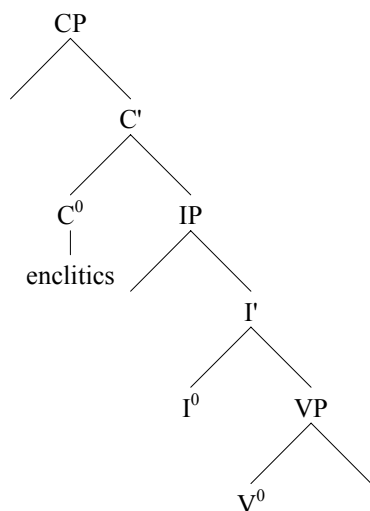
Given this assumption, the examples (213) and (214b) appear to be syntactically excluded, i.e. the string adjacency between complementizers and enclitics is a natural consequence of the head adjunction structure, and there is only one potential landing site for XPs in a position to the left of the enclitic cluster. The other assumptions correspond to the assumptions in Halpern's (1992) analysis, that is, clitics are lexically specified for prosodic subcategorization, and, on a post-syntactic level, the Last Resort operation PI repairs structures that otherwise would violate prosodic requirements.

Prosodically ill-formed structures are repaired in the same way as in Halpern's (1992) approach by inversion of a string initial enclitic with a prosodic word immediately to its right, as shown in (216).

(216) a.   *Taj **je**   čovjek svirao klavir*
           this be$_{3sg}$ man   play$_{ptc}$ piano
           "This man played piano."

    b.
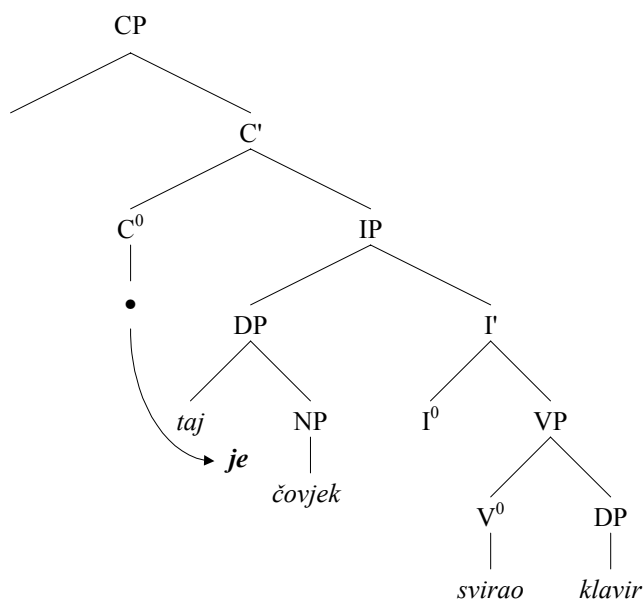
While the Schütze (1994) approach is able to exclude constructions like (213) and (214b), it adopts all the other conceptual and empirical problems of Halpern's (1992) analysis mentioned above.

In the following section, empirical issues will be discussed, which are problematic for the both above described syntactic approaches, as well as for purely phonological accounts.

4.1.3 Problems for Phonological Analyses

In this section empirical problems for prosodic analyses are addressed in more detail. In particular it is shown that constructions that are syntactic in nature, prosodic analyses

massively over- and undergenerate. In section split constituent are scrutinized closely, showing that they not only can be explained syntactically, but also cause problems for prosodic analyses. The properties of *wh*-movement are focused in section , showing that only syntactic approaches make the right predictions about enclitic placement in such constructions. In particular, it will be shown that *wh*-movement can split constructions syntactically, thus providing empirical evidence for syntactic analyses of such constructions. In section , I will present examples that show that enclitics appear in deeper positions in the clause, after several prosodic words. Cross-linguistic evidence for a syntactic analysis of split constituents is provided in section . Finally, in section properties of prepositions are discussed, showing that the assumption in Zec and Inkelas (1990) that prepositions cannot host enclitics is wrong, and that only a syntactic analysis can explain why PPs cannot be split up by enclitics.

4.1.3.1 Split of Complex Syntactic Constituents

The following examples show that complex DPs that contain a head noun and a relative clause can be topicalized, see example (217a). Alternatively, the DP with the head noun can be topicalized alone, leaving the relative clause in the right peripheral position, which is potentially an extraposed position, as in (217c). It is not possible to strand the relative clause in some intermediate position in the clause, if the DP with the head noun is topicalized alone, as in (217b).

(217) a. [*One knjige, koje sam želio   kupiti*] *nisam   našao.*
           these books that be_{1sg} $wish_{ptc}$ buy_{inf} $NEG\text{-}be_{1sg}$ $find_{ptc}$
           "I didn't find the books that I wanted to buy."

       b. * [*One knjige*] *nisam*   [*koje   sam želio   kupiti*] *našao.*
           these books $NEG\text{-}be_{1sg}$ which be_{1sg} $wish_{ptc}$ buy_{inf} $find_{ptc}$

       c. [*One knjige*] *nisam   našao* [*koje   sam želio   kupiti*]
           these books $NEG\text{-}be_{1sg}$ $find_{ptc}$ which be_{1sg} $wish_{ptc}$ buy_{inf}

Furthermore, complex DPs that contain a relative clause may occupy a couple of different positions in the clause, for example, they may be scrambled. Such DPs may be placed in a position between the complementizer and the overt subject in an embedded clause, as in (218).

(218)   *Ivan kaže da **su** **mu*** [*one knjige* [*koje je želio kupiti*]]
I.   say$_{3sg}$ that be$_{3pl}$ him those books   which be$_{3sg}$ wish$_{ptc}$ buy$_{inf}$

poslali poštom.
send$_{ptc}$ mail

"Ivan said that they send him the books that she bought yesterday by mail."

The PI-analysis predicts that the enclitic cluster in (218) inverts with the following prosodic word, if the word order corresponding to the one in the embedded clause in (218) appears in the matrix clause. Although it is possible to scramble such a DP to IP, as illustrated in (218), PI cannot apply to an underlying structure as in (219). In other words, PI is predicted to apply in contexts like (219). However, in such cases it leads to ungrammaticality, as (219a) shows. In cases like (219), PI overgenerates.

(219) a. * *One knjige **su** **mi** koje sam jučer kupio poslali poštom.*
those books be$_{3pl}$ me which be$_{1sg}$ yesterday buy$_{ptc}$ send$_{ptc}$ mail

b.
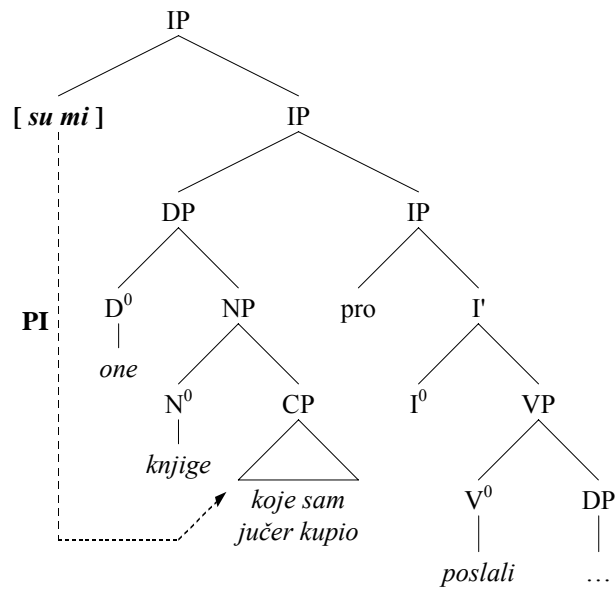
The example in (219) contains a *pro*-subject, therefore, one might assume that the complex DP is not necessarily adjoined to IP, but perhaps to some lower maximal projection. Even if the complex DP would be adjoined to VP, the same argument still holds. Irrespective of the position of the complex DP, there is no obvious reason why PI should be blocked.

If such a complex DP would be located in subject position, i.e. in the specifier of IP position, the PI-analysis again predicts the enclitic cluster to invert with the first prosodic word. In construction (220) the first available prosodic word inside the subject DP is the prosodic word *knjige*. An enclitic cluster that appears in absolute string initial position preceding such a subject DP should be able to invert with the head noun of the subject DP. The contrast in (220) shows that PI cannot apply in such contexts.

(220) a. *Knjige koje **je** Marija kupila **mi se** sviđaju.*
books which be_{3sg} M. buy_{ptc} me self please_{ptc}
"The books that Maria bought pleased me."

b. * *Knjige **mi se** koje **je** Marija kupila sviđaju.*
books me self which be_{3sg} M. buy_{ptc} please_{ptc}

c.
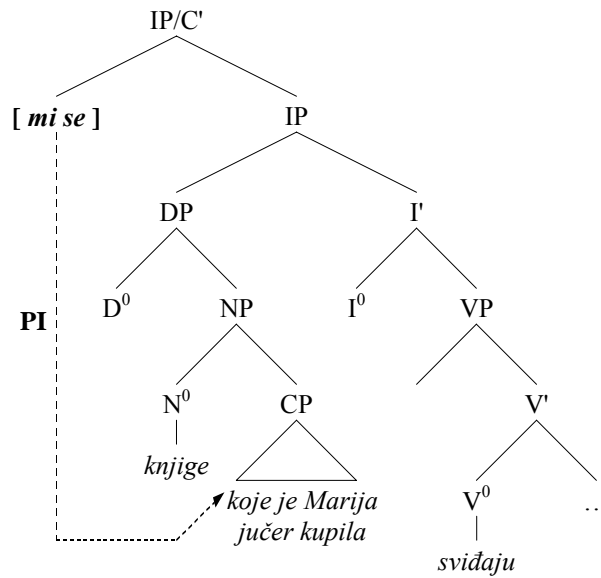
PI leads to ungrammaticality in the case of (220b). The enclitic cluster can only be placed after the complex DP, to the right of the fifth prosodic word, as in (220a). Independent of the underlying assumption about the base position of enclitics, strong prosodic placement analyses and the PI-approach overgenerate, in that they predict structures like (220b) to be well formed. However, the enclitic cluster cannot intervene between the head noun and the relative clause inside of the complex DP, as (220b) shows. Whether it is assumed that the enclitic cluster is adjoined to IP, as in Halpern (1992), or located in C^0, as in Schütze (1994), the PI-analysis makes the wrong predictions, i.e. it overgenerates.

Such data as in (220b) is not only problematic for the PI-analysis. It is also problematic for pure phonological analyses. If the enclitic cluster is placed in phonology, the question is why it respects certain syntactic constituent boundaries.

An attempt to rescue the PI-analysis could be based on stipulations about adjunction or scrambling of complex DPs that contain relative clauses. Examples with complex subjects of the type in (221) show that even if such complex DPs are most likely not scrambled, PI does not seem to be operative in such cases.[44]

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[44] In the examples (221) *pojaviti* ("to appear") requires a reflexive pronoun as direct object. If in an enclitic cluster a reflexive pronoun and the finite enclitic auxiliary *je* (3 sg. "to be") appear together, *je* is preferably, but not necessarily dropped.

(221) a. [IP **se** [IP [DP *čovjek koji* **mi je** *obećao pomoći*] *nije*

self man which me be₃sg promiseₚₜc helpᵢnf NEG-be₃sg

pojavio]

appearₚₜc

b. * [IP __ [IP [DP *čovjek* **se** *koji* **mi je** *obećao pomoći*] *nije* …]]

man self which me be₃sg promiseₚₜc helpᵢnf NEG-be₃sg

The enclitic reflexive pronoun *se* cannot appear in the position between the head noun and the relative clause inside of the subject DP, although the head noun in (221) is a prosodic word and an underlying structure as in (221a) would require PI in order to avoid a violation of prosodic constraints. Instead the enclitic reflexive pronoun has to occupy a position to the right of the complex DP, i.e. following the relative clause.

In such cases prosodic analyses overgenerate. The prediction of the PI-analysis, for example, is that inversion of the enclitic with the first prosodic word to the right is possible.

Further problems for prosodic analyses arise, if data as in (222) is taken under consideration. Complex subject DPs, as in (222), are opaque for enclitic split, in other words, the head noun may not be separated from the selected infinitive.

(222) a. *Nada, sresti* **ga, je** *bila velika.*

hope meetᵢnf him be₃sg beₚₜc great

"The hope to meet him was great."

b. * *Nada* **je** *sresti* **ga,** *bila velika.*

hope be₃sg meetᵢnf him beₚₜc great

"The hope to meet him was great."

If the complex DP in (222) occupies the specifier of IP position, and if the enclitic auxiliary *je* is either located in C⁰ or adjoined to IP, (222a) is expected to be a well

(221) a. [IP **se** [IP [DP *čovjek koji* **mi je** *obećao pomoći*] *nije*

self man which me be_{3sg} $promise_{ptc}$ $help_{inf}$ NEG-be_{3sg}

pojavio]

$appear_{ptc}$

b. * [IP __ [IP [DP *čovjek* **se** *koji* **mi je** *obećao pomoći*] *nije* …]]

man self which me be_{3sg} $promise_{ptc}$ $help_{inf}$ NEG-be_{3sg}

The enclitic reflexive pronoun *se* cannot appear in the position between the head noun and the relative clause inside of the subject DP, although the head noun in (221) is a prosodic word and an underlying structure as in (221a) would require PI in order to avoid a violation of prosodic constraints. Instead the enclitic reflexive pronoun has to occupy a position to the right of the complex DP, i.e. following the relative clause.

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(222) a. *Nada, sresti* **ga, je** *bila velika.*

hope $meet_{inf}$ him be_{3sg} be_{ptc} great

"The hope to meet him was great."

b. * *Nada* **je** *sresti* **ga,** *bila velika.*

hope be_{3sg} $meet_{inf}$ him be_{ptc} great

"The hope to meet him was great."

If the complex DP in (222) occupies the specifier of IP position, and if the enclitic auxiliary *je* is either located in C^0 or adjoined to IP, (222a) is expected to be a well

formed result of a post-syntactic application of PI. Again both types of prosodic analyses overgenerate, since the purely prosodic placement analysis would expect the placement of enclitics after the initial prosodic word, which is the head noun *nada* in (222) to be well formed. PI-analyses cannot exclude the operation of PI in an underlying structure like (223) without further stipulations. Compare (223) and (222).

(223)
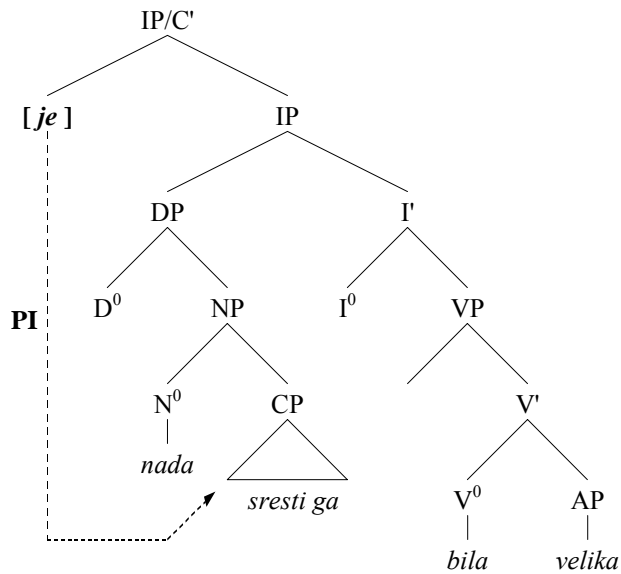
Progovac (1996) presents arguments on the basis of PPs with stressed prepositions (see also Bošković, 1997a). Example (224a) shows that the preposition cannot be separated from its complement. The preposition is a stressable prosodic word in this example, but it is not able to host enclitics, as (224b) demonstrates.

(224) a. * *Prema Stipe i   Ivan idu   Mariji.*
           toward S.   and I.   walk$_{3pl}$ M.
           "Mile and Ivan are walking toward Maria."

       b. * *Prema su   Mariji Stipe i   Ivan išli.*
           toward be$_{3pl}$ M.   S.   and I.   walk$_{ptc}$

c. *Prema Mariji **su** Stipe i Ivan išli.*

   toward M. be$_{3pl}$ S. and I. walk$_{ptc}$

The prosodic placement analysis cannot explain why (224b) is ungrammatical, since the preposition *prema* can be stressed, and, thus, represent a prosodic word. In principle, one would expect this PP to be located lower than enclitics in the syntactic representation, with PI inverting the preposition with the enclitic auxiliary in (224b). Again, both analyses overgenerate in such cases.

In the following, other predictions and problems with the Prosodic Inversion approach, and prosodic analyses will be discussed in more detail.

4.1.3.2 Split *Wh*-movement

Constructions which involve *wh*-movement of complex DPs might be considered problematic for the PI-approach as well. The structure of (225a) is ambiguous in Halpern's (1992) approach, if *wh*-movement is analyzed as movement to the specifier of CP, but it is not ambiguous in Schütze's (1994) analysis.

(225) a. *Kakav auto **je** Ivan kupio?*

   what-kind-of car be$_{3sg}$ I. buy$_{ptc}$

   "What kind of car did Ivan buy?"

   b. *Kakav **je** auto Ivan kupio?*

   what-kind-of be$_{3sg}$ car I. buy$_{ptc}$

In terms of the analysis proposed by Schütze (1994), the enclitic auxiliary in (225b) occupies the C^0-position. This implies that the complex DP is split in syntax in this construction, i.e. the head noun has to be located lower than C^0, while the *wh*-adjective is placed in the specifier of CP position, as in (226).

(226)

```
                         CP
                        /  \
                   kakav    C'
                           /  \
                         je    IP
                              /  \
                          auto    IP
                                 /  \
                             Ivan    I'
                                    /  \
                                  I⁰    VP
                                         \
                                          V'
                                         /  \
                                       V⁰
                                        |
                                      kupio
```
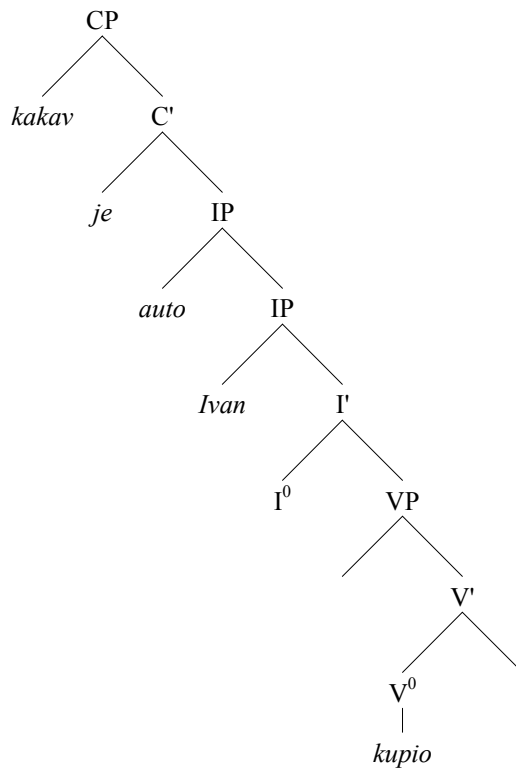
Since we are forced to explain (225b) as a result of a split of constituents, where the *wh*-adjective moves independently of the rest of the complex DP to the specifier of CP, with subsequent scrambling of the remnant DP, the set of data covered by the operation of PI is reduced dramatically. In fact, it covers only a certain subset of non-*wh*-constituents apparently being split by enclitics. The empirical motivation for the mechanism of PI shrinks correspondingly.

In terms of Halpern's (1992) approach, the situation is much more obscure. Halpern has to allow a syntactic split of DPs, since constructions like (227) are possible in Croatian (cf. Browne, 1976).

(227)   *Kakav   je   Ivan auto kupio?*
        what-kind-of be$_{3sg}$ I.   car   buy$_{ptc}$
        "What kind of car did Ivan buy."

As (227) shows, *wh*-adjectives can move independently of the rest of the DP. Taking into account (227), the syntactic structure of (225a) could be either (228a), or (228b).

(228) a.

```
                    CP
                   /  \
              kakav    C'
              auto    /  \
                     /    IP
                    /    /  \
                  je    IP
                       /  \
                   Ivan    I'
                          /  \
                        I⁰    VP
                              /  \
                            V⁰
                             |
                           kupio
```

b.

```
                    CP
                   /  \
              kakav    C'
                      /  \
                     /    IP
                    /    /  \
                 auto   IP
                       /  \
                     je    IP
                          /  \
                      Ivan    I'
                             /  \
                           I⁰    VP
                                 /  \
                               V⁰
                                |
                              kupio
```
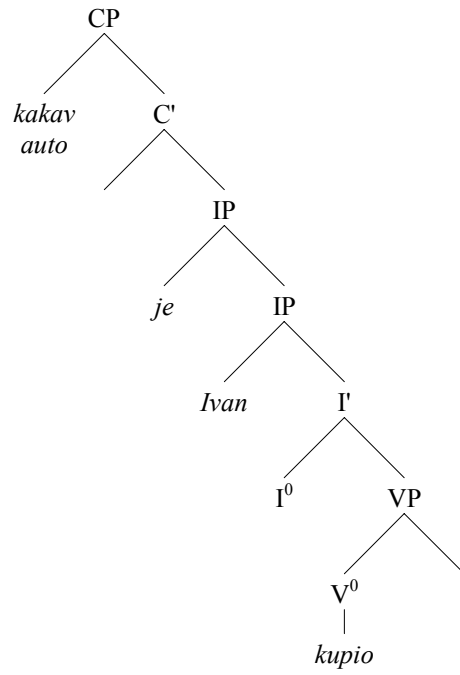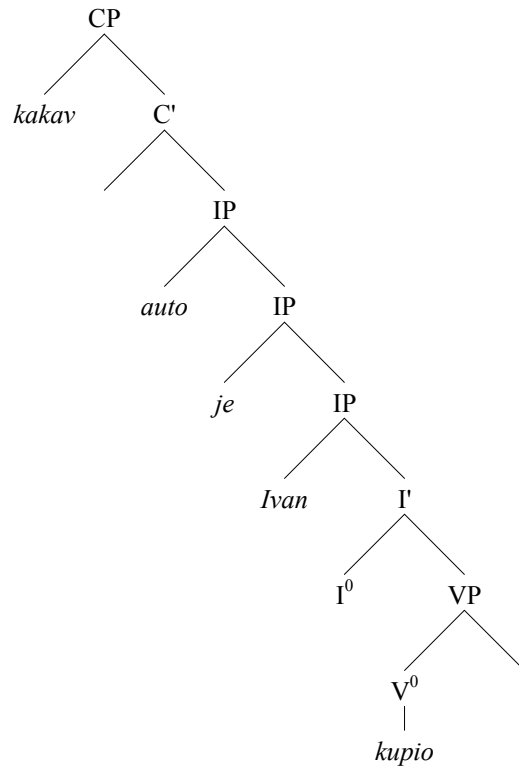
The picture gets even more obscured, if one considers *wh*-movement of elements inside

a complex PP. Examples (229) show that the preposition is pied piped with the *wh*-phrase.

(229) a. *Na kakav krov **je** Ivan skočio?*
    on what-kind-of roof be$_{3sg}$ I. jump$_{ptc}$
    "On what kind of roof did Ivan jump?"

  b. *Na kakav **je** krov Ivan skočio?*
    on what-kind-of be$_{3sg}$ roof I. jump$_{ptc}$

Construction (229b) can only receive a structural analysis as in (230), where in both, Halpern's (1992) and Schütze's (1994) type of analysis the PP is split in syntax.

(230)
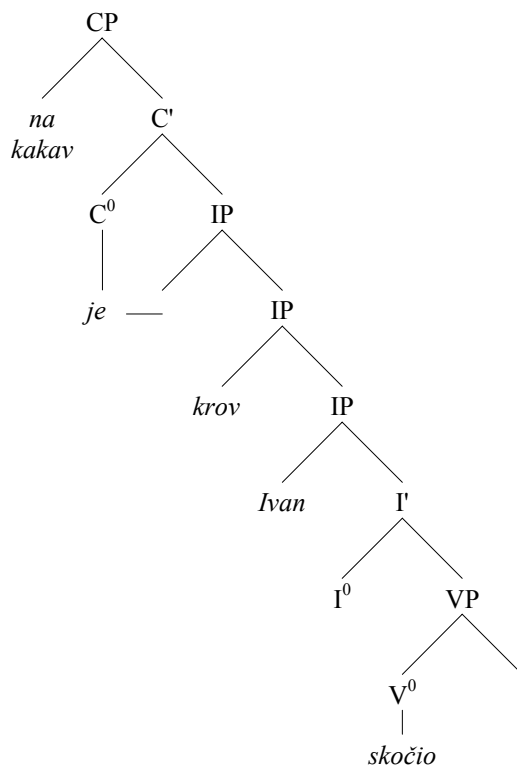
The necessary assumptions with respect to constructions like (229b) are that one *wh*-phrase has to move to the specifier of CP in *wh*-questions. If enclitics are located lower than the landing site of *wh*-phrases, the construction in (229b) can only be analyzed as

in (230). Therefore, PI-approaches have to allow for syntactic splits of PPs. Such splitting is not unproblematic, as the examples in (231) show. It is not possible to extract constituents out of PPs, i.e. PPs are islands for extraction.

(231) a. * *Što*$_i$ ***je***   *Ivan skočio na ravno* t$_i$?
              what be$_{3sg}$ I.   jump$_{ptc}$ on flat

       b. * *Ivan* ***je***   *krov*$_i$ *skočio na ravni* t$_i$.
              I.   be$_{3sg}$ roof   jump$_{ptc}$ on flat

If constructions like (229b) are the result of a syntactic split of PPs, it is necessary to provide a plausible solution for the problem that, on the one hand, PPs are islands for extraction, and, on the other hand, a split of such PPs is a syntactic phenomenon. Halpern (1992) suggests an analysis in which the NP-complement is *Right Node Raised* (RNR) to the right of the PP in the base position, as illustrated in (232).

(232)
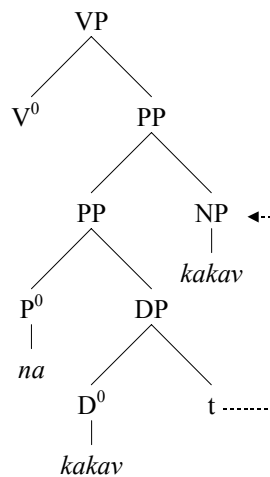
A subsequent *wh*-movement of the remnant PP-part would result in a structure like (229b). Already conceptually RNR appears to be problematic, since it is difficult to motivate it for other types of constructions. A detailed discussion can be found in the following sections. Empirically, it is predicted that a word order, as in example (233) is possible, in which one might assume that the remnant PP is scrambled to some position

between the subject and the VP, and the remainder of the PP-shell is topicalized.[45]

(233) * *Krov **je***   *Ivan na ravni skočio.*
      roof be_{3sg} I.   on flat jump_{ptc}

Further stipulations appear to be necessary in the PI-approach in order to avoid such problems. Given that in the PI-approach it is even necessary to allow for syntactic split of PPs, the empirical motivation for such a powerful mechanism reduces even further. The only relevant constructions appear to be complex subject DPs. However, the possibility to split constituents in syntax might allow for constructions in which enclitics split syntactic constituents to be analyzed in a similar way. It is not clear at all, to what extend the mechanism of PI contributes to the analysis and to the understanding of apparent splits of syntactic constituents. It rather seems to be an unmotivated and conceptually problematic extension of the theory of grammar, which leads to massive over- and undergeneration.

In the following, more empirical problems for prosodic analyses in general will be discussed in more detail. In particular, the syntax of split constituents is discussed in a separate section.

4.1.3.3 Enclitics in Deeper Positions

The analyses proposed in Zec and Inkelas (1990) in its strong version predicts that enclitics in general occupy the second position in the clause. The examples discussed in the previous sections show that this strong version cannot be maintained. Enclitics in Croatian occupy a relative third or fourth position in prosodic terms in examples like (234).

(234) a.   *Čovjeka, koji **mi je**   pomogao, nisam   više   sreo.*
         man   who me be_{3sg} help_{ptc}   NEG-be_{1sg} longer meet_{ptc}
         "I didn't meet the man that helped me anymore."

---

[45] PP-topicalization and *wh*-movement are generally possible, as has been shown in the previous discussion.

b. *Ivan tvrdi, da **mu ga je** Marija dala.*

I. claim$_{3sg}$ that him it be$_{3sg}$ M. give$_{ptc}$

"Ivan claims that Maria gave it to him."

c. *Nada, sresti **ga**, bila **je** velika.*

hope meet$_{inf}$ him be$_{ptc}$ be$_{3sg}$ great

"The hope to meet him was great."

Enclitics are located in the second position in relative clauses (234a), resulting in an absolute third position with respect to the whole clause. In embedded finite clauses, the enclitic cluster appears string adjacent to the complementizer *da* (234b), which results in an absolute fourth position in the clause. Furthermore, in constructions with noun selected infinitives, as in (234c), the enclitic appears in an absolute third position.

On the basis of the assumptions formulated in prosodic accounts for enclitic placement in Croatian, one would expect all requirements from enclitics to be fulfilled in any position that is not the absolute string initial position. The additional hypothesis formulated in Zec and Inkelas (1990) is that enclitics have to be placed after the initial prosodic word. So far, numerous empirical arguments against the absolute nature of this constraint have been presented. In fact, it appears that the 1W-constraint can only be maintained in a restricted version, where the restriction takes into account the relative syntactic context. That is, in clausal domains enclitics occupy a position immediately after the initial prosodic word. The empirical facts discussed so far have shown that even this stronger formulation leads to overgeneration. The only way out would be to say that sometimes the 1W-constraints applies, where sometimes means rather seldom. The empirical challenge for a prosodic analysis is to provide clear empirical facts that allow for only a prosodic explanation.

Several cases, where prosodic approaches over- and undergenerate, were discussed in previous sections. The following data shows that prosodic accounts massively undergenerate in other cases. The examples in (235) show that the enclitic cluster can appear after a complex syntactic constituent, not after the first, but rather after the third or fourth prosodic word.

(235) a. *U nekoj staroj kući je   Ivan stanovao.*
           in some old   house be_{3sg} I.   live_{ptc}
           "Ivan lived in some old house."

       b. *Novi auto Marijinog brata je   Ivan razbio.*
           new car M.   brother be_{3sg} I.   crash_{ptc}
           "Ivan crashed the new car of Mary's brother."

It is also possible for the enclitic auxiliary in (235) to appear in some third position, apparently inside the complex syntactic constituent, as in (236).

(236) a. *U nekoj je   staroj kući   Ivan stanovao.*
           in some be_{3sg} old   house I.   live_{ptc}

       b. *U nekoj staroj je   kući   Ivan stanovao.*
           in some old   be_{3sg} house I.   live_{ptc}

       c. *Novi je   auto Marijinog brata   Ivan razbio.*
           new be_{3sg} car M.   brother I.   crash_{ptc}

       d. *Novi auto je   Marijinog brata   Ivan razbio.*
           new car be_{3sg} M.   brother I.   crash_{ptc}

As has been shown on the basis of, for example, the data in (235), the generalization that enclitics are placed after the first prosodic word is to strong. It has been demonstrated that it is necessary to formulate a disjunctive generalization which states that enclitics are either placed after the first prosodic word, or after the first syntactic constituent in a clause. On the basis of examples like (236), even the disjunctive formulation of the constraint is not compatible with the empirical facts. In cases like (236) prosodic analyses undergenerate. One might argue that the constructions in (236) are cases with split constituents, i.e. with scrambling of the right subconstituent of some

complex constituent, with subsequent topicalization of the remnant. If this would be constructions with split syntactic constituents, it appears to be more and more questionable whether a prosodic constraint is involved in the placement of enclitics at all.

4.1.3.4 Cross-linguistic Comparison

In contrast to Croatian, the placement of enclitics in Polish is not restricted to the second position. Both languages make use of nearly the same class of sentential enclitics. As mentioned earlier, enclitic pronouns in Polish for example, can occupy different positions in the clause, as in the examples in (237).

(237) a. *Wczoraj Marek rzucił go na ten dach.*
           yesterday M.   throw_ptc it   on this roof
           "Marek throw it on this roof yesterday."

       b. *Wczoraj Marek go rzucił na ten dach.*
           yesterday M.   it   throw_ptc on this roof

       c. *Wczoryj go Marek rzucił na ten dach.*
           yesterday it M.   throw_ptc on this roof

As already mentioned earlier, It cannot be assumed that pronominal enclitics occupy a fixed position in the clause. Further, enclitic placement in Polish does not seem to be constrained in the same way as in Croatian, in other words, the placement after the first prosodic word does not appear to be an active constraint in Polish. This is one of the basic differences between cliticization phenomena in Croatian and Polish. However, there is also a striking similarity between Croatian and Polish. Like in Croatian, enclitics apparently split up complex constituents, as in (238) and (239).[46]

---

[46] The orthographic rules of Polish require that the participle and the auxiliary in the examples in (239) are written as one word.

(238) a. *Marek zielony samochód* **mu** *kupił.*

M.   green   car   him buy$_{ptc}$

"Marek bought him a green car."

b. *Marek zielony* **mu** *samochód kupił.*

M.   green him car   buy$_{ptc}$

(239) a. *My wczoraj   na   śliski   dach skoczyli* **śmy**.

we yesterday on   smooth roof jump$_{ptc}$ be$_{1pl}$

"We jumped on a smooth roof yesterday."

b. *My wczoraj   na   śliski   **śmy** dach skoczyli.*

we yesterday on   smooth be$_{1pl}$ roof jump$_{ptc}$

If the 1W-condition does not apply to Polish, there is no obvious reason for enclitics to appear inside of complex syntactic constituents. Also, if enclitics in Polish do not appear in a fixed position in the clause, which is assumed to be one of the necessary conditions for PI to apply, constructions like (238b) and (239b) are rather cases of syntactic constituent split than the results of *Last Resort* prosodic operations. Similar constructions can be found in other Slavic languages.

4.1.3.5 Properties of Prepositions

Zec and Inkelas (1990) assumed that examples like (195) are excluded because prepositions in (Serbo-) Croatian can only be realized as unstressed, i.e. as proclitic to their complement. The examples in (195), repeated here as (240), were explained in terms of the prosodic status of the preposition and lexicalized prosodic requirements of enclitics.

(240) a. *Petar* **je**   *u kući.*

P.   be$_{3sg}$ in house

"Petar is in the house."

b. *U kući **je** Petar.*

    in house be_{3sg} P.

c. * *U **je**   kući   Petar.*

    in be_{3sg} house P.

The ban on enclitic auxiliary to appear in the position between the preposition and the nominal complement in (240c) results from the clash of basic properties of prepositions in (Serbo-) Croatian and the assumed lexical properties of enclitics. In particular, it is assumed that prepositions can never receive a prosodic representation of a prosodic word, i.e. they cannot be stressed, and therefore they are not able to fulfill the prosodic subcategorization requirement of enclitics. The data in (241), however, shows that prepositions can receive contrastive stress (cf. Wilder and Ćavar, 1994a; Ćavar, 1996).

(241)   *Ivan je   skočio NA, a   ne   POD   stol.*

        I.   be_{3sg} jump_{ptc}on and not under table

        "Ivan jumped on the table, not under it."

In this respect, prepositions differ from, for instance, enclitic pronouns. Enclitic pronouns can never receive contrastive stress, as the examples in (242) show.

(242) * *Vidio sam **ga**,   a   ne   (n)ju.*

       see_{ptc} be_{1sg} him, and not her

Furthermore, prepositions behave in phonological terms similar to the negation particle, as discussed in chapter 2. As mentioned in chapter 2, the examples in (243) show that prepositions license enclitic pronominal complements.

(243)   *Popeo se   na-**nj**.*

       climb_{ptc} self on-it

       "He climbed on it."

The preposition in (243) is realized as a heavy syllable, i.e. it receives a bimoraic representation on the phonological level. It is not possible to combine the enclitic pronoun in (243) with a monomoraic preposition, that is, the vowel lengthening of a monosyllabic preposition is obligatory, if the prepositional complement is enclitic. Example (244) illustrates different realizations of prepositions that are possible in various contexts.[47]

(244)   *nā njega — na-njega — nā-nj — * na-nj*
         on him/it

In particular, (244) shows that prepositions may host enclitics. The generalization presupposed in Zec and Inkelas (1990) in the explanation of (240) is not correct for Croatian.[48]

One important property of most of the prepositions is their default monosyllabic and monomoraic phonological representation. In the unmarked case, such prepositions are proclitic to their complement. Nevertheless, they can also be realized as independent accented words (e.g. Barić et al., 1990; Barić et al., 1995: 280 f.), showing heaviness in form of vowel length. In terms of Moraic Theory, the different phonological realizations of prepositions are expressed by assuming that proclitic prepositions receive monosyllabic and monomoraic representations, whereas full form prepositions are bimoraic and monosyllabic prosodic words.

Polysyllabic prepositions as, for example, *ispred* ("in front of") are not considered to be proclitic in the same way as prepositions like *u* ("in") or *na* ("on"). Such prepositions are assumed to be morphologically complex, namely, they consist of several submorphemes that represent atomic propositions. In the following discussion will focus on monosyllabic prepositions that may be realized as proclitics, and stressed prosodic words.

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[47] Long vowels are marked with a diacritic, as for example '*ā*', while short vowels are not marked diacritically.

[48] It might be the case that in dialects of Serbian prepositions indeed cannot be stressed, in particular in the Belgrade dialect considered in Zec and Inkelas (1990).

With respect to (244), the assumption is that the proclitic form of the preposition *na* ("on") is monosyllabic and receives a monomoraic phonological representation, whereas the full form of the preposition is realized with a long vowel. In terms of Moraic Theory, one might assume that the two forms of the same preposition only differ in their structural representation. The proclitic form receives a monomoraic, and the full form a bimoraic phonological representation. In terms of the framework proposed by Hayes (1989a), one might analyze the obligatory lengthening of the monosyllabic preposition in combination with an enclitic pronominal complement in (244) as a case of compensatory lengthening. The underlying representation of the pronoun contains two syllables, where every single syllable is light by default. Phonological reduction of the pronoun leaves behind an unbound mora, which is subsequently bound to the preposition, resulting in a heavy syllable. The possibility to realize a heavy monosyllabic preposition in combination with a full form pronominal complement in (244) is restricted to marked contrastive contexts. In other words, the default representations are comparable to the observations with respect to the negation particle, in that they are complementary. If the prepositional complement is enclitic, the preposition retracts stress and has to be realized as heavy. On the other hand, if the prepositional complement is a stressed prosodic word, the preposition procliticizes to the complement, and, no stress retraction takes place. The parallel observation was made in chapter 2 with respect to monosyllabic negation particles and their verbal hosts. If the finite verb that combines with the negation particle is enclitic, the negation particle retracts stress and is realized as a heavy bimoraic syllable. In all other cases it is proclitic to the finite verb.

Having established that prepositions can be stressed, and, as such may host enclitic pronominal complements, we turn to the following examples in (245).

(245) a. *Na Ivana se naslonila.*

  on I. self lean_{ptc}

  "She was leaning on Ivan."

  b. * *Na* / * *Nāse njega naslonila.*

  on self him lean_{ptc}

c. *Nā **nj** se naslonila.*

on him self lean_ptc

"She was leaning on him."

The contrast between (245a) and (245b) shows that enclitics cannot appear inside of PPs, even if the preposition bears the word accent. Yet, the preposition is able to host an enclitic pronominal complement. In this case, it is also able to host a sentential enclitic, as in (245c). Therefore, the ungrammaticality of constructions like (245b) does not seem to be related to the prosodic properties of prepositions, but rather to other properties of PPs.

Although the use of a preposition with an enclitic pronominal complement apparently is perceived as archaic in Bosnian (Nedzad Leko, p.c.), and does not seem to exist in Serbian, in Croatian both the full and proclitic form of the relevant monosyllabic prepositions are in use, as well as the special prepositional enclitic form of the pronoun. The following example from the introduction of Barić et alii (1996: 5) illustrates that such enclitic pronouns are used in modern standard Croatian.

(246) *Zavod za jezik   nada se da će   naša stručna i   društvena*

institute for language hope_3sg self that want_3sg our   expert   and social

javnost prihvatiti ovaj priručnik i   time   opravdati napore koji   su

public accept_3sg this handbook and this-way justify_3sg effort which be_3spl

*u **nj** uloženi.*

in it put-in_ptc

"The institute for language hopes that experts and general public accept this handbook, so that the expenditure that was invested in it will be justified."

The conclusion so far is that prepositions are able to host enclitics in Croatian if they are stressed. The generalization presupposed in Zec and Inkelas (1990) does not hold for

Croatian.[49]

Spencer (1991) observes that enclitics in Polish cannot cliticize to certain function words, as for example the negation particle *nie* or prepositions. At least for prepositions this does not seem to be the case. The following examples show that enclitic pronouns in Polish may encliticize to prepositions, if they are pronominal complements. In this respect, Polish and Croatian have similar properties.[50]

(247) a. *Marek skoczył na dach.*

M.   jump_{ptc}   on roof

"Marek jumped on a roof."

b. *Marek skoczył na ń wczoraj.*

M.   jump_{ptc}   on it yesterday

"Marek jumped on it yesterday."

Like in Croatian, a preposition hosts a reduced enclitic pronoun in (247b). One might consider one of the preceding words to host both, the preposition and the enclitic pronoun. Example (248) shows that the PP can be located in clause initial position in Polish, where the only element that is available as a host for the enclitic pronoun is the preposition.[51]

(248) *Na ń Marek skoczył.*

on it M.   jump_{ptc}

Not only in Croatian, but also in other Slavic languages it is possible to cliticize to prepositions. The prosodic properties of prepositions do not seem to be the responsible

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[49] As already mentioned in Wilder and Ćavar (1994a) and Ćavar and Wilder (1994), prepositions may prosodically function as prosodic words if they are, for example, stressed in contrastive constructions with elliptic complements of the preposition.

[50] Constructions like (247b) are also possible in Czech (Veselovská, p.c.), as well as in other Slavic languages.

[51] Native speakers of the Warsaw dialect consider combinations of prepositions with enclitic pronouns as archaic. Nevertheless, such constructions are not judged to be ungrammatical.

factor for the ungrammaticality of examples like (245b).

If the ungrammaticality of constructions like (245b) is not the result of special prosodic properties of prepositions, or their prosodic 'deficience', how else can it be explained? An explanation for the ungrammaticality of example (245b) might be found, if the examples in (249) are taken under consideration.

(249) a. * [*Takvoj situaciji*]$_i$ *smo* *se* *našli* *u* t$_i$ *, da ...*
                      such   situation   be$_{1pl}$ self find$_{ptc}$ in   that

      b. * *U*$_i$ *smo* *se* *našli* [$_{PP}$ t$_i$ *takvoj situaciji*], *da ...*
             in be$_{1pl}$ self find$_{ptc}$ such   situation   that

      c. *Našli* **smo** **se** *u* *takvoj* *situaciji, da ...*
             find$_{ptc}$ be$_{1pl}$ self in such   situation that
             "We found ourselves in such a situation that …"

Example (249a) shows that in Croatian complements of prepositions cannot be fronted independently of the preposition, i.e. preposition stranding is not possible and preposition phrases are islands for extraction. Furthermore, it is not possible to move the preposition alone and leave the complement behind, as example (249b) shows.

Since, one the one hand, prepositions in principle can host enclitics and, on the other hand, they appear to be opaque for movement operations, a syntactic explanation for constructions like (245b) appears to be more appropriate. As has been demonstrated in the previous sections, one is forced to assume that syntactic constituents in Croatian can be split in syntax. In this case enclitics appear between the left and the right part of a complex constituent. A preposition cannot be separated from its complement in syntax, as shown in examples in (249), and enclitics cannot be placed between a preposition and its complement. The correlation between these two phenomena is less striking, if the responsible constraints are assumed to be syntactic in nature.

4.2 Syntactic Accounts

Numerous analyses of enclitic placement in (Serbo-) Croatian assume that enclitics are placed in a fixed syntactic position. In the following, this will be referred to as the 'fixed placement hypothesis'. However, there are diverging opinions about the relevant syntactic position. While Wilder and Ćavar (1994a, b), Franks and Progovac (1994), Schütze (1994), Progovac (1996), and Mišeska_Tomić (1996) assume that enclitics are located in C^0, Rivero (1994b) assumes that it is a specifier position between CP and IP, and Percus (1993) and Roberts (1994) assume that enclitics occupy the head position of such a projection. Even Halpern's (1992) analysis relies on the assumption that the position of enclitics is fixed, i.e. they are adjoined to IP, or to a maximal projection between CP and IP in terms of Halpern (1995). Alternative approaches assume that the landing site of enclitics is variant, i.e. enclitics occupy the highest syntactic head position (cf. Franks, 1998). In the following, I will refer to this hypothesis as the 'dynamic placement hypothesis'. In principle, Wilder and Ćavar (1994a), and Ćavar and Wilder (1994) might be assigned to this group of analyses, since they assume that the highest head is always the C^0-position, while it still might be the case that in infinitives the CP-projection is missing, which forces enclitics to be located in lower functional projections. In his recent work, Bošković (1997a, 1997b) argues explicitly against a unique position of enclitics in syntax, providing empirical arguments that are supposed to prove this point of view.

In the following the arguments for a syntactic analysis of enclitic placement are summarized, and the pro- and contras of different proposals are discussed in detail. It is argued that in terms of X-bar theory, the fixed placement hypothesis appears to be most promising, while newer theoretical considerations about syntactic structure (cf. Chomsky, 1995) favor the dynamic placement hypothesis.

4.2.1 Fixed Syntactic Position for Enclitics

In the previous discussion, numerous placement restrictions for enclitics point towards a syntactic solution. It has been shown that prosodic accounts and analysis that utilize the

mechanism of *Prosodic Inversion* fail to explain empirical facts and make wrong predictions. At the sight of massive indication for syntactic constraints on the placement of enclitics, Wilder and Ćavar (1994a) proposed an analysis which assumes that enclitics are adjoined to C^0 in syntax. This analysis results from basic generalizations for the placement of enclitics, mentioned in chapter 2. The basic empirical facts are repeated in the following. First, enclitics have to be string adjacent to the complementizer *da*, as in (250).

(250) a.   *Ivan kaže, da **mu je** Marija dala poljubac.*

       I.   say$_{3sg}$ that him be$_{3sg}$ M.   give$_{ptc}$ kiss

       "Ivan says that Maria gave him a kiss."

      b. * *… da Marija **mu je** dala poljubac.*

         that M.   him be$_{3sg}$ give$_{ptc}$ kiss

The following examples show that not only maximal syntactic constituents are not allowed to intervene between the complementizer and the clitic cluster, but also heads like, for instance, the full form of the finite auxiliary in (251).

(251) a.   *Ivan kaže, da nije   Marija nazvala Marina.*

       I.   say$_{3sg}$ that NEG-be$_{3sg}$ M.   call   M.

       "Ivan says that Maria didn't call Marin."

      b.   *Ivan kaže, da **ga** nije   Marija nazvala.*

       I.   say$_{3sg}$ that him NEG-be$_{3sg}$ M.   call$_{ptc}$

       "Ivan says that Maria didn't call him."

      c. * *Ivan kaže, da nije   **ga** Marija nazvala.*

       I.   say$_{3sg}$ that NEG-be$_{3sg}$ him M.   call$_{ptc}$

Example (251) shows that it is not possible for a full-form auxiliary to intervene between the complementizer and the clitic cluster, although the auxiliary seems to be

able to occupy some head position higher than the subject DP in (251a).

The adjacency requirement between a complementizer and a clitic cluster, as argued in Wilder and Ćavar (1994a), is best captured in terms of syntactic head adjunction. The assumption is, therefore, that enclitics are in general right adjoined to the C^0 position in the syntactic surface representation.

Second, enclitics have to be string adjacent to the initial *wh*-phrase in simple constituent questions, as in (252).

(252) a.   *Što je   Ivan kupio?*
            what be$_{3sg}$ I.   buy$_{ptc}$
            "What did Ivan buy?"

       b. * *Što   Ivan je   kupio?*
            what I.   be$_{3sg}$ buy$_{ptc}$

If one assumes, in terms of X-bar theory, an underlying sentence structure as in (253), the examples in (250) and (252) find an explanation by assuming that the enclitic auxiliary is placed in C^0. The logic of X-bar theory and the generalizations with respect to examples (250) and (252) dictate the analysis in (253).

(253)
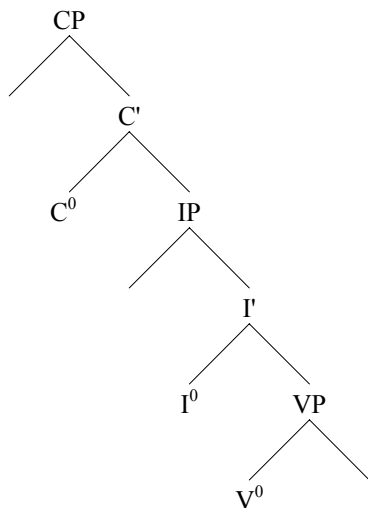
On the basis of the general assumption that in *wh*-questions in Croatian one *wh*-phrase has to be located in the specifier of CP position in the surface representation, and that complementizers occupy the head of CP position, the structural analysis of the examples (250) and (252) is given in (254a) and (254b) respectively. One basic assumption about the placement of enclitics in Wilder and Ćavar (1994a), and Ćavar and Wilder (1994) is that enclitics are right adjoined to C^0, as shown in (254a).[52]

(254)   a.

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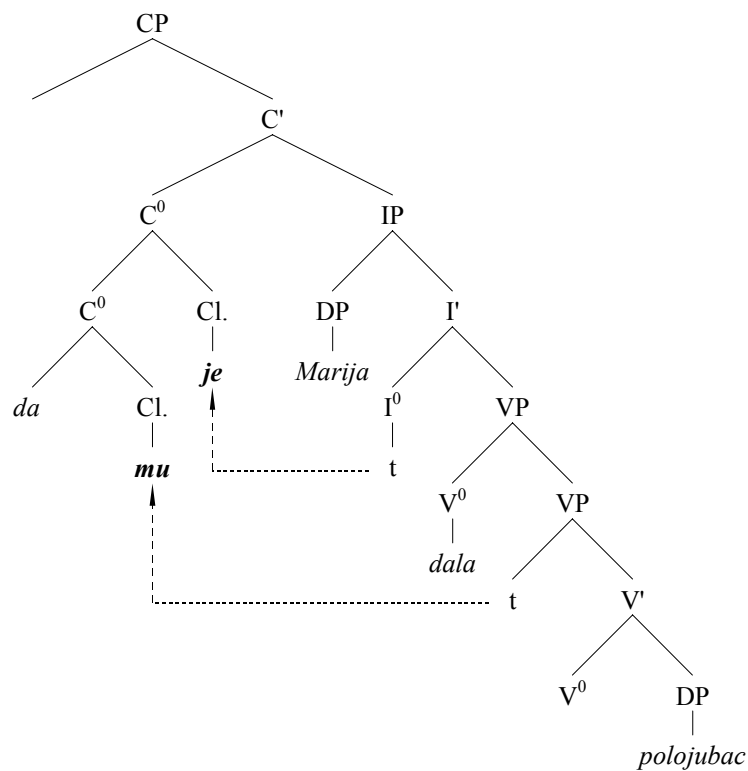
[52] The structures in (254) are simplified, to represent just the basic assumptions about the underlying structural properties of the relevant examples.

b.
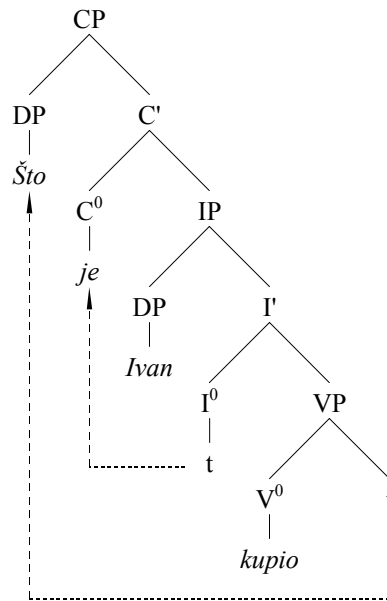
Adjacency between the complementizer *da*, and the enclitic cluster is a natural consequence of head adjunction of the cluster to C^0, which is the base generation site for the complementizer. In an underlying structure like (254a), only heads are expected to intervene between the complementizer and the enclitic cluster. Since the only head that is compatible with the C^0-position is the complementizer or a verb, no material is expected to intervene. A similar analysis was proposed, for example, in Franks and Progovac (1994), and Progovac (1996).

The predictions of the C^0-placement analysis are that one maximal projection in specifier of CP, and only one head, or one cluster of heads may precede enclitics in Croatian. There are numerous problems with this analysis. One basic problem has to do with the trigger for the movement of enclitics. If one excludes the possibility of base generation, the question is, why these elements should right adjoin to C^0. Another problem is related to the assumption that enclitics are right adjoined to C^0, whereas other elements adjoin to the left. Consider the examples in (255), where a full form finite auxiliary (255a) or a finite main verb (255b) precedes the enclitic cluster.

(255) a. *Nije   mu ga Ivan dao.*
         NEG-be$_{3sg}$ him it I.   give$_{ptc}$
         "Ivan didn't give it to him."

b. *Daje **mu ga** Ivan.*

give$_{3sg}$ him it   I.

"Ivan gives it to him."

The example in (255a) is analyzed as in (256), with the finite verb moving to C^0 and the enclitics right adjoined to it. Since the proponents of the C^0-analysis have to assume that the position of the finite auxiliary is derived, it has to be placed in C^0 either by a substitution operation or by adjunction.

(256)
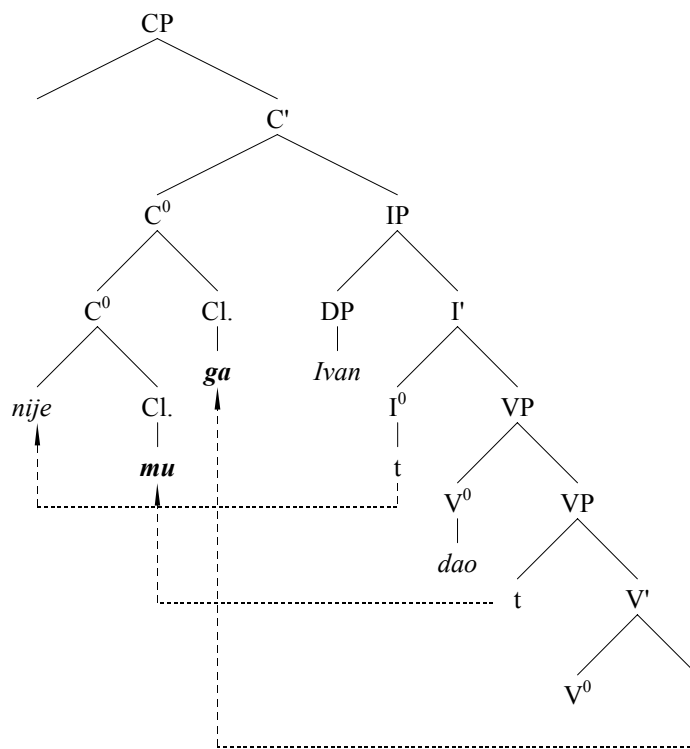
If the placement of the auxiliary is a substitution operation, i.e. the auxiliary head replaces the C^0-head, a strict order of derivational steps has to be assumed. The auxiliary head has to move first in order to replace the C^0-head, and the enclitics adjoin in subsequent steps. One could argue that, in any case, adjunction to the right of C^0 and substitution might be problematic because it represents a cyclicity violation in some sense. However, if movement of the auxiliary is not substituting the C^0-head, it can be

analyzed as either an adjunction to the left or an adjunction to the right of an empty C^0-head. If one assumes that it is adjunction to the left, it is unclear, why enclitics cannot adjoin to the left. On the other hand, if one assumes that the auxiliary adjoins to the right, ordering of derivational steps is necessary. Furthermore, ordering of the elements inside the enclitic cluster has to established in some way, in addition to the ordering with respect to the host.

As has been discussed in chapter 2, the only really fixed slot inside the enclitic cluster is the position of the particle *li*. This particle has always to appear in the initial position in a cluster. One basic assumption about this particle is that it is base generated in C^0 (cf. Wilder and Ćavar, 1994a; Bošković, 1998b) and all other enclitics are adjoined to it, as well as full form finite auxiliaries or finite verbs in yes/no-questions, as in (257).

(257) a. *Jesi **li mu ga** dao?*
           be$_{2sg}$ Pt him it give$_{ptc}$
           "Did you give it to him?"

       b. *Daješ **li mu ga**?*
           give$_{2sg}$ Pt him it
           "Do you give it to him?"

The assumption that a finite verb, be it an auxiliary or a main verb, move to C^0 in yes/no-question does not seem to be problematic. Such structures are attested in numerous other languages. However, if the underlying assumption is that the particle *li* is base generated in C^0, the conclusion must be that the finite verb adjoins to the left of it. One possible analysis of (257b) in terms of Wilder and Ćavar (1994a) is presented in (258).

(258)
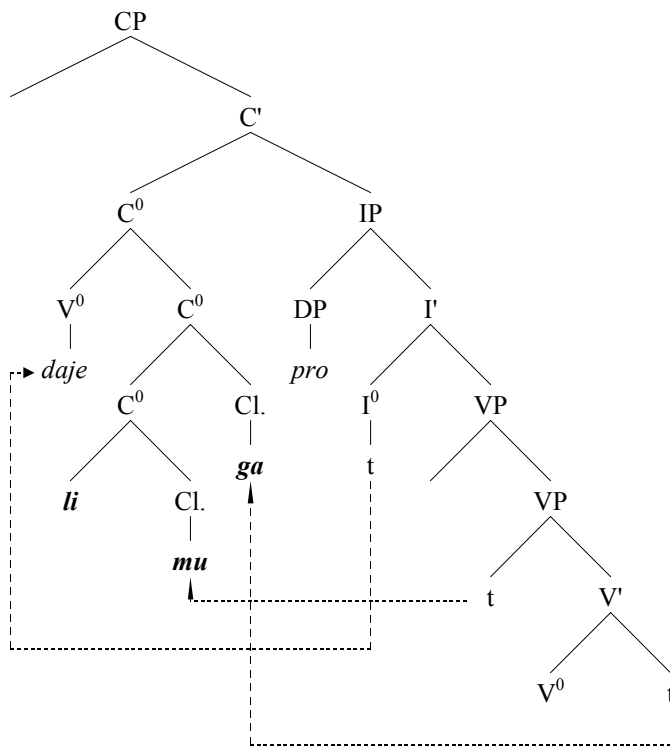
Like with all other approaches that assume that enclitics are placed in C^0, the problem is to motivate the movement or base generation of the relevant elements in C^0. Yet, the structural make up of the resulting C^0 remains unclear. Recent developments in syntactic theory either exclude structures as in (258), or require the different operations in (258) to be motivated by of matching features of the landing sites and the moved elements. Plausible solutions have not been provided yet. Furthermore, the fixed position analyses still rely on the assumption that enclitics are lexically specified for prosodic subcategorization. This assumption, however, is rather problematic, as mentioned in the previous sections.

Numerous empirical problems for such an analysis have been discussed in the literature (cf. Schütze, 1994, 1996; Ćavar, 1996; Bošković, 1998; Franks, 1998). Some of the problems are related to split syntactic constituents. It has been argued that certain constructions require a 1W-placement analysis in terms of prosody, since it can be shown that the constituents cannot be split in syntax. Basically, the defense of the syntactic approach is based on the assumption that in all cases in which enclitics apparently appear inside a complex syntactic constituent, the respective constituent is

split in syntax via movement. Since the topic of split constituents deserves more attention, because of its complexity, the relevant discussion will be postponed to the next chapter. In the following, several predictions of the syntactic approach that are related to word order phenomena without referring to split of constituents will be discussed in more detail. Before we continue with the discussion of empirical facts, the dynamic placement analyses will be introduced.

4.2.2 Dynamic Syntactic Placement of Enclitics

The proponents of dynamic placement of enclitics (cf. Bošković, 1997a, 1997b; Franks, 1998) present several arguments against the assumption that enclitics are placed in a unique position in the clause in all structures. The dynamic placement analyses assume that enclitics can appear in any position in the clause. This may be a functional head position, like for example AGR-O or, in principle, an adjunction position to different maximal or minimal projections in the functional hierarchy.

There are on the one hand conceptual arguments, that are related to the basic assumption that not all sentences are CPs. The underlying idea is related here to economy considerations with respect to structural projections. The basic assumption formulated in Bošković (1997b) and Franks (1998) is that only the functional projections that are necessary for the elements in a numeration set are projected. In other words, if, for example, there is no complementizer in the numeration set, the C-projection is not represented in the syntactic structure built by the computational system. The natural consequence of this hypothesis is that not all sentences are CPs. It follows then that enclitics cannot be placed in the C^0 position in all the sentences. However, such argumentation is based on hypotheses that are not empirically well motivated. One could argue in the same way that the C-projection has to be present if enclitics are part of the underlying numeration set, since enclitics require the C^0-position, for instance for feature checking. Both types of conceptual arguments are weak.

The dynamic placement hypothesis is not unproblematic because of other reasons as well. In terms of the Minimalist Program (Chomsky, 1995), movement of elements is triggered by the need to check morpho-syntactic or interpretable features. If the enclitics

as morphemes with a certain set of features can appear in different positions, the assumption has to be that the corresponding features are realized also in different positions in the clause, or that the feature matrix of the enclitic elements depends on the syntactic type of construction. Since the latter possibility is unmotivated and conceptually problematic, the only possibility that remains is to assume that the same features may be realized in different positions in the clause. This assumption, however, is also problematic. If one assumes that the C-projection is a projection of certain functional features, which not only can be realized in the functional head C, but also constitute the defining properties of a C-projection, realizing these features in another functional projection is equal to saying that the resulting functional projection is both, some projection of X, and a projection of C (see Haider (1989) on the idea of matching projections). Conceptually, the proposal that enclitics surface in different positions in the clause is, as we see, more problematic than the hypothesis of a fixed position.

The conceptual arguments are neither strong, nor very convincing. Empirical facts are necessary to motivate such a view, otherwise the fixed placement hypothesis appears more appealing on conceptual grounds.

Beside the conceptual arguments against a unique position for enclitics in Croatian, Bošković (1997a, 1997b) and Franks (1998) present several empirical arguments, which are discussed in the following sections.

4.2.2.1 Participle Movement and the Particle *li*

One of the basic arguments against a fixed position for enclitics in (Serbo-) Croatian presented in Bošković (1997a/b) and Franks (1998) is based on examples with the particle *li*. The particle *li* is assumed to be a question particle.[53] Its base position is assumed to be the C^0-position. This assumption appears to be plausible in the context of the fixed placement hypothesis. In the analyses presented by Bošković (1997a/b) and Franks (1998), this is basically a stipulation, which is not further motivated. Given these assumptions, the basic observation is that participles cannot move in front of *li*, but finite main verbs can, as the contrast for Serbian in (259) is supposed to show.

(259) a. *Pije   **li** Jovan vino?*
$$\text{drink}_{3sg} \text{ Pt J.} \qquad \text{wine}$$
"Does Jovan drink wine?"

    b. * *Pio   **li je**   Jovan vino?*
$$\text{drink}_{ptc} \text{ Pt be}_{3sg} \text{ J.} \qquad \text{wine}$$

The argument against the fixed placement hypothesis is constructed as follows. The participle in (259b) obviously cannot move to the position that precedes the particle *li*. If *li* is base-generated in C^0, the conclusion is that the participle cannot move to C^0, or any other position provided by the projection of C. The examples (260), however, show that the participle can precede pronominal or auxiliary enclitics.

(260) a. *Pio   **je**   Ivan vino.*
$$\text{drink}_{ptc}\text{be}_{3sg} \text{ I.} \qquad \text{wine}$$
"Ivan drank wine."

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[53] See chapter 2 for a detailed discussion of the use and properties of the particle *li*, as well as for the relevant generalizations for Croatian.

b. *Pio*   ***ga je***   *Ivan.*

     drink$_{ptc}$ it   be$_{3sg}$ I.

     "Ivan drank it."

If the participle cannot move to C^0, as argued on the basis of (259b), then the enclitics in (260) have to be located lower in the structure.

As mentioned in chapter , the empirical facts for Croatian are not as stated in Bošković (1997a/b) and Franks (1998). Thus, the generalization that participles cannot precede the particle *li* does not hold for Croatian. Neither is the particle *li* a question particle in Croatian, nor is participle movement blocked in a position preceding the particle. The examples in (261) show that the participle can be realized in front of the particle *li* in declarative clauses, where the auxiliary is enclitic.

(261)   *Spavao* ***li je****!*

       sleep$_{ptc}$ Pt be$_{3sg}$

       "He really slept a lot."

There are numerous cases, in which the particle *li* is realized in non-*wh*-contexts, contributing a 'dubitative' interpretation. On the basis of the data in (259b) and (261), the generalization with respect to participle fronting in the context of the particle *li* has to be expressed as in (262).

(262)   **Participle fronting**

       Participle fronting is not possible in yes/no-questions.

In fact, the generalization above might be formulated even stronger. It is the case that participle fronting is excluded, in all *wh*-contexts. For yes/no-questions it is not surprising that only finite verbs are licensed in the projection of C. This appears to be a cross-linguistic phenomenon.

The example in (261) and different other examples of that type, which were discussed in chapter 2 suggest that participles can, and in fact do move to C^0, if it is assumed that the particle *li* is always base-generated in this position. This way, the

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participle placement argument in the contexts with the particle *li* support rather the fixed placement hypothesis. It definitely does not provide empirical evidence for the dynamic placement hypothesis.

4.2.2.2 Participle Movement and Adverbs

Another type of empirical arguments against the fixed placement hypothesis is presented in Bošković (1997a/b). Basically, he argues that, if one assumes that adverbs occupy fixed positions in the clause, it follows that enclitics cannot be located in a fixed position.

One basic assumption about the underlying word order in Serbian/Croatian is that direct objects are base-generated to the right of main verbs, resulting in an unmarked VO order. A further assumption with respect to the VP structure is that sentential adverbs are adjoined to some functional projection above of VP, that is, to TP in Bošković (1997: 145f), while all other adverbs are adjoined to VP itself. Note that the assumption about the position of adverbs is crucial for his arguments about verb placement.

The examples in (263) and (264) (Bošković, 1997: 144) show that participles may precede VP-adverbs in Serbian (to use Bošković's terminology).

(263) a. *Jovan je   potpuno   zaboravio Petra.*

           J.   be$_{3sg}$ completely forget$_{ptc}$ P.

           "Jovan completely forgot Peter."

      b. *Jovan **je**   zaboravio$_i$ potpuno* t$_i$ *Petra.*

           J.   be$_{3sg}$ forget$_{ptc}$ completely P.

(264) a. *Jovan **je**   juče   istukao Petra.*

           J.   be$_{3sg}$ yesterday beat$_{ptc}$ P.

           "Jovan beat Peter yesterday."

b.   *Jovan **je** istukao_i juče* t_i *Petra.*

    J.   be$_{3sg}$ beat$_{ptc}$ yesterday P.

However, as Bošković observes, the linear order between participles and sentential adverbs is less liberal than in Serbian. The examples (265) and (266) demonstrate that a participle may not precede a sentential adverb.

(265) a.   *Jovan **je** nesumnjivo istukao Petra.*

    J.   be$_{3sg}$ undoubtedly beat$_{ptc}$ P.

    "Jovan has undoubtedly beaten up Peter."

    b. * *Jovan **je** istukao_i nesumnjivo* t_i *Petra.*

    J.   be$_{3sg}$ beat$_{ptc}$ undoubtedly   P.

(266) a.   *Jovan **je** vjerovatno zaspao.*

    J.   be$_{3sg}$ probably   fall-asleep$_{ptc}$

    "Jovan probably fell asleep."

    b. * *Jovan **je** zaspao   vjerovatno.*

    J.   be$_{3sg}$ fall-asleep$_{ptc}$ probably

On the basis of the contrast between (263) and (265), Bošković (1997b) argues that the participle can move across VP-adverbs, while it cannot move across sentential adverbs. Since the latter are assumed to be base-generated adjoined to TP, participles seem to be able to move to a position outside of VP, but below TP. The following observation is supposed to support this view.

(267) a.   *Jovan **je** pravilno odgovorio Mariji.*

    J.   be$_{3sg}$ correctly answer$_{ptc}$ M.

    "Jovan answered Maria correctly."

    "Jovan did the right thing in answering Maria."

b. *Jovan **je** odgovorio pravilno Mariji.*

   J. be_{3sg} answer_{ptc} correctly M.

   "Jovan answered Maria correctly."

   *"Jovan did the right thing in answering Maria."

c. *Odgovorio **je** pravilno Mariji.*

   answer_{ptc} be_{3sg} correctly M.

   "He answered Maria correctly."

   *"He did the right thing in answering Maria."

Bošković (1997a) argues that in constructions in which a participle is fronted across an adverb that is ambiguous between a subject-oriented and a manner interpretation, only the manner interpretation is available, as in (267b) and (267c). If the surface position of the participle is below the adverb, as in (267a), both interpretations are available. The example in (268) illustrates this more clearly for another adverb, which is ambiguous between the two types of interpretation.

(268) a. *Jovan **je** mudro prodao svoju kuću.*

   J. be_{3sg} wisely sell_{ptc} his house

   "Jovan sold his house in a wise manner."

   "It was wise of Jovan to sell his house."

b. *Jovan **je** prodao mudro svoju kuću.*

   J. be_{3sg} sell_{ptc} wisely his house

   "Jovan sold his house in a wise manner."

   * "It was wise of Jovan to sell his house."

c. *Prodao **je** mudro svoju kuću.*

   sell_{ptc} be_{3sg} wisely his house

   "Jovan sold his house in a wise manner."

   * "It was wise of Jovan to sell his house."

The ambiguity between a manner and subject-oriented reading of the adverb *mudro* in (268) is assumed to be the result of structural differences. While the example (268a) with manner adverb reading is analyzed as in (269a), the same example with the subject-oriented reading is assumed to have a representation as in (269b).

(269)   a.

b.

```
                    AGR_SP
                   /      \
                 DP       AGR_S'
                 |       /      \
              Jovan   AGR_S^0    TP
                        |       /    \
                        je    AdvP    TP
                               |     /   \
                             mudro  T^0
                                      :
                                     VP
                                    /   \
                                        V'
                                       /   \
                                     V^0    DP
                                      |    /   \
                                   prodao svoju  NP
                                                 |
                                               kuću
```
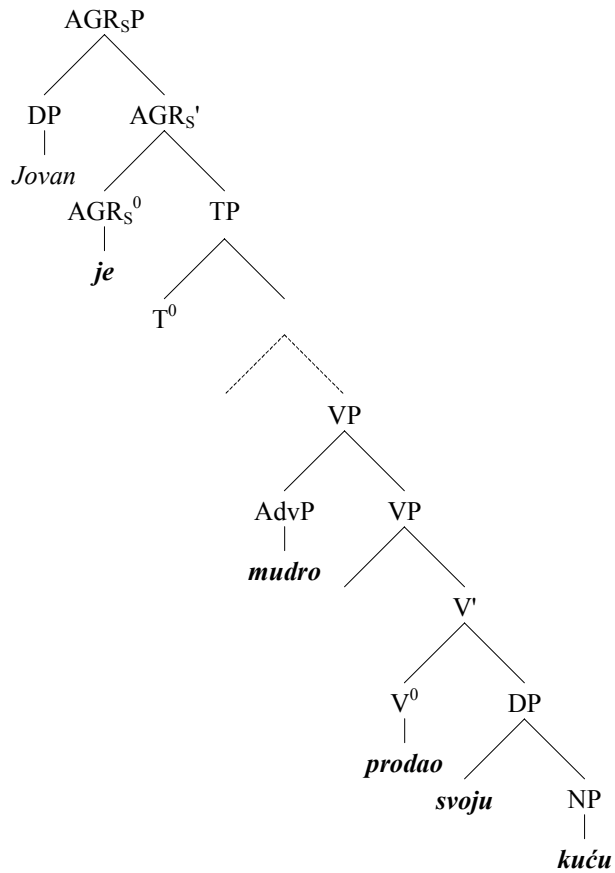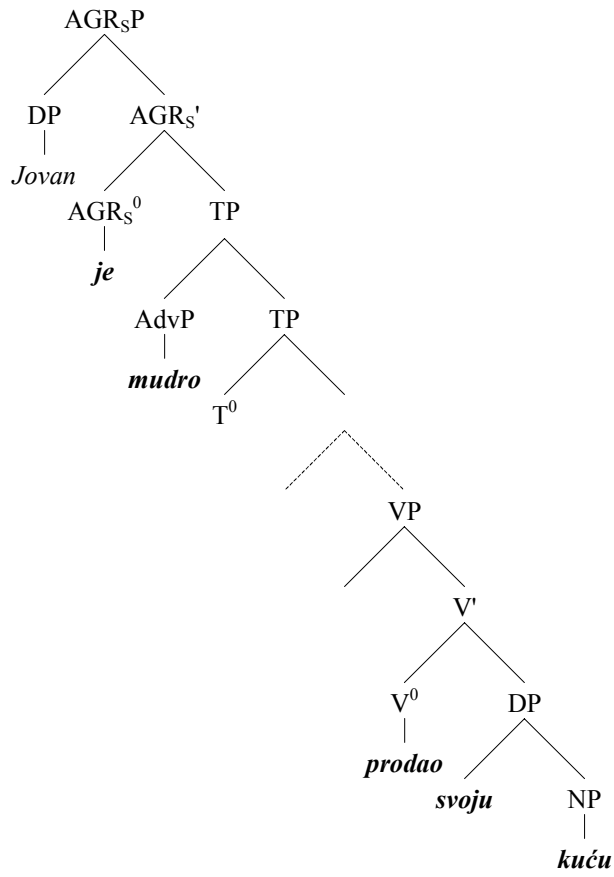
Whereas the enclitic auxiliary in the structure (269a) might even be located in the head position of TP, the structure for (268a) with a subject-oriented interpretation of the adverb *mudro* allows only for the structural analysis illustrated in (269b). The ban on the subject-oriented interpretation of the adverb *mudro* in (268b/c) is analyzed in Bošković (1997a/b) in structural terms. Constructions, in which the participle precedes the adverb are always constructions with the adverb adjoined to VP, and the participle is moved to some higher functional head, below T^0. The general claim is that participles can never move to the head of TP or higher. As mentioned earlier, participles can precede enclitics. If participles cannot move to T^0 or higher, they must be located in a lower position in such constructions. In particular, they cannot be located in C^0.

In general, the phenomena illustrated in (265) and (268) can be interpreted in various ways. One possibility is to account for the contrast structurally, as suggested in Bošković (1997a/b), and other work on adverb placement (cf. Alexiadou, 1997; Cinque, 1997). Another option would be to claim that adverbs may be located in different

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positions in syntax, and that the semantic component is responsible for establishing a representation for the interpretation of the different structures and adverb positions. In other words, the contrasts in (265) and (268) could be understood not as syntactic in nature, as a result of different scope relations between the predicate and the adverb. An argument that was presented in Franks (1998) points towards the latter option. Franks (1998) observes that the subject oriented interpretation of ambiguous adverbs is not possible, if finite verbs are preceding the adverb, as in examples (270) and (271).

(270) a. *Jovan pravilno odgovara Mariji.*

      J.   correctly answer$_{3sg}$ M.

      "Jovan answers Maria correctly."

      "Jovan did the right thing in answering Maria."

  b. *Jovan odgovara pravilno Mariji.*

      J.   answer$_{3sg}$ correctly M.

      "Jovan answers Maria correctly."

      *"Jovan did the right thing in answering Maria."

(271) a. *Jovan mudro prodaje svoju kuću.*

      J.   wisely sell$_{3sg}$ his   house

      "Jovan sells his house in a wise manner."

      "It is wise of Jovan to sell his house."

  b. *Jovan prodaje mudro svoju kuću.*

      J.   sell$_{3sg}$ wisely his   house

      "Jovan sells his house in a wise manner."

      *"It is wise of Jovan to sell his house."

Since finite verbs are assumed to be able to move to C^0 and precede the particle *li* even in yes/no-questions, the ban on the subject-oriented interpretation of the adverbs in (270) and (271) does not seem to be related to finite vs. non-finite verbs but to some independent constraints. Further, Franks (1998) presents even more problems with the

adverb-interpretation argument. The examples in (272) show that even in yes/no-questions, where the finite main verb is moved to the sentence initial position, the same effects with respect to the adverb interpretation can be observed.

(272) *Odgovara **li** Jovan pravilno Mariji?*

answer₃ₛg Pt J.   correctly M.

  "Does Jovan answer Maria correctly?"

  * "Does Jovan do the right thing in answering Maria?"

Given the examples above, Franks (1998) concludes that there seems to be a general problem with moving verbs across adverbs, especially across sentential adverbs. In particular, Franks' (1998) examples and the fact that participles can move to a position where they precede the particle *li* demonstrate that the argument against verb movement does not go through. There is no doubt about the fact that participles can move, and that there is a more general problem with the interpretation of sentential adverbs and their relative position with respect to the verb.

Another line of argumentation against the underlying assumptions in Bošković (1997a/b) refers to the hypothesis that adverbs occupy fixed positions in the clause. As pointed out in the literature about adverb placement (cf. Alexiadou, 1997; Cinque, 1997), adverbs are not only base-generated in different positions, but they also can be moved. Under the assumption that adverbs are able to undergo movement (cf. Alexiadou, 1997; Cinque, 1997), the argumentation about adverb positions and the movement of verbs simply lacks any substance. To sum up the basic assumptions in Bošković (1997a/b), it can be said that sentential adverbs are base generated higher than VP-adverbs, i.e. they are adjoined to TP, whereas temporal adverbs like *juče* ("yesterday") are assumed to be adjoined to VP. The prediction is that sentential adverbs should always precede temporal adverbs. The examples in (273) show that this prediction is wrong for Croatian.

(273) a.   *Ivan **je** sinoć   vjerojatnosreo Mariju.*

       I.   be₃ₛg yesterday probably meet_ptc M.

       "Ivan probably met Mary yesterday."

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b. *Ivan **je** vjerojatno sinoć sreo Mariju.*
I. be$_{3sg}$ probably yesterday meet$_{ptc}$ M.

As (273) shows, both sequences of temporal and sentential adverbs are possible. However, the unmarked order is given in (273a). While (273a) is unambiguous, as long as none of the adverbs is focused (stressed), (273b) is ambiguous between the reading in (273a) and the default interpretation "Ivan met Mary probably yesterday", where probably just has local scope over the temporal adverb. Given that in the unmarked case (273a) the so called VP-adverb precedes the sentential adverb, the stipulation that the temporal adverb is adjoined to VP and the sentential adverb to TP does not appear to be motivated. Less so, if the examples in (274) are considered. In the examples in (274) a floating quantifier is used to mark the base position of the direct object (compare Franks (1998) for an argument on the basis of floating quantifiers).

(274) a. *Ivan je studente oborio sve jučer.*
I. be$_{3sg}$ students fail$_{ptc}$ all yesterday
"Ivan failed all the students yesterday."

b. *Ivan je studente jučer oborio sve.*
I. be$_{3sg}$ students yesterday fail$_{ptc}$ all

c. *Ivan je jučer studente oborio sve.*
I. be$_{3sg}$ yesterday students fail$_{ptc}$ all

d. *Jučer je Ivan studente oborio sve.*
yesterday be$_{3sg}$ I. students fail$_{ptc}$ all

The temporal adverb in (274) can appear in a right peripheral position, which is right of the base-position of the direct object, as indicated by the floating quantifier *sve*. It can also appear in several different positions preceding the fronted direct object and the participle, as in (274c), including the absolute initial position, as in (274d).

The observations with respect to the placement of adverb so far allow different diverging conclusions. On the one hand, one might conclude that temporal adverbs like *sinoć* are in some cases adjoined to the same position as sentential adverbs. The possibility for participles to precede such adverbs has to be interpreted then as raising of the participle to some higher functional head position. On the other hand, one might conclude that it is not the case that the two types of adverbs always occupy one fixed position, but rather they may be adjoined to different positions. The consequences would be that either participles can move even higher than postulated in Bošković (1997a/b) or that the placement of adverbs cannot be used as an argument for movement of participles in both Serbian and Croatian. On the basis of the examples in (274), and the examples with sentential and temporal adverbs the latter conclusion seems to be adequate. As in the examples in (275), the so called VP-adverbs may appear in different positions in the clause. It seems to be difficult to argue that these positions are positions of adjuncts of VP.

(275) a. *Ivan nije   dao   Mariji knjigu jučer   u Zagrebu.*
       I. NEG-be$_{3sg}$ give$_{ptc}$ M.   book   yesterday in Zagreb
       "Yesterday in Zagreb Ivan didn't give Maria the book."

       b. *Jučer   Ivan u Zagrebu Mariji knjigu nije   dao.*
       yesterday I.   in Zagreb M.   book   NEG-be$_{3sg}$ give$_{ptc}$

In fact, without listing all the possible sequences, the adverb may appear in any position in the clause, in both, (275a) and (275b).[54] Given that placement of the so called VP-adverbs is extremely liberal in Croatian, examples with participles preceding such adverbs do not necessarily show that participles have been raised across these adverbs. Actually, such an analysis appears to be extremely unmotivated.

Furthermore, in Croatian the contrast in (266) appears to be just a markedness phenomenon. Constructions with participles preceding the so called VP-adverbs, as in examples (263b) and (264b), are well formed but perceived as marked. The same is true

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[54] The adverb may not appear inside the PP-adjunct, and in (275a) it is considered marked, if the adverb is placed in final position.

for examples like (265b) and (266b), with the so called sentential adverbs. The Croatian counterparts are given in (276) and (277) respectively.

(276) a. *Marinko je sinoć sreo Senku.*
           M. be3sg yesterday meetptc S.
           "Marinko met Senka yesterday evening."

       b. *Marinko je sreo sinoć Senku.*
           M. be3sg meetptc yesterday S.

(277) a. *Slavko je vjerojatno zaspao.*
           S. be3sg probably fall-asleepptc
           "Slavko probably fell asleep."

       b. *Slavko je zaspao vjerojatno.*
           S. be3sg fall-asleepptc probably

In (277), the judgments with respect to both types of adverbs are independent of intonation breaks before the adverbs. Both types of constructions are considered well formed. Furthermore, as confirmed by Milan Mihaljević (p.c.), the subject oriented interpretation of sentential adverbs as *mudro* ("wisely") is available even if the adverb appears in the absolute initial position, as illustrated by (278).

(278) a. *Mudro je Ivan kuću prodao.*
           wisely be3sg Ivan house sellptc
           "Ivan sold the house in a wise manner."
           "It was wise of Ivan to sell the house."

       b. *Mudro li je Ivan kuću prodao.*
           wisely Pt be3sg I. house sellptc
           "Ivan sold the house in a very wise manner."
           "It was very wise of Ivan to sell the house."

As (278) shows, both readings are available if the sentential adverb appears in the initial position of the clause. It can even precede the particle *li*, as in (278b). As already mentioned in chapter 2, in such cases the particle *li* is used to emphasize the proposition. Native speakers of Croatian tend to accept both interpretations. However, the preference for one or the other interpretation changes, depending on the construction (Milan Mihaljević, p.c.).

To conclude, the arguments based on verb movement and the position of different types of adverbs do not appear to be very convincing. Given that the two main arguments in favor of the dynamic enclitic placement turn out to be inadequate, the dynamic enclitic placement analysis lacks empirical basis. Nevertheless, in the following section, the analysis proposed in Bošković (1997a) will be still discussed in more detail, since certain concepts expressed therein are of some relevance for the following argumentation.

4.2.3 VP Ellipsis and Enclitics

As noted in Stjepanović (in press) (cited in Bošković (1997a)), examples like (279) are a result of VP-ellipsis.

(279)   *Oni **su** kupili novine,   a   i   vi   **ste**.*
        they be$_{3pl}$ buy$_{ptc}$ newspaper, but and you be$_{2pl}$
        "They bought newspapers and you did too."

In such constructions parts of the enclitic cluster can be deleted, as illustrated in (280).

(280)   *Mi **smo mu ga** dali,   a   i   vi   **ste**.*
        we be$_{1pl}$ him it   give$_{ptc}$ but and you be$_{2pl}$
        "We gave it to him, and you did too."

In particular, it is claimed that VP-ellipsis in (280) "raises a serious problem for the assumption that clitics cluster under the same node" in (Serbo-) Croatian (Bošković,

1997a: 22). The underlying assumptions here are that ellipsis can only affect syntactic constituents, i.e. parts of a syntactic head are not able to undergo ellipsis. Another assumption is that in the construction in (280) the enclitics have undergone ellipsis in the second conjunct. Hence Stjepanović (in press) and Bošković (1997a/b) conclude that enclitics do not cluster together under one syntactic head.

However, the underlying assumptions of Stjepanović (in press) are not unproblematic. On the one hand, the examples in (281) show that in the two conjuncts both types of corresponding elements can be realized, i..e. the full form of the auxiliary in the second conjunct, and the enclitic form in the first, as in (281a), and the full form pronoun in the first conjunct, and the enclitic pronoun in the second, as in (281b).

(281)　a.　*Ti **si** sreo Mariju, i ja nisam.*
　　　　　you be$_{2sg}$ meet$_{ptc}$ M.　　and I NEG-be$_{1sg}$
　　　　　"You met Maria, and I did not."

　　　b.　*Marija **je** njega srela u Parizu, i Ivan **ga je** sreo*
　　　　　M.　　be$_{3sg}$ him meet$_{ptc}$ in Paris and I.　　him be$_{3sg}$ meet$_{ptc}$

　　　　　u Londonu.
　　　　　in London

　　　　　"Maria met him in Paris, and Ivan met him in London."

Numerous combinations of that type are possible, and even proper names can be linked with enclitic pronouns in such coordinated structures. There is no convincing argument that shows that indeed the enclitics are deleted in the example in (280).

4.2.4 Prosodic Filters for Syntactic Representations

The analysis proposed in Bošković (1997a) assumes that the basic properties of enclitics in Serbo-Croatian are lexical. Basically, he assumes that the properties of enclitics in Serbo-Croatian are strictly phonological, and, thus, second position enclitic placement

must be a phonological effect. Sentences that do not meet the phonological requirements are filtered out at PF. In particular, he assumes that enclitics have the properties in (282) as part of their lexical specification.

(282) a.   #

       b.   suffix

The two conflicting constraints in (282) state that enclitics must be right adjacent to an intonation phrase (I-P) boundary, indicated with the # symbol in (282a), and that clitics must be suffixes. The conflict between (282a) and (282b) is only apparent, since the reference to an I-P in (282a) is not a part of the constraint in (282b). Elements that are able to fulfill the requirement in (282b) are assumed to be prosodic words. If an enclitic is part of the initial prosodic word, or the initial prosodic phrase in an I-P, it is assumed that the constraint (282a) is fulfilled. The examples in (283) show this for both cases (Bošković, 1997a: 35).

(283) a.   # *Nju **je**   Jovan poljubio* #
               her be$_{3sg}$ J.   kiss$_{ptc}$
               "Her, Jovan kissed."

       b.   # [$_{PhP}$ *Moju prijateljicu*] ***je***   *poljubio* #
                        my   friend   be$_{3sg}$ kiss$_{ptc}$
                        "My friend, he kissed."

In (283a) it is assumed that the enclitic auxiliary is a suffix to the initial prosodic word *nju*, which is initial in the I-P. In contrast, the enclitic auxiliary in (283b) is a suffix to the prosodic word *prijateljicu*, which is the second prosodic word in the I-P, but a part of the first prosodic phrase in the I-P. Here, a notion of head has to be introduced into prosodic analysis which is important for the inheritance of properties in Bošković (1997a). The second prosodic word in (283b) is analyzed, thus, to be the head of the prosodic phrase. An addition is that "properties of a head can be satisfied on the phrase

level" (Bošković, 1997a: 36). In other words, by merger of the second prosodic word, which is assumed to be the head of the prosodic phrase, with the following non-prosodic word, which is the enclitic auxiliary, the properties of the enclitic auxiliary are inherited to the head of the prosodic phrase, and further on to the prosodic phrase itself.

With respect to the basic assumptions, there is nothing innovative in Bošković's (1997a) analysis. As in syntactic analyses (cf. Wilder and Ćavar, 1994a; Ćavar and Wilder, 1994) he assumes that PF filters out syntactic representations that contain string initial enclitics. In Wilder and Ćavar (1994a) such constructions are claimed to violate the prosodic subcategorization frame of enclitics in PF. A similar analysis was proposed by Zec and Inkelas (1990). The placement of enclitics as oriented on prosodic constituent boundaries was in a similar way proposed in the different phonological or prosodic analyses (cf. Zec and Inkelas, 1990; Klavans, 1985). The innovative part in Bošković's (1997a) analysis is the way he puts the different constraints together, and designs their interaction. Furthermore, he formulates an extension of the Prosody Theory as proposed in cf. Nespor and Vogel (1982, 1986), Selkirk (1986), and Hayes (1989a), by introducing the notion of a head of a prosodic constituent and the mechanism of property inheritance.

The problematic assumptions in Bošković's (1997a) approach are related to the type of elements combined with each other. The Strict Layer Hypothesis (SLH) (Selkirk, 1986) excludes constituents of level n in the prosodic hierarchy to dominate directly elements of the level n - 2. In other words, prosodic phrases dominate directly only prosodic words, and prosodic words dominate directly only feet. In these terms, the status of enclitics in Bošković's (1997a) analysis is completely unclear. The only thing that is clear about them is that they are not prosodic words. How exactly they enter prosodic structure and what should be the status of the SLH is left unexplained. The necessary stipulation that enclitics have to be initial in 'their' I-P adds further problems to the system that are related to the detailed specification of the referent of 'their'. In other words, although Bošković (1997a) argues that his analysis avoids look-ahead, he needs some sort of look-ahead in the prosodic structure.
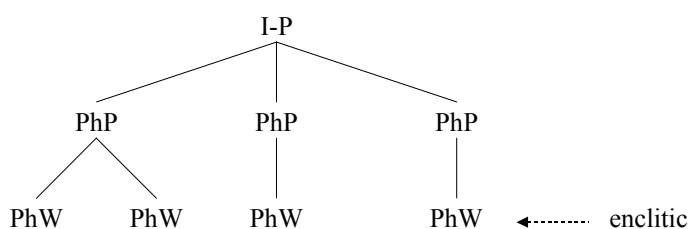
The stipulation formulated in (282a) needs further specification as well. In order to check whether some element fulfills this requirement, the prosodic component has to compute and evaluate the relevant features. Adding such mighty properties to Prosody

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Theory requires strong empirical evidence, which Bošković's (1997a) does not provide.

In order to see his proposal at work, consider the predictions of this analysis. Enclitics have to be placed to the right of the initial prosodic phrase, or otherwise the requirement in (282a) cannot be met. This type of violation is illustrated in the structure in (284), where an enclitic merges with the preceding prosodic word, which is a part of the third prosodic phrase in the intonation phrase.

(284)

```
                          I-P
             ┌─────────────┼─────────────┐
           PhP           PhP           PhP
          ┌──┴──┐          │             │
        PhW    PhW       PhW           PhW   ◄········ enclitic
```

The analysis presented in Bošković (1997a) predicts such representations to be filtered out at PF, since the enclitic is not initial in 'its' I-P, hence, a violation of (282a) occurs. The examples in (285), however, could receive a representation as in (284), or even a more structured one. Every single adjective in (285a) can be separately stressed motivating various prosodic structures. In the example in (285b), the demonstrative and the head noun are mapped onto one prosodic phrase, while the relative clause projects at least a prosodic phrase. Nevertheless, the enclitic reflexive pronoun *se* appears immediately after the complex DP.

(285) a. *Na koji   prljavi zeleni auto **je**   Ivan skočio?*
           on which dirty green car be$_{3sg}$ I.   jump$_{ptc}$
           "On which dirty green car did Ivan jump?"

       b. *Taj čovjek, koji **me** gleda, **se** nije   nasmješio.*
           this man   who me watch$_{3sg}$ self NEG-be$_{3sg}$ smile$_{ptc}$
           "The man who watches me, didn't smile."

To sum up, the proposal in Bošković (1997a) appears to be problematic on empirical and conceptual grounds. Pushing the computations necessary to restrict the placement of

enclitics into the phonological component has the consequences of unmotivated extensions of this component with unnecessary machinery. Several conceptual problems discussed for the different proposals, prosodic and syntactic, extend to Bošković's (1997a) proposal as well.

4.3   Summary

This chapter has introduced different approaches to enclitic placement in Croatian. The prosodic approaches have been shown to massively over- and undergenerate. They fail to explain restrictions on the placement of enclitics, which, in contrast, can easily be captured in terms of syntax. Prosodic Inversion has been shown to face massive empirical problems as well.

The syntactic analyses introduced in this chapter assume a unique position for enclitics in the clause. Most of them assume that the fixed syntactic position is C^0. Other syntactic analyses assume dynamic placement of enclitics. It has been shown that the latter approach fails on conceptual and empirical grounds. The arguments used against a fixed placement analysis turn out to fail for different reasons. In fact, some of the arguments can be used against the dynamic analysis itself.

In the following chapter the C^0-analysis will be reincarnated, and its advantages and disadvantages will be discussed. Finally, a completely alternative view will be proposed that does not consider enclitics in Croatian to be lexical elements with special properties, but rather as derived morpho-phonological entities that undergo different types of derivation in certain contexts

5 Reconsidering Enclitic Placement and Verb Movement

The preceding discussion has shown that many restrictions on the placement of enclitics in Croatian and other Slavic languages are syntactic in nature. In this chapter, I will defend the claim that all word order restrictions in these languages are syntactic. The phonological component is not involved in establishing the linear order of elements and, in particular, of enclitics. However, it is argued here that the phonological component is responsible for the cliticization effects, which is nothing more and nothing less than simple phonological reduction and integration of the reduced element into the surrounding prosodic structure.

In the following, the basic arguments for syntactic placement of enclitics are reconsidered and numerous examples are discussed that are considered to cause empirical problems for a syntactic analysis of enclitic placement in Croatian. Section 5.1 is primarily concerned with the renewed motivation for the syntactic analysis, and the discussion of the empirical consequences of such an analysis. The phonological properties of clitics and the motivation of a reductionist view on clitics in Croatian is discussed in section 5.2.

5.1 Placement of Enclitics in C^0

The following section introduces briefly the syntactic placement analysis for enclitics in Croatian, as first proposed in Wilder and Ćavar (1994a). In section 5.1.1, it will be shown that the assumption that enclitics are placed in a fixed syntactic position in the clause makes the correct empirical predictions. Nevertheless, the analysis proposed in Wilder and Ćavar (1994a/b), and Ćavar and Wilder (1994) has certain drawbacks. It is based on the assumption that enclitics in Croatian are lexical, i.e. that the enclitic forms are not only assumed to be stored in the lexicon, together with their full form counterpart, but they are also assumed to have a prosodic subcategorization frame as part of their lexical specification (cf. Inkelas, 1990; Zec and Inkelas, 1990). There are several reasons to refute the lexicalist assumptions of the proposal which is discussed in the final section.

5.1.1 Further Arguments in Favor of Syntax

So far, several generalizations have been formulated with respect to the location of enclitics in Croatian. In (286) the most relevant generalizations are repeated.

(286) a. Enclitics are string adjacent to complementizers in matrix and subordinate clauses.

b. Enclitics are string adjacent to the initial *wh*-phrase in simple constituent questions.

c. Enclitics cluster together in the second position in the clause.

d. There is a more or less fixed order among the enclitics in the cluster.

On the basis of the generalizations in (286), Wilder and Ćavar (1994a) proposed an analysis in which enclitics are placed in C^0, as illustrated in (287).

(287) a. *Ivan kaže, da **ga je** Marija nazvala.*

  I.   say$_{3sg}$ that him be$_{3sg}$ M. call$_{ptc}$

  "Ivan says that Maria called him."

  b.
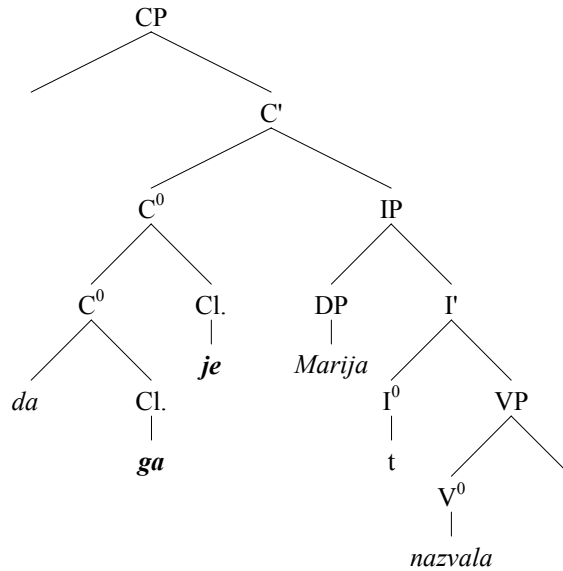
The prediction of the C^0-placement analysis is that enclitics are adjacent to complementizers and only one head may precede enclitics in the clausal domain. Furthermore, only one maximal syntactic constituent located in the specifier of the CP-position may precede enclitics. In the following sections, different empirical predictions are discussed in more detail.

5.1.1.1 *Wh*-constructions

One prediction of the C^0-analysis is that enclitics follow a *wh*-constituent in simple constituent questions. In Croatian, one *wh*-constituent has to move to the clause initial position, which is assumed to be the specifier of the CP position in (287b). Simple *wh*-questions as in (288) show that the enclitic is placed string adjacent to the *wh*-phrase, and it cannot appear in a lower position, as in (288b).

(288) a. *Što **je** Ivan kupio?*

　　　　　what be₃ₛg I.　buyₚₜc

　　　　　"What did Ivan buy?"

　　　b. * *Što Ivan **je**　kupio?*

　　　　　what I.　 be₃ₛg buyₚₜc

In multiple *wh*-constructions, as illustrated in (289), more than one *wh*-phrase may appear in the sentence initial position. Croatian does not show superiority effects in such constructions, as the contrast in (289b/c) and (290a/b) shows.

(289) a. *Što Ivan daje　komu?*

　　　　　what I.　 give₃ₛg who

　　　　　"What does Ivan give to whom?"

　　　b. *Što   komu Ivan daje?*

　　　　　what who I.　 give₃ₛg

　　　c. *Komu što　Ivan daje?*

　　　　　who　 what I.　 give₃ₛg

(290) a. *Tko　　komu daje　 knjigu?*

　　　　　whoₙₒₘ whodₐₜ give₃ₛg book

　　　　　"Who gives a book to who?"

　　　b. *Komu tko　　daje　 knjigu?*

　　　　　whodₐₜ whoₙₒₘ give₃ₛg book

If such constructions contain enclitics, the enclitic is located in a position after the initial *wh*-phrase, as in (291). It cannot appear after all the fronted *wh*-phrases, as illustrated in (291b).

(291)   a.   *Što **je** komu Ivan dao?*
            what be$_{3sg}$ who I.   give$_{ptc}$

     b. * *Što komu **je** Ivan dao?*
              what who   be$_{3sg}$ I.   give$_{ptc}$

On the basis of Rudin's (1988, 1989) analysis of multiple *wh*-questions in Serbo-Croatian, the contrast in (291) is expected. It is assumed that only one *wh*-phrase moves to the specifier of CP position, whereas in constructions like (289b) and (289c) the second *wh*-phrase is adjoined to some functional projection below C, as illustrated in (292).

(292)
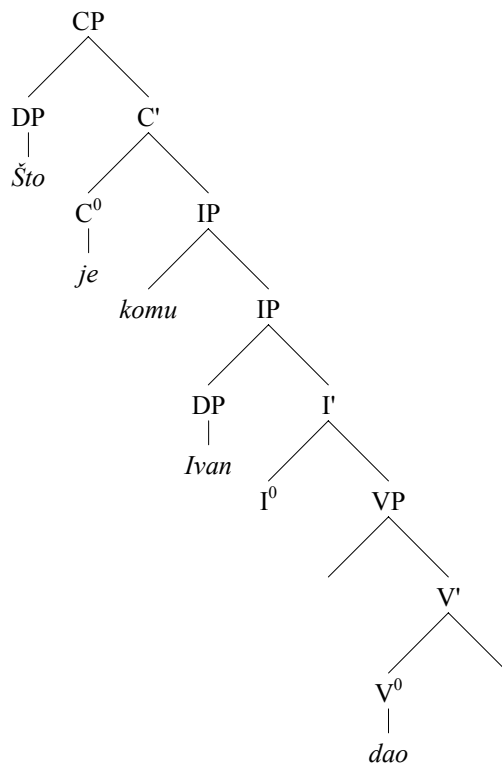
If *wh*-constructions in Croatian are analyzed as involving an obligatory movement of one *wh*-phrase to Spec-CP, and if the clitic cluster is assumed to be placed in C^0, as shown in (292), the ungrammaticality of (291b) is to be expected. In this respect, the analysis of *wh*-movement in Croatian proposed in Rudin (1988), is compatible with the

C^0-placement analysis, and in fact, both analyses make the same correct predictions.

Constructions with multiple *wh*-extraction out of finite sentential complements, however, show that this analyses cannot apply to all *wh*-constructions. As Penn (1996) observes, in constructions with long multiple *wh*-extractions, not only a fixed order among the extracted *wh*-phrases has to be respected,[55] but also the clitic cluster must follow the whole complex of extracted *wh*-phrases. The examples in (293) demonstrate that the preferred order of *wh*-phrases in this example seems to be [Nominative > Accusative].[56]

(293) a.   *Tko   koga   misliš,   da voli?*
              who   whom   think$_{2sg}$ that love$_{3sg}$
              "Who do you think that loves whom?"

       b. * *Koga   tko   misliš,   da voli?*
              whom   who   think$_{2sg}$ that love$_{3sg}$

The clitic cluster must be placed after the complex of extracted *wh*-phrases, as illustrated in the examples in (294). The placement of enclitic elements after the first *wh*-phrase leads to ungrammaticality, see (294b).

(294) a.   *Tko   koga   je   Ivan mislio, da je   poljubio?*
              who   whom   be$_{3sg}$ I.   think$_{ptc}$ that be$_{3sg}$ kiss$_{ptc}$
              "Who did Ivan think that kissed whom?"

       b. * *Tko   je   koga   Ivan mislio, da je   poljubio?*
              who   be$_{3sg}$ whom   I.   think$_{ptc}$ that be$_{3sg}$ kiss$_{ptc}$

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[55] The examples in (293) show that superiority effect with respect to *wh*-movement emerge in long *wh*-extraction constructions, although they do not seem to show up in simple matrix clauses.

[56] Some native speakers of Croatian tend to accept (293b) with a strong stressed *koga* and completely unaccented *tko*. The unmarked intonation however, gives the results as indicated in (293), which is also confirmed by native speakers of both Croatian and Serbian dialects (Penn, p.c.).

However, such examples do not show that the clitic cluster can be placed in some third position in matrix contexts. It rather shows that in the cases of long *wh*-extraction, apparently only the whole complex of *wh*-phrases can be extracted. The examples in (295) show that splitting of the *wh*-complex in the matrix clause is not possible, whereas two *wh*-phrases may be separated in single clause multiple *wh*-questions, as illustrated in (296).

(295) a. * *Tko   Ivan   koga   misli   da **je**   poljubio?*
           who   I.   whom   think$_{3sg}$ that be$_{3sg}$ kiss$_{ptc}$

       b. * *Tko   Ivan   misli   koga   da **je**   poljubio?*
           who   I.   think$_{3sg}$ whom   that be$_{3sg}$ kiss$_{ptc}$

(296) a. *Što   jučer   komu Ivan nije   dao?*
           what yesterday who I.   NEG-be$_{3sg}$ give$_{ptc}$
           "What did not Ivan give to whom yesterday?"

       b. *Tko   auto komu nije   dao?*
           who$_{nom}$ car   who$_{dat}$ NEG-be$_{3sg}$ give$_{ptc}$
           "Who did not give the car to whom?"

The analysis for the examples in (296) proposed here – and in line with Rudin (1988) – assumes that both *wh*-phrases are moved. While only the first *wh*-phrase is moved to the specifier of CP position, the second is scrambled to some intermediate functional projection, where scrambling is understood as adjunction.

   Grewendorf (1998) suggested for similar constructions like (294a) that the *wh*-phrases are extracted as a single constituent from the embedded clause, and as such placed in the specifier of CP in the matrix clause. This analysis explains why enclitics cannot intervene between the extracted *wh*-phrases, if enclitics are placed in C^0. If enclitics would be located lower than C^0, the prediction would be that in multiple *wh*-matrix clauses two wh-phrases can precede the enclitics. As shown in (291b), this leads to ungrammaticality.

However, extraction out of sentential complements of one *wh*-phrase alone is possible, whether it is the accusative or the nominative *wh*-phrase, as the examples in (297) show.

(297) a.   *Tko Ivan misli   da **je**   poljubio koga?*
           who I.   think$_{3sg}$ that be$_{3sg}$ kiss$_{ptc}$ whom
           "Who did Ivan think that kissed whom?"

      b.   *Koga Ivan misli   da **je**   tko   poljubio?*
           who I.   think$_{3sg}$ that be$_{3sg}$ who   kiss$_{ptc}$

Furthermore, it can be observed that scrambling out of finite sentential complements is possible in Croatian, as in example (298a). This, however, is not possible, if long *wh*-movement out of the same embedded clause takes place, as illustrated (298b) shows. In other words, either scrambling, or *wh*-movement out of an embedded clause is possible.

(298) a.   *Ivan **je**   Mariju mislio da **je**   Pavo poljubio.*
           I.   be$_{3sg}$ M.   think$_{ptc}$ that be$_{3sg}$ P.   kiss$_{ptc}$
           "Ivan thought that Pavo kissed Maria."

      b. * *Tko **je**   Ivan Mariju mislio da **je**   poljubio?*
           who be$_{3sg}$ I.   M.   think   that be$_{3sg}$ kiss$_{ptc}$

Since scrambling of maximal constituents out of finite embedded clauses is possible,[57] if no long *wh*-movement takes place, and splitting of an extracted *wh*-cluster in the matrix clause is not possible, one might conclude that multiple extraction of *wh*-phrases out of embedded finite contexts is extraction of one clustered constituent, as proposed in Grewendorf (1998).

     This section has shown that the assumption that enclitics are placed in C^0 makes the

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[57] For Croatian native speakers (298a) is only good, if the constituent *Mariju* in the matrix clause is stressed. Whatever this observation might imply, this construction has to be analyzed as syntactic extraction out of an embedded clause.

right predictions about constructions with *wh*-movement. The string adjacency requirement between an initial *wh*-phrase and enclitics is explained structurally. Also, multiple *wh*-constructions confirm the assumption that enclitics are located in C^0. Only one *wh*-phrase may precede enclitics in simple clauses, while all wh-phrases have to precede the enclitics in cases with multiple *wh*-extraction.

5.1.1.2 Islands

For a discussion of syntactic islands and the placement constraints for enclitics, consider the relevant observations made so far, as formulated in (299).

(299) a.   Syntactic constituents are split by enclitics.

       b.   Movement of enclitics is subject to certain island constraints.

The empirical side of the generalizations in (286) has been discussed in the previous sections and chapters. In the following, the focus will be put on the observations in (299). In particular it will be argued that the placement of enclitics is restricted by syntactic islands and, consequently, enclitics have to be analyzed as elements that are placed in syntax.

   Certain domains that seem to be opaque for extraction of enclitics have been already mentioned. For example, enclitic auxiliaries cannot be extracted out of a finite complement clause, as the examples in (300) show.

(300) a.   *Ivan kaže, da **je**   Marija kupila knjigu.*
            I.   say$_{3sg}$ that be$_{3sg}$ M.   buy$_{ptc}$ book
            "Ivan says that Maria bought a book."

       b. * *Ivan **je**   kaže, da Marija kupila knjigu.*
            I.   be$_{3sg}$ say$_{3sg}$ that M.   buy$_{ptc}$ book

The ungrammaticality of (300b) would be a mystery for a prosodic analysis. Syntactic

theory predicts (300b) to be ungrammatical. Since the auxiliary, being a head in the embedded clause, cannot move across an intervening head, it cannot move across the complementizer *da*, and leave the complementizer behind. In other words, extraction of the auxiliary would violate *Relativized Minimality* (Rizzi, 1990), some version of the *Head Movement Constraint* (HMC) (cf. Travis, 1984), or different economy principles in terms of the Minimalist Program (Chomsky, 1995). Complementizers, however, are not predicted to block extraction of maximal syntactic constituents. As mentioned in the previous section, extraction of subject and object DPs out of finite complement clauses is possible in Croatian. The example in (301) illustrates this point.

(301) a. *Marija$_i$ Ivan kaže, da **je**   t$_i$ kupila knjigu.*
           M.   I.   say$_{3sg}$ that be$_{3sg}$ buy$_{ptc}$ book
           "Ivan says that Maria bought a book."

       b. *Što$_i$ Ivan kaže, da **je**   Marija kupila* t$_i$.
           what I.   say$_{3sg}$ that be$_{3sg}$ M.   buy$_{ptc}$
           "What does Ivan say that Maria bought."

Since topicalization (301a), and *wh*-movement (301b) of maximal syntactic constituents is possible, the contrast between (300) and (301) could be used as a test to figure out the syntactic status of enclitic pronouns. (302) shows that full form pronouns can be topicalized or scrambled out of finite complement clauses.

(302) a. *Njega **je**   Ivan tvrdio, da **je**   Marija srela* t$_i$.
           him   be$_{3sg}$ I.   claim$_{ptc}$ that be$_{3sg}$ M.   meet$_{ptc}$
           "Ivan said that Maria met him."

       b. *Ivan **je**   njega$_i$ tvrdio, da **je**   Marija srela* t$_i$.
           I.   be$_{3sg}$ him   claim$_{ptc}$ that be$_{3sg}$ M.   meet$_{ptc}$

If the full form pronoun in (302b) is replaced by its enclitic counterpart, the well formed

structure in (303) results.[58]

(303)   *Ivan **ga** **je**   tvrdio   da   **je**   Maria srela* t_i .
     I.   him be$_{3sg}$ claim$_{ptc}$ that be$_{3sg}$ M.   meet$_{ptc}$

The enclitic pronoun seems to behave like the full form with respect to extractability from finite complement clauses. If the underlying base position of the enclitic pronoun in (303) is assumed to be in the embedded clause, the movement of the enclitic into the matrix clause has to be analyzed as XP-movement, since head movement is blocked, as the ungrammaticality of (300b) suggests. Stjepanović (1998) came to a similar conclusion on the basis of VP-ellipsis phenomena, as discussed in the chapter 4.

Another observation made on the basis of (303) is that the enclitic auxiliary in the embedded clause, and the extracted enclitic pronoun in the underlying representation do not form a syntactic head. Otherwise the discontinuous realization of the two elements cannot be explained, since syntactic operations are not assumed to target substructures of heads.

As discussed earlier, infinitival complements are transparent for extraction. Verbal arguments may be *wh*-moved, topicalized, or scrambled into the matrix clause, as illustrated in (304).

(304)   a.   *Što$_i$ **je**   Ivan   želio* [*kupiti Mariji* t_i] ?
            what be$_{3sg}$ I.   wish$_{ptc}$ buy$_{inf}$ M.
            "What did Ivan wish to by for Maria?"

     b.   *Mariji$_i$**je**   Ivan   želio* [*kupiti* t_i *auto*] .
            M.   be$_{3sg}$ I.   wish$_{ptc}$ buy$_{inf}$ car
            "For Maria, Ivan wanted to buy a car."

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[58] Some native speakers perceive (303) as marked. The markedness could be due to the fact that such extraction usually requires prosodic emphasis of the extracted element. Since this is not possible with enclitic pronouns, a special intonation, or contrastive stress on some other element is necessary. (303) has tested with emphatic, or contrastive stress on the matrix clause subject.

c. *Ivan **je** Mariji*ᵢ *želio* [*kupiti* tᵢ *auto*] .

    I.   be₃ₛg M.   wishₚₜc buyᵢₙf   car

As mentioned in chapter 4, infinitival complements are also transparent for enclitic pronouns. In fact, they are not only transparent for enclitic climbing – in the unmarked case, enclitics have to move out of the infinitive into the matrix clause, as in (305).

(305) a. *Ivan želi* [*Mariji kupiti auto*] .

    I.   wish₃ₛg M.   buyᵢₙf car

    "Ivan wants to buy a car for Maria."

    b. * *Ivan želi* [*Mariji **ga** kupiti*] .

    I.   wish₃ₛg M.   it buyᵢₙf

    c. *Ivan **ga**ᵢ želi* [*Mariji kupiti* tᵢ] .

    I.   it wish₃ₛg M.   buyᵢₙf

    "Ivan wants to buy it for Maria."

If the infinitive is realized with its own intonation contour, the enclitic may remain in the infinitive. In example (306) the infinitive has to be separated from the matrix clause by an intonation break, i.e. both clauses represent prosodically independent intonation phrases. The examples in (307a) and (307b) show the different prosodic structures, where (307a) corresponds to (305c), and (307b) to (306).

(306) *Ivan želi* [*Mariji **ga** kupiti*] .

    I.   wish₃ₛg M.   it buyᵢₙf

(307) a.   [IntPh *Ivan **ga** želi Mariji dati*]

    b.   [IntPh *Ivan želi*] [IntPh *Mariji **ga** dati*]

*Taj covjek ga zeli kojega sam sreo sinoc Mariji kupiti.

This phenomenon might be analyzed syntactically, in that dislocation of the infinitive results in a prosodic representation as in (307b). Thus, (307b) might be comparable to the phenomena discussed in the context of VP-topicalization and split enclitic clusters in chapter 2. Comparable to the phenomenon in the examples above, (308) shows that similar constraints apply to noun selected infinitives. In (308c) the infinitive has to be realized with its own intonation contour.

(308) a. *Ivan **je** imao* [$_{DP}$ *želju* [*sresti Mariju*]] .
         I.   be$_{3sg}$ have$_{ptc}$ wish   meet$_{inf}$ M.
         "He expressed the wish to meet Maria."

       b. *Ivan **ju**$_i$ **je** imao* [$_{DP}$ *želju* [*sresti* t$_i$]] .
         I.   her be$_{3sg}$ have$_{ptc}$ wish   meet$_{inf}$

       c. *Ivan **je**   imao* [$_{DP}$ *želju* [*sresti **ju***]] .
         I.   be$_{3sg}$ have$_{ptc}$ wish   meet$_{inf}$ her

The problem imposed by apparent optionality of enclitic placement is solved if we assume that in the cases when enclitics remain in a transparent constituent, the constituent is displaced, i.e. it is extraposed in the constructions in (306) and (308c). This analysis is supported by the examples in (309).

(309) a. [*Želju* [*sresti **ga** u parku*]] *imao **je**   Ivan.*
         wish   meet$_{inf}$ him in park   have$_{ptc}$ be$_{3sg}$ I.
         "Ivan had the wish to meet him in the park."

       b. [*Želju* [*sresti **ga** u parku*]] ***je**   Ivan imao.*
         wish   meet$_{inf}$ him in park   be$_{3sg}$ I.   have$_{ptc}$

The examples in (309) show that the complex DP that contains an infinitival

complement can be topicalized, as in (309a), or left dislocated, as in (309b),[59] if the enclitic pronoun remains inside the infinitival complement. If the enclitic is extracted out of the complex DP, topicalization and left dislocation lead to ungrammaticality, as illustrated in (310).

(310) a. * [*Želju* [*sresti* t_i *u parku*]] *imao* **ga_i je**   *Ivan.*
            wish   meet$_{inf}$ in park   have$_{ptc}$ him be$_{3sg}$ I.

    b. * [*Želju* [*sresti* t_i *u parku*]] **ga_i je**   *Ivan imao.*
              wish   meet$_{inf}$ in park   him be$_{3sg}$ I.   have$_{ptc}$

The contrast between (308b) and (310) suggests that extraction out of infinitives that are nominal complements is only possible, if the complex DP is in its base-position. As the examples in (311) show, scrambling of full DPs and topicalization (311a), or left dislocation (311b) of the remnant DP leads to ungrammaticality, although extraction of full DPs out of complex DPs is possible, if the complex DP remains *in situ*, as in (311c).

(311) a. * [*Želju* [*sresti* t_i *u parku*]] *imao* **je**   *Mariju$_i$ Ivan.*
            wish   meet$_{inf}$ in park   have$_{ptc}$ be$_{3sg}$ M.   I.

    b. * [*Želju* [*sresti* t_i *u parku*]] **je**   *Ivan Mariju imao.*
            wish   meet$_{inf}$ in park   be$_{3sg}$ I.   M.   have$_{ptc}$

    c.   *Ivan* **je**   *Mariju$_i$ imao* [*želju* [*sresti* t_i *u parku*]]
           I.   be$_{3sg}$ M.   have$_{ptc}$ wish   meet$_{inf}$ in park
           "Ivan had the wish to meet Maria in the park."

The parallellity between the examples in (310) and (311a/b) not only proves that enclitic pronouns must be maximal syntactic constituents, but also indicates that the

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displacement of constituents that are not islands for extraction, like for example the complex DP in (311a/b), turns them into islands. One might think that the problem is based on the ECP and c-command, that is, if the extracted DP in (311a/b) does not c-command its trace, the result is an ECP violation. The examples in (312), however, show that long extraction out of complex DPs from embedded clauses into matrix clauses is possible, as in (312a), as well as scrambling of the complex DP in the embedded clause, as in (312b).

(312) a. *Ivan Mariju$_i$ kaže, da je imao* [*želju* [*sresti* t$_i$]] .

      I.   M.   say$_{3sg}$ that be$_{3sg}$ have$_{ptc}$ wish   meet$_{inf}$

      "Ivan says that he had the wish to meet Maria."

    b. *Ivan kaže, da je* [*želju* [*sresti Mariju*]] *imao.*

      I.   say$_{3sg}$ that be$_{3sg}$ wish   meet$_{inf}$ M.   have$_{ptc}$

It is not possible to extract the direct object out of the infinitive in example (312b), and scramble it long into the matrix clause, as illustrated in (313).

(313) * *Ivan Mariju$_i$ kaže, da je* [*želju* [*sresti* t$_i$]] *imao.*

    I.   M.   say$_{3sg}$ that be$_{3sg}$ wish meet$_{inf}$ have$_{ptc}$

Consequently, the assumption is that in the cases where the enclitic apparently remains in non-islands, the non-islands are adjuncts that are extraposed (see example (306)). Prosodic restrictions on such constructions support the extraposition view as well.

Independent of a possible syntactic, or prosodic explanation for the alternation between (305c) and (306), the contrast between these constructions, and examples like (314) is expected, if enclitic placement is restricted syntactically, but not if it is prosodic in nature.

While enclitics can be moved into the matrix clause out of verbal infinitive complements, and out of noun selected infinitives, they cannot be extracted from a progressive, as the contrast in (314) shows.

(314) a. *Ivan **je** vikao* [*udarajući **ga** po glavi*]

      I.   be$_{3sg}$ shout$_{ptc}$ hit$_{prog}$ him on head

      "Ivan was shouting while he was hitting himself on the head."

b. * *Ivan **ga**$_i$ **je** vikao* [*udarajući* t$_i$ *po glavi*]

      I.   him be$_{3sg}$ shout$_{ptc}$ hit$_{prog}$ on head

Adjuncts, like the progressive in (314) are islands for extraction. They are not only islands for enclitics pronouns, but also for full DPs, as the example (315) shows.

(315) * *Pavu*$_i$ **je** *Ivan vikao* [*udarajući* t$_i$ *po glavi*]

      P.   be$_{3sg}$ I.   shout$_{ptc}$ hit$_{prog}$ on head

As already mentioned, PPs are also islands for extraction. If PPs contain enclitics, the enclitics cannot be extracted. This is not only true for prepositional complements, but also for enclitics that are embedded in the complement of PPs, as in (316).

(316) a. *Ivan samo misli* [$_{PP}$ *o* [$_{DP}$ *želji* [*sresti **ju**.*]]]

      I.   only think$_{3sg}$ about wish meet$_{inf}$ her

      "Ivan only thinks about the wish to meet her."

b. * *Ivan **ju**$_i$ samo misli* [$_{PP}$ *o* [$_{DP}$ *želji* [*sresti* t$_i$]]]

      I.   her only think$_{3sg}$ about wish meet$_{inf}$

The blocking effect in (316b) is clearly a property of the PP. As has been shown in chapter 4, DPs are transparent for extraction, which is also the case with infinitives.

    Furthermore, also complex noun phrases are islands for extraction. Neither full DPs, nor enclitics can be extracted out of a relative clause, as (317) shows.

(317) a. *Karlo**je** razbio* [$_{DP}$ *auto* [$_{CP}$ *kojeg **mu je** otac kupio*]]

      K.   be$_{3sg}$ smash-up$_{ptc}$car   which him be$_{3sg}$ father buy$_{ptc}$

      "Karlo smashed up the car that his father bought him."

b. * *Karloje*   *otac*_i   *razbio* [_{DP} *auto* [_{CP} *kojeg* **mu je** t_i *kupio*]]

     K.   be_{3sg} father smash-up_{ptc} car   which him be_{3sg} buy_{ptc}

c. * *Karlomu*_i **je**   *razbio* [_{DP} *auto* [_{CP} *kojeg* t_i *je*   *otac*   *kupio*]]

     K.   him be_{3sg} smash-up_{ptc} car   which   be_{3sg} father buy_{ptc}

These observations are not only problematic for theories that deny syntactic influence on enclitic placement. They also show several points about the syntactic status of enclitic pronouns and enclitic auxiliaries. While the former behave like their full form counterparts syntactically, i.e. they are subject to island constraints for maximal syntactic constituents, the latter behave rather like syntactic heads, in other words, movement of enclitic auxiliaries is subject to, for instance, the HMC. These generalizations are formulated in (318).

(318)   a.   Enclitic pronouns are maximal syntactic constituents.

        b.   Enclitic auxiliaries are syntactic heads.

From the discussion above, it should be clear, that enclitic placement has to be explained in terms of syntax. Stating that enclitics are placed in the prosodic structure would lose important generalizations and, in fact, face massive empirical problems.

5.1.1.3   Topicalization and Left Dislocation

As in the cases with *wh*-movement, the C^0-analysis predicts that in matrix contexts only one maximal syntactic constituent may precede the enclitic cluster, if topicalization is analyzed as movement of one syntactic constituent to the specifier of CP position. The examples in (319) show that only one topicalized syntactic constituent may precede the enclitic cluster, as expected in the C^0-placement analysis.

(319) a. *Ivana **je** Marija nazvala sinoć.*
 I. be$_{3sg}$ M. call$_{ptc}$ yesterday
 "Maria called Ivan yesterday."

 b. *Sinoć **je** Marija Ivana nazvala.*
 yesterday be$_{3sg}$ M. I. call$_{ptc}$
 "Yesterday Maria called Ivan."

 c. * *Sinoć Ivana **je** Marija nazvala.*
 yesterday I. be$_{3sg}$ M. call$_{ptc}$

 d. * *Ivana sinoć **je** Marija nazvala.*
 I. yesterday be$_{3sg}$ M. call$_{ptc}$

Zec and Inkelas (1990), Wilder and Ćavar (1994a), and Ćavar and Wilder (1994), among others, discuss certain cases where enclitics appear in the third position after two initial syntactic phrases or after one syntactic phrase and a verbal head, as in (320).

(320) a. [$_{PP}$ *U svoju kuću*] [$_{DP}$ *Ivan*] **ga** *nije pustio.*
 in his house I. him NEG-be$_{3sg}$ let$_{ptc}$
 "Ivan didn't let him in his house."

 b. [$_{PP}$ *Prije nekoliko dana*] [$_{X0}$ *nije*] **ga** *imao.*
 before some days NEG-be$_{3sg}$ it have$_{ptc}$
 "He didn't have it some days ago."

 c. [$_{DP}$ *Neki stari čovjek*] [$_{V0}$ *daje*] **mu** *savjet.*
 some old man give$_{3sg}$ him advice
 "Some old man gives him an advice."

The C^0-placement analysis predicts that the two fronted constituents in (320a) should be

either both located in the specifier of CP position, as in (321a), or that the first constituent is a left dislocated phrase, which might be analyzed as adjoined to CP, as illustrated in (321b).

(321)   a.
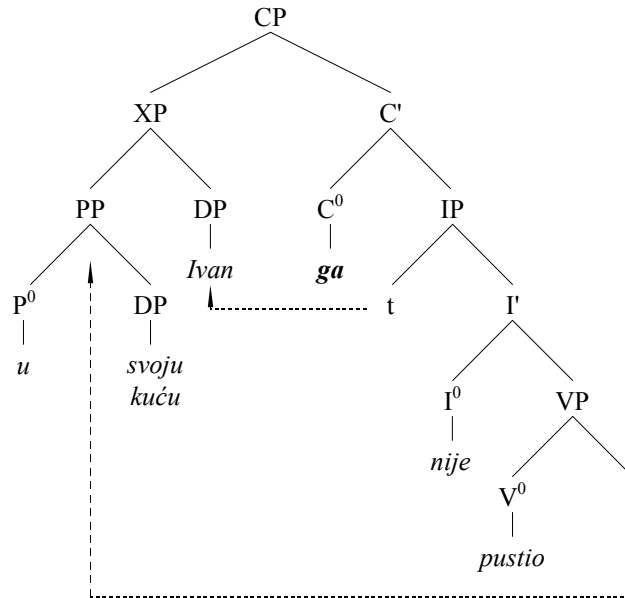
b.
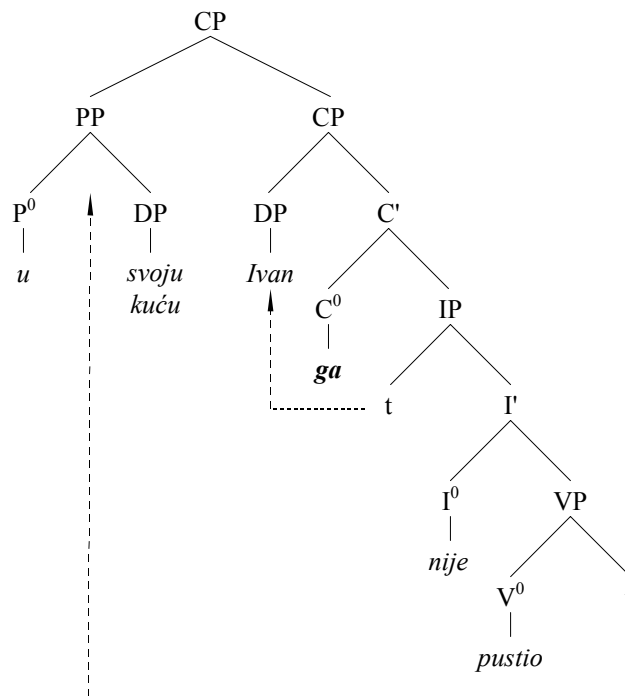
Zec and Inkelas (1990) observe that in constructions like (320a) the initial phrase cannot be just a single word, as illustrated in (322).

(322)* *Danas Marija **ga je** poljubila.*
       today M.   him be$_{3sg}$ kiss$_{ptc}$

They conclude that similar to the constraint on heavy NP-shift in English, left dislocated phrases in (Serbo-) Croatian have to be branching prosodic phrases. This prosodic requirement does not hold for simple topicalization or other types of XP-to-C movements. Simple pronouns can be topicalized i.e. moved to the specifier of CP position, or *wh*-pronouns are placed in the specifier of CP. The prosodic requirement does not constrain movement to the specifier of CP in general.

The possibility to left dislocate heavy constituents is restricted in Croatian. The examples in (323) show that left dislocation of such heavy constituents is not possible, if the CP is a constituent or a yes/no-question.

(323) a. * *U svoju kuću koga **je**   Ivan pustio?*
               in his   house who be$_{3sg}$ I.   let$_{ptc}$

      b. * *Prije svakog ručka pije   **li** Ivan lozu?*
            before every   lunch drink$_{3sg}$ Pt I.   grappa

The ungrammaticality of the examples in (323) implies that the left dislocated constituents are indeed integrated into the clause, and not external to it. The incompatibility between non-*wh*-constituents and a [+*wh*] specified CP-projection could be the reason for the ungrammaticality of the examples in (323).

Given the assumption that the construction in (320a) involves adjunction of one heavy constituent to CP, the apparent third position of enclitics can be captured in terms of syntax, as it is done in the C^0-placement analysis.

The examples in (320b) and (320c) are correspondingly analyzed as placement of a head in C^0, left adjoined to C^0 and preceding the enclitic and either placement of a complex constituent in specifier of CP or adjunction of this constituent to CP. The

option chosen here is the latter one, i.e. whenever a head precedes enclitics in C^0 and a heavy syntactic constituent is initial, the initial constituent is left dislocated.[60] There are some cases, where CP may be doubly filled in Croatian. Such cases are constructions with *wh*-phrases in the specifier of CP, and an overt complementizer or the particle *li*, as discussed in chapter 2. As already noted in Wilder and Ćavar (1994a), Croatian seems to avoid Doubly Filled Comp.

To sum up, the third position placement of enclitics is neither problematic for the C^0-placement analysis, nor is it in any way unusual. It has been shown that such constructions can be handled in a straightforward way in terms of syntax.

5.1.1.4 Heads preceding the Enclitic Cluster

The C^0-placement analysis for enclitic placement, proposed in Wilder and Ćavar (1994a) predicts that only one syntactic head may precede the enclitic cluster. As discussed in the previous section, the C^0-placement analysis predicts that in certain contexts, namely in contexts with a maximal and a minimal syntactic constituent in CP, the enclitic cluster appears in the relative third position in the clause. It has been shown that in matrix contexts enclitics may appear in the absolute third position in syntactic terms, i.e. after two syntactic constituents. The same holds for embedded contexts, as for example in embedded *wh*-questions, like in (324). In such constructions, enclitics also appear in the relative third position, after a *wh*-phrase and a complementizer.

(324) a. *Pitam* ***se*** [$_{CP}$ *što   da **mu** kupim*]
          ask$_{1sg}$ self   what that him buy$_{1sg}$
          "I ask myself, what I should buy him."

      b. * *Pitam* ***se*** [$_{CP}$ *što   **mu** da kupim*]
          ask$_{1sg}$ self   what him that buy$_{1sg}$

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[60] There are several reasons to assume that the third position of enclitics in constructions like (320b) is the result of left dislocation and verb movement to C^0. See Wilder and Ćavar (1994a) and Ćavar and Wilder (1994) for arguments.

The set of heads that are licenced by C^0, are expected to precede the enclitic cluster. In particular, the set of heads contains all complementizers that can be located in C^0, and verbal heads. In terms of the C^0-placement analysis, the examples in (325) are analyzed as head movement to C^0 of participles and full form auxiliaries.

(325) a.　　*Nije*　　**ga**　*Ivan*　*sreo.*
　　　　　NEG-be$_{3sg}$　him I.　　meet$_{ptc}$
　　　　　"Ivan didn't meet him."

　　　b.　　*Sreo*　**ga**　**je**　　*Ivan.*
　　　　　meet$_{ptc}$ him be$_{3sg}$　I.

Wilder and Ćavar (1994a) present a couple of arguments for the V-to-C-analysis of examples like (325). One of the arguments is based on the observation in (326).

(326) a.　　*Bio*　**ga**　**je**　　*Ivan*　*sreo.*
　　　　　be$_{ptc}$　him be$_{3sg}$　I.　　meet$_{ptc}$
　　　　　"Ivan has met him."

　　　b. *　*Sreo*　**ga**　**je**　　*Ivan*　*bio.*
　　　　　meet$_{ptc}$ him be$_{3sg}$　I.　　be$_{ptc}$

In pluperfect constructions a participial auxiliary can be moved in front of the enclitic cluster, as in (326a). The ungrammaticality of (326b) can only be understood, if participle movement in (326) is head movement. The participial auxiliary dominates the main verb participle in the underlying structure, as the contrast in (327) shows.

(327) a.　　*Ivan*　**je**　　*bio*　*sreo*　*Mariju.*
　　　　　I.　　be$_{3sg}$　be$_{ptc}$　meet$_{ptc}$ M.
　　　　　"Ivan had met Maria."

　　　b. *　*Ivan*　**je**　　*sreo*　*bio*　*Mariju.*

I. be_{3sg} meet_{ptc} be_{ptc} M.

The raising of the main verb participle is predicted to produce an ungrammatical result, if it is head movement. Constructions like (326b) are excluded because of a violation of the HMC. Further arguments for head movement of verbs to a position in front of enclitics are morphological. In periphrastic future, the main verb and the enclitic auxiliary fuse together, as example (328) illustrates.

(328) a. *Čitat **ću** Krležu.*
read_{inf} want_{3sg} K.
"I will read Krleža."

b. *Čita-**ću** Krležu.*
read_{inf}-want_{3sg} K.

Fusion processes as in (328b), where the infinitival suffix of the main verb is truncated, are expected in head structures. They do not occur between heads and phrases, as shown in (329), where the relevant phonological context is given, but fusion is excluded.

(329) a. *Čitat **Ćurkovića***
read_{inf} Ć.
"to read Ćurković"

b. * *Čita-**Ćurkovića***

In constructions with overt complementizers the sequence [V + enclitics] is not possible. Since as it has been shown that a verb that precedes enclitics has undergone head-movement, a complementary distribution between complementizers and verbs in a position preceding enclitics is expected. The examples in (330) and (331) demonstrate that in constructions with overt complementizers a verb may not be placed in a position preceding the enclitics.

(330) a. *Da **li mu ga** Ivan daje?*

that Pt him it   I.   give$_{3sg}$

"Does Ivan give it to him?"

b. * *Da daje   **li mu ga** Ivan?*

that give$_{3sg}$ Pt him it I.

(331) a. *Ivan kaže, da **mu ga** Marija daje.*

I.   say$_{3sg}$ that him it   M.   give$_{3sg}$

"Ivan says that Maria gives it to him."

b. * *Ivan kaže, da daje **mu ga** Marija.*

I.   say$_{3sg}$ that give$_{3sg}$ him it   M.

Further arguments for a head movement analysis of sequences like [V + enclitics] can be found in Wilder and Ćavar (1994a). Apparent counterevidence has been discussed in the previous sections. For the purposes of the discussion here, it suffices to conclude that there is no empirical counterevidence against the prediction that only one head may precede the enclitic cluster.

In the following, conceptual and empirical problems connected with the C^0-analysis will be presented. It will be argued that most of the empirical problems can be solved, while the conceptual problems still remain.

5.1.2 Problems for a Syntactic Approach

The syntactic analysis for enclitic placement proposed in Wilder and Ćavar (1994a) and Ćavar and Wilder (1994) assumes that enclitics are lexical, i.e. enclitics are specified in the lexicon for prosodic subcategorization. As mentioned earlier, such an assumption is problematic on conceptual grounds. Further problems for a syntactic analysis are empirical. In the following sections, the most prominent arguments will be presented in more detail. In section constructions with split constituents will be discussed, which apparently can only be explained in terms of prosodic enclitic placement.

5.1.2.1 Split Constituents

Zec and Inkelas (1990) assume that enclitics in Serbo-Croatian may split syntactic constituents. Such data was supposed to provide evidence for phonological or prosodic placement of enclitics. For Croatian, the examples in (332) show that the enclitic-cluster may appear after a complex DP in sentence initial position (332b), or apparently 'inside' the complex DP, as in (332b).

(332) a.   *Taj čovjek **joj ga je**   poklonio.*
             this man   her it be$_{3sg}$ present$_{ptc}$
             "This man presented it to her."

       b.   *Taj **joj ga je**   čovjek poklonio.*
             this her it be$_{3sg}$ man   present$_{ptc}$

The enclitic cluster *joj ga je* in (332) may occupy a position after the sentence initial constituent, as for example a complex DP in (332a), and apparently inside a sentence initial DP following the first word, i.e. the demonstrative *taj* in (332b). Such phenomena suggest an analysis which refutes a direct relation between syntactic constituent boundaries and the position of enclitics in Croatian. As observed in Browne (1976), such splits occur in *wh*-constructions, where the *wh*-element is adjectival, as in (333).

(333) a.   *Kakav   auto **je**   Ivan kupio?*
             what-kind-of car   be$_{3sg}$ I.   buy$_{ptc}$
             "What kind of car did Ivan buy?"

       b.   *Kakav   **je**   auto Ivan kupio?*
             what-kind-of be$_{3sg}$ car   I.   buy$_{ptc}$

On the basis of constructions like (334), however, it does not appear to be necessary to assume that (333b) is a genuine case of a prosodic split of a syntactic constituent. As discussed in Browne (1976), the *wh*-phrase can be fronted, leaving the head noun *in*

situ.

(334)   *Kakav*   *je*   *Ivan kupio auto?*
         what-kind-of be_{3sg} I.   buy_{ptc} car

The same type of syntactic discontinuity is possible with the constructions discussed in Zec and Inkelas (1990), that apparently can only be explained in terms of prosodic enclitic placement. In example (335), a demonstrative is topicalized, thus, being separated from the head noun of the complex DP.

(335)   *Taj* *je*   *Ivan kupio auto.*
         this be_{3sg} I.   buy_{ptc} car
         "Ivan bought this car."

Complex DPs with adjectives can be split by topicalizing the adjective, as in (336b), or the head noun, as in (336c).

(336) a.   *Ivan* *je*   *kupio creni auto.*
            I.   be_{3sg} buy_{ptc} red   car
            "Ivan bought a red car."

     b.   *Crveni je*   *Ivan kupio auto.*
            red   be_{3sg} I.   buy_{ptc} car

     c.   *Auto je*   *Ivan kupio crveni.*
            car be_{3sg} I.   buy_{ptc} red

Split topicalization of a part of a complex DP is not restricted to one element alone, as in (336b) and (336c). The example in (337) shows that two adjectives can be topicalized, leaving the head noun behind.

(337)   *Ćusti crveni* *je*   *Ivan kupio auto.*

nice red   be$_{3sg}$ I.   buy$_{ptc}$ car

"Ivan bought a nice red car."

On the basis of the examples above, one might conclude that it is possible to extract the left branch of a complex DP, if the DP remains in its base position. In other words, there might be a similarity between examples like (305) in section , and the split DPs in (337). However, the split of DPs, as in (337), is also possible, if the head noun is clearly placed to the left of the VP, as illustrated in (338).

(338)   [*Ćusti crveni*] ***je***   *Ivan* [*auto*]$_i$ *kupio* t$_i$.
        nice red   be$_{3sg}$ I.   car   buy$_{ptc}$

Given the observations above, the apparent prosodic split of syntactic constituents of the type in (338) can be accounted for in terms of movement (cf. Wilder and Ćavar, 1994a; Ćavar, 1996). Split constructions as in (338) could be the result of a left branch extraction of a complex DP, with subsequent scrambling of the remnant DP, as illustrated in (339).[61]

---

[61] The category of the fronted subconstituent is left unspecified. One might assume that it is a complex adjectival phrase. However, here it is relevant that the fronted subpart of the complex DP is a syntactic constituent. The mere fact that a cluster of adjectives can be extracted from object DPs proves that it is a constituent.

(339)
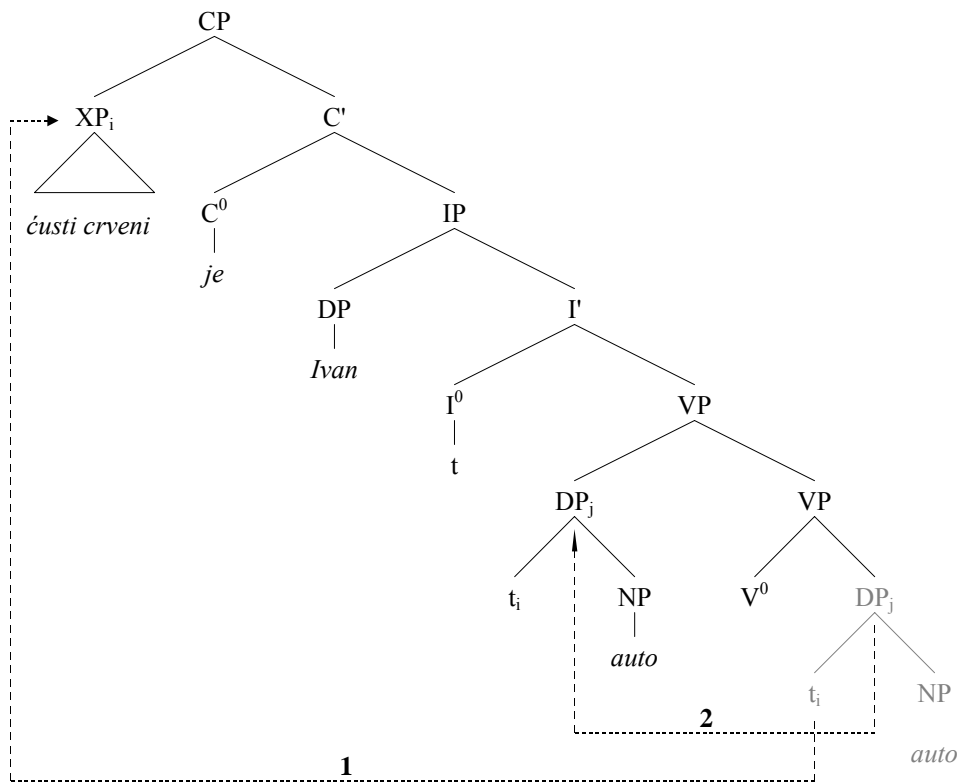
Extending this analysis to constructions of the type in (332b), gives a plausible syntactic analysis of constructions that are assumed to be the result of prosodic enclitic placement, or of a post-syntactic application of Prosodic Inversion. The syntactic representation of the example in (332b) is illustrated in (340).

(340)

```
                          CP
                         /  \
                        /    \
               XP_i          C'
                |           /   \
               taj         /     \
                         C^0      IP
                          |      /  \
                       joj ga je /    \
                               DP      I'
                              /  \    /  \
                             /    \  /    \
                           t_i    NP I^0   VP
                                   |       /  \
                                 čovjek   /    \
                                        V'
                                       /  \
                                      /    \
                                    V^0
                                     |
                                  poklonio
```
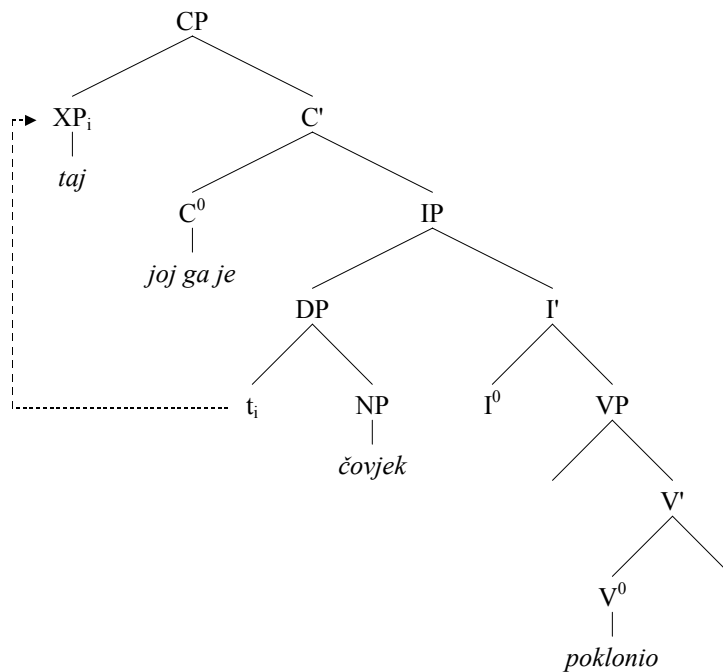
The apparent prosodic split of subject DPs turns out to be a simple case of subextraction. The extraction analysis proposed above is not unproblematic. The following examples show that such split constructions are not possible with all types of syntactic constituents. A preposition phrase, for example, cannot be split by an enclitic cluster in a way that the preposition is separated from its complement (Zec and Inkelas, 1990: 367), as example (341) shows.

(341) a.   *Na krov je   Ivan skočio.*
             on   roof be_{3sg} I.   jump_{ptc}
             "Ivan jumped on the roof."

       b. * *Na je   krov Ivan skočio.*
             on   be_{3sg} roof I.   jump_{ptc}

While the enclitic auxiliary *je* may occupy a position directly behind the fronted PP in (341a), it cannot follow the initial preposition in (341b), i.e. it cannot split the PP. In contrast, a PP may be split in a different way, as illustrated in (342).

(342) *Na ravni **je** krov Ivan skočio.*

on flat be$_{3sg}$ roof I. jump$_{ptc}$

"Ivan jumped on the flat roof."

Enclitics may split a preposition in a way that the preposition and an adjective that belongs to the prepositional complement, is separated from the head noun of the PP complement. The data of this type inspired diverging analysis and heated debates in the literature. Some analysis assume that, in general, purely phonological or prosodic constraints are responsible for such word order variation (e.g. Zec und Inkelas, 1990; Radanović-Kocić, 1996), while others argue that the word order in (342) is derived syntactically (e.g. Ćavar, 1996).

As discussed in chapter 4, an alternative suggestion – some sort of Salomonian solution – was suggested by Halpern (1992) and Schütze (1994). This alternative makes the assumption that enclitics occupy a fixed syntactic position, but a post-syntactic adjustment is possible. More precisely, these approaches utilize a mechanism of *Prosodic Inversion* (PI) that allows post-syntactic inversion of clitics with a preceding or following phonological constituent. For (Serbo-) Croatian the preposition and the adjective in (342) are assumed to be a prosodic word. PI is assumed to apply at the level of *Phonetic Form* (PF) or *Prosodic Structure* (PS).

In order to understand why the example in (342) is problematic for a syntactic analysis, consider the following facts. PPs are islands for extraction in Croatian. The examples in (343) shows that prepositional complements cannot be extracted out of a PP.

(343) a. * *Krov$_i$ **je** Ivan skočio na (ravni) t$_i$*

　　　　roof be$_{3sg}$ I. jump$_{ptc}$ on flat

　　　b. * *Što$_i$ **je** Ivan skočio na (ravno) t$_i$*

　　　　what be$_{3sg}$ I. jump$_{ptc}$ on flat

　　　c. * *Ivan **je** krov$_i$ skočio na (ravni) t$_i$*

　　　　I. be$_{3sg}$ roof jump$_{ptc}$ on flat

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Since neither topicalization, as in (343a), nor *wh*-movement, as in (343b), nor scrambling, as in (343c), is allowed out of PPs, there is no possibility to describe the split of PPs in (342) as a syntactic operation. The structure in (344) illustrates the problem.

(344)
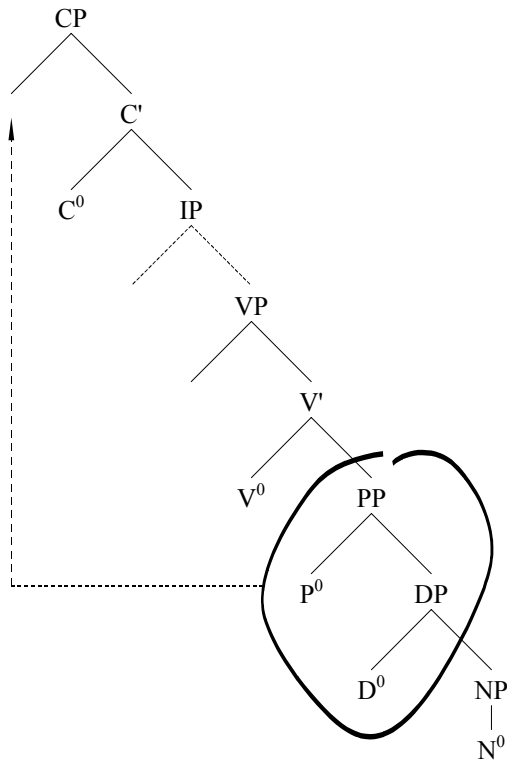
Since extraction out of PPs is impossible, the question is, how the preposition together with the left part of the complement DP can be fronted. A solution as in (344) is not possible given standard assumptions about syntactic operations, since parts of constituents, as illustrated in (344), cannot be subject to syntactic operations. As already mentioned in chapter 4, the alternative solution that makes use of Right Node Raising, as suggested in Halpern (1992), faces empirical problems. Another analysis, proposed in Ćavar and Fanselow (1997), appears to be more promising.

I will adopt here the analysis proposed in Ćavar and Fanselow (1997), which assumes that split PPs in Croatian and Polish are the result of a Copy-and-Deletion operation (cf. Chomsky, 1995). The Copy-and-Deletion analysis assumes that

movement is triggered by the need to check features, as proposed in the Minimalist Program (Chomsky, 1995). The phenomenon of partial deletion of a copied constituent, i.e. split realizations of complex constituents, arises in constructions, in which one constituent contains two conflicting features. For the split PP constructions of the type in (342), it is assumed that two different interpretable features are contained in the complex PP, where one feature specifies the adjective, and the other specifies the head noun. Typical conflicting feature pairs, as assumed in Ćavar and Fanselow (1997), are Topic and Focus features. These features are assumed not to be deleted in the checking process. The basic assumptions are summarized in (345) (Ćavar and Fanselow, 1997).

(345) a. Topic and Focus are syntactically operative interpretable features in German, Croatian, and Polish.

b. A complex syntactic constituent may contain different lexical elements that are specified for Topic and Focus. These features have to be checked, i.e. there is movement to the relevant checking positions.

c. At a post-syntactic level of Morphological Structure (MS) (Halle and Marantz, 1993), morphological material is inserted.

d. The copy-and-deletion approach to movement is adopted, where *Deletion* is understood as *No Insertion* at MS.

e. The Visibility Condition in (346) is postulated.

(346) **Visibility Condition on Interpretable Syntactic Features**
Interpretable syntactic features are morpho-phonologically represented at/after the level of Morphological Structure.

Given these assumptions, in an underlying structure as in (347), the complex PP is assumed to contain two interpretable features that have to be checked against their counterparts, which are base-generated in different functional projections. The conflict between two features that have to be checked, and syntactic structure can only be solved by realizing parts of the complex constituent in different locations in the structure, i.e. in different checking domains. Since PPs are islands for extraction, movement cannot solve the conflict. An extension of the Ćavar and Fanselow (1997) analysis could be

formulated in the following way. If movement is possible to solve the described conflict, it applies. In all other cases, the Last Resort strategy of copy-and-deletion is used.

(347)

XP
X'
X⁰
Topic
YP
Y'
Y⁰
Focus
VP
V⁰
PP
P⁰
DP
D⁰
Topic
NP
N⁰
Focus
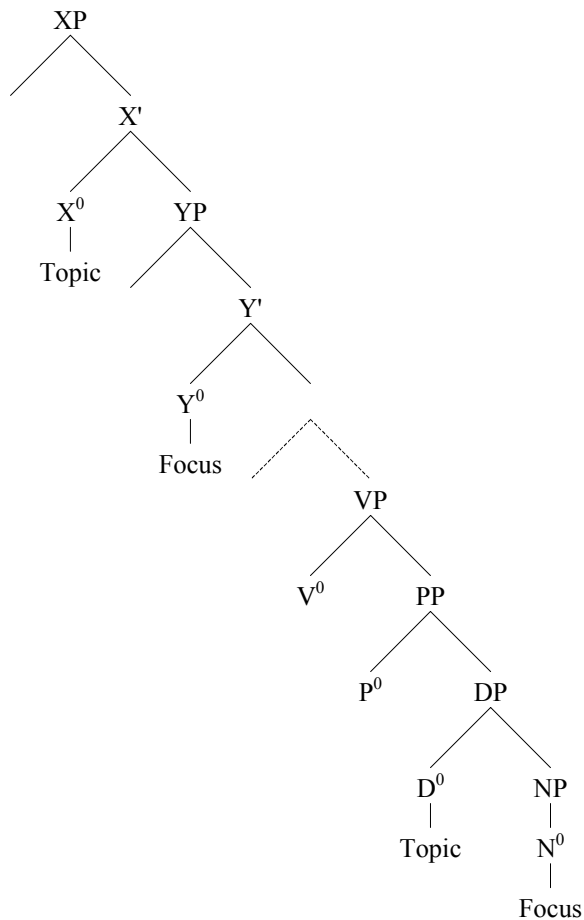
In structures like (347), only the copy-and-deletion operation can solve the conflict that is imposed by two conflicting features in one constituent and the Visibility Condition in (346). For the example in (342) the derivational steps are listed in (348).

(348) a. *je   Ivan skočio na ravni krov*
       be_{3sg} I. $jump_{ptc}$ on flat   roof
                       Topic   Focus

   b. *je na ravni krov Ivan skočio* ~~na ravni krov~~

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c. *na ravni ~~krov~~ je ~~na ravni~~ krov Ivan skočio ~~na ravni krov~~*

The first derivational step, i.e. the derivation of (348b), includes copying of the complete PP into the checking domain of the Topic feature. Since base-positions usually do not represent checking domains that are subject to the Visibility Condition, the deletion of the base-copy is complete. The second step in the derivation (348c) copies the complete PP from the Topic-checking domain into the Focus-checking domain and deletes parts of both copies. The deletion is assumed to be restricted in two respects. On the one hand, Visibility requires the matching features to be preserved in the checking domain. On the other hand, general restrictions on Deletion are assumed, that allow only for complete deletion of the base-copy, or leftward deletion in the left, and rightward deletion in the right copy (cf. Wilder, 1997). The possible deletion operations are illustrated in (349).

(349) a. Complete deletion: [X Y Z] … ~~[X Y Z]~~

b. Left- and rightward deletion: [X Y ~~Z~~] … [~~X Y~~ Z]

c. Right- and leftward deletion: *[~~X Y~~ Z] … [X Y ~~Z~~]

The restrictions in (349) guarantee that a split PP can only be realized as in the example in (342). However, this analysis has certain weaknesses as well. Only if the hierarchical relation between the checking domains of the relevant features matches the linear order of the corresponding features in a syntactic constituent, the proposed analysis makes the right predictions. If one assumes that the Topic feature is always realized in the projection of C, for example, and the Focus feature is a property of a hierarchically lower projection, the copy-and-deletion analysis would not be able to derive a representation in the same way as in (348), for an underlying structure as in (350).

(350) *je   Ivan skočio na ravni krov*

  be$_{3sg}$ I.   jump$_{ptc}$ on flat   roof

                  Focus   Topic

Being aware of certain problems with this approach, I assume that a syntactic solution in the line of a copy-and-deletion analysis is available for the split-PP constructions and split constituents do not represent knockdown arguments against syntactic analyses for enclitic placement in Croatian.

Nevertheless, certain constructions are discussed in the literature, that might be problematic, even for a copy-and-deletion approach. Schütze (1994) argues on the basis of examples in (351) that a syntactic split-PP analysis fails, because it is argued to make the wrong predictions. The judgements in (351) are provided by Schütze (1994).

(351) a. ? *U ovu **je**   veliku Jovan ušao   sobu.*

        in this be$_{3sg}$ large   J.   walk$_{ptc}$ room

        "Jovan walked into this large room."

    b.??? *U ovu Jovan veliku ulazi   sobu.*

        in this J.   large walk$_{3sg}$ room

        "Jovan walks into this large room."

    c. * *U ovu Jovan ulazi   veliku sobu.*

        in this J.   walk$_{3sg}$ large   room

The example in (351a) is supposed to show that beside split topicalization of PPs, the mechanism of Prosodic Inversion is necessary. The example in (351b) is supposed to show that multiple splits of PPs are not possible, or very marked. Therefore, (351a) cannot be analyzed as multiple PP split. Furthermore, Schütze (1994) observes that it is not possible to topicalize the left part of a PP and leave an adjective and the head noun behind in the base position. As observed in Ćavar (1996), in constructions with split PPs, the head noun cannot remain in the base position. The grammaticality judgements for the examples in (352) are shared by native speakers of Croatian and Serbian.

(352) a. * *Na kakav **je** Ivan bacio loptu krov?*
           on what-kind-of be_{3sg} I. throw_{ptc} ball roof

       b. * *Na kakav **je** Ivan bacio krov loptu?*
           on what-kind-of be_{3sg} I. throw_{ptc} roof ball

       c. *Na kakav **je** Ivan krov bacio loptu?*
           on what-kind-of be_{3sg} I. roof throw_{ptc} ball
           "On what kind of roof did Ivan throw the ball?"

       d. *Na kakav **je** krov Ivan bacio loptu?*
           on what-kind-of be_{3sg} roof I. throw_{ptc} ball

Apparently, in split constructions both parts of the split constituent have to be dislocated. It is not possible for the head noun in (352a/b) to remain inside the VP. This is expected in the copy-and-deletion analysis proposed here. Only in cases with conflicting interpretable features, split constituents arise. However, base-positions do not provide such features, therefore, the head noun is expected to appear in a checking domain of a functional projection or topicalized with the rest of the PP. If a PP has only one interpretable feature, complete deletion of the base-copy is obligatory. In the same way, the examples in (351) are excluded. And, as expected, the examples in (351) improve, if the head noun is located outside of the VP, as in (353).

(353) a. <u>*U ovu*</u> **je** <u>*veliku*</u> *Jovan* <u>*sobu*</u> *ušao.*
           in this be_{3sg} large J. room walk_{ptc}
           "Jovan walked into this large room."

       b. <u>*U ovu*</u> *Jovan* <u>*veliku*</u> *momentalno* <u>*sobu*</u> *ulazi.*
           in this J. large in-this-moment room walk_{3sg}
           "In this moment, Jovan walks into this large room."

(352) a. * *Na kakav **je** Ivan bacio loptu krov?*
           on what-kind-of be_3sg I. throw_ptc ball roof

       b. * *Na kakav **je** Ivan bacio krov loptu?*
           on what-kind-of be_3sg I. throw_ptc roof ball

       c. *Na kakav **je** Ivan krov bacio loptu?*
           on what-kind-of be_3sg I. roof throw_ptc ball
           "On what kind of roof did Ivan throw the ball?"

       d. *Na kakav **je** krov Ivan bacio loptu?*
           on what-kind-of be_3sg roof I. throw_ptc ball

Apparently, in split constructions both parts of the split constituent have to be dislocated. It is not possible for the head noun in (352a/b) to remain inside the VP. This is expected in the copy-and-deletion analysis proposed here. Only in cases with conflicting interpretable features, split constituents arise. However, base-positions do not provide such features, therefore, the head noun is expected to appear in a checking domain of a functional projection or topicalized with the rest of the PP. If a PP has only one interpretable feature, complete deletion of the base-copy is obligatory. In the same way, the examples in (351) are excluded. And, as expected, the examples in (351) improve, if the head noun is located outside of the VP, as in (353).

(353) a. <u>*U ovu*</u> **je** <u>*veliku*</u> *Jovan* <u>*sobu*</u> *ušao.*
           in this be_3sg large J. room walk_ptc
           "Jovan walked into this large room."

       b. <u>*U ovu*</u> *Jovan* <u>*veliku*</u> *momentalno* <u>*sobu*</u> *ulazi.*
           in this J. large in-this-moment room walk_3sg
           "In this moment, Jovan walks into this large room."

c.　　*U ovu* Jovan *veliku sobu* ulazi.

　　　　　in this J.　　　large　room walk$_{3sg}$

On the basis of the data in (352) and (353), the apparent empirical evidence for Prosodic Inversion turns out to confirm the basic assumptions and predictions of the copy-and-deletion analysis instead. Furthermore, the example in (353b) illustrates another prediction of the copy-and-deletion analysis which has not been mentioned before. A complex constituent that is specified for three (or more) conflicting features is also expected to be split up in three (or more) pieces, preserving the underlying linear order. A complex DP may be specified for the features [*Wh*, Focus, Topic], or even [*Wh*, Primary-Focus, Secondary-Focus, Topic]. As predicted, examples like (354a) are ungrammatical, as well as the corresponding coherent PP in (354b).[62]

(354)　a.　* *U ovu* Jovan *sobu* momentalno　　*veliku* ulazi.

　　　　　　 in this J.　　　room in-this-moment large　walk$_{3sg}$

　　　　b.　* *u ovu sobu veliku*

　　　　　　 in this room large

Multiple splits of complex constituents are attested in languages which do show 1W-enclitic placement restrictions, or do not have enclitics of the type in Croatian and Polish at all. The examples in (355) show that multiple splits are possible in Polish (355a), and German (355b) (cf. Ćavar and Fanselow, 1997), although Prosodic Inversion empirically cannot be motivated in these languages.

(355)　a.　　*Nowe* mi Marek *interesujące* chciał　*książki* zaproponować.

　　　　　　 new　 me Marek interesting　 wanted　books　suggest

　　　　　　 "Marek wanted to suggest new interesting books to me."

---

[62] Some native speakers of Croatian accept (354b) marginally. The possibility of post-nominal adjectives in Croatian is semantically restricted. Post-nominal adjectives are either perceived as archaic, or the combination of [noun + adjective] is used as a proper name.

b. *Bücher hat er interessante nach Berlin keine mitnehmen dürfen.*
   books   has he interesting   to   Berlin no   with-take   may-ed
   "One was not allowed to take any interesting books to Berlin."

Since the syntactic operation of constituent split is motivated as an intra-linguistic and cross-linguistic necessity, and since apparently all split constituents find a syntactic analysis, the empirical basis for Prosodic Inversion or prosodic placement of enclitics does not exist. However, there are still some constructions which are considered opaque for syntactic split. Browne (1975) provides the example in (356b) as an argument against syntactic enclitic placement

(356) a. *Lav Tolstoj je veliki ruski pisac.*
        Leo Tolstoy be$_{3sg}$ great   Russian writer
        "Leo Tolstoy is a great Russian writer."

      b. ? *Lav je Tolstoj veliki ruski pisac.*
        Leo be$_{3sg}$ Tolstoy great   Russian writer

It seems to be impossible to split name in syntax, as illustrated in (357).

(357) * *Lav je bio Tolstoj veliki ruski pisac.*
         L.   be$_{3sg}$ be$_{ptc}$ T.   great   Russian writer

Franks (1998) observes that morpho-syntactic restrictions independently can be used to show that split of proper names is syntactically driven. The example in (358a) shows that usually both parts of the name are declined, and marginally there is a possibility to decline just the first name, as in (358b).

(358) a. *Lava Tolstoja čitam.*
        L.   T.   read$_{1sg}$
        "I am reading Leo Tolstoi."

b. ? *Lava Tolstoj čitam.*

    L.   T.   read$_{1sg}$

Only if both parts of the proper name are declined, splitting is licensed, as argued in Franks (1998). The examples in (359) show that an enclitic auxiliary may split a fully declined proper name, but not a proper name that corresponds to (358b).

(359) a.   *Lava **sam** Tolsotja čitao.*

           L.   be$_{1sg}$ T.   read$_{ptc}$

           "I read Leo Tolstoy."

    b. * *Lava **sam** Tolstoj čitao.*

           L.   be$_{1sg}$ T.   read$_{ptc}$

Similar conditions were observed in Bošković (1997a) for syntactic split of proper names. As illustrated in (360), proper names can be split by non-enclitic elements, if both parts are declined.

(360) a.   *Lava čitam Tolstoja.*

           L.   read$_{1sg}$ T.

    b. * *Lava čitam Tolstoj.*

           L.   read$_{1sg}$ T.

The correlation between the ungrammaticality of (358b) and (360b) is less striking, if the ungrammaticality of the split proper name in (358b) is analyzed as a morpho-syntactic violation.

Summarizing the results of this section, the conclusion is that the apparent empirical evidence for prosodic placement restrictions of enclitics has disappeared, and that all the constructions with split constituents find a plausible explanation in terms of syntactic placement constraints. Furthermore, the empirical data discussed in this section does not falsify the C^0-placement hypothesis.

5.2   Phonological Properties of Clitics

In the following section, syntactic and phonological properties of clitics will be examined in more detail. The purpose of this section is to discuss the possibility of analyzing enclitics from a different perspective. So far, most approaches rely on the assumption that enclitics in Croatian are lexical elements that are placed in the syntactic or phonological component. The view that I want to propose here is that it might be the case that clitics become clitics only at the level of Prosodic Structure. This proposal entails the idea that in the syntactic component, only the categorial information of elements is available, whereas on post-syntactic levels, that is, Morphological Structure (cf. Halle and Marantz, 1993) and Prosodic Structure (cf. Selkirk, 1987; Nespor and Vogel, 1986; Hayes, 1989b) morpho-phonological representations are inserted and derived. In this scenario, the prosodic properties of elements are determined on the basis of the syntactic representation and lexical properties of the elements represented in it.

It may be the case that there are pure prosodic or phonological constraints on the form of function words in Croatian that are responsible for the realization of certain function words as enclitics or full forms. In other words, enclitics not necessarily have to be assumed to be lexical elements that are placed in certain positions, but they are elements that are subject to phonological processes that are partially determined by their position in the syntactic representation, and indirectly also by their position in the prosodic structure. The processes that I want to consider here are either stress assignment or phonological reduction. As mentioned in chapter 2, both processes apparently can interact and their output can be an enclitic form, a stressed full form, or even a stressed clitic. While certain function words that have a representation which does not qualify as a minimal word in prosodic terms can be subject to stress assignment rules in certain configurations, other function words undergo phonological reduction in positions where they are not assigned stress. Stress assignment is understood as an operation on prosodic structure, which applies to unstressed prosodic words, i.e. it applies only to function words in Croatian, since function words are assumed to be not specified for word accent in the lexicon (cf. Selkirk, 1995).

Given that prosodic words are the stress bearing units can be assigned stress, it

follows that morphemes that do not qualify as prosodic words undergo phonological changes, i.e. *nucleus* lengthening applies. Unstressed function words that qualify as prosodic words are subject to phonological reduction in the default case, i.e. syllable truncation applies if no stress assignment effects the function word. The context in which such operations are licensed is determined by prosodic structure.

The implications are that enclitics are not placed in syntax, i.e. in the syntactic representation only pronominal DPs and auxiliary heads are represented. The strong claim expressed here is that the lexicon does not contain two forms of the relevant morphemes (full form and enclitic counterpart), and in particular, it does not contain prosodic subcategorization frames as part of the lexical specification of these morphemes. Whether a function word surfaces as a clitic, or as a full form prosodic word is determined purely by their morpho-phonological make-up, and the relevant prosodic context. The perspective I want to suggest here is that its not the syntactic and prosodic representations that have to be derived on the basis of clitics in the input, its the representation of the morphemes that is derived on the basis of given prosodic representations that directly depend on the underlying syntactic representations.

Although the C^0-placement analysis, and the extended syntactic analysis presented in the previous sections appears to be empirically adequate, it faces conceptual drawbacks. The assumptions that enclitics are lexical, and that they contain a prosodic subcategorization frame as part of their lexical specification are, however, not necessary for enclitic placement. Eliminating these assumptions does not imply that the C^0- or syntactic placement analyses are wrong. It would rather free the syntactic component from the necessity to cope with clitic categories in general. The possibility to analyze the syntax of clitics as nothing else than the syntax of pronouns and auxiliary verbs has major conceptual advantages. Some of them have to do with the conception of a lexicon. The lexicon here is understood to be a storage for language specific information (cf. Marantz, 1997).

As argued in the previous chapters and sections, the assumption that clitics are lexical entails unmotivated stipulations. In order to capture the alternation of clitic pronouns between enclitic and proclitic prosodic properties, it is necessary to assume that the lexicon encodes both of the alternatives, together with a corresponding non-clitic counterpart. Such consequences should be avoided, because of economy

considerations with respect to the lexicon, and because of the lack of explanatory power, given that an algorithmic solution is available. With respect to the properties of the computational system of language faculty, the introduction of powerful machinery, as for example *Prosodic Inversion*, has not only empirical disadvantages, as has been shown in detail in the previous chapters and sections, but it raises also the complexity of the grammar enormously, which is not desirable because of several reasons. If it turns out that only operations, like for example deletion and stress assignment, that are independently motivated for the phonological component, are necessary to explain the properties of clitics in Croatian, this solution should be favored above extensions of the components of grammar.

The following sections will motivate this 'minimalist' view. In section , the basic properties of clitics, and in particular of enclitics in Croatian will be reconsidered. The paradigms of different clitics, and the relation between the phonological and morphological structure of the different categories are discussed in section . The basic outline of a derivational analysis for enclitics in Croatian will be presented in section .
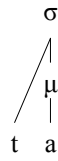
5.2.1 Basic Phonological Properties of Clitics

Clitics are usually assumed to be monosyllabic (cf. van der Leeuw, 1997). Kenstowicz (1994: 640ff) notes that in many languages monomoraic or monosyllabic words are avoided, i.e. lexical words are preferably bimoraic or disyllabic. It is assumed that in these languages a minimal bimoraic/disyllabic requirement is imposed. Such languages are sensitive for syllable weight. Croatian is such a language. As the examples in (361) show, vowel length is a distinctive phonemic feature in Croatian that differentiates an adjective from an enclitic auxiliary.

(361) a. *sām* b. *sam*

alone$_{sg-msc}$ be$_{1sg}$

The necessary properties of a heavy syllable are language specific. The structural differences between heavy and light syllables might be described as in (362) (McCarthy and Prince, 1986; Hayes, 1989).
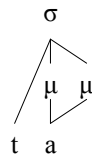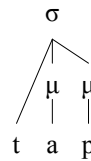
(362)　a.　　light syllable (A)　　　　b.　　light syllable (A)

```
        σ                              σ
        |                             / \
        μ                            μ   \
        |                            |    \
     t   a                        t   a    p
```

　　　c.　　heavy syllable (A)　　　　d.　　heavy syllable (B)

```
        σ                              σ
       / \                            / \
      μ   μ                          μ   μ
      |                              |   |
   t   a                         t   a   p
```

While in some languages only the length of the vowel differentiates light from heavy syllables, in other languages syllables with a coda count as heavy. Croatian differs from Latin in that the existence of a coda is irrelevant in the former, i.e. the syllable structure in (362d) does not exist in Croatian. A comparison between Croatian and Latin is drawn in (363).

(363)

|	Croatian	Latin
light	(C) V (C)	(C) V
heavy	(C) VV (C)	(C) VV (C)
		(C) V C

I will not go into details about the relevance of the distinction between light and heavy syllables for phonological processes, as expressed in Moraic Theory. In the following I will concentrate on the relevance of heaviness for the analysis of enclitic vs. full forms in Croatian. In Croatian it appears that the heaviness of syllables is what determines the status of a function word as clitic or independent stressed word. Monosyllabic function words are en- or proclitic, if they are realized with a short vowel and, thus, receive a monomoraic phonological representation. The null-hypothesis with respect to function words is that only the unstressed forms are specified in the lexicon, while the stressed

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forms are derived on the level of prosodic structure. Clitics that have a polysyllabic full form counterpart are reduced phonologically, whereas clitics with a monosyllabic stressed full form are lexical. This division will be motivated in the following.

The basic observation with respect to stress and the weight of syllables is that stressed monosyllabic words are bimoraic in Croatian. If the assumption is that the prosodic word is the stress domain, there is a relation between heaviness and prosodic structure. Only heavy syllables can be, or are stressed in Croatian. We may conclude that the minimal word in Croatian is bimoraic.

McCarthy and Prince (1986) (see also Kenstowicz, 1994: 640) provided an explanation for the fact that closed class elements escape minimality restrictions and fail to receive a stress in terms of the prosodic hierarchy. The basic assumption is that a prosodic word is composed of metrical feet, as illustrated in (364). In the prosodic hierarchy metrical feet dominate directly syllables, which dominate directly morae.

(364)

      prosodic word
          |
        foot
          |
       syllable
          |
        mora
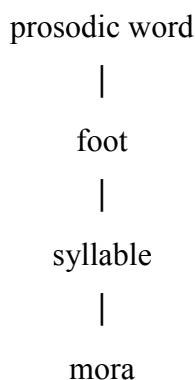
A prosodic word must contain at least one foot. Metrical feet are assumed to be binary, i.e. they either have to contain two syllables, or two morae. Monosyllabic or monomoraic structures cannot be metrified, i.e. they cannot be projected to a foot, and therefore they cannot represent prosodic words. We can adopt this analysis straightforward to Croatian.

It is possible to postulate two classes of function words on the basis of the minimal word definition. One class of elements is lexically specified as monosyllabic and monomoraic, and undergoes phonological lengthening processes in certain contexts where it must be represented as a prosodic word. The other class of elements are

function words that are lexically specified as polysyllabic, and consequently polymoraic. These elements undergo reduction processes in certain contexts in order to escape the minimality restriction, or, in other words, to avoid a stress.

(365) a.   prepositions: *na*   →   *nā*   ("on")

       b.   auxiliaries: *jesam*   →   *sam*   (1st sg. "to be")

Different alternative strategies can be found for deriving a minimal word in Croatian. The most prominent strategy observed for monosyllabic prepositions, as in the example in (365), entails vowel lengthening. The resulting phonological representation is bimoraic. Such prepositions can be used in isolation and host enclitics, as has been shown in the previous discussion. A preposition like *na* ("on"), for example, is assumed to be lexically represented as a single monomoraic syllable. The stressed form of the preposition can be seen as the result of the process of stress assignment, which either lengthens the syllable, or requires lengthening in the phonological component. Stress is not necessarily represented or perceived on a long syllable for all words. On function words in Croatian, the duration of a syllable (in combination with intensity) is perceived as a stress or word accent. The enclitic vs. full form status of prepositions can, thus, be analyzed as purely derivational in terms of phonology.

The lengthening process is not the only phenomenon that can be observed with respect to prepositions. While a monosyllabic and monomoraic preposition in some phonological context undergoes lengthening, in other phonological contexts alternative strategies are applied. The example in (366) shows that vowel insertion is used as an alternative, if the phonological context requires an alternative strategy.

(366)   *pod + njega* → *pod + nj* → *pod+a+nj* → *pod+aa+nj*

Vowel insertion appears to be the only option in (366) because resyllabification in a first step, i.e. integration of '*nj*' into the coda of the syllable '*pod*' would violate the *Sonority Sequencing Principle* (SSP) (cf. Kenstowicz, 1994: 254f). Lengthening of the vowel would not resolve the conflict, although the resulting representation would fulfill

the minimal word requirement. The alternative strategy of the insertion of an epenthetic vowel causes resyllabification in a second step. The resyllabification effect could be seen as a consequence of the *No Coda* principle (cf. Bethien, 1998). The resulting syllable structure is illustrated in (367).

(367)   *po - dānj*

The subsequent lengthening of the epenthetic vowel may be analyzed as compensatory, in the sense of Hayes (1989a), since the underlying pronoun *njega* provides two morae that have to be bound. This phenomenon, thus, can be used to argue for an underlying full form representation of the pronoun in (368).

In other contexts, the preposition *pod* is subject to lengthening. If it is used in isolation in constructions with contrastive stress, the nucleus is lengthened with a resulting form *pōd*. This result shows that a derivational approach in phonological terms is to be preferred. The lexicalist view would state that prepositions are lexically specified for prosodic subcategorization, and the different variants of the full form prepositions are allomorphs. As should be clear from the examples above, such an approach is not adequate.

In the following section, I will present the outline of a possible analysis of enclitic auxiliaries and pronouns in the same line as introduced for prepositions above.

5.2.2 Derivation vs. Lexical Clitics

The basic underlying assumption with respect to clitics in, for example, (Serbo-) Croatian, Polish, and Czech in the literature seems to be that they are lexical. In other words, it is assumed that clitics are lexicalized in the sense that the lexicon contains both forms of for example an auxiliary in its enclitic and full form. Furthermore, it was argued by Inkelas (1989), and Zec and Inkelas (1990), among others that clitics are lexically specified for a prosodic subcategorization frame, i.e. the information that clitics require a host to their left or right is part of their lexical specification. This assumption is adopted by nearly everybody working on clitics in Slavic. What, if this view is wrong, and if Marantz (1997: 202) is right in saying that: "Lexicalism is dead,

deceased, demised, no more, passed on…”? In the following the possibility is discussed that clitics not necessarily have to be assumed to be represented in the lexicon, and that they most probably are also not specified for prosodic subcategorization.

The auxiliary paradigms discussed in chapter 2 might be used to argue for an alternative view. One might think of the enclitic auxiliary forms as derived from their corresponding full forms. The mere fact that the morpho-phonological representation of enclitic auxiliaries might be considered to represent a true subset of the full form representation points to such a possibility. Examples (369) show this relation for the present tense 1st person singular of *biti*. The same comparison can be shown to hold for all other elements in the paradigm.

(368)   *jesam - sam*

       be_{1sg} (“I am.”)

The question is, what kind of relation holds between the two forms in (369). Compared with the paradigms of other types of verbs, one might consider -$(a)m$ to represent the 1st person agreement suffix in (369), while the rest is basically the root morpheme that undergoes morpho-phonological changes that are probably dependent on the phonological properties of the suffix. In table (370) the complete paradigm for the present tense of *biti* is repeated, with a mark for the morphological boundary between root and suffix in the individual items.

(369)

	singular	plural
1st	*jes - am*	*jes - mo*
2nd	*jes - i*	*jes - te*
3rd	*jest - Ø*	*jes - u*

A comparison between table (370) and (371) shows that the enclitic forms do not correspond with the agreement suffixes of the individual items.

(370)

	singular	**plural**
1st	*sam*	*smo*
2nd	*si*	*ste*
3rd	*je*	*su*

A match between enclitic and full forms cannot be found on the basis of the morphological structure of the full form. Enclitic forms contain a part of the root morpheme and the complete suffix. However, the phonological structure of the full forms shows that the enclitics can be seen as true phonological subconstituents of the complex structure.[63] Table (372) shows the syllabification of the individual items.

(371)

	singular	**plural**
1st	*je - sam*	*je - smo*
2nd	*je - si*	*je - ste*
3rd	*jest*	*je - su*

Apart from the 3rd singular, all enclitic forms correspond to one syllable of the full form, namely the final syllable. Given the morphological structure of for example the 1st singular *jes-am*, the syllabification process attaches the coda of the initial syllable to the onset of the following syllable. This might be seen as a reflex of a general principle *No Coda* in terms of Optimality Theory (e.g. Prince and Smolensky, 1993; McCarthy and Prince, 1993).[64] It seems, however, that the (only) possible match with respect to a subset relation between the enclitic and the full forms can be established on the basis of the underlying phonological structure. Again, excluding the 3rd person singular, in a

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[63] Here I assume that a syllable is a phonological constituent.

[64] See Benthien (1998) for a detailed discussion of this phenomenon in Slavic languages.

derivational scenario, one might formulate an algorithm that generates or derives an enclitic form from a full form in the following way:

(372) **Enclitic Auxiliary Derivation**

Erase the initial syllable of a disyllabic full form.

The algorithm in (373) would generate all enclitic forms in the paradigm, except of the 3rd person singular. One major difference between the 3rd person singular, and the other full forms is that the 3rd person singular *jest* is monosyllabic, while all the other forms are disyllabic. As already mentioned earlier, the corresponding 3rd person singular enclitic *je* stands out in many respects. On the one hand, it can be stressed, and thus evade the status of an enclitic. On the other hand, it might be taken to represent a simple reduction of the root morpheme; however, not a trivial one.

The same operations can be used to derive the enclitic forms in the pronominal paradigm in Croatian. I will not show this for every single item, but rather describe the possible dependencies between prosodic structure and the surface form of pronouns and auxiliaries. The following section describes a possible dependency between surface forms of the different function words and the underlying syntactic and prosodic representations.

5.2.3 Deriving Surface Representations

On the basis of the correlations found in the previous section, the enclitic forms of auxiliaries and pronouns seem to be derivable in phonological terms. The two necessary processes in the phonological component that derive the paradigms of the different categories from their unmarked lexical specification are assumed to be Phonological Reduction and Stress Assignment. These processes are not necessarily assumed to be exclusive. As has been shown in chapter 2, we are forced to assume that the derivation of enclitic surface forms can be followed by Stress Assignment. Croatian exhibits constructions with stressed enclitics, as well as Czech (cf. Veselovská, 1995) and other languages (cf. van der Leeuw, 1997). Both processes can entail different sets of operations. As demonstrated with the different surface forms of prepositions, general

phonological constraints apply in different contexts. Given the assumption that the surface forms of enclitics are derived in the phonological component, two questions arise. On the one hand, the question is in which contexts either the one or the other process is triggered. On the other hand, one might ask, why do the processes exist at all. The first question is empirical, and can be answered on the basis of relevant data. The second question, however, will not find a satisfactory explanation at this moment. It might be the case that function words are used in Croatian in the most optimal way, i.e. they are reduced as much as possible, preserving only the parts (morpho-phonological representation) that are necessary for recoverabilty of the underlying feature representation. This view is in line with certain underlying assumptions in the copy-and-deletion analysis of split constituents proposed in previous sections.

The conceptual advantages of the analysis proposed here are discussed in the previous sections. Basically, it is favorable to eliminate lexicalist assumptions from the analysis of enclitics in Croatian, as well as in other languages. Since it has been shown that enclitic pronouns and auxiliaries syntactically behave like their full form counterparts, and that, so far, all the discussed constructions with enclitics can be explained in terms of syntactic placement, one might ask, what the empirical advantage of an approach is that assumes that enclitics are not present in the syntactic representation. In order to motivate such an analysis empirically, consider the empirical arguments against a syntactic approach that were presented in Bošković (1997a/b). The examples in (374) show that an enclitic cluster can be split in a finite clause if parenthetical constructions are inserted in the clause.

(373) *Oni **su** | ja tako_   mislim | nazvali **ga** jučer.*
       they be$_{3pl}$ I   this-way think$_{1sg}$ call$_{ptc}$ him yesterday
       "The called him. This is what I think."

Bošković (1997a/b) argues that the construction in (374) cannot be explained if it is assumed that enclitics are placed in C^0. Further, he assumes that the construction in (374) cannot be explained as syntactic placement of enclitics at all. While his argument might cause problems for the C^0-placement analysis, it is definitely no argument against a syntactic analysis of enclitic placement, if the syntactic analysis assumes that its not

the enclitics that are placed in syntax, but pronominal and verbal categories that represent the surface forms of the enclitics. The underlying syntactic representation for the surface representation in (374) is illustrated in (375).

(374) *Oni **jesu** | ja tako   mislim | nazvali **njega** jučer.*
      they be$_{3pl}$ I this-way think$_{1sg}$ call$_{ptc}$ him   yesterday

As such, the syntactic representation in (375) is perfectly well-formed, even with the full forms of the auxiliary and the pronoun. The derivation of the surface form in (374) is obligatory if the auxiliary and the pronoun are not focused. It has to be assumed that focus intonation is triggered by underlying features in the syntactic representation, or by non-syntactic, i.e. semantic or conceptual conditions which are mapped onto prosodic representations. The surface representation in (374) is the default case where phonological reduction of function words applies. In cases where the relevant function words are syntactically marked for stress, the reduction processes are not licensed. Such a case is illustrated in the example in (376).

(375) *Dao   knjigu **sam njemu**/***mu**.*
      give$_{ptc}$book be$_{1sg}$ him
      "I gave him the book."

VP-topicalization, as in the example in (376), is only licensed if some element in a deeper position in the clause is focused. This is comparable to the constraints on VP-topcialization in German, as illustrated in (377).

(376) a. *Das Buch gegeben **hab'**   ich ihm/***'m***
          the book give$_{ptc}$ have$_{1sg}$I   him
          "I gave him the book."

       b. *Das Buch **hab'**   ich **'m** gegeben.*
          the book have$_{1sg}$I   him give$_{ptc}$

In constructions like (377), either the subject pronoun or the indirect object pronoun have to be focused. In either case, the pronoun cannot be realized as phonologically reduced element. If the focus is represented on the indirect object, it has to be emphasized prosodically which excludes phonological reduction. If the subject pronoun *ich* is focused, the indirect object pronoun is in the focus domain and cannot be reduced phonologically. It has to be assumed that focus spreading effects all c-commanded constituents in the local clausal domain. The example in (378) shows that the pronoun *njega* in Croatian can be reduced if it is not in the c-command domain of a focused element in its clausal domain.

(377)   *Dao   knjigu **sam mu**   jučer.*
        give$_{ptc}$ book   be$_{1sg}$ him yesterday
        "I gave him the book yesterday."

In the example in (378), the adverbial has to be focused. Only if it is focused, the pronoun can be reduced. On the other hand, in the underlying syntactic representation the pronoun can be focused. In this case it has to surface as a full form pronoun.

    The clustering effect can be analyzed in a similar way. If a pronoun is stressed in a position that is adjacent to a complementizer, it cannot be reduced in the phonological component. The example in (379a) shows that auxiliaries that are in the c-command domain of a stressed pronoun also cannot be reduced phonologically. On the other hand, pronouns that precede stressed auxiliaries cannot be realized as full forms, i.e. they have to be reduced.

(378) a.   *Ivan kaže   da **mu**   NJEGA jesam/***sam** pokazao.*
           I.   say$_{3sg}$ that him$_{dat}$ him$_{acc}$ be$_{1sg}$ show$_{ptc}$
           "Ivan said that I showed HIM to him."
           *"Ivan said that I DID show him to him."

b. Ivan *kaže da **mu** *njega/**ga** JESAM pokazao.*

I. say$_{3sg}$ that him$_{dat}$ him$_{acc}$ be$_{1sg}$ show$_{ptc}$

*"Ivan said that I showed him to him."

"Ivan said that I DID show him to him."

The clustering effect of pronouns and auxiliaries, thus, is analyzed as the result of a successive reduction of adjacent unstressed function words. Where the reduction can apply, it does so. If an unstressed function word is in the local c-command domain of a focused (stressed) element, it cannot be reduced. This is understood as an effect of focus spreading.

This analysis does not exclude the possibility of the use of lexicalized enclitic forms. If certain elements are indeed lexical, they are inserted with their specific morpho-phonological form at Morphological Structure.

This brief sketch of an alternative analysis shows that the notion of syntactic clitic placement may be both wrong and right. It may be wrong because enclitics in Croatian can be analyzed as phonologically reduced elements. In this case, enclitics are not placed in syntax, but derived in the phonological component. However, the category representing enclitics is placed in the syntactic component. Syntactic constraints on the placement of enclitics are, therefore, expected.

The empirical predictions of such an approach, as proposed in this section, are not clear in the moment. Further research in the domain of focus, focus spreading, and the syntax and phonology of enclitic placement may falsify it on an empirical basis.

5.3   Summary

This chapter has shown that placement of enclitics in Croatian has to be analyzed as placement in syntax. Movement of enclitics is subject to different island constraints, and different enclitics show different syntactic properties, i.e. enclitic pronouns behave like maximal syntactic constituents, whereas enclitic auxiliaries behave like syntactic heads. Several arguments have been presented against phonological approaches to enclitic

placement in Croatian.

It was demonstrated that a syntactic is available for split constituents constructions which have been argued to be strong arguments for prosodic enclitic placement.

An alternative approach was proposed which treats enclitics as elements that are derived on post-syntactic levels. Placement of enclitics in Croatian is analyzed as placement of full form pronouns and auxiliaries. This approach refutes that clitics are special in that they occupy positions in the clause that are not available for their full form counterparts. The only special property of clitics is that they are closed class elements that are not specified for word accent by default. As such they are subject to different prosodic constraints that either promote the prosodic properties of the respective elements, reduce them to a minimum, and the minimum is defined in prosodic terms. This approach has the advantage of providing explanations for constructions which syntactic approaches can hardly explain. Furthermore, it eliminates completely lexicalist assumptions from the analysis of enclitics in Croatian.

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