



UNIVERSITY OF NOVI SAD  
FACULTY OF PHILOSOPHY  
THEORETICAL LINGUISTICS



**TOPICALIZATION AND LEFT DISLOCATION IN ENGLISH AND SERBIAN**  
DISSERTATION

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Izvod: IZ	Cilj doktorske disertacije pod nazivom <i>Tematizacija i leva dislokacija u engleskom i srpskom jeziku</i> je da opiše i ponudi generativni prikaz sintaksičkih i informacijsko strukturnih osobina tematizacije i leve dislokacije u pomenutim jezicima, dveju naizgled sličnih struktura za pomeranje rečeničnog elementa u prednje polje koje izražavaju iste propozicije, ali ne odgovaraju istom kontekstu. Analiza nije kontrastivna u smislu da tražimo englesko srpske ekvivalente ili obratno, već je <i>tertium comparationis</i> pojava tematizacije i leve dislokacije. Ponuđeni su i osnovni dijagnostički testovi za razlikovanje dva oblika leve dislokacije identifikovana u srpskom, naime leve dislokacije odvojene teme i kontrastne leve dislokacije. Disertacija takođe istražuje kako informacijsko strukturiranje iskaza određuje kontekstualne izbore. Leksikon obezbeđuje ulaznu informaciju sistemu sintaksičkih operacija koji putem obeležja gradi strukturu u fazama i takođe dovodi do pomeranja. Podaci vezani za informacijsku strukturu su dati u numeraciji. Rezultati istraživanja ukazuju na potrebu da se pojam teme raščlani na kombinaciju obeležja [+/-a, +/-c], slično Lópezu (2009), anaforično u smislu Birnera & Warda (1998), i kontrastno u pragmatičkom smislu Titove (2013) pri čemu je [+/-c] zavisno od [+a]. Tematizacija i u engleskom i u srpskom jeziku i kontrastna leva dislokacija u srpskom obeležavaju teme kao [+a, +c], dok leva dislokacija odvojene teme i u engleskom i u srpskom jeziku obeležava teme kao [+a, -c]. U radu se dokazuje da ni

dodeljivanje pragmatičkih obeležja pored formalnih obeležja relevantnih za derivaciju putem operacije koja formira numeraciju ne narušava uslov uključenosti. Interpretacija elementa obeleženog kao tema je rezultat njegove kombinacije obeležja i njegove sintaksičke pozicije, što odražava interakciju sintakse, prozodije i pragmatike. Pragmatička obeležja su vrednovana, ali netumačiva u numeraciji čineći sintaksički objekat koji ih sadrži aktivnim za sintaksičke operacije. Upravna (pragmatička) obeležja uzrokuju slaganje, ali ne i pomeranje. Obeležje ivice je ono što pokreće pomeranje ili interno spajanje. **Argumentujemo** da je tematizacija i u engleskom i u srpskom jeziku generisana pomeranjem. Obeležje ivice na upravnom elementu C (Force) dozvoljava TopP ako je to neophodno za interpretaciju i ako je strukturno moguće, kao što su formulisali Jiménez-Fernández & Miyagawa (2014). Za razliku od engleskog, nefazni upravni element T (upravni element obeležja vremena) u srpskom jeziku može da preuzme obeležje ivice od C i dozvoli TopP u Spec,TP u onim strukturama za koje se smatra da nisu kompatibilne sa tematizacijom u engleskom jeziku. Upravni element koji dozvoljava levu dislokaciju se realizuje kao intonacijska pauza, kao što predlaže Emonds (2004). **Argumentujemo** da je leva dislokacija odvojene teme i u engleskom i u srpskom jeziku nastala generisanjem levo dislociranog konstituenta u mestu realizacije (pridruženom CP projekciji), dok je kontrastna leva dislokacija u srpskom nastala pomeranjem (takođe u poziciju pridruženu CP projekciji). Ono što se zapravo pomera je rezumtivna zamenica i onda se po pridruživanju levo dislociranog elementa uspostavlja koreferentnost putem operacije uskladi ili uskladi+složi Boeckxa (2003), što predstavlja jedini način da se ne naruši uslov uključenosti. Iako i tematizacija i kontrastna leva dislokacija obeležavaju kontrastne teme, one imaju različite diskursne distribucije, što je potvrdio naš korpus, stoga je ovo pridruživanje levo dislociranog elementa opravdano. U slučaju leve dislokacije odvojene teme, koreferentnost između levo dislociranog elementa i rezumtivne zamenice se uspostavlja putem operacije uskladi (Boeckx 2003). Ako je rezumtivna zamenica klitika, ona se pomera u drugu poziciju u svojoj intonacijskoj frazi, što je

	uzrokovano fonološkim zahtevom. Leva dislokacija odvojene teme i u englesko i u srpskom jeziku obeležava referencijske teme i takođe je sredstvo unapređivanja teme u srpskom, kao što se argumentuje na osnovu našeg korpusa.
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[+a, +c], whereas Hanging Topic Left Dislocation HTLD in both English and Serbian marks topic [+a, -c]. It is argued that adding pragmatic features in addition to formal ones relevant to the derivation by the operation which forms the numeration does not offend the Inclusiveness Condition either. The interpretation of an element marked as a topic is the result of its featural content and its syntactic position, reflecting the interaction of syntax, prosody and pragmatics. Pragmatic features are valued but uninterpretable in the numeration rendering the syntactic object containing it active for syntactic operations. Probe (pragmatic) features trigger Agree(ment), but not displacement. It is an edge feature that drives movement or Internal Merge. It is argued that topicalization in both English and Serbian is generated by movement. The edge feature on C (Force) licenses the TopP if it is required for the interpretation and if it is structurally possible, as observed by Jiménez-Fernández & Miyagawa (2014). Unlike in English, the non-phase head T in Serbian can inherit an edge feature from C and license the TopP in the Spec,TP in those structures which are said to be incompatible with topicalization in English. The head licensing the left-dislocated element is realized as comma intonation, as argued by Emonds (2004). It is argued that Hanging Topic Left Dislocation in both English and Serbian is derived by base-generation of the left-dislocated constituent in its surface position (adjoined to a CP), whereas Contrastive Left Dislocation in Serbian by movement (also to a position attached to a CP). What moves is the resumptive pronoun, and then co-reference is established upon adjoining of the left-dislocated element via the operation Match or Match+Agree of Boeckx (2003), which is the only way not to violate the Inclusiveness Condition. Although both Topicalization and Contrastive Left Dislocation mark contrastive topics, they have different discourse distributions, as confirmed by our corpus, thus this adjoining of a left-dislocated element is justified. In the case of Hanging Topic Left Dislocation, co-reference between the left-dislocated element and the resumptive pronoun is established via the operation Match of Boeckx (2003). If the resumptive pronoun is a clitic, it moves to the second position in its



	intonational phrase triggered by the phonological requirement. Hanging Topic Left Dislocation in both English and Serbian marks referential topics and it is also a topic-promoting device in Serbian, as argued on relying on our corpus.
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## Abbreviations

Contrastive Left Dislocation	CLD
Edge Feature	EF
External Merge	EM
Feature Inheritance	FI
Hanging Topic Left Dislocation	HTLD
Information Structure	IS
Internal Merge	IM
Left Dislocation	LD
Logical Form	LF
Main Clause Phenomena	MCP
Mainstream Generative Grammar	MGG
Minimalist Program	MP
Phase Impenetrability Condition	PIC
Phonological Form	PF
Resumptive Pronoun	RP
Strong Minimalist Thesis	STM
Topicalization	TOP

## Typography and Conventions for Glosses

- Book and article titles, Latin words and expressions and in-text examples are in italics.
- Technical terms are italicized only when mentioned for the first time.
- Words or phrases serving as topics and resumptive pronouns in the examples are in boldface.
- Single quotation marks are used for English equivalents of the examples from Serbian (and other languages), for words and expressions from the examples referred to in the main text, and for citations. Double quotation marks are used for quoted words or expressions within quotations.
- The strikethrough indicates the lack of pronunciation and feature checking.
- The numbering of examples starts afresh in each chapter.
- The examples which are considered ungrammatical by native speakers are marked with an asterisk (\*) and those which are judged degraded with a question mark (?) or a double question mark (??) if degraded to a greater extent.
- The examples which are grammatical but contextually infelicitous are marked with a hashtag (#).
- Additional information, comment or clarification in a citation or an example is enclosed by square brackets.
- Glosses include the minimum information necessary. For instance, verbal morphology in Serbian inflects for tense, mood, aspect, person and number. In addition to tense, person and number are indicated only in the case when the subject is omitted.

## Contents

<b>Acknowledgements</b> .....	1
1. Introductory Considerations .....	2
1.1 The Subject of the Research and the Methodology .....	2
1.2 Information Structure: Key Terms and Concepts .....	4
1.3 The Outline of the Dissertation .....	23
2. The Minimalist Framework of Sentence Analysis and Information Structure .....	27
2.1 A Brief Overview of the Development of the Chomskyan Investigation .....	27
2.2 Minimalist Derivation .....	29
2.3 The Issues of the Minimalist Framework and Information Structure Integration ...	37
3. Distinguishing Topicalization from Left Dislocation in English: the Database .....	43
3.1 Syntactic Properties of Topicalization and Left Dislocation in English .....	43
3.1.1 Structural Characteristics .....	44
3.1.1.1 The Nature of Fronted Elements .....	44
3.1.1.2 TOP, LD and Embedding .....	48
3.1.2 TOP, LD, Long Distance Dependencies and Island Sensitivity .....	50
3.1.3 TOP, LD and Reconstruction Effects .....	54
3.1.4 Summary .....	56
3.2 Discourse Functions of Topicalization and Left Dislocation in English .....	57
3.2.1 Birner & Ward (1998) .....	57
3.2.2 Prince (1997, 1998) and Gregory & Michaelis (2001) .....	60
3.2.3 Information-Structural Properties of TOP and LD in English .....	64
3.2.4 Summary .....	67
4. Distinguishing Topicalization from Left Dislocation in Serbian .....	68
4.1 Syntactic Properties of Topicalization and Left Dislocation in Serbian .....	68
4.1.1 The Nature of Fronted Elements, Case Connectivity, Clitic Placement ...	68
4.1.2 Two Types of LD in Serbian .....	79
4.1.2.1 TOP, HTLD, CLD and Reconstruction Effects .....	82
4.1.3 TOP, LD, Long Distance Dependencies and Island Sensitivity .....	86
4.1.4 TOP, LD and Embedding .....	91

4.1.5 Summary .....	94
4.2 Discourse Functions of Topicalization and Left Dislocation in Serbian .....	96
4.2.1 Discourse Function of TOP .....	99
4.2.2 Discourse Functions of HTLD and CLD .....	104
4.2.3 TOP versus CLD .....	111
4.2.4 Summary .....	114
5. Previous Accounts of Topicalization and Left Dislocation within the Minimalist Program ..	116
5.1 Traditional Adjunction Approaches Reincarnated .....	117
5.2 Information-Structural Import Syntactically Encoded .....	122
5.2.1 Rizzi (1997, 2004, 2006) .....	122
5.2.2 Grohmann (2000, 2003) and Sturgeon (2008) .....	126
5.2.3 Argument Fronting as a Main Clause Phenomenon .....	131
5.2.3.1 The Truncation Approach by Emonds (2004) .....	132
5.2.3.2 The Competition Approach by Jiménez-Fernández & Miyagawa (2014) .....	134
6. The Proposal: A Feature-Based Account of TOP and LD in English and Serbian .....	137
6.1 The Main Theoretical Assumptions .....	137
6.2 Deriving TOP in English and Serbian .....	145
6.3 Deriving HTLD in English and Serbian and CLD in Serbian .....	155
7. Concluding Summary and Pending Research .....	166
References .....	169
Appendix 1: Questionnaire .....	193
Appendix 2: Questionnaire .....	199

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## 1. Introductory Considerations

### 1.1 The Subject of the Research and the Methodology

The dissertation examines two superficially similar preposing structures in English and Serbian which represent one of the various strategies languages employ to express truth-conditionally equivalent propositional content. In other words, the utterances in (2) and (3) below (the prime examples being Serbian translations), where the object ‘John’ is preposed as the topic or something that the utterance is about, convey the same propositional meaning as the utterance in (1) with canonical word order (being SVO in both English and Serbian), i.e. the fact that Maria loves John. The verb in both (2) and (3) receives sentential stress. The obvious difference between (2) and (3) is that the structure in (3) exhibits a co-referential (resumptive) pronoun in the canonical position of the preposed object whereas the one in (2) has a gap. The common term in the literature for the structure in (2) is *topicalization* (henceforth TOP, also *fronting*) and for the structure in (3) *left dislocation* (LD).

- (1) a) Maria loves John.  
a') Marija voli Jovana.  
Maria.NOM loves John.ACC
- (2) a) TOP: **John** Maria loves.  
a') TOP: **Jovana** Marija voli.  
John.ACC Maria.NOM loves
- (3) a) LD: **John**, Maria loves **him**.  
a') LD: **Jovana**, Marija voli **njega**.<sup>1</sup>  
John.ACC Maria.NOM loves him

Even though they are truth-conditionally equivalent, the structures in (2) and (3) are not felicitous in the same contexts since the structuring or packaging of information in an utterance determines the kind of context in which it may be used. The communicating of this non truth-conditional meaning is referred to as the *information-structural* component of the language the

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<sup>1</sup> For the purposes of the parallelism with the English example and simplicity we use the variant of LD containing the full pronoun ‘njega’ (him) for the time being, though the clitic pronoun ‘ga’ (him) instead is much more frequent in Serbian.

key terms and concepts of which will be introduced in the following section. The aim of the dissertation is to describe and offer a formal (generative) account of the syntactic and information-structural properties of the structures of TOP and LD in English and Serbian, i.e. to explain how the structures are syntactically generated trying to capture the interaction between syntax and this discourse aspect on independently motivated grounds. An important contribution of the dissertation is laying out the fundamental diagnostics of differentiating between the two variants of LD identified in Serbian, which has not been discussed in the literature so far. The dissertation also explores how informational structuring of an utterance determines contextual choices. It is important to stress that this analysis of the structures of TOP and LD in English and Serbian is not contrastive in the sense that we are looking for English-Serbian equivalents or vice versa, but the *tertium comparationis* are the phenomena of TOP and LD, i.e. the interaction of syntax and discourse in encoding this discourse-informational aspect.

The dissertation primarily follows the mainstream generative (or Chomskyan) methodology, i.e. a hypothetico-deductive or top-down method, the generative framework (with focus on the Minimalist Program and Phase Theory) being presented in chapter 2. In other words, theoretical expectations are tested against language-particular data since, as noted by Lees (1965: 23), ‘observations are meaningless unless we know what regularity they are supposed to illustrate’. The results of those tests shape the theory in return, our proposal being discussed in chapter 6.<sup>2</sup> Thus, for generative investigation, theory and observations or descriptions are complementary, as pointed out by Newmeyer (1996).<sup>3</sup> Therefore, in order to test our predictions we use various sources of language data such as examples from literature, (electronic) newspapers, blogs, message boards, Google searches, radio program transcripts as well as elicited examples in the form of questionnaires in which native speakers are asked whether they find the given sentences acceptable on the basis of their language competence (for the justification of this procedure, cf. Sgall et al. 1973, Halupka-Rešetar 2011, *inter alia*). Since the aim of generative grammar is to formulate a grammar that produces all of the (theoretically) possible sentences in a language (and all languages), relying exclusively on data obtained from various forms of corpora would be limiting. Therefore, eliciting sentences is an indispensable

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<sup>2</sup> Generative linguistics has undergone a number of changes of technical nature whereas the fundamental hypothesis and the theoretical aim have never changed, as pointed out by Lu Jian-ming (2004).

<sup>3</sup> For a more detailed discussion and defense of generative methodology, see Fuzhen Si (2009), for example.



source of data. We had two groups of respondents: a group of 5 native speakers of English and a group of 34 native speakers of Serbian, colleagues, acquaintances and friends, aged 24 to 60, holding academic degrees in various fields of study, including Serbian, English (and other foreign) language teaching. The questionnaires combined two types of questions: (a) closed questions, i.e. questions which are clearly targeted and the answer is 'yes' or 'no' (with respect to acceptability in a given context), and (b) a form of ranking questions, where respondents were expected to judge the degree of acceptability of pairs of examples, on condition they find them both acceptable in a given context. The collected data were subjected to descriptive statistics computation such as percentages. The questionnaires are given in the appendices. In order to show the discourse functions of TOP and LD in Serbian, we rely on a corpus of radio program transcripts only since that is the only available corpus which contains examples of LD in addition to those of TOP.

The following section presents the key terms and concepts of information structure.

## **1.2 Information Structure: Key Terms and Concepts**

The information communicated by a simple sentence such as the one in (4), can be different in relation to different contexts, as illustrated in (5), (6) and (7). Intonational prominence is indicated by capitals.

(4) John drank the beer.

(5) A: There's no more beer in the fridge! Who drank it?

B: JOHN drank the beer.

(6) A: John looks a bit tipsy. What did he drink?

B: John drank THE BEER.

(7) A: What did John do with the beer left after the party? Did he return it?

B: No, John DRANK the beer.

Informally speaking, the component of language encoding this different structuring of information with respect to which part of the sentence (utterance) is considered more or less informative depending on a particular context is referred to as *information structure* (henceforth

IS).<sup>4</sup> Languages express IS by various means. English often employs stress, as illustrated above. It also uses syntactic structure, such as TOP, LD, and cleft sentences. Hungarian, Czech, *inter alia*, are argued to have special syntactic positions for topicalized and focused constituents. Japanese, Chinese, the Bantu languages, *inter alia*, have morphological (topic and focus) markers.

Kruijff-Korbayová & Steedman (2003: 250) define IS broadly as ‘comprising the utterance-internal structural and semantic properties reflecting the relation of an utterance to the discourse context, in terms of the discourse status of its content, the actual and attributed attentional states of the discourse participants, and the participants’ prior and changing attitudes (knowledge, beliefs, intentions, expectations, etc.)’, where discourse is as ‘a coherent multi-utterance dialogue or monologue text’. This broad definition is intended to encompass the various information-structural dichotomies presented in (8) below. Basically, a sentence is composed of one less informative part (i.e. *theme, topic, background*) and one more informative part (i.e. *rheme, comment, focus*) assumed to follow the less informative one and to receive intonational prominence, as observed in most languages. Over the last 100 years or so, numerous approaches to what should be considered the primitives of IS gave rise to the diverse and often confusing terminology listed in the table in (8) (largely based on von Heusinger 1999: 102):

(8) An overview of IS terminology

<i>point of departure/initial notion - l'énonciation</i>	Weil (1844)
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<sup>4</sup> Since the dissertation considers certain phenomena of the informational language component within a formal framework, the adopted term is *information structure*. It was coined by Halliday (1967b: 200) to refer to a distinct structural level as the correlate to intonation phrasing or ‘tonality’ since phrasing does not always correspond to constituent structure. Among other terms found in the literature are: von der Gabelentz’s (1869) *psychological* or *logical structure* (reflecting the idea that the function of language (and a sentence) is to associate psychological concepts); the *functional sentence perspective* of the Prague School (Mathesius [1929] 1975: 82) referring to the ‘thematic structure’ of a sentence as a linguistic level of analysis independent of the subject-predicate relation, patterned by the functional (communicative) orientation of the speaker whereby every part of an utterance is being evaluated for its semantic contribution to the whole, further developed by Firbas (1964, 1996a), Daneš (1970), by Sgall, Hajičová & Benešová (1973) and Sgall, Hajičová & Panevová’s (1986) *topic-focus-articulation*, by Peregrin (1995), Kruijff-Korbayová (1998) and Hajičová, Partee & Sgall (1998)); Chafe’s (1976: 28) *information packaging* metaphor (denoting the structuring of a discourse with respect to the beliefs of the speaker about the beliefs of the hearer (‘how the message is sent’) rather than with respect to the semantic content of linguistic expressions (‘the message itself’); and Vallduvi’s (1990: 4) *informatics* (denoting the component of language that is responsible for ‘the interpretation and generation of information packaging’, i.e. non-truth-conditional meaning in Vallduvi’s (1990: 14) literal sense of packaging or structuring of information consisting of a small set of ‘instructions’ by means of which a speaker ‘optimize[s] the entry of data into her/his knowledge store’).

<i>psychological subject-psychological predicate</i>	von der Gabelentz (1869), Paul (1880)
<i>theme-rheme</i>	Ammann (1928) ( <i>Thema-Rhema</i> ), Mathesius (1929), <sup>5</sup> the traditional Prague School (Firbas (1964), Daneš (1970)), Bolinger (1965), Halliday (1967b)
<i>topic-comment</i>	Hockett (1958), Gundel (1974), Reinhart (1982)
<i>topic-focus</i>	the modern Prague School (Sgall et al. (1973), Sgall et al. (1986), Hajičiová et al.(1998), Kruijff-Korbayová (1998)), von Stechow (1981), Lambrecht (1994), Zubizarreta (1998)
<i>presupposition-focus</i>	Chomsky (1971), Jackendoff (1972), Selkirk (1984), Rooth (1985)
<i>background-focus</i>	Dahl (1969), Chafe (1976) for contrastive focus (further developed by Vallduví's (1990) <i>focus-link-tail</i> ), Jacobs (1982), Krifka (1992)
<i>background-kontrast</i>	Kruijff-Korbayová & Steedman (2003)
<i>old/given-new</i>	Halliday (1967b), Chafe (1976)
<i>open proposition-focus</i>	Prince (1981), Ward (1988)
<i>c-construable-focus</i>	Rochemont (1986)
<i>notional subject-notional predicate</i>	Kiss (1995)

<sup>5</sup> Mathesius never used the term *rheme*. It was introduced into English linguistics by his student Jan Firbas (Mathesius 1975: 185, fn. 71; Firbas 1996a: 9). Before 1939, the terms *theme* and *enunciation* were used basically to refer to *psychological subject* and *psychological predicate*, respectively (Mathesius 1928: 67). After 1939, *departure point of utterance*, then *basis* (along with *theme*) and *nucleus* were used to refer to 'the element about which something is stated' and 'what is stated about the basis,' respectively (cf. Firbas 1996a).

As Vallduví (1990: 35) pointed out, ‘What all the approaches have in common is the recognition that in the sentence there is some sort of informational split between a more informative part and a less informative part. Where that split is and what kind of split it is – a continuum or a dichotomy – is a matter of disagreement, but the split is nevertheless present.’<sup>6</sup> Most approaches agree that the defining criterion for the informational split of a sentence is a contrast in informativeness, and the evaluation of informativeness includes at least one or a combination of the two aspects of *aboutness* (sentential aspect) and *discourse anchoring* (discourse aspect) (von Heusinger 1999: 102). Each notion is briefly discussed below.

Aboutness refers to a distinction between what the utterance is (pragmatically or contextually) about (*topic, theme or notional subject*), as the part that relates the utterance to the discourse purpose (the point of departure), and what is said or predicated about it (*comment, rheme or notional predicate*), the part that advances the discourse. This (intuitive) notion is part of the more general notion of predication. Drawing on the basic concept of predication that dates back from Aristotle’s *Categories* (an entity can either be *present-in* or be *said-of* a subject), Hockett (1958: 201) states: ‘The speaker announces a topic and then says something about it’, corresponding to the categorical judgment (of the 19<sup>th</sup> century philosophers Brentano and Marty) in the *thetic/categorical* distinction in linguistics of Kuroda (1972) and Sasse (1987).<sup>7</sup> An influential philosophical discussion of what a sentence is pragmatically about is found in Strawson (1964: 97-98). The topic is what the statement is about evoking ‘knowledge assumed to be already in the audience’s possession’, and ‘assessments of statements as true or false are commonly [...] topic-centered’. It follows that the topic must be referential or carry existential presupposition. Consider Strawson’s (1964: 98) examples given in (9):

- (9) a) A: What is the King of France like?  
      B: The King of France is bald.

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<sup>6</sup> Linguists disagree with respect to the question of recursivity of IS partitioning, i.e. whether it occurs at the sentence level, clause level or even at the level of some lower syntactic unit. As Kruijff-Korbayová & Steedman (2003: 251) summarize, Vallduví and Zacharski (1994), Koktová (1995), Hajičová et al. (1998), Kruijff-Korbayová and Webber (2001) allow various degrees of mild recursivity, for example, in cases of coordinated and some cases of subordinated clauses within complex sentences. Vallduví (1990), Sgall et al. (1986) and, Steedman (2000) allow no recursivity, whereas Partee (1995) allows unlimited recursivity.

<sup>7</sup> Thetic sentences express a simple judgment of the logical structure ‘A is’ or ‘A is not’, such as sentences containing weather verbs or existential sentences.

b) A: The exhibition was visited yesterday by the King of France.

The statement in (9a) has no truth value since it is about a non-existent king. In (9b), something is asserted about ‘the exhibition’ (the topic) and the statement is false since ‘the King of France’ is not among the visitors.<sup>8</sup> This implies that sentences must have topics in order to be assigned truth values and that topics must be discourse old or given. Erteshik-Shir (2007: 16-19) argues that instead of ‘old’ (mentioned in the conversation), topics must be ‘given’ (the hearer has the referent in mind) in the following ways. There are ‘permanent and temporary fixtures of our world’ (such as the moon, the train, etc.) or a topic can be derived from a previously mentioned *discourse topic* defining a set the topic belongs to (e.g. writing a letter of recommendation for a student sets the discourse topic for their professor (cf. Grice 1975)),<sup>9</sup> or from general world knowledge accommodation, as given in (10):

(10) John heard a beautiful concert. The composer directed it.

In the context ofthetic sentences such as ‘It is raining’, sentences are considered to be predicated of a (implicit) *stage topic* (here-and-now of the discourse).

According to Gundel & Fretheim (2004: 4), this connection between the topic and referential givenness (*information status*)<sup>10</sup> is due to the ‘definiteness’ or ‘presupposition’ effect of topics, which can be illustrated in English by the ‘lie-test’ of Erteshik-Shir & Lappin (1979), given in (11):

(11) A: John is a liar.

B: That’s not true!

The statement A (about ‘John’) is challenged by saying B. This is understood as conveying: ‘John is not a liar.’ The existence of ‘John’ is not denied. Being presupposed, the topic is outside the scope of sentence negation. Various other referential givenness conditions on topics have

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<sup>8</sup> This also demonstrates that although IS is primarily a pragmatic phenomenon since the interpretation of an utterance is context-dependent, it can also have truth-conditions (semantic) effects (de Swart & de Hoop 1998).

<sup>9</sup> *Discourse topic* is a proposition or an entity a given discourse or text is supposed to be about, i.e. it is concerned with discourse/text understanding and cohesion (cf. van Dijk 1976/77, Keenan-Ochs & Schieffelin 1976, Brown & Yule 1983a, *inter alia*). Daneš (1974a: 109) refers to it as *hypertheme*. Lambrecht (1994) uses the term to denote a topic expression whose referent is pragmatically salient beyond the confines of a sentence.

<sup>10</sup> *Referential or information status* is an absolute property of a discourse entity regarding its presence or absence in the previous discourse or the hearer’s knowledge store depending on the discourse model (Vallduví 1990: 20).

been proposed such as different concepts of referentiality and specificity (often identifiability by the speaker) of, for example, Fodor & Sag (1982), Enç (1991), and von Heusinger (2011), the *Familiarity Condition* of Gundel (1985), the cognitive statuses on *Givenness Hierarchy* of Gundel, Hedberg & Zacharski's (1993), the *identifiability* and *activation statuses* of Lambrecht (1994) (drawing on Prince 1992 and Chafe 1987). As argued by Reinhart (1981), it is enough to be interpreted as referential (specific in other approaches) in order to serve as a topic. We will illustrate this in (12) below by Erteschik-Shir's example (to appear in Cabredo Hofherr et al. eds.), where definite is to be understood as involving familiarity. Since individual-level predicates such as: 'Dogs are intelligent.' cannot be interpreted as having a stage topic, thus uttered out-of-the-blue like stage level predicates, as in: 'Firefighters are (always) available.' any constituent that can be a subject of such a sentence must be a possible topic as well.

- (12) a) The little boy is intelligent.  
b) He is intelligent.  
c) John is intelligent.  
d) \*A little boy is intelligent. (non-specific)  
e) Dogs are/A dog is intelligent. (only generic)  
f) A student I know is intelligent. (specific)  
g) A dog is intelligent, a cat is not. (contrastive)  
h) Two/Some (of the) students are intelligent. (partitive)

As expected, definites (12a, b, and c) are possible topics. However, indefinites (12e, f, g, h) are also possible topics as long as they are referential, which is why (12d) is marked as ungrammatical. As pointed out by Lambrecht & Michaelis (1998: 495), the evoked status does not entail topic status, since pronouns, for example, which are considered typically topical (denoting or otherwise indicating the topic, cf. *Centering Theory* of Grosz, Joshi & Weinstein 1995) can be interpreted as new information as well in the right context, as illustrated in (13) (from Casielles-Suárez 2004: 41):

- (13) A: Who did they call?  
B: Pat said they called her.

In order to account for the same propositions about different referents, Reinhart (1981: 79-80) further formalizes this concept of topichood in her dynamic interpretation framework by proposing an internal organization of the context set (a modification of Stalnaker's 1978 possible worlds definition of a context) where propositions are classified into subsets of propositions by their referential entries or sentence topics, as given in (14):

(14) a) A: Tell me about Felix.

B: Felix adores Rosa.

b) A: Tell me about Rosa.

B: Felix adores Rosa.

The proposition (B) remains unchanged, but it will be assessed and stored as information about Rosa in (14b).

The following classical syntactic tests for identifying what is intuitively perceived as a sentence topic (in the aboutness sense) were proposed by Kuno (1972), Gundel (1974, 1985, 1988) in (a) and (b), and Reinhart (1981) in (c) below. The reasoning behind the tests is that if a sentence structurally unmarked for a topic position can appropriately be replaced with an equivalent structurally marked sentence in a given context, the phrase that occupies the dislocated position can be considered the topic of the unmarked sentence, as proposed by Kuno (1972) and Gundel (1974).

- a) 'As for' and 'Speaking of' tests → an expression can be considered a topic if it can be topicalized or left-dislocated and preceded by 'as for'. E.g. As for the vodka, John drank it; Speaking of the vodka, John drank it.
- b) 'What-about' test → an expression can be considered a topic if the sentence can answer the question 'What about X', where X is the topic. E.g. What about the vodka, who drank it? – John drank the vodka.
- c) 'Said-about/of' test → an expression can be considered a topic if there is an alternative form of the sentence 'S/he said about/of X that "comment"', where the topic X is

contained in the focus domain of the sentence. E.g. They said about the vodka that John drank it.<sup>11</sup>

These tests have proved to be either too strong (some topicalized phrases fail the tests) or too weak (too many elements are identified as topics) as observed by Gundel (1974, 1988), Reinhart (1981), Prince (1985), Ward (1988), Vallduví (1990) and others. Although they fail to identify any type of topic, the purpose of these and other pragmatic tests (cf. the examples in (12)) is not to determine the necessary conditions for being a topic (or focus), since ‘pragmatics is not deterministic’, but to show that a certain informational structure is possible, as pointed out by Gundel & Fretheim (2004: 16). Topics exhibit different syntactic, prosodic and pragmatic properties. Among different types of topic found in the literature are: *aboutness-shift topic* (newly introduced or reintroduced in a discourse) (Frascarelli 2007: fn. 13) or *shifted topic* (Erteschik-Shir 2007), *hanging topic* (not preceded by prepositions and obligatorily resumed by a (clitic) pronoun, not necessarily topic shifting) (Benincà 2001, Frascarelli 2007: fn. 13), *familiar* or *continuing topic* (referring back to discourse established entities for topic continuity, not aboutness topics by themselves (cf. Givón 1983, the *backward-looking center* of Centering Theory), Frascarelli 2007: the English counterpart of example 9), and *contrastive topic*, implying that one alternative or member of a set introduced by the previous context is under consideration, illustrated in (15-18), respectively:

(15) **A Leo (gli)** parlerò domani.  
to Leo to.him will talk-I tomorrow  
‘I will talk to Leo tomorrow.’

(16) **Leo \*(gli)** parlerò domani.  
Leo to.him will talk-I tomorrow  
‘Leo, I will talk to him tomorrow.’

(17) A: I was supposed to study the rules here and do the exercises at home, while I expected to find some outlines I could refer to, at any point, to check the relevant rule, this is what I missed: **the check** that I could remember everything.

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<sup>11</sup> The predication (comment) has to be understood as affecting the subject (topic), i.e. as being its potential property, thus the subjects of presentational sentences cannot be topics, e.g. *Then, a bear appeared out of nowhere. ?He said about a bear that it appeared out of nowhere.*



B: However those questions gave you a **check** for your understanding.

A: Well, maybe I cannot do **this check** on my own.

(18) A: Who drank what?

B: **John** drank the vodka (but **Maria** drank the beer.)

A contrastive topic is actually a partial answer to a larger question under discussion (such as A) signalled (in this case) by a fall-rise accent or Jackendoff's (1972) B-accent (cf. Büring 1999, 2003, also Krifka 2007, Neeleman et. al 2009, Titov 2013). Since across languages different phrases can be topicalized or dislocated, drawing up a comprehensive inventory of topics falls outside the scope of the dissertation.

The other aspect important for the evaluation of informativeness, referred to as discourse anchoring by von Heusinger (1999), denotes a distinction between the part of the utterance that is informative or new with respect to the embedding textual environment or discourse (*focus* or *new*) and the part that is uninformative, known, given or presupposed knowledge or discourse (*background*, *presupposition*, *open proposition* and *old/given*). However, there is no coherent definition of *givenness*. Whereas Halliday (1967b: 206) relates it to 'anaphorically or situationally recoverable' entities, which Chafe (1976: 30) reformulates into the psychological model of consciousness of the speaker and the hearer, i.e. '[...] knowledge which the speaker assumes to be in the consciousness of the addressee at the time of the utterance', Chomsky (1971) and Jackendoff (1972) introduce the opposition presupposition-focus with the focus being the non-presupposed information in the sentence, i.e. not shared by the speaker and the hearer and 'carrying the intonation center'; technically, the complement of presupposition. Chomsky (1971) and Jackendoff (1972) build on a broader notion of presupposition,<sup>12</sup> which developed into a semantic theory of focus.<sup>13</sup> Rochemont (1986) defines given information as *C(ontext)-*

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<sup>12</sup> Two types of propositions can be considered presupposed:

1) whole presupposed propositions – containing a sentential subject, no variable, as in: e.g. *The fact that she is a woman is no disqualification*. The utterance presupposes the whole presupposed proposition, i.e. that she is a woman (Prince 1986: 2019), and

2) open presupposed propositions - containing a variable, marked by stress (a) or syntactic form (b):

a) She gave the SHIRT<sub>i</sub> to Harry.

b) It was the SHIRT<sub>i</sub> that she gave 0<sub>i</sub> to Harry.

'She gave X<sub>i</sub> to Harry.' is salient shared knowledge (Prince 1986: 2).

<sup>13</sup> The structured meaning theory was developed by von Stechow (1981), Jacobs (1983) and Krifka (1991, 1992), and the alternative semantics theory was proposed by Rooth (1985, 1992).

*construable*.<sup>14</sup> It follows that the (information) focus is typically correlated with the context question since the answer to the relevant implicit or explicit *wh*-question in the particular context (Gundel 1994: 461) is necessarily new, and the rest of the sentence, contained in the question, is presupposed, as in the following examples (from Erteschik-Shir 2007: 28) (cf. also Büring 1997, Engdahl 2001), in which the focus is capitalized:

- (19) a) Q: What did John do?  
A: He WASHED THE DISHES.
- b) Q: What did John wash?  
A: He washed the DISHES.
- c) Q: Who washed the dishes?  
A: JOHN washed the dishes.
- d) Q: What happened to the dishes?  
A: JOHN WASHED them.
- e) Q: What happened?  
A: JOHN WASHED THE DISHES.
- f) Q: What did John do with the dishes?  
A: He WASHED them.

In (19a), only the subject is presupposed (thus the only possible topic), the verb phrase is the focus. In (19b) and (19c), the topic is contained within the presupposition, but it cannot be equated to it (the sentences are evaluated with respect to ‘John’ and ‘the dishes’, respectively). In (19d), the topic and the presupposition overlap, but they do not form a syntactic constituent. Example (19e) represents an all-focus sentence with no presupposition (having a stage topic likethetic sentence). In (19f), the preposition is discontinuous, the verb being the focus.

Focus is always foregrounded in linguistic structure in some way. English usually relies on prosody (as in the above example). One element carries a primary pitch accent which can be associated with a different focus structure. This makes it possible for one and the same utterance to be interpreted differently depending on the context, as illustrated below:

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<sup>14</sup> Constituents said to be *D(iscourse)-linked* belong to a referential set already established in the discourse. Pesetsky (1987) introduced the term to account for a specific type of *wh*-constituents (*viz.* ‘which N’) requiring an answer from a certain set (defined by the head noun) (Frascarelli 2007: fn. 15).

- (20) a) A: What did John wash?  
       B: John washed [the DISHES]<sub>F</sub>. (*argument or narrow focus*)
- b) A: What did John do?  
       B: John [washed the DISHES]<sub>F</sub> (*predicate or wide focus*)
- c) A: What happened?  
       B: [John washed the DISHES]<sub>F</sub> (*sentence focus*)

However, Gazdik (2011: 152) rejects this ‘assumption that focused constituents are the ones that answer constituent questions’ considering an example such as the one in (21), where the focused constituent in B is not a new discourse entity since it has been mentioned in the question (‘contrastive’ in brackets being our modification, which will be taken up shortly):

- (21) A: Who did Mary kiss, John or Bill?  
       B: Mary kissed JOHN<sub>(CONTRASTIVE)FOCUS</sub>.

Gundel & Fretheim (2004: 2-3) point out that there are two kinds of givenness, logically independent, *viz.* referential and relational. In (21B), ‘John’ is referentially given in the sense that it is already established in the discourse, but it is relationally new in the sense that it is new information that is predicated about ‘Mary’ which is outside the scope of predication. In other words, ‘John’ can be represented by a variable X in the proposition: Mary kissed X. Relational givenness is associated with the semantic representation of sentences (e.g. presupposition-focus of Chomsky 1971 and Jackendoff 1972, topic-comment of Gundel 1974 and Reinhart 1982, and topic-predicate of Erteschik-Shir 1997/2007, *inter alia*), whereas referential givenness does not have to be associated with linguistic representations at all (e.g. one can consider some visual or auditory (non-linguistic) representation as familiar/specific or not). Topic, as a relational givenness notion, can be constrained but not uniquely determined by the context. For example, the same context, the sentence in (22a) can be followed by either (22b) or (22c), depending on the speaker’s interest, i.e. different things can be presented to be what these sentences are about (‘the match’ in (22b) and ‘Australia’ in (22c)), which is reflected in the prosody too (Gundel 2010: 179):

- (22) a) Yesterday was the last day of the Davis Cup match.

- b) The match was won by Australia.
- c) Australia won the match.

Going back to (21), the kind of focus illustrated is referred to as *contrastive focus* in the literature.<sup>15</sup> It can be said to imply the availability of a contextually closed set of semantically related members providing alternatives for a given proposition, which are typically negated or corrected (cf. Lee 2003, Umbah 2004, Krifka 2007). For Titov (2013), the set of alternatives has to be activated exactly at the point when the sentence containing the contrastive element is uttered. Titov refers to a pragmatic set of alternatives (contextually salient entities), not a semantic set of alternatives as usually considered in the literature, as stated above.<sup>16</sup> For example, Szűcs (2014: example 5) builds on Kenesei's (2006) examples to argue that both new information focus (NIF) (23b) and contrastive focus (CF) (23c) involve set-membership at the level of semantics, *viz.* {people I invited}, but only contrastive focus indicates to the hearer that there are some other people under consideration as well at the level of pragmatics and asserts that none of them was invited, as illustrated in (23):

- (23) a) Kit hívtál meg?  
 who.ACC invited-you PREVERB  
 'Who did you invite'
- b) Meghívtam (például) Jánost<sub>NIF</sub>.  
 Invited-I for example John.ACC  
 'I invited (for example) John.'
- c) Jánost<sub>CF</sub> hívtam meg.  
 John.ACC invited-I PREVERB

<sup>15</sup> Cf. Casielles-Suárez (2004), for an overview of various types of focus recognized in the literature.

<sup>16</sup> According to Titov (2013), since the alternative is mentioned earlier (in the question), the focus in (21) is not interpreted contrastively (but restrictively), and the focus in (i) receives such an interpretation (the construction itself forces such an interpretation, though):

(i) A: Who did Mary kiss?

B: It was JOHN<sub>CONTRASTIVE FOCUS</sub> who Mary kissed.

However, if (21B) means that Mary did not kiss Bill as well, then 'John' is interpreted contrastively. Erteschik-Shir (2007: 49-50), points out that in the case of restrictive foci, the set-membership does not have to be clearly defined only contextually restricted or specified and the members are not contrasted to other members (do not eliminate them), as illustrated in (ii):

(ii) A: Which one of his friends wants to meet John?

B: JANET wants to meet John.

‘I invited JOHN (and not somebody else).’

Based on evidence from the syntactic distribution of constituents serving different informational functions, Neeleman et al. (2009) argue that contrastiveness should be a primitive of IS on a par with topic and focus, i.e. topic and focus as basic notions of IS ‘can be enriched to yield a contrastive interpretation’, i.e. contrast is contingent on topic or focus as presented in the table below:

(24) A Four-Way Typology of IS Notions

	Topic	Focus
Non-contrastive	Aboutness topic [topic]	New information focus [focus]
Contrastive	Contrastive topic [topic, contrast]	Contrastive focus [focus, contrast]

After we have clarified the two aspects taken to define the informational split of a sentence, let us now briefly illustrate why the dichotomies presented in the table in (8) (reflecting the two aspects) cannot be collapsed into one.

Topic/theme-comment/rheme dichotomies, which separate topic from the rest of the sentence, and background/ground/presupposition/open proposition/c-construable-focus dichotomies, which separate focus from the rest of the sentence, are all presented in (25):

(25) Q: What does John like?

John	likes	beer.
topic/theme/notional subject	comment/rheme/notional predicate	
link	tail	focus
ground		
background/presupposition/open proposition/c-construable		

Assuming that the two aspects of the IS are structurally distinct, Halliday (1967b) postulates a thematic structure (theme-rheme, linear ordering of informational units with respect to aboutness, speaker-oriented) and information structure (an internal organization of each informational unit whose elements are marked with respect to givenness, hearer-oriented) of a sentence. Thus, the theme is the initial constituent of the sentence,<sup>17</sup> whereas topic is defined as what the sentence is pragmatically about (Reinhart 1981). The status of these notions in linguistic theory is different, as pointed out by de Swart & de Hoop (1998). Vallduví's (1990) trinomial hierarchical articulation reflects both aspects, the ground containing the link, a 'special' topic-like sentence-initial element indicating a specific file card in the hearer's knowledge-store where the new information (focus) is to be entered, and the tail, the complement of the link within the ground.<sup>18</sup> However, not all sentence-initial constituents are necessarily links, there can be more than one link (when the new information has to be stored under different addresses), and only one can be sentence-initial. Furthermore, in languages such as English links stay *in situ* (prosodically marked). As de Swart & de Hoop (1998: 116) point out, links in Catalan seem to be shifted rather than continuing topics, and if both kinds of topics are to be generalized over, the pragmatic notion of aboutness which characterizes both should be employed. According to Gundel (1998), the presupposition-focus interpretations of Chomsky (1971) and Jackendoff (1972) can be reformulated as different topic-comment interpretations.<sup>19</sup> Vallduví (1990: 51),

<sup>17</sup> The terms theme and rheme also represent the ontological structure of the message conveyed by the sentence and became employed by the functionalist approach of the Prague School that mainly focused on the notion of givenness. The theme is the starting point of the utterance (old information in the sense that the expression refers to a discourse entity mentioned before or assumed to be known by the interlocutors). The rheme contributes new information about the theme.

<sup>18</sup> The tripartite division of information was also proposed by Erteschik-Shir (1997, 2007), Büring (1999), *inter alia*, motivated by the fact that the elements contained in the comment and background are not equally informative or prosodically marked.

<sup>19</sup> Chomsky (1971: 95) notes that sentence (1) expresses three different propositions with respect to which constituent containing the intonation center (capitalized) is understood to be the focus:

(1) Did the Red Sox play the YANKEES?

PRESUPPOSITION	FOCUS	POSSIBLE RESPONSES
the Red Sox played someone	the Yankees	No. The Tigers.
the Red Sox did something	played the Yankees	No. They had the day off.
something happened	the Red Sox played the Yankees	No. Bill had the flu.

On the other hand, sentence (2) expresses only one proposition, different from the ones available in (1):

(2) Did the RED SOX play the Yankees?

PRESUPPOSITION	FOCUS	POSSIBLE RESPONSES
Someone played the Yankees	The Red sox	No. (it was) the Tigers.

Gundel (1998) reformulates (1) and (2) as topic-comment interpretations, as shown in (3) and (4), respectively, the comment being the main predication and the scope of the question in every case:

*inter alia*, (cf. de Swart & de Hoop 1998: 117-119), argues against collapsing the topic-comment and focus-background dichotomies into one because it would be empirically inadequate, though they partially overlap. Both (26b) and (26c) are possible answers to (26a):

- (26) a) What did she give to Harry?  
 b) She gave [a shirt]<sub>F</sub> to Harry.  
 c) To Harry she gave [a shirt]<sub>F</sub>.

The focus-background articulation reflects the distinction between the focus ‘shirt’ and the background ‘Mary gave X to Harry’, but not the meaning denoted by the topicalization of the indirect object in (26c). On the other hand, the topic-comment partition cannot account for the intonational difference between (27a) and (27b), namely that ‘to Harry’ is part of the comment, but not in focus in (27a), and that ‘to Harry’ is the new information in (27b) (de Swart & de Hoop 1998: 118):

- (27) a) [Mary]<sub>T</sub> [gave a SHIRT to Harry]<sub>C</sub>.  
 b) [Mary]<sub>T</sub> [gave a shirt to HARRY]<sub>C</sub>.

The topic-focus bipartition developed by the Prague School based on a scale of communicative dynamism is given in (28):

- (28) Q: What does John like?

John likes	beer.
contextually bound	contextually non-bound
topic	focus

The dichotomy contextually bound (CB)-contextually non-bound (NB) (the linguistic counterpart of the cognitive opposition of given-new information, respectively) determines the

(3) Did the Red Sox play the YANKEES?

TOPIC/THEME	COMMENT/RHEME
(the ones) Who the Red Sox played	(x is) the Yankees
The Red Sox/what the Red Sox did	(x is) played the Yankees
??/time x, place y	The Red Sox played the Yankees

(4) Did the RED SOX play the Yankees?

TOPIC/THEME	COMMENT/RHEME
(the ones) who played the Yankees	(x is) the Red Sox

topic (T)-focus (F) dichotomy in that a CB item typically belongs to T and a NB item to F.<sup>20</sup> However, in marked cases where the item is more deeply embedded thus not dependent directly on the main verb, it is possible to find CB items in F and NB items in T, such as ‘my’ and ‘nice’, respectively, in (29) (from Hajičová & Sgall 2007: 880):

(29) This nice book belongs to my neighbor.

As shown, topic and focus have been used to refer to syntactic/phonological structures and to their semantic/pragmatic interpretation (even by the same authors). Therefore, one has to distinguish between topic expressions and topic referents. There are various formal means of marking topics. Languages usually employ several of the options illustrated in (30) below. Topics are often subjects in *subject-prominent* languages such as English and Serbian (explained further in the text). Topics can be expressed by special syntactic movement, namely topicalization (30a) and left dislocation (30b), diathesis such as passivization (30c), specialized syntactic constructions such as the one in (30d), by sentence initial position in languages with free word order such as German or Russian (30e), or by intonation, i.e. deaccentuation (marked by lower case letters) (30f) (from Krifka 2001). Topics can also be marked by a (clitic) pronoun (30g) or morphologically (30h). Since topic is a presupposed or predictable part of the proposition, it does not have to be formally expressed, such as in the cases of topic drop (30i), or stage topic (30j).

- (30) a) **This article** Mr. Morgan wrote when he was still young.  
 b) **This article**, Mr. Morgan wrote it when he was still young.  
 c) **This article** was written by Mr. Morgan when he was still young.  
 d) As for/Regarding **this article** it was written by Mr. Morgan when he was still young.  
 e) **Diesen Artikel** schrieb Mr. Morgan, al ser noch jung war.  
 f) Mr. Morgan **WROTE**<sub>(accented)</sub> **this article** when he was still **YOUNG**<sub>(accented)</sub>.  
 g) Jovan **ju** je poljubio.

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<sup>20</sup> This concept of topic seems similar to the definitions of Open Proposition/Presupposition/Background that account for discourse-old, multiple topical expressions (all elements that are not the focus). However, context-bound is not to be equated with discourse-old since ‘not only items mentioned in the preceding verbal co-text can occur as CB, but also those referring to entities activated by the situation of the discourse’ (Sgall et al. 1986, 1998: 59). It is possible to introduce a discourse-new element as a (sentence) topic, as in: e.g. *That was a student of mine. Her HUSBAND had a HEART attack* (Lambrecht 1994: 326) (the discourse topic remains unchanged; it is still about a student of mine).



John.NOM her.CL.ACC AUX kissed

‘John kissed her.’

h) **Neko wa** kingyo o ijit-te.

cat TOP goldfish OBJ play with-and

‘The cat is playing with a/the goldfish, and... (Japanese, Gundel & Fretheim 2004: 5)

i) Ja ne sdala kursovuju, potomu čto ješčë ne dopisala **Ø/jejë.**

I neg hand-in.past course-paper because that yet neg write.perf.past it

‘I haven’t handed in the course paper, because I haven’t finished writing it.’ (Russian, Erteshick-Shir, Ibnbari & Taube 2012: 8)

j) A man arrived. (cf. (12))

Since more than one constituent of a sentence can be presupposed or familiar, then a sentence can have more than one potential topic, especially if there is more than one pronoun (considered to indicate topicality) in the sentence, e.g. ‘**I** gave **her** a present.’. However, if a topic is defined to be not only given but also as what the sentence is about and a truth-value pivot, ambiguity is avoided and the following distinction is made, illustrated by example (31) below from Neeleman et al. (2009).

(31) a) **Maxine** was introduced to the queen on her birthday.

b) She was wearing a special dress for the occasion.

‘Maxine’ is a linguistic topic (denoting a discourse entity or referent) since it introduces a new topic of discourse and the comment about Maxine is that she was introduced to the queen on her birthday. It should be distinguished from other expressions in the utterance that merely index or designate such an entity in a sentence, i.e. its semantic role as an argument, such as pronouns in both (31a) and (31b) as the continuation of the discourse in (31a) (cf. Lambrecht 1994: 187).

As argued by Gundel & Fretheim (2004: 16), syntactic and pragmatic tests for topic and focus identification (which take a sentence or a part of it and testing its contextual appropriateness (cf. pp.10 and 13)) demonstrate the failure to distinguish between the properties

of topic and focus (or IS) that are grammar-driven and those that are pragmatic.<sup>21</sup> Therefore, as pointed out by Gundel & Fretheim (2004:17): ‘The important question then is not whether topic and focus are basically grammatical or pragmatic concepts, but which of their properties are purely linguistic, i.e. grammar-driven, and which are derivable from more general pragmatic principles that govern language production and understanding.’ Since across languages the IS of a sentence interacts with (or can be expressed by) phonology (intonation), morphology (topic/focus markers or morphemes), syntax (word order variations), interpretation (quantifier scope),<sup>22</sup> and also has an effect on discourse structuring (the possible sequence of sentences), there has been continuing disagreement in linguistic theory regarding the placement of IS in the overall system of grammar. It is generally agreed that IS belongs to sentence grammar, i.e. it is concerned with the organization of the sentence within a discourse, not with the organization of discourse itself.<sup>23</sup> The question is whether these levels are independent or interdependent. As a reaction to the transformational-generative or ‘formal’ view of syntax as an autonomous level of linguistic structure, semantics being a component which ‘interprets’ syntactic structure, various *functionally* oriented approaches appeared concerned with explaining the communicative function of morphosyntactic or intonational structure in discourse rather than developing formal models of sentence structure, seeing the syntactic and IS component as interdependent. However, Chomsky (1980: 59) suggests that the issues of stress and presupposition may fall within ‘grammatical competence’ rather than ‘pragmatic competence’, both kinds of competence being part of ‘the mental state of knowing a language’. With respect to this, Lambrecht (1994: 9) notes

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<sup>21</sup> For this reason a number of authors have suggested that topic and focus should not be considered linguistic concepts at all (e.g. Prince 1998, Szendrői 2001, Slioussar 2007). However, these approaches are challenged to account for syntactic processes such as topicalization, topic and focus markers, for instance.

<sup>22</sup> Consider an example from Erteschik-Shir (2007: 25-26). The sentence, e.g. ‘*Two girls arrested three boys.*’ is ambiguous without context. There are three possible interpretations depending on with respect to what the truth value of the sentence is assessed: (1) if it is the topic of the sentence, the subject takes wide scope, i.e. there is a context in which a set of two girls is given an assignment to arrest three boys. On the collective reading, the girls as a group are supposed to arrest three boys, whereas on the distributive reading, each of the girls is supposed to arrest three boys, which if true, would amount to six boys arrested. (2) if the object is the topic, the parallel analysis applies, and (3) there is the unscoped reading if neither the subject nor the object is interpreted as the topic, i.e. if the sentence is interpreted as predicated of a stage topic, e.g. *Today/at 6 o’clock/on the corner, two girls arrested three boys.*

<sup>23</sup> The Prague School distinguishes between three levels: the level of the grammatical structure of sentences, the level of the semantic structure of sentences, and the level of the organization of utterance (Daneš 1970). Halliday (1967: 199) regards theme (‘the grammar of discourse’, concerned with the IS of a clause) as the third area of syntactic choice in the domain of the English clause, along with transitivity (‘the grammar of experience’, syntax and semantics (sets of process types)) and mood (‘the grammar of speech function’). In his *functional grammar*, Dik (1980: 3) makes a distinction between semantic, syntactic and pragmatic functions. For Lambrecht (1994: 3), IS is concerned only with psychological phenomena that have a correlate in grammatical form.

that Chomsky's notion of pragmatic competence is rather vague, but that it seems more similar to what he termed conversational pragmatics than to discourse pragmatics, 'leaving open the possibility that information structure is indeed part of grammar'. As Lambrecht (1994: 1) points out, the study of IS encounters difficulties since it has to cope simultaneously with both formal and communicative aspects of language, i.e. the relationship between the linguistic form and the mental states of speakers and hearers (limited to the study of psychological phenomena which have correlates in grammatical form, see Prince (1981a: 233)), which has resulted in different approaches to the phenomenon of IS and different terminology referring to the phenomenon itself (as summarized in fn. 4). One of the earliest models of IS, the *subject-predicate distinction* (introduced into grammar by Aristotle), is not only recognized in linguistics, but also in metaphysics, logic, epistemology, psychology, and information theory, which makes it perplexing and difficult to define either at one level or by relating different levels. As von Heusinger (1999: 104) points out, linguistic research has revealed that subject and predicate are not universal categories.<sup>24</sup> Since Li & Thompson (1976) languages have been classified as either *topic-prominent* or *subject-prominent*. Topic-prominence is a property of those languages in which the topic-comment relation is essential to the basic structuring of a sentence, i.e. it is independent of the syntactic ordering of subject, verb and object, i.e. of constituent structure (such as Mandarin Chinese). On the other hand, subject-prominence is a property of those languages in which the essential relation is that of subject-predicate, which is derived from grammatical word order (such as English). The distinction is illustrated in the examples below (Jiang 2009: 9-10). While in (32), the answer in English shows that a subject-predicate structure is necessary for the sentence to be grammatical, in (33), the answer in Chinese allows for different topic-comment structures and subjectless structures.

(32) Q: Have you returned that book?

A: Yes, I have.

(Subject + Predicate)

(33) Q: Ni huan na ben shu le ma?

you return that book LE (aspect marker) ma (yes/no question-particle)

'Have you returned that book?'

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<sup>24</sup> A sentence in syntactic theory is no longer defined in terms of subject-predicate structure, but these basic notions survived into generative grammar denoting the rule of parsing a sentence (S/IP/CP → NP/DP VP/vP).

- A: Huan le.  
 return *LE*  
 ‘Returned.’ (Comment)
- A: Shu huan le.  
 book return *LE*  
 ‘The book has been returned.’ (Topic + Comment)
- A: Shu wo huan le.  
 book I return *LE* (aspect marker)  
 ‘The book, I have returned it.’ (Topic + Subject + Comment)

A brief but fairly exhaustive historical overview of the approaches to the IS of a sentence is presented in von Heusinger (1999). The literature on IS is vast and there are numerous overviews of more recent approaches to the IS of a sentence within different frameworks, found, e.g. in Vallduví (2014) (cf. references therein), and many others. Overviews of generative (minimalist) and multilevel grammar approaches are found in Carnie (2014), Dikken (ed.) (2013), and Erteschik-Shir (2007), *inter alia*.

After clarifying the key terms and concepts of IS, we can present a brief outline of the dissertation in the following section.

### 1.3 The Outline of the Dissertation

The dissertation is structured as follows. Chapter 2 gives a brief overview of the development of the adopted theoretical framework, *viz.* mainstream generative grammar (2.1) focusing on the derivational mechanisms of the minimalist model and its recent development, *viz.* phase model (2.2), and considers the most important issues of the integration of the generative framework and information structure (2.3).

Chapters 3 and 4 describe the English and Serbian database, respectively, i.e. they specify the syntactic properties and discourse functions of the structures of TOP and LD in the languages in question. The syntactic data presented, *viz.* the nature of the preposed elements, embedding, reconstruction, long-distance dependencies and island sensitivity, are relevant to accounting for the manner in which the constructions in question are generated. TOP in both English and

Serbian and CLD in Serbian are argued to mark contrastive topics, whereas HTLD in both English and Serbian is argued to be a topic-promoting device marking referential topics. Although they both mark contrastive topics, TOP and CLD in Serbian are shown to have different discourse distributions.

Chapter 5 presents a critical overview of the previous analyses of TOP and LD within the relevant framework focusing on those employing more recent, minimalist mechanisms. Adjunction approaches by Bailyn (2012) and Barbosa (1996, 2000) are discussed in section 5.1. Section 5.2 presents approaches assuming that the IS-information is syntactically encoded, including Rizzi (1997, 2004, 2006), section 5.2.1, Grohmann (2000, 2003) and Sturgeon (2008), section 5.2.2 and argument fronting as a main clause phenomenon focusing on the truncation approach by Emonds (2004), section 5.2.3.1, and the competition approach by Jiménez-Fernández & Miyagawa (2014), section 5.2.3.2.

Our proposal, presented in chapter 6, builds on an association of theoretical assumptions given in section 6.1. The lexicon feeds the computational system which by means of features builds structure via phases and also gives rise to displacement. There is an additional, pragmatic component which encodes information-structural (IS) relations and which accessed along with the PF and LF at the interface, encompassing them. The IS information comes from the numeration, (in line with Aboh 2010). The notion of a topic is deconstructed in a combination of the features [+/-a(nchored), +/-c(contrastive)], similarly to López (2009), *anchored* in the sense of Birner & Ward (1998), and *contrastive* interpreted in the (pragmatic) sense of Titov (2013) as evoking alternatives at the moment of utterance with respect to what is anchored, thus parasitic on [+a]. TOP in both English and Serbian, and CLD in Serbian mark topics [+a, +c], whereas HTLD in both English and Serbian marks topic [+a, -c]. The operation which forms the numeration optionally adds formal and pragmatic features relevant to the derivation, which does not offend the Inclusiveness Condition. The interpretation of an element marked as a topic is the result of its featural content and its syntactic position, reflecting the interaction of syntax, prosody and pragmatics (in line with Sturgeon 2008). Pesetsky & Torrego's (2007) proposal that valuation and interpretability of features be independent concepts is adopted. Pragmatic features come as valued but uninterpretable rendering the syntactic object containing it active for syntactic operations. Probe (pragmatic) features trigger feature checking or Agree(ment), but not

displacement. It is an edge feature that drives movement. For both conceptual and empirical reasons, it is adopted that every phrase is a phase in the dynamic (contextual) sense of Bošković (2014). Following Rizzi (1997), it is assumed that when there is a TOP projection (licensed by an edge feature on C), C splits into Force and Fin, opting for a feature-checking instead of criterial approach. Two derivational conditions are important. Biskup's (2009a) modification of Müller's (2008, 2011) *Feature Balance* applies in the numeration requiring a one-to-one relation between features, otherwise the derivation crashes. If it is met, the derivation continues and the *Phase Featuring Principle* applies ensuring the cyclicity of movement without 'look-ahead' of Chomsky (1995b). Section 6.2 illustrates the derivation of TOP in English and Serbian in parallel based on the data presented in chapters 3 and 4, respectively. TOP in both English and Serbian is generated by movement or Internal Merge (IM). The edge feature on C (Force) licenses the TopP if it is required for the interpretation and if it is structurally possible. Namely, building on the observation by Jiménez-Fernández & Miyagawa (2014), it is assumed that, unlike in English, the non-phase head T in Serbian can inherit an edge feature from C and license the TopP in the Spec,TP in those structures which are said to be incompatible with TOP in English due to the competition of the anaphoric operator and the operators those structures are assumed to have, presumably in the Spec,CP. Section 6.3 illustrates the derivation of English HTLD and Serbian HTLD and CLD. The head which licenses the left-dislocated element is realized as comma intonation, as argued by Emonds (2004). The data from chapters 3 and 4, respectively, suggest that HTLD in both English and Serbian is derived by base-generation of the left-dislocated constituent in its surface position (adjoined to a CP), whereas CLD in Serbian is derived by movement or IM (also to a position attached to a CP). Namely, what moves is the resumptive pronoun (RP), and then co-reference is established upon adjoining of the left-dislocated element via the operation Match or Match+Agree of Boeckx (2003), which is the only way not to violate the Inclusiveness Condition. Although both TOP and CLD mark contrastive topics, they have different discourse distributions, as shown by our corpus, thus this adjoining of a left-dislocated element is justified. In the case of HTLD, co-reference between the left-dislocated element and the RP is established via the operation Match of Boeckx (2003). If the resumptive pronoun is a clitic, it moves to the second position in its intonational phrase triggered by the phonological requirement. Chapter 7 provides a concluding summary of the dissertation suggesting the subject

of further research, namely the optionality of the application of Match or Match+Agree in the case of CLD.

## 2. The Theoretical Framework of Sentence Analysis and Information Structure

### 2.1 A Brief Overview of the Development of the Chomskyan Investigation

The Chomskyan program,<sup>25</sup> also referred to as the *Mainstream Generative Grammar* (MGG), has served the central role in the work on generative grammar, both with respect to the development of his proposals and alternatives to them (Culicover 2014), and can be divided into three phases (Brown ed. 2005).

*Syntactic Structures* (Chomsky 1957) marks the beginning of the first phase (also referred to as *Transformational Generative Grammar*) which continues through *Aspects of the Theory of Syntax* (Chomsky 1965, the *Standard Theory*). It is strictly formalistic in that *language* is modeled into a system of formal symbols and focuses on the aspects of the system that make it recursive, central to the issue of language creativity neglected in the era of American structuralism and, more generally, behavioral sciences and philosophical assumptions of logical positivism which considered language, like all behavior, conditioned or serving a communicative function.<sup>26</sup> A clear-cut distinction between grammar and linguistic theory is drawn. Syntax studies the principles and processes by which sentences are generated in individual languages. It is ‘autonomous and independent of meaning’ (Chomsky 1957: 17) in the sense that its primitives are not defined in semantic terms, though the connection between form and meaning is not denied.<sup>27</sup> The goal of linguistic theory is ‘to provide a general method for selecting a [successful] grammar for each language, given a corpus of sentences of this language’ (Chomsky 1957: 11) which is not to be identified with any particular corpus obtained, i.e. the sentences do not have to be valid in a semantic or communicative sense or frequent. The aim is to account for the linguistic intuition of native speakers of a language (Chomsky 1964b).<sup>28</sup> The linguistic analysis

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<sup>25</sup> It is ‘a *program*, not a *theory*, and a program that is both traditional in its general flavor and pretty much theory-neutral, insofar as the biolinguistic framework is adopted’ (Chomsky 2007: 4), ‘[...] a set of guidelines which constrain the general hypothesis space within which [...] various theories can be entertained’ (Svenonius 2009: 3)

<sup>26</sup> Chomsky adapted Post’s (1944) version of recursive function theory employing the axiomatic-deductive method in mathematical logic and postulated his linguistic tool, a *generative* (or mathematically explicit) *transformation*, (Lasnik & Lohndal 2013: 1), a relation between (abstract) structures often different from the observed sentence it underlies (e.g. the passive-active transformation  $(NP_1) V NP_2 \rightarrow NP_2 be+ en V$  (by  $NP_1$ )). Historical and intellectual reviews of generative grammar and developments that departed from Chomsky’s proposal are presented in: Lasnik & Lohndal (2013), Freidin (2012), Tomalin (2006), *inter alia*.

<sup>27</sup> Chomsky (1975: 58) states that ‘Surely there are significant connections between structure and function; [...]. Where it can be shown that structures serve a particular function, that is a valuable discovery’.

<sup>28</sup> This ‘mentalistic approach’ means that theoretical linguistics uses performance and other data (e.g. data provided by introspection) to determine the invariably human capacity of knowing the *language* (understood to be a



should separate the grammatical sequences of a language from the ungrammatical ones by specifying formal rules or generalizations underlying regularities (*descriptive adequacy*), and study only grammatical ones. Chomsky (1964b: 63) coins the term *explanatory adequacy* to tackle the question of ‘the internal structure of the device [grammar]’, i.e. how the descriptively adequate grammar of each language is selected on a principled basis.

The second phase starts in the late 1960s and reaches its climax during the 1980s in *Government and Binding Framework* or *Principles and Parameters Theory* (Chomsky 1981). The aim is to properly constrain the expressive power of derivations and to generalize the operations (motivated by considerations of explanatory adequacy), thus develop an adequate model of *Universal Grammar* (UG), i.e. ‘the system of principles, conditions, and rules that are elements or properties of all human languages not merely by accident but by necessity – of course, I mean biological, not logical, necessity’ (the ‘innateness hypothesis’) (Chomsky 1975: 29). Chomsky (1975: 6) introduces levels of representation of linguistic structure into the theory as part of UG, which will change considerably over the years (Lasnik & Lohndal 2013).<sup>29</sup> The aim is to determine the precise nature of the relationship between syntactic derivation and semantic and phonological interfaces. Separating the core of grammatical research from the periphery defused the tension between descriptive and explanatory adequacy. Principles are universal features that the theory of UG is based on, restricting the form of grammars, whereas parameters account for the existing diversity, being ‘fixed by experience’ (Chomsky 1982: 3) (e.g. the null-subject parameter).

The third phase starts in the early 1990s. Under the *Minimalist Program* (MP), Chomsky moves beyond explanatory adequacy in search of a ‘principled’ explanation of every property of language (in the sense of a more general character that may be valid in other domains and for other organisms) based on methodological simplicity in theorizing (*Occam’s razor*)

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‘cognitive organ’ within what came to be known as the ‘biolinguistic perspective’ in the 1970s) as the independent subject of its inquiry. Miller & Chomsky (1963 in Culicover 2014: 466) point out that a sentence can be grammatical in terms of linear ordering, phrase structure, but nevertheless unacceptable: e.g. *The patient that the doctor that the nurse called examined recovered*. This has been ascribed to the processing complexity, not grammar (Gibson 1998 in Culicover 2014). Due to the lack of theories of processing, this has not been given special attention in the syntactic theory, but assumed that ‘acceptability that cannot be attributed to semantics or pragmatics reflects properties of the grammar itself’, e.g. \*Sandy knew the answer, but I would never do it (Culicover 2014: 466).

<sup>29</sup> ‘A level of representation consists of elementary units (primes), an operation of concatenation by which strings of primes can be constructed, and various relations defined on primes strings of primes, and sets and sequences of these strings’ (e.g. *Transformation-marker, Deep Structure, Surface Structure, Phonological Form, Logical Form*).

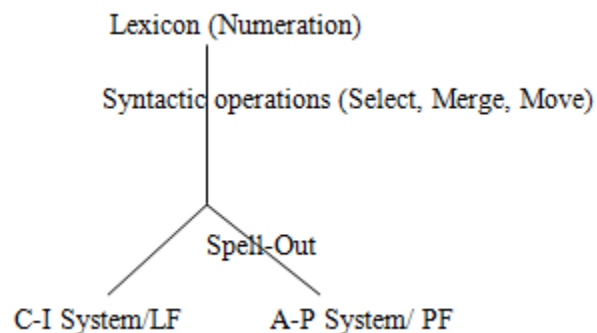
(Chomsky 2008: 134). Contrary to the previous phase, the properties of the *Faculty of Language* (whatever properties of the brain which enable it to learn language) are now approached from bottom up, ascribing parametrization to the lexical specification of certain functional elements, assuming the *Universal Base Hypothesis* (all languages have the same underlying structure).

The following section will briefly present the minimalist architecture focusing on Chomsky's (and others where relevant) post-2000 work, namely the *Phase Theory*, relevant to understanding various accounts of TOP and LD presented in chapter 5 as well as to our proposal put forward in chapter 6.

## 2.2 Minimalist Derivation

The grammar is defined to be 'a generative procedure that constructs [compatible] pairs  $(\pi, \lambda)$  that are interpreted at the articulatory-perceptual (A-P) [*Phonological Form* (PF)] and conceptual-intentional (C-I) [*Logical Form* (LF)] interfaces, respectively as "instructions" to the performance systems' (Chomsky 1995b: 219). *Spell-Out* (also *Transfer* of Chomsky 2004-2013)<sup>30</sup> applies at any point in the derivation and *switches* to the PF. After *Spell-Out* strips away only those elements relevant to the PF from a formed structure, the computation proceeds without further access to the lexicon and maps the residue of the structure to the LF, resulting in the right sound and meaning pairing. This early (Y-) minimalist model is illustrated in (1):

(1) The early minimalist model (Chomsky 1993, 1995b)



Chomsky (2004: 107) makes a weaker derivational claim in his phase-based approach: 'In this conception there is no LF: rather, the computation maps LA to <PHON, SEM> piece-by-

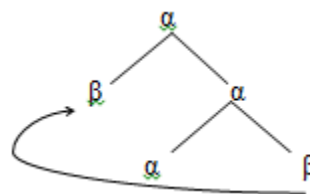
<sup>30</sup> Technically speaking, *Spell-Out* refers to the transfer to the PF only, not the LF, as noted by Citko (2014: 41).

piece cyclically'.<sup>31</sup> In other words, there are still PF and LF components, but there are no PF and LF syntactic levels *per se*. There is a single narrow-syntactic cycle (PF cycle proceeding in parallel), a feature system of building structure (projecting or labeling) and a feature system of movement. The fundamental assumption in the MP is that each lexical item is not a syntactic primitive, but a bundle of three types of features, i.e. morphological properties present in the lexical item: semantic, phonological (both intrinsic to it) and formal (relevant to syntactic operations, i.e. to establishing syntactic dependencies such as Case, EPP,<sup>32</sup> the  $\phi$ -features of the functional categories *v* (the light verb head of transitive), and T (tense/event structure), and the  $\phi$ -features of the lexical categories N and V (the semantic features of person, number, gender, and Case on N). The derivation is bottom up starting with a one-time selection of a numeration (also *lexical array*) dispensing with further access to the lexicon. The computation ( $C_{HL}$ ) is based on two operations: *Merge* (*set-Merge*, Chomsky 1998, 2000 or *External Merge* (EM), Chomsky 2004) that combines two objects  $\alpha$  and  $\beta$  into a new object, a set  $\{\alpha, \beta\}$  termed K, for example, the resulting label  $\gamma$  (informing the computation about its relevant syntactic features) being either that of  $\alpha$  or  $\beta$  ( $K = \{\gamma \{\alpha, \beta\}\}$ ), and *Move* which Chomsky (2004) reanalyzes as *Internal Merge* (IM), a combination of two more fundamental operations: copying and deletion of the material present in the structure,  $\alpha$  and  $\beta$  (thus not a syntactic primitive), deletion being accessible only to the PF, not to the interpretive operations, as illustrated in (2) and (3), respectively:

(2) External Merge



(3) Internal Merge



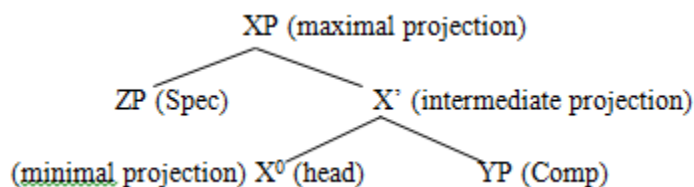
<sup>31</sup> Cf. Epstein & Seely (1999, 2002) for their strong derivational claim termed *Multiple Spell-Out*.

<sup>32</sup> The EPP is the requirement that an expletive is obligatorily present in the subject position of English-type languages if nothing raises to that position (Chomsky 1981). It has survived into the MP, though there are proposals for its elimination (cf. Seely & Epstein (1999) and Boeckx (2002)). Adger & Svenonius (2009, 2011) treat it as a second order feature.

The derivation *converges* if the N is exhausted and if Merge has applied sufficiently enough to generate a single phrase marker also exhausting the initial N, otherwise it *crashes* as required by the principle of *Full Interpretation*. Branching is binary following Kayne (1984) and also required by Merge. Assuming Kayne’s (1994) theory of ordering and that the only relations relevant to the computation are those established by the derivational process itself (Epstein 1994), movement (IM) is invariably cyclic (compositional), thus targeting of embedded categories (entailing feature lowering and non-cyclic raising) is ruled out. Labels, required for interpretation at the interfaces, are an independent operation and ideally reduce to minimal (structural rather than linear) search<sup>33</sup> mostly making reference to selection (Chomsky 2013).

The projection status of a given syntactic element is determined in terms of its X’-relation to other syntactic elements resulting from the existence of uninterpretable feature which motivate Merge, as illustrated in (4):

(4) The basic X’-structure



*Minimal projections* (XP, ZP, YP) are lexical items that feed the computation and they do not project. *Intermediate projections* (X’) are neither minimal nor maximal projections (the *Elsewhere Case*). *Complements* (also notations for *first-Merge*) are sisters of minimal non-maximal projections or heads (YP), and *specifiers* (*later-Merge*) are sisters of intermediate projections (ZP). Chomsky (1995b: 228) relates this to the *Inclusiveness Condition*, which bans any special marking of maximal and minimal projections: ‘No new objects [features, bar levels, traces, indices] are added in the course of computation apart from rearrangements of lexical properties’.<sup>34</sup> A particular linguistic expression and its interpretation are built up derivationally

<sup>33</sup> Linearization is as a PF-phenomenon, as made explicit by Kayne’s (1994) *Linear Correspondence Axiom*.

<sup>34</sup> Chomsky (2004) considers eliminating labels (as theory-internal notions) because they violate the Inclusiveness (as proposed by Collins 2002, Gallego 2010, *inter alia*), but since this raises problems for the mechanism of the *Relativized Minimality* of Rizzi (1990, 2004) (an element in a certain position is an intervener for the movement of another element of the same type across it) or selection, the conclusion is that they are indispensable. However, as

(the process is triggered), and it satisfies the bare output conditions of the interfaces (the legibility conditions of the external systems imposed by the FL) in an *optimal* way defined in terms of *Methodological* and *Substantive Economy Considerations*, the least effort notions of locality and well-formedness in derivation (*Occam's razor* methodology).<sup>35</sup> The strongest minimalist thesis (STM) is that 'language is an optimal solution to such conditions' (Chomsky 2001a: 1).

IM always leaves a (featurally identical) copy, which remains at the semantic interface (eliminating reconstruction (interpreting the lower copy) and easing processing), but is erased at the phonetic interface (due to minimization of computation) since language 'is "designed" so that C-I approximates the SMT, with utility for communication only a secondary factor' (Chomsky 2008: 146). In other words, PF component can at best yield a 'very limited semantic interpretation', 'surface semantic effects are restricted to narrow syntax' (Chomsky 2001a: 15). EM interacts with argument structure, whereas IM, which yields displacement, interacts with *edge properties* which are scope or discourse-related (such as topic/comment, presupposition/focus, old/new information, and similar).

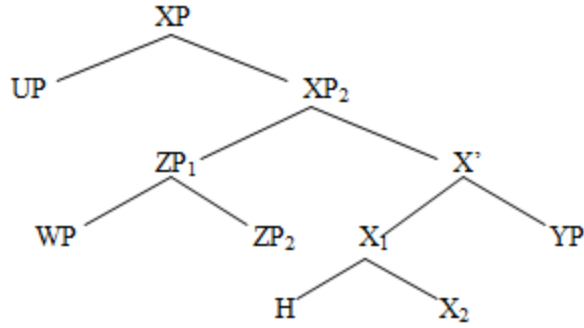
The *Extension Condition* requires that both EM and IM target the top of the existing tree. *Adjunction* does not meet this condition since there is no merging with the host. Under Kayne's (1994) binary branching and the assumption that there is no phrasal adjunction, in order to preserve the distinction between adjuncts and specifiers under this relational phrasal definition, Chomsky (1995b) evokes the distinction between categories and segments of Chomsky (1986) and assumes that adjunction bears a label determined by the head of the construction but does not change the phrasal status of its host structure. They are labeled as an ordered pair, say,  $K = \{ \langle \gamma, \{ \alpha, \beta \} \rangle \}$ , where  $\gamma$  is determined by either  $\alpha$  or  $\beta$  (trivially);  $K$  being a two-segment category, not a new category, as illustrated in (5) below:

#### (5) Adjunction

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noted by Citko (2014: 13) if a label is a copy of a feature of one of the two merged elements, then the Inclusiveness is not violated.

<sup>35</sup> For example, the *Minimal Link Condition* (a locality constraint preempting longer steps, Move over Merge), *Superiority Condition* (the highest *wh*-phrase moves), the Full Interpretation, the Inclusiveness Condition, etc.



There are three cases of adjunction here: UP to XP (adjunction of maximal projections) turning XP into a two-segment category  $\langle XP_1, XP_2 \rangle$ , then WP to ZP forming a two-segment category  $\langle ZP_1, ZP_2 \rangle$  in the specifier position, and, finally, H to X (adjunction of heads) turning X into  $\langle X_1, X_2 \rangle$ . Chomsky (2004: 118) takes adjuncts to be introduced into the derivation by *pair-Merge* (of Chomsky 1998, 2000) (an old mechanism, namely a *generalized transformation* of Chomsky (1955, 1957), which introduces a whole tree into another tree, built in parallel), and then, ‘simplified’ to set-Merge, at the point of Transfer, ‘thus permitting phonetic linearization and yielding “late insertion” effects at the semantic interface’ (Chomsky 2008: 147).

EM is ‘costless’ by definition, i.e. satisfies *Last Resort* (applying only when necessary) and is restricted by *Derivational Economy* (involving short local steps (i.e. spec positions)). The operation that drives IM under Last Resort and the Inclusiveness Condition is feature checking. Features uninterpretable (unreadable) to the interfaces in the overt syntax of the *probe* or *selector* (an uninterpretable feature of a lexical item or  $\varphi$ -features of the *Core Functional Categories* (C (force/mood), T and  $v$ , obligatory for T and  $v$ )) must be deleted or checked off (as a one fell swoop) under matching with an ‘active’ local *goal* by the operation *Agree* (Chomsky 1998, 2000: 101) for legibility.<sup>36</sup> Both items entering Agree(ment) must (at least potentially) have a feature to be satisfied by the Agree operation as required by the *Activity Condition*. The probe must be identical to the goal in all features (required by *Maximize Matching Effects*),<sup>37</sup> c-command the goal, and there is a restricted search space (the closest c-command) between the

<sup>36</sup> Interpretability is not an inherent feature property, but depends on the lexical item it belongs to (determined by UG), the position (e.g.  $\varphi$ -features they are uninterpretable on verbs, but interpretable on nouns), or the interface relevance. Structural Case is not a feature of T or  $v$ . It is assigned a value under Agree, and then removed from the narrow syntax by Spell-Out. Case itself is not matched, but it deletes under  $\varphi$ -matching (ancillary to Agree of  $\varphi$ -features).

<sup>37</sup> There is no partial Agree.

probe and the goal, i.e. Agree applies at a distance without displacement.<sup>38</sup> Agree copies the value of a valued feature in either the probe or the goal onto a matching unvalued feature in the other. Features are valued dimensions: e.g.[+V] feature, where ‘V’ is the dimension, ‘+’ is the value. *Match* refers to the same feature, independently of a value. It is non-distinctness, not strictly speaking identity (Chomsky 2001a: 5).<sup>39</sup> Unlike EM, Agree is language specific. In Chomsky’s (2001a) *Derivation by Phase*, interpretability does not have a direct role in driving syntactic operations; the ‘valued’ and ‘unvalued’ feature distinction is introduced in order to account for the cyclic Spell-Out. Unvalued features must be valued by Agree. Once the uninterpretable feature is valued it deletes, presumably at the end of each phase. At each stage of the derivation a *subnumeration* (or *subarray*) is extracted from the numeration (without further access to the lexicon), placed in the ‘active memory’ creating a natural syntactic object termed a *phase* (Chomsky 2001a: 11-12). A phase (subnumeration) derives the *Merge-Over-Move Effect*, i.e. all things being equal, Merge or Agree is preferred over Move (Chomsky 2000: 106ff). The existence of subnumerations explains the ungrammaticality of (6a) (Chomsky 2000: 104ff):

- (6) a) \*There [<sub>T</sub> is likely [ <sub>$\alpha$</sub>  a proof<sub>i</sub> to be discovered t<sub>i</sub>]].  
 b) There [<sub>T</sub> is a possibility [ <sub>$\alpha$</sub>  that proofs<sub>i</sub> will be discovered t<sub>i</sub>]].

When one subnumeration is exhausted, the next one is selected from the numeration and placed in the active memory, the difference between (6a) and (6b) being that T in (6a) does not constitute a different subnumeration, unlike in (6b). Therefore, the expletive can be excluded from the derivation forming  $\alpha$  in (6b), but not in (6a), since the entire structure is one subnumeration (phase), exhibiting the Merge-Over-Move effect. A phase is a syntactic object relatively independent in terms of interface properties,<sup>40</sup> the closest syntactic counterpart to a proposition, namely a CP (a full clause including tense and force) or a  $\nu$ P (all  $\theta$ -roles being assigned (transitive and ergative verb phrases), not a TP (finite or not) or a verb phrase whose head lacks  $\phi$ -features (external argument) and hence does not enter into case/agreement checking

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<sup>38</sup> Reinhart’s (1979) representational definition:  $\alpha$  c-commands  $\beta$  iff: (i)  $\alpha$  does not dominate  $\beta$  (the line can be traces from  $\alpha$  to  $\beta$  going only downwards), and  $\beta$  does not dominate  $\alpha$ ; (ii) the first branching node that dominates  $\alpha$  also dominates  $\beta$  ( $\beta$  is either  $\alpha$ ’s sister or  $\alpha$ ’s sister contains  $\beta$ ); Epstein’s (1999) derivational definition: X c-commands all and only the terms (constituents) of the category Y with which X was paired by Merge or by Move in the course of the derivation.

<sup>39</sup> Chomsky (2005) divorces IM from Agree by introducing an edge feature driven movement, which will be addressed in section (6.1).

<sup>40</sup> Cf. Citko (2014), for a discussion of the notion of relative independence at the interfaces.

(such as unaccusative or passive verb phrase) (Chomsky 2001a: 12). It is also assumed that substantive categories are selected by functional categories, i.e. V by  $v$ , and T by C, hence  $v$ P and CP are phases containing one  $v$  or C.<sup>41</sup> T fails to define a phase boundary like C since T inherits its (all of its) uninterpretable features ( $\phi$ -features and tense) from C by means of *Feature Inheritance* (FI), which is assumed to hold for all phase heads and to be obligatory (deriving the A-A' distinction). Being inherently associated with lexical items, interpretable features are not inherited and never deleted. A subnumeration is determined by a single selection of C or  $v$  (a single phase head). Derivation proceeds phase by phase. For example, the sentence in (7) has four phases marked by brackets:

(7) [CP [TP John<sub>i</sub> [<sub>v</sub>P t<sub>i</sub> thinks [CP [TP Tom<sub>j</sub> will [<sub>v</sub>P t<sub>j</sub> win the prize]]].

Phases satisfy the strong *Cyclicity Condition* complying with a powerful locality constraint, namely the *Phase Impenetrability Condition* (PIC), given in (8) (from Chomsky 2000: 108):

(8) Phase Impenetrability Condition:

In phase  $\alpha$  with head H, the domain of H is not accessible to operations outside  $\alpha$ , only H and its edge [Spec  $\alpha$ ] are accessible to such operations.

It follows from the PIC that the valued uninterpretable features ‘can be detected with only limited inspection of the derivation, [...], if earlier phases need not be inspected’ (Chomsky 2001a: 12). The assumption is that inspection never goes beyond one phase which significantly reduces the memory load and strengthens the notion of cyclicity. The operation Spell-Out/Transfer applies derivation-internally before LF, removes uninterpretable features from the syntactic object and transfers it to the PF. However, since it is not a semantic operation, it cannot know which features are (un)interpretable. Instead, it sees whether features are valued or not due to the fact that uninterpretable features enter the derivation without a value. After Agree has applied, the distinction is lost. As for the ‘timing’ of Spell-Out and a derivational ‘lookback’ limited to the phase level of Chomsky (2001a), Chomsky (2008: 154) argues that uninterpretable features (which signal the boundaries of a phase, Gallego 2010: 151) must be deleted either

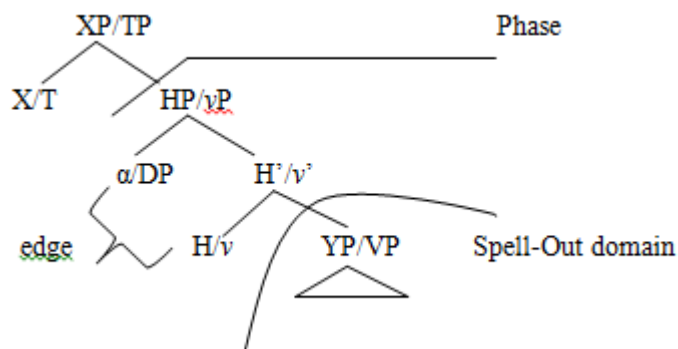
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<sup>41</sup> Due to similarities between CP and DP, Svenonious (2004), Hiraiwa (2005) among others, suggest that DP be a phase as well. For Epstein & Seely (2002), Boeckx (2007), and Müller (2011), *inter alia*, all phrases are phases. For Bošković (2014), all lexical categories (Ns, Vs, As, and Ps) project phases. Den Dikken (2007) defines phases on the basis of the subject-predicate configuration.



before or as part of Transfer (Spell-Out) as required by both interfaces. Since they can be phonetically realized, they cannot be deleted before transfer to the PF. Thus, they must be transferred at the point where they are valued, i.e. at the phase level, assuming that all operations (Merge (**External Merge and Internal Merge**) and Transfer) take place at the phase level (and apply simultaneously, apart from External Merge), as determined by the label (Richards 2007). Namely, in what came to be known as the revised phase theory (Chomsky 2005), heads are the loci of uninterpretable features (instead of evoking lexical subnumerations) and they determine when Spell-Out takes place the phase head complement is transferred/spelled out instead of phase because of labeling for further computation, giving its uninterpretable features to non-phase head by means of **Feature Inheritance**,<sup>42</sup> dispensing with stipulations of the (propositional) properties of phases. Thus, FI is conceptually motivated as the only way to satisfy two conflicting, independently motivated requirements, *viz.* the Value-Transfer Simultaneity and the PIC (the edge and nonedge (complement) of a phase are transferred separately) (Richards 2008: 566–8). Given the PIC and the fact that derivation mostly contains more than one phase, Spell-Out applies more than once per derivation; preserving PF and LF integrity of phases.<sup>43</sup> The following phase configuration is obtained (from Citko 2014: 32):

(9) General phase configuration



After explaining its basic mechanisms, we can now consider the most important issues of the integration of the minimalist framework and information structure, i.e. discourse-related effects.

<sup>42</sup> As already mentioned, T becomes a probe by means of FI mechanism from C (well-known subject-agreement and EPP effects associated with T). As pointed out by Richards (2011: fn. 12), this apparent counter-cyclicality is not problematic since T is not a phase head, thus a cyclic node. [...], at the level of the phase, operations are unordered with respect to each other (there can only be ordering between phases themselves, not within them).<sup>7</sup>

<sup>43</sup> Cf. Marušić's (2005) Non-Simultaneous Spell-Out.

### 2.3 The Issues of the Minimalist Framework and Information Structure Integration

As pointed out in section 1.2, cross-linguistically speaking, the IS notions (of topic and focus) interact with both the internal components (syntax, phonology, semantics) and the external component (discourse/pragmatics) of grammar, basically presenting the same information (propositional meaning) in different ways in a discourse (context). Their integration into the generative framework should formalize this interaction on independently motivated grounds, i.e. it should reveal where in the derivation discourse considerations become relevant (i.e. where and how topic and focus are introduced and whether they exist as grammatical categories or are encoded as syntactic features corresponding to semantic and prosodic properties), and whether their interpretation should be ascribed to syntax, to one of the interpretative components (phonology or semantics) or to the pragmatic component. If it is the pragmatic component, what kind of interaction is in question, i.e. ‘whether discourse factors drive syntactic operations, or whether the information-structural component in interaction with pragmatics interpret the output of the syntactic component; as well as whether interpretative components impose requirements on syntax or simply interpret the structures delivered to the interfaces’ (Molnár & Winkler 2005: 2).<sup>44</sup>

The integration of IS within the MP architecture, assuming the *Two-Interpretive Interface Hypothesis* (viz. that the syntactic structure is interpreted at its interfaces, the PF and the LF), faces two major problems, as pointed out by Erteschik-Shir (2007: 55)

- 1) Since IS exerts both PF and LF effects, IS features must be available to both the PF and the LF, thus already present in the syntax (without violating the Inclusiveness), which creates a problem with the association of PF and LF properties of these features since there is no interface between the PF and the LF.
- 2) Movement in the MP, as a Last Resort operation is triggered by an active (morphological) feature that has to be checked and cannot be optional whereas the movement triggered by IS features is optional and, thus cannot be syntactically driven.

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<sup>44</sup> As pointed out by Barbiers (2013: 905), it is an open question in the MP whether the invariable syntactic principles are specific to the language faculty or follow from interface conditions. ‘We have to learn about the conditions that set the problem in the course of trying to solve it. The research task is interactive: to clarify the nature of the interfaces and optimal computational principles through investigation of how language satisfies the conditions they impose – optimally, insofar as SMT holds’ (Chomsky 2005: 3).

As explained in the previous section, under the **Strong Minimalist Thesis**, genuinely optional movement in derivations is eliminated. As Barbiers (2013: 920-921) recapitulates, two common ways have been employed in the MP to account for the optionality in movement: (a) feature or an EPP feature that triggers movement, and (b) the assumption that optionality (variation) arises at the PF resulting from the choice to delete a copy in its base position or in its landing-site when two structures are equivalent syntactically and semantically.

Rebushi & Tuller (1999: 12) observe two viable options for resolving the above problems:

- 1) postulating a ‘focus structure’ interface in addition to the PF and LF interfaces, i.e. syntax produces full sentences mapped onto an additional level of representation, namely IS, the interpretation of which is related to the discourse (or extralinguistic) properties: e.g. Bailyn (1995a, 2012) (*Functional Form*), Erteschik-Shir (1997, 2007) (*F-Structure*), Zubizarreta (1998) (F(ocus)-structure of an utterance is associated with one or more *Assertion Structures* (post LF)) etc.<sup>45</sup>
- 2) postulating an abstract morpheme (or feature) F, taken to be both PF- and LF-interpretable, i.e. assuming that the IS information is syntactically determined: e.g. Rizzi (1997, 2004), Cinque (1999, 2002), Poletto (2000), Belletti (2004, 2012, 2013, 2014), Benincà & Poletto (2004), Shlonsky (2010), Cruschina (2010), Haegeman (2012), Biloa (2013), Bayer & Dasgupta (2014)), Ouhalla (1999), Aboh (2007, 2010), etc.

According to Chomsky (1995b: 220), ‘surface effects’ on interpretation, including IS, ‘seem to involve some additional level or levels internal to the phonological component’, formed in the course of the mapping of syntactic objects to a PF representation (since ‘the PF level itself is too primitive and unstructured to serve this purpose’), and accessed at the interface along with the PF and the LF. Holmberg (1999: 4), for example, proposes attributing it to a component of ‘stylistic rules’, which is post Spell-Out (in that it accesses prosodic features, but feeds the PF proper) operating on a feature [-focus] inserted together with other phonological features at

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<sup>45</sup> The idea that there is a level of the systematic representation of discourse relations goes back to Jackendoff (1972) who argues for a semantic substructure termed *focus and presupposition*. It is what Rochemont (1986) terms *Functional Structure*, Vallduví (1992) *Informatics*, and Lambrecht (1994) *Information Component*.

Spell-Out (cf. Chomsky 1995: 324f). Due to the fact that postulating an additional interface runs counter to minimalist economy considerations, a number of authors have opted for attributing the interpretation of IS to the PF. Since, cross-linguistically, foci and topics are either marked by prosody (pitch accents) or word order, or both, van Gelderen (2003: 19) argues that IS is determined at the PF because prosody is obviously a PF-phenomenon and since it is assumed in the MP that all linearization happens at the PF, she proposes that IS effects are derived from phonology in three ways basically: by phonologically-driven (PD)-movement, free linear (re-) ordering according to IS patterns, and intonation. Selkirk (1995), von Stechow (1999), Katz & Selkirk (2011), Bocci (2013), among many others, propose linking focus to the main sentence stress assigned to a certain constituent of a (hierarchically arranged) syntactic structure. Reinhart (1995, 2006), Neeleman & Reinhart (1998), Zubizarreta (1998), Szendrői (2004), Samek-Lodovici (2005, 2006), Féry & Samek-Lodovici (2006), Fanselow (2007), etc., argue that phonological requirements trigger movement for IS effects. Thus, IS does not play a role in syntax and deriving IS effects from phonology does not violate the Inclusiveness. However, there is evidence that discourse functions can be mediated by LF-movement as well (affecting binding relations and scope). There is Chomsky's (1976) classical observation that focusing the object in (10) causes a *Weak Crossover Effect* (WCO) (a variable cannot be the antecedent of a pronoun to its left):

(10) ?His<sub>i</sub> mother loves JOHN<sub>i</sub>.

Bailyn (2012), for example, provides syntactic evidence that surface word ordering in Russian does not necessarily derive quantifier scope relations, but that there is, in addition, a covert quantifier raising operation that derives inverse scope giving rise to scope ambiguities. According to the so-called *Modular Hypothesis* for discourse features, there is no direct link between syntax and discourse-related phenomena, those features are not available to the syntactic derivation (Frascarelli 2012). Given the cyclicity of the derivation via phases, movement is triggered by the interface requirements of either the PF (e.g. Fanselow & Lenertová 2011) or the LF (e.g. Horvath 2010). However, there are discourse-related (morphological) markers and fronting in a number of languages (cf. Frascarelli 2012, for example), and, as pointed out by Bailyn (2012: 319), the generative notion of interpretation is typically concerned with quantificational and logical relations among elements at the LF, not with discourse relations

(cf. also Espinal & Villalba 2015). Furthermore, LF relations are assumed to be represented uniformly across languages.

According to what came to be termed *cartography*, there is a direct interaction between syntax and the semantic-pragmatic interface. Rizzi (1997) introduces topic and focus into syntax as functional features (with interpretative import on a par with Wh, Neg) which project syntactic structure in the form of X' schema (being in designated specifier positions of TopP and FocP, their heads being overtly realized in some languages, and their complements constituting the comment and the presupposition respectively). Since IS-motivated movement is optional, once they are projected, topic and focus phrases necessarily trigger movement to the left periphery of the clause as a structural area (CP)<sup>46</sup> defined by a system of functional heads and their projections which are mapped for various IS functions, thus providing instructions for interface interpretations. After it reaches a position dedicated to a particular scope-discourse interpretive property, the moved element gets frozen in place (*Criterial Freezing* of Rizzi 2003). The functional hierarchy is assumed to be universal. Since they are interpretable, topic and focus features will survive to the C-I interface, and for the same reason they won't be visible at the PF. Aboh (2007, 2010), for example, argues that the core IS notions (namely, *interrogative force*, *topic* and *focus*) are part of the numeration in the form of discourse-related lexical items that exhibit specific syntactic behavior implying that they drive the derivation and project in syntax, and on a par with other formal features such as Case or  $\phi$ -features are optionally present when the lexical item is selected for the numeration, checked at the CP or DP phase level. The challenges to cartography and (other) feature-checking accounts reveal an intricate interaction between word order and intonation in deriving IS (cf. van Craenenbroeck 2009). The fact that topics can be moved, base-generated and stranded also raises problems for the assumed topic-focus hierarchy (Bailyn 2012). Reinhart (2006) argues that [topic] or [focus] features are not features on a lexical item but properties of an entire constituent relating to the IS of the entire sentence, thus they cannot be present in the numeration. López (2009) points out that the notions of topic and focus, however they are defined, make no predictions about the syntactic behavior of constituents assumed to bear them.

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<sup>46</sup> For non-fronted foci it is assumed that they are fronted at the LF, following Chomsky's (1976) observation on focalization and WCO.

Following Kayne's (1998) assumption that focus operators move to a position at the edge of  $\nu$ P, in more recent minimalist work, namely in Phase Theory, dislocation is assumed to always take place to the left of the sentence or predicate phrase, and optional operations are allowed if they have an effect on the outcome (Chomsky 2001a: 34). In his account of Scandinavian object shift and linguistic variation with respect to its occurrence, Chomsky (2001a) touches upon the issue of optionality of movement motivated by IS and postulates the interpretative features *Int* and *Int'* corresponding to topic and focus (though not explicitly stated). According to Chomsky (2005, 2008: 151) it is assumed that there is no specific link between syntax and IS if Rizzi's (1997) approach to the left periphery is adopted, i.e. if what is raised (driven by an *edge feature* in the CP domain (cf. chapter 6)) is identified by its final position, according to Chomsky (2005), some specifier's position. There are no IS features anymore. Chomsky (2005: 18) illustrates this by the following example which will be quoted here since it is the topic of this thesis: 'Take, say, Topicalization of DP. EF [edge feature] of a phase head PH can seek any DP in the phase and raise it to SPEC-PH. There are no intervention effects, unless we assume that phrases that are to be topicalized have some special mark. That seems superfluous even if feasible, particularly if we adopt Rizzi's approach to the left periphery: what is raised is identified as a topic by the final position it reaches, and any extra specification is redundant. The same should be true for other forms of A'-movement'.

Given the economy approach to linguistic phenomena in the MP, the central problem is that of the optionality of movement since simply postulating a feature that drives movement is not a solution to the problem unless it is independently motivated, as pointed out by Bailyn (2012). Since the movement related to IS is driven by discourse requirements, the research should focus on understanding and formalizing the relation between syntax and discourse grammar (including interaction with the interpretative components). There are basically two strands of approaches to IS here, depending on the level at which syntax and discourse interface, as pointed out by López (2009):

- 1) the sentence level in the form of 'a pragmatically determined IS interface fed by grammar and extralinguistic knowledge' (Schwabe et al. (eds.) 2007: 5), a combination of a representational and derivational approach (e.g. Bailyn 1995a, 2012), Erteschik-Shir 1997, 2007), and

2) the phase level, a purely derivational approach (e.g. López 2009)

For Bailyn (1995a, 2012: 324), discourse organization is uniform at the level of Functional Form (FF), and languages differ in the way in which FF relations are encoded in the surface form (e.g. word order variations (scrambling), intonation, discourse particles, etc). The canonical (SVO) order being functionally ambiguous, the movement driven by FF ‘fixes’ Russian Theme-Rheme structure in the sense that ‘the dislocated constituent represents the presupposed/given information and the remainder of the sentence the Information Focus or Rheme.’

Erteschik-Shir (1997, 2007: 43-44) claims topic and focus are ‘defined as triggering instructions to manipulate a stack of filing cards, each of which represents a referent available in the discourse’ (in the sense of the common ground of Reinhart 1981). F-structure rules (namely, *topic, focus, update*) apply to referential constituents within top/foc domains, allowing for a non-binary division of a sentence, i.e. there is a backgrounded part to which neither topic nor focus is assigned. Since scope is determined directly from f-structure, the LF is rendered superfluous, i.e. f-structure replaces the LF. Top and Foc features are introduced as part of lexical selection, which, on a par with  $\varphi$ -features, may percolate to the maximal projection of the lexical item they are assigned to.

For López (2009), topic and focus are not theoretical primitives, but are deconstructed into bundles of binary features, *viz.* [+/- a(naphoric)] and [+/- c(contrast)], deriving traditional partitioning into Topic-Comment, Theme-Rheme, Focus-Presupposition, etc. Pragmatic rules apply at phase edges which are specified for the positive values of the dichotomy whereas the complement domain of the phase head bears the negative values. The feature values are carried by the constituents during the course of the derivation constraining the set of possible derivations.

After we have explained the mechanisms of the MP and summarized different approaches to the problems of the MP and IS integration, we can set out to describe syntactic properties and discourse functions of our databases, *viz.* the structures of TOP and LD in English (chapter 3) and Serbian (chapter 4), in order to define the scope of our research the results of which are analyzed in chapter 6.

### 3. Distinguishing Topicalization from Left Dislocation in English: the Database

#### 3.1 Syntactic Properties of Topicalization and Left-Dislocation in English

As pointed out in section 1.2, languages employ various means to express information structure of a sentence, word order variations being one of them. Even in English, which belongs to the so-called (syntax-)configurational languages characterized by a rather fixed word order (cf. É. Kiss 1995, 2001),<sup>47</sup> namely subject (S)-verb (V)-object (O) (cf. Greenbaum et al. 1990: 204-230), there is a possibility of marking information structure of a sentence by certain word order patterns such as two preposing or fronting structures, namely topicalization (TOP henceforth) and left-dislocation (LD), illustrated by the examples in (1). Their canonical word-order alternative is given in (2):<sup>48</sup>

(1) John kissed Mary.

(2) TOP: **Mary** John kissed **t**.

LD: **Mary**, John kissed **her**.

Although these two structures express truth-conditionally synonymous propositions identical to the proposition in (1), they have different syntactic (and information-structural) properties. As evident, both TOP and LD have a fronted element in a left-peripheral position of the sentence, i.e. in the position preceding the canonical subject position. However, whereas TOP has a coreferential gap in the canonical or argument position of the fronted element, implying that some dependency holds, LD has a resumptive pronoun (RP), typically a personal pronoun in English, antecedent-bound by the left-dislocated element.<sup>49</sup> The left-dislocated element is set off

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<sup>47</sup> Syntactic structure and the linear order of constituents are determined by syntactic functions such as subject, verb/predicate or object.

<sup>48</sup> Cf. Halupka-Rešetar (2011: 125-130), for an overview of syntactic structures in English used for expressing topic, contrastive focus and information focus in English.

<sup>49</sup> A resumptive pronoun (RP) is obligatorily (antecedent) bound by a left-dislocated element and cannot freely choose a contextually salient referent as a 'regular' pronoun in (ii). The RP occurs in structures which would otherwise have a gap, i.e. be analyzed as derived by movement such as *wh*-movement, relative clauses and dislocations. The variable position in a relative clause or question in English is defined by the presence of a gap, as in (i), whereas there is no possibility of alternating with a gap in (ii) (from McCloskey 2006: 94-95):

(i) There are guests that everyone wants to invite \_.

(ii) Most people think that they have a right to a decent job.

The RP can also be a weak or clitic pronoun (e.g. in Italian, Serbian), an inflection marker on prepositions (e.g. in Semitic and Celtic languages (cf. Borer 1984 and McCloskey 2002, respectively), or an epithet (a definite DP usually attributing a negative meaning to the dislocated phrase) (cf. Kroch 1981, Aoun & Choueiri 2000, *inter alia*).



by an intonational break and followed by a syntactically complete (matrix) clause, thus arguably more detached or syntactically independent from the rest of the sentence.

The following sections will consider the structural differences between the processes of TOP and LD, 3.1.1, namely the kind of constituents that can be topicalized and left-dislocated, section 3.1.1.1 and TOP, LD and embedding, section 3.1.1.2, then TOP, LD, long dependencies and island sensitivity, section 3.1.2, and reconstruction effects with TOP and LD, section 3.1.3. The data obtained are supposed to show what the restrictions on the availability of TOP and LD are, whether the structures in question are derived by movement (IM) or not, and what the nature of the surface position of the topicalized or dislocated constituent is. The data will be referred to in chapter 6 where a formal account of these processes is offered.

### 3.1.1 Structural Characteristics

#### 3.1.1.1 The Nature of Fronted Elements

The terms TOP and LD were introduced into the generative model by Ross (1967/1986) to refer to the fronting of a non-*wh*-element to the left periphery of the sentence to mark the topic of the sentence. Examples of topicalization in English are illustrated in (3). The topicalized constituent, typically a DP,<sup>50</sup> a pronoun, a PP, or an AP, serves different syntactic functions. A verb or a proposition (CP) can also be topicalized.

- (3) a) TOP of the definite direct object DP/pronoun:

**That (movie)** I won't watch.

- b) TOP of the indirect object DP/PP:

**His wife** John gave an expensive present to./**To his wife** John gave an expensive present.

- c) TOP of the direct object pronoun:

**Him** I haven't met.

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There is 'true', 'syntactic' or 'productive' resumption (in Irish, Hebrew and Arabic) referring to RPs in A'-dependency structures where no grammatical principle disallows a gap. The presence of an RP to 'amnesty' a violation of an island (a constraint dependency) or found in long-distance dependencies has been termed 'intrusive' resumption' (Sells 1984) or 'processor' resumption (Asudeh 2011). Pesetsky (1998) proposes a movement account of RPs as partially spelled out copies of the dislocated phrase. Boeckx (2003, 2008) proposes that an RP is the stranded, remnant D after the extraction of the antecedent (the complement) from a 'big-DP', i.e. the antecedent of an RP at First-Merge is its complement.

<sup>50</sup> We will adopt the traditional generative view, *viz.* Abney (1987), that the head of the noun phrase in English is a determiner.

d) TOP of the indirect object pronoun:

**Her** I haven't spoken to.

e) TOP of the subject complement AP:

**Afraid of his neighbor's dog** he used to be.

f) TOP of the VP:

**Eat rutabagas** Holly wouldn't. (Johnson 2001: 444)

g) TOP of the proposition, CP:

**That John is a millionaire** no one would ever say.

h) TOP of the circumstantial adjunct PP/AP:

**For entertainment/In the pub/So badly** they sing karaoke.

A 'simple' quantifier phrase (QP) cannot be topicalized, as illustrated by Postal (1993: 541):

(4) a) \***Every proposal** the director refused to consider.

b) \***Anyone** they would have fired.

If a QP is modified by adding a relative clause or an adjective phrase, i.e. by making it specific or referential, then the topicalization is no longer blocked, from Postal (1993: 542).

(5) a) **Anyone who was sick/less popular** they would have fired.

b) **Every proposal made by the members of the board** the director refused to consider.  
(our modification)

É. Kiss (2012: 128) claims that this is due to the fact that they cannot assume a 'name' status. Arregi (2003) argues that the indefinite DP is interpreted as the individual picked by the choice function.

Meaningless expressions cannot be topicalized either, such as expletive 'it' and 'there' in (6a) and (6b), respectively, compared to referential (adverbial) 'there' in (6c). However, 'it' cannot be topicalized even when it is referential (pronominal), as illustrated in (6d).

(6) a) \***There** he believes to be unicorns. (Schenk 1995: 259)

b) \***It** I blame on you that we are late.

c) **There** he believes the unicorns to be. (Schenk 1995: 259)

d) \*It (the book) Mary gave to John.<sup>51</sup>

The interim conclusion based on (4-6) would be that TOP in English is restricted to expressions which are referential or specific.

A left-dislocated constituent in English is typically a DP or a pronoun functioning as subject, direct or indirect object, as exemplified in (7a), (7b) and (7c), respectively. It can also be a DP containing a restrictive relative clause (7d), a gerund phrase (7e) or an adverbial clause of condition (7f) again functioning as the subject or object DP, as shown by the RP substitution in the matrix clause.<sup>52</sup>

(7) a) LD of the subject DP:

**This song, it** really annoys me.

b) LD of the direct object DP:

**John, I** can't stand **him**.

c) LD of the indirect object DP:

**John, I** gave **him** the keys.

d) LD of the DP containing a restrictive relative clause:

**(As for)The fact that John is often late,** the manager is concerned about **it**.

e) LD of the gerund DP:

**Giving lectures, it's** difficult work to do for the youngsters. (Rodman 1997: 36)

f) LD of the adverbial CP:

**If it is fine tomorrow, that'll** be good. (Rodman 1997: 36)

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<sup>51</sup> Pronominal 'it' seems to share some of the properties of what has cross-linguistically been termed *deficient pronouns*, viz. it cannot be modified or conjoined and it cannot receive contrastive or focal stress, hence not be topicalized. A tripartite division of pronouns into strong, weak and clitic (the latter two being referred to as deficient) was identified by Cardinaletti & Starke (1999). Clitic pronouns differ from weak ones in that they are also morphologically deficient.

<sup>52</sup> There are different types of LD across languages and even within one language. As summarized by Alexiadou (2006: 669), if the RP is a demonstrative pronoun as in Dutch or German (i), it is known as *Contrastive Left Dislocation*; if it is a clitic pronoun as in Italian, Spanish, Hebrew, Arabic and Greek (ii), it is called *Clitic Left Dislocation*, and where the function of the RP is assumed by an epithet, it is referred to as *Hanging Topic Left Dislocation* (cf. example 10).

(i) Die man *die* ken ik niet  
the man that know I not  
'That man, I don't know him.'

(ii) Ton Jani *den* ton ksero.  
the-acc John-acc neg cl-acc know-1sg  
'John, I do not know him.'

The restriction on topicalizing QPs applies to LD as well for the reason of (the lack) specificity or referentiality, as illustrated below:

- (8) a) \***Anyone**, they would have fire **them**.  
b) **Anyone who was sick**, they would have fired **them**.

There is no case matching or connectivity, i.e. LD elements are marked by a default or nominative case, which in spite of the poor English case morphology can be illustrated by the following example, where the LD element does not need the overt prepositional case assigner (from Acuña Fariña 1995: 15):

- (9) a) I spoke to Liz the other day.  
b) **Liz**/\***To Liz**, I spoke to **her** the other day.

As for co-reference, the fronted DP does not seem as closely related to the remainder of the sentence in the case of LD as in the case of TOP in the sense that the function of the RP can be served by an epithet phrase, a definite DP often containing a demonstrative and having affective, typically negative meaning such as anger, irony and the like (Aoun and Choueiri 2000), as illustrated in (10) (cf. also McCloskey 2006, Falk 2002):

- (10) (**As for**) **John**, Mary can't stand **that liar**.

Multiple LD is possible only in the case of LD of DPs and every DP has to be resumed by a co-referential pronoun in the clause, as illustrated by (11) from Rodman (1974) cited in Okuno (1992: 3). Multiple LD in (12), where PPs are also dislocated, results in ungrammaticality (from Grohmann 2000: 10):

- (11) **Bill, Sue and that damn snake**, he told **her** to get **it** out of their sleeping bag.  
(12) \*(**As for**) **Clothes, for me, John, in that shop**, he never bought **them there** for **me**.

Furthermore, LD and TOP can co-occur in the same sentence with LD topic preceding the TOP one, as illustrated below from Reinhart (1976) in Okuno (1992: 4):

- (13) a) (**As for**) **Rosa<sub>LD</sub>**, **my next book<sub>TOP</sub>** I will dedicate to **her**.  
b) \***My next book<sub>TOP</sub>**, **as for Rosa<sub>LD</sub>**, I will dedicate to **her**.

### 3.1.1.2 TOP, LD and Embedding

Whereas TOP seems to be highly restricted in root interrogatives, LD is not. The topicalized constituent is banned in the position immediately preceding or following an interrogative *wh*-constituent (*wh*-movement) or an (abstract) *yes/no* question operator (T>C movement), as illustrated in (14), whereas this does not hold for LD, as shown in (15). The gap is indicated by ‘t’ (trace).<sup>53</sup>

(14) TOP:

a) \*Who(m) **the books** did John give away t to?/\*To whom **the books** did John give away t? (Chomsky 1977: 92) also:

a’) \***The books** who(m) did John give away t to?/\***The books** to whom did John give away t?

b) \*Can **this kind of behavior** we tolerate t? (Radford 1997: 312) also:

b’) \***This kind of behavior** can we tolerate t?<sup>54</sup>

(15) LD:

a) (As for) **The books**, who(m) did John give **them** away to?

b) **This kind of behaviour**, can we tolerate **it**?

Breul (2004: 63) finds attested examples of embedded TOP in the literature, where the topicalized constituent follows the complementizer *that*.

(16) a) You know that **this kind of behavior** we cannot tolerate. (Radford 1997: 312)

b) We decided that **money** we don’t have too much control over, but we will argue to not have to have those stupid pedagogical seminars twice a month. (Ward 1988: 102)

c) Q: Don’t you want any cheese?

A: I have a feeling that **the types of cheese they put in them** I’m not gonna like. (1988: 104)

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<sup>53</sup> Breul (2004: fn. 102) points out that TOP is generally impossible in the cases where the *wh*-constituent precedes the topicalized constituent, whereas some speakers find acceptable some sentences where the topicalized constituent precedes the *wh*-constituent, as in:

(i) \*/?On **that subject**, who should I consult with? (Haegeman & Guéron 1999: 226).

Indeed, as judged by the native speakers consulted, the examples in (14) where the topicalized constituent precedes the *wh*-word do seem less bad.

<sup>54</sup> The examples in (a’) and (b’) are our native speakers’ judgements.

d) Who said that **Mary** John likes? (Müller 1998: 35)

According to Emonds (1964: 24), TOP does not occur in embedded sentences, thus being a root transformation (what came to be known as *Main Clause Phenomena* (MCP) Haegeman 2010, 2014), and illustrates this by the following examples (supplemented by examples from Haegeman 2010) (18f-g):<sup>55</sup>

- (17) a) \*Have I shown the broom (that) **these steps** I used to sweep with. (clausal complement of nouns/restrictive relative clause)  
b) (?) \*I fear (that) **each part** John examined carefully.  
c) \*We are going to the school play because **our daughter** we are proud of.  
d) (?) \*Do you think that **socialist theory** many Czechs would deny?  
e) \***That this house he left to a friend** was generous of him. (sentential subject)  
f) \*John regrets [that **this book** Mary read]. (Maki et al. 1993: 3) (complements of factive verbs)<sup>56</sup>  
g) \*[When **this song** I heard last week], I remembered my first love. (Haegeman 2010: 3) (central adverbial clauses (temporal and conditional))

As noted by Emonds (1964: 26), LD does not undergo embedding either:

- (18) a) (?) \*I told you that **this movie**, you shouldn't like **it** much.  
b) \*Bill hopes that **John's sister**, **she** won't do anything rash.  
c) \*They put so much furniture in here that **this room**, **it** really depresses me.  
d) \*He doesn't like the park that **Jane**, **she** visits every weekend.

However, it has been noted that LD may occur in the embedded context of propositional attitude verbs (cf. also Cinque 1990), verbs such as 'believe', 'know', 'hope', 'suspect', 'wish', 'regret', and similar, denoting intentional attitudes which are analyzed as relations an individual may stand in to a proposition (Crystal 2008: 393), and can take clauses as their complements, as illustrated below:

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<sup>55</sup> As expected, the native speakers consulted in our research disagree with respect to the acceptability of Emonds's embedded TOP following the complementizer *that* in examples (18b) and (18d).

<sup>56</sup> Factive verbs such as: 'know', 'learn', 'realize', 'regret', and similar, presuppose the factual truth of their complement.

(19) I said that **my father, he** was tight as a hoot-owl. (Ross 1967: 424)<sup>57</sup>

### 3.1.2 TOP, LD, Long Distance Dependencies and Island Sensitivity

TOP establishes an upwardly unbounded A'-dependency relation with the gap or trace (the trace is subject to *Strong Crossover* effects (SCO) like in the case of *wh*-movement)<sup>58</sup> in the sense that the targeted position is arbitrarily higher up than the clause from which the constituent has moved, as illustrated by Ross (1967/1986: 182) in (20) below.

(20) **Beans** I don't think that you'll be able to convince me Harry has ever tasted **t** in his life.

The nature of this position has been a matter of debate and it will be addressed in chapter 6. However, TOP is constrained, as shown in the previous section. In fact, TOP and *wh*-movement in interrogative and relative clauses exhibit parallel behavior with respect to island and other transformational grammar constraints of Ross (1967/19) subsumed in (21) below under *subjacency*<sup>59</sup> for expository purposes. Breul (2004: 61-62) supplemented the compiled list with two more pairs of examples, namely the subject condition of Chomsky (1973) (later also subsumed under subjacency) and the *That*-trace effect of Chomsky & Lasnik (1977) (later accounted for by the *Empty Category Principle* (ECP) of GB theory capturing the interpretation and distribution of empty categories such as traces).<sup>60</sup> The first example in each pair of examples illustrates TOP, the second one *wh*-movement with respect to the relevant syntactic structure.

(21) a) Coordinate Structure Constraint:

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<sup>57</sup> Our respondents find this example acceptable with the verb 'tell' as well, which, according to Emonds, should not allow LD (cf. 19a).

<sup>58</sup> The trace cannot be bound by a c-commanding pronoun. The pronoun is in an argument position of the relevant verb, as illustrated below:

(i) \*Who<sub>i</sub> do you think he<sub>i</sub> loves t<sub>i</sub>?

(ii) \*Him<sub>i</sub> John<sub>i</sub> doesn't trust t<sub>i</sub>.

<sup>59</sup> It is a condition employed in GB and the earlier version stating that a constituent cannot be moved in a single application of a movement rule across more than one bounding (constituent) node (replaced in Chomsky (1986) by the term *barrier*).

<sup>60</sup> Breul (2004: 60) uses the term *fronting* in the examples to refer to this syntactic process which has 'the effect of topicalization or focalization.' Birner & Ward (1998) classify preposing or fronting structures into *focus preposing* and *topicalization* on the basis of their intonation and information structure (cf. Ward 1988 and Prince 1981b). Ross (1967/1986) derives both topic preposing and focus preposing by a single syntactic rule of topicalization. Proposing different positions for the two, Gundel (1974) introduces the terms *topic topicalization* and *focus topicalization*. As pointed out by Breul (2004: fn. 100), in addition to the term *topicalization* being used in the literature to denote a functionally or syntactically defined class of phenomena (as illustrated above), the term has been used differently even by authors who consider syntactic properties only (cf. Ward 1988). Haegeman & Guéron (1999), for example, refer to DP-, AP-, and PP-fronting as topicalization, whereas there is VP-fronting.

i) \***A big car** John bought a red bicycle and **t./(?)**\* **A big car** John bought **t** and a red bicycle.<sup>61</sup> (TOP)

i') \*What did John buy a red bicycle and *t*?/\* What did John buy *t* and a red bicycle? (interrogative *wh*-movement)

b) Complex NP Constraint:

i) \***Bill** I believe the report that John met **t**. (TOP)

i') \*Who do you believe the report that John met *t*? (interrogative *wh*-movement)

ii) \***John** I never liked the people who believed **t**. (TOP)

ii') \*John is the person who I never liked the people who believed *t*. (relative *wh*-movement)

c) *Wh*-island Constraint:

i) \***Such a car** I wonder who will (ever) buy **t**. (TOP)

i') \*What do you wonder who bought *t*? (interrogative *wh*-movement)

ii) \***John** I was wondering who liked **t**. (TOP)

ii') \*John is the person who I was wondering who liked *t*. (relative *wh*-movement)

d) Sentential Subject Constraint:

i) \***John** that Susan saw **t** surprised me. (TOP)

i') \*John is the person who that Susan saw *t* surprised me. (relative *wh*-movement)

e) Subject Condition:

i) \***John** an expensive picture of **t** would surprise me. (TOP)

i') \*John is the person who an expensive picture of *t* would surprise me. (relative *wh*-movement)

f) *That*-trace Effect/ECP:

i) **John** I believe (\*that) **t** just left. (TOP)

i') John is the person who I believe (\*that) *t* just left. (relative *wh*-movement)

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<sup>61</sup> Some of our native speakers find this sentence acceptable only as an afterthought, otherwise not acceptable.



TOP and *wh*-movement also exhibit parallel behavior with respect to licensing parasitic gaps. A parasitic gap is a null element which is licensed by the presence of another null element (gap) in the sentence (cf. Haegeman 1994: 473-474 for a description).

- (22) a) **These socks** I'll put e away without folding e.<sup>62</sup> (TOP)  
b) What will you put e away without folding e? (interrogative *wh*-movement)

According to Prince (1997: 132), one of the functions of LD presented here since it is clearly determined by syntax not by information structure is what she terms *island amnesty*. It is often referred to in the literature as a 'covert' instance or application of TOP (cf. Gregory & Michaelis 2001, Szűcs 2014, for example). Namely, when there is a syntactic constraint regarding a long-distance dependency, i.e. an *island*, the speaker avoids its violation by putting a resumptive pronoun in the canonical position of the fronted element. This is the reason why Chomsky (1977) assumes that LD unlike TOP does not belong to the core syntax. (23) repeats the examples of TOP from (21). The following examples are derivationally saved by the insertion of an RP.

- (23) a) **Bill**, I believe the report that John met **him**. (Complex NP Constraint)  
b) **John**, I never liked the people who believed **him**. (Same as (a))  
c) **Such a car**, I wonder who will (ever) buy **it**. (*Wh*-island Constraint)  
d) **John**, I was wondering who liked **him**. (Same as (c))  
e) ?**John**, that Susan saw **him** surprised me. (Sentential Subject Constraint)<sup>63</sup>  
f) ?**John**, an expensive picture of **him** would surprise me. (Subject Condition)  
g) **John**, I believe (that) **he** just left. (*That*-trace Effect)

As shown by the examples in (23), LD in English is insensitive to both strong and weak islands<sup>64</sup> in that an island boundary between the RP and the left-dislocated constituent does not block the intended co-reference between them and there is no case connectivity.

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<sup>62</sup> Modeled on <https://literal-minded.wordpress.com/2009/02/10/dougs-parasitic-gap/>.

<sup>63</sup> Some native speakers consulted find (g) and (h) acceptable.

<sup>64</sup> Strong islands are relative clauses, subjects and adjuncts (involve the crossing of two barriers), whereas weak islands are *wh*-island, negative island, and the sentential complement of nouns (involve the crossing one barrier). Both disallow extraction of adjuncts, while only weak islands allow extraction of arguments.

Unlike *wh*-movement, TOP does not exhibit Weak Crossover effects (WCO),<sup>65</sup> a configuration where a quantified or R-expression is moved over an expression that contains a pronoun to be bound, whereby the moved quantifier cannot reconstruct, i.e. according to one of the approaches to the phenomenon, move to a lower position at LF in order for the sentence to receive the correct interpretation (cf. Heycock 1995 for reconstruction phenomena). Consider the examples from Postal (1993: 540) below.<sup>66</sup> Co-reference is indicated by co-indexing. Like TOP, LD does not exhibit WCO effect either, as illustrated in (24):

- (24) a) \*Who<sub>i</sub> did his<sub>i</sub> sister call t<sub>i</sub> a moron? (*wh*-movement, WCO effect)  
 b) **Frank<sub>i</sub>** his<sub>i</sub> sister called t<sub>i</sub> a moron. (TOP, no WCO effect)  
 c) **Frank<sub>i</sub>**, his<sub>i</sub> sister called **him<sub>i</sub>** a moron. (LD, no WCO effect)

The grammaticality of (24b) and (24c) implies that no operator movement has taken place. The term operator denotes an expression that is believed to head a *wh*-chain based on subjacency effects and that is said to bind a variable.<sup>67</sup> Guéron (1984: 153ff) observes the following contrast:

- (25) a) \*Who<sub>i</sub> does his<sub>i</sub> mother like t<sub>i</sub>?  
 b) John<sub>i</sub> his<sub>i</sub> mother likes t<sub>i</sub>.

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<sup>65</sup> Rizzi (1997) distinguishes between two types of A'-movement: an operator movement construction that binds a variable in the position of the trace (*wh*-movement), and the one that does not (topicalization) by using a diagnostic introduced by Lasnik & Stowell (1991), namely WCO. On WCO effects, cf. Postal (1993).

<sup>66</sup> The WCO effect arises only if the moved or extracted element is semantically 'a true quantifier phrase', i.e. if it refers to a set with more than one member, as observed by Lasnik & Stowell (1991) in Postal (1993: 539). This generalization accounts for the following data, from Postal (1993: 540):

- (i) \*the kid<sub>i</sub> who<sub>i</sub> his<sub>i</sub> sister called t<sub>i</sub> a moron (restrictive relatives)  
 (ii) Frank<sub>i</sub> was easy for his<sub>i</sub> sister to outshine t<sub>i</sub>. (object raising)  
 (iii) Who<sub>i</sub> did they convince t<sub>i</sub> that his<sub>i</sub> sister had called pg<sub>i</sub> a moron? (parasitic gap extraction)  
 (iv) John<sub>i</sub>, who<sub>i</sub> they convinced his<sub>i</sub> sister that you had called t<sub>i</sub> a moron,... (non-restrictive relatives)

However, Postal (1993: 547-549) argues that Lasnik & Stowell's claim is both too strong and too weak in different respects. There are cases where extraction under topicalization (and other cases mentioned, which will be disregarded further since irrelevant to our purposes) does yield WCO effect even though the extracted phrase is not a 'true quantifier phrase'. The extracted phrases are referential expressions. Consider the pair of examples below.

- (v) a. Sidney<sub>i</sub>, I am sure [his<sub>i</sub> job/mother/beard] is important to t<sub>i</sub>.  
 b. \*Sidney<sub>i</sub>, I am sure [your carving/description/opinion of him<sub>i</sub>] is important to t<sub>i</sub>.

On the other hand, the contrast is obtained even when the extracted phrase is a true quantifier phrase, as in:

- (vi) a. \*Which lawyer<sub>i</sub> did his<sub>i</sub> clients hate t<sub>i</sub>?  
 b. Which lawyer<sub>i</sub> did [even/only his<sub>i</sub> clients] hate t<sub>i</sub>?

Postal (1993: 547) thus suggests that the contrast is also related to the semantic properties of the phrase containing the pronoun. Namely, the bracketed DPs in (vb) and (vib) are 'scope islands', i.e. their quantifier can only have a scope internal to the phrase.

<sup>67</sup> Cf. Haegeman (1998), for an overview of structures containing operators

Guéron (1984) claims that the (un)grammaticality follows from the referential status of the moved phrase. Unlike the topic ‘John’, the operator ‘who’ is not referential, thus (24a) results in ungrammaticality. According to Lasnik & Stowell (1991), this contrast yields WCO effect.

### 3.1.3 TOP, LD and Reconstruction Effects

Let us now consider *reconstruction* or *connectivity effects* regarding the constructions in question (cf. Cinque 1990), namely reconstruction and binding relations (26-28), and idiomatic expressions (29) (WCO being addressed in the previous section).

Consider the possibility of reconstruction effects with TOP and LD with respect to Condition A (26) and Condition C (27) of Binding Theory, and quantifier binding (28), as illustrated below:<sup>68</sup>

- (26) a) TOP: [**Rumours about himself<sub>i/\*j</sub>**]<sub>k</sub>, John<sub>i</sub> doesn’t like **t<sub>k</sub>**.  
 b) LD: [**Rumours about himself<sub>i/\*j</sub>**]<sub>k</sub>, John<sub>i</sub> doesn’t like **them<sub>k</sub>**.

The reflexive pronoun has to be c-commanded by an antecedent in its binding domain (or complete functional complex (Sturgeon 2008: 45), cf. fn. 68), implying that reconstruction to the clause-internal position for the interpretation of the anaphor has taken place.

- (27) a) TOP: [**The rumour that John<sub>i</sub> is a liar**]<sub>k</sub>, he<sub>i/j</sub> is not much concerned about **t<sub>k</sub>**.  
 b) LD: [(**As for**) **The rumour that John<sub>i</sub> is a liar**]<sub>k</sub>, he<sub>i/j</sub> is not much concerned about **it<sub>k</sub>**.

The fact that there is no violation of Condition C in the case of co-reference between ‘John’ and ‘he’ in both examples above implies that no reconstruction has occurred, what has been termed the *anti-reconstruction effect* by Van Riemsdijk & Williams (1981). According to Heycock (1995), only referential phrases yield anti-reconstruction effects.<sup>69</sup>

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<sup>68</sup> Condition A of Binding Theory requires an anaphor to be bound (co-indexed) within its binding domain. Condition C of Binding Theory requires an R(eferential) expression to be free. Following from standard minimalist assumptions regarding phrase structure and syntactic relations, a binding domain is defined in functional terms, as follows: ‘A *binding domain* for  $\alpha$  is the most deeply embedded *Complete Functional Complex* (CFC) containing  $\alpha$  in which the basic binding requirements for  $\alpha$  can be met, where CFC is an XP in which all the  $\theta$ -roles compatible with a lexical head are assigned in A-positions’ (from Sturgeon 2008: 45). For other arguments in favour of a functional dependency approach to binding domains, cf. de Vos (2007).

<sup>69</sup> Huang (1993) observes that predicates (ii), unlike arguments (i), obligatorily reconstruct to their D(eep)-structure position. Consider the examples containing an R-expression from Heycock (1995: 548):

(i) a. [Which allegations about John<sub>i</sub>]<sub>j</sub> do you think he<sub>i</sub> will deny t<sub>j</sub>?

- (28) a) TOP: **Their (own) pet** every child loves **t**.  
 b) LD: \***Their (own) pet**, every child loves **it**.

A pronoun is bound if it is interpreted as a bound variable, c-commanded by the quantified expression or ‘who’ that binds it (cf. Büring 2007).<sup>70</sup> The unacceptability of the sentence in (28b) means that there are no reconstruction effects with LD in the case of quantifier binding.

It is possible to topicalize a part of an idiom which contains a free argument (which has semantic content), i.e. an idiomatic meaningful subpart such as ‘Mary’ in (29a) as opposed to ‘the bucket’ which has no meaning in (29b) since idiom is defined as corresponding to one primitive meaning expression, from Schenk (1995: 260):

- (29) a) **Mary’s leg** Pete pulled **t**.  
 b) \***The bucket** John kicked **t**.

However, the idiom chunk in (30a) cannot be left-dislocated.

- (30) \***Mary’s leg**, Pete pulled **it**.<sup>71</sup>

Idioms are generally considered to be non-compositional, in the sense that they are semantically and syntactically restricted so that ‘[...] the meaning of a complex expression is a function of the meaning of its constituent parts and the way these are syntactically combined’ (van der Linden

- b. [Those allegations about John<sub>i</sub>]<sub>j</sub>, I think he<sub>i</sub> will deny t<sub>j</sub>.  
 (ii) a. \*[How proud of John<sub>i</sub>]<sub>j</sub> do you think he<sub>i</sub> is t<sub>j</sub>?  
 b. \*[Proud of John<sub>i</sub>]<sub>j</sub>, I don’t think you can accuse him<sub>i</sub> of being t<sub>j</sub>.

Heycock (1995) considers this contrast to be a more general pattern of contrast between referential and non-referential reading (‘referential’ in the sense of Rizzi 1990, Cinque 1990, *inter alia*), relevant to extraction possibilities, since there are cases where some arguments pattern together with predicates with respect to obligatory reconstruction. She considers the following examples:

- (iii) a. [Which stories about Diana<sub>i</sub>]<sub>j</sub> did she<sub>i</sub> most object to t<sub>j</sub>?  
 b. \*[How many stories about Diana<sub>i</sub>]<sub>j</sub> is she<sub>i</sub> likely to invent t<sub>i</sub>?

Co-reference is possible in (a), but not (b), which is unexpected for (b) since in both, the R-expression is contained in an adjunct, which could be added later into the derivation (after the phrase to which it is attached to moves out of the c-command domain of the co-indexed pronoun, according to Lebeaux (1988, 1991)), and the sentence in (b) does not involve a fronted predicate. The important difference between the examples is that the *wh*-phrase in (b) is non-referential (What is the number of stories that Diana is likely to invent?), whereas in (a) it is referential (What subset of the set of stories about Diana did she most object to?). Thus, fronted phrases that can only be interpreted non-referentially do not yield anti-reconstruction effects.

<sup>70</sup> For example (Reinhart 1983: 55):

- (i) Everybody<sub>i</sub> loves his<sub>i</sub> dog.  
 (ii) John<sub>i</sub> exploits the secretary who works for him<sub>i</sub>, and Adam<sub>j</sub> exploits the secretary who works for him<sub>j</sub>. ()

<sup>71</sup> The native speakers consulted find this sentence acceptable on non-idiomatic reading.

1993: 2). According to Chomsky (1993), *inter alia*, the idiomatic interpretation is kept if a chunk (part) which separated from the remainder of the idiom is interpreted at its base position, i.e. a particular syntactic structure is assumed to involve movement.

There are different kinds of LD across languages and within a language (cf. fn. 52). Based on the reconstruction data presented in this section, and on the nature of the dislocated elements, as shown in (7) and (8), English seems to exhibit only one kind of LD we will be referring to by the term *Hanging Topic Left Dislocation* (HTLD) used in the literature (cf. Grohmann 2000, 2003, Sturgeon 2008, *inter alia*), characterized by island insensitivity and the absence of reconstruction effects.

### 3.1.4 Summary

TOP in English exhibits the following properties:

- All major phrasal categories serving different syntactic functions can be topicalized.
- TOP is highly restricted in root interrogatives. The topicalized element cannot immediately follow or precede the *wh*-constituent or the *yes/no* question operator.
- Embedded TOP is generally possible (following the complementizer ‘that’ in the case of the complements of non-factive verbs).
- On a par with *wh*-movement TOP exhibits long dependencies and island sensitivity and licenses parasitic gaps.
- Unlike *wh*-movement, TOP does not exhibit WCO effect.
- TOP exhibits reconstruction effects.
- It is possible to topicalize a meaningful subpart of an idiom.

English seems to exhibit only one kind of LD termed Hanging Topic Left Dislocation (HTLD). Let us sum up the properties of LD in English:

- The left-dislocated element can only be resumed by a full (personal) pronoun.
- The left-dislocated element can be a DP or a CP functioning as a subject or object DP, and there is no case matching.
- The function of the resumptive pronoun can be assumed by an epithet phrase in the case of DPs.

- More than one DP can be left-dislocated, each resumed by a pronoun.
- LD can co-occur with TOP in the same sentence with LD obligatorily preceding TOP.
- LD is possible in root interrogatives.
- Embedded LD is generally not possible.
- LD is insensitive to (complex NP and *wh*-) islands.
- LD does not exhibit WCO effect.
- There are reconstruction effects with respect to Condition A of Binding Theory. As for Condition C, only referential phrases yield anti-reconstruction effects. There are no reconstruction effects with respect to quantifier binding.
- Idiom chunks cannot be left-dislocated.

### 3.2 Discourse Functions of Topicalization and Left Dislocation in English

The following sections will present the studies of the discourse functions of TOP and LD in English, *viz.* Birner & Ward (1998), section 3.2.1, Prince (1997, 1998), section 3.2.2 and Gregory & Michaelis (2001), section 3.2.3, and introduce the relevant terms, concepts and methodology employed in analyzing the Serbian data in the following chapter. Section 3.2.4 considers the information-structural nature of topics denoted by the constructions in question.

#### 3.2.1 Birner & Ward (1998)

As pointed out by Van Hoof (2006: 411), the most frequent use of the term TOP is to refer to ‘the intuitive information-structural function of this preposing transformation, which is to mark the fronted constituent [mostly a DP] as a sentence topic, i.e. the entity the sentence is about’, or the current topic of the sentence (e.g. Halliday 1967b, Gundel 1974, Reinhart 1981, etc.). Ward (1988) and Birner & Ward (1998) demonstrate that this limitation is unmotivated and that all the major grammatical constituents (DPs, APs, VPs, and PPs) can be felicitously preposed. Birner & Ward (1998: 38) define TOP (and preposing in general) pragmatically in terms of referential givenness, beyond the confines of a sentence, corresponding not to the topicalized constituent *per se*, but to the poset (i.e. partially ordered set) which it is a member of, illustrated in (31):<sup>72</sup>

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<sup>72</sup> The pragmatic function of preposing is independent of the topic-focus distinction. Birner & Ward (1998) observe what was already noted by Gundel (1974) and Prince (1981b) that the fronted constituent in English preposing structures such as: e.g. *Mary John kissed.* can be interpreted either as a (kind of) topic (as an answer to *What about*

- (31) A: Do you watch football?  
 B: Yeah. **Baseball** I like a lot better.

TOP has two simultaneous functions in (31). First, the topicalized constituent ‘baseball’ serves as a link to the prior context or the anchored poset {sports} inferred via a contextually licensed or plausible linking relation and the trigger ‘football’ explicitly evoked in the previous utterance. Second, a salient or open proposition (OP) is evoked for felicity at the time of utterance, presented in the canonical word order as: OP = I like-to-X-degree {sports}, where X is a member of the poset {amounts}; the focus is ‘better’.<sup>73</sup> The sentence has two pitch accents, the primary or nuclear accent (the head of a prosodic phrase, an H\* tone termed A-accent by Jackendoff 1972) on the focused constituent within the clause and a somewhat weaker pitch accent (a fall-rise tone, termed B-accent by Jackendoff 1972) on the fronted constituent in a separate ‘intonational phrase’ (Pierrehumbert 1980). Thus, in example (31B), ‘baseball’ is marked with a B-accent and ‘better’ with an A-accent, being the focus of the utterance. It could be argued that the intuitive topic in (31) is the hyperonym ‘sports’ (the discourse topic) not ‘baseball’, and that the function of TOP is to introduce a new sentence topic. Lambrecht (1994: 161) points out that ‘the relevant function of topicalization is not to mark an activation state of a referent<sup>74</sup> but to mark the referent of a DP as a (particular kind of) TOPIC in the proposition in which it is an argument, as a corollary, to mark the proposition as being about the referent of this topic. Such syntactic marking is necessary because in sentences with unmarked presuppositional structure accented DPs are not topics but focus constituents.’<sup>75</sup>

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*Mary? Who kissed her?*), which they term *topicalization* (Gundel’s *topic topicalization*), or as a (kind of) focus (as an answer to ‘Who did John kiss?’), which they term *focus preposing* (Gundel’s *focus topicalization*, Prince’s *focus movement*). These two structures are also intonationally distinct.

<sup>73</sup> In the case of focus preposing, as illustrated in (i) below from Birner & Ward (1998: 36), the link is the new information or focus, and the open proposition has the form (in the canonical word order) OP = It costs X, where X is a member of the poset {prices}; the focus is ‘six dollars’. The sentence has one pitch accent on the fronted focus.

- (i) A: Where can I get the reading packet?  
 B: In Steinberg. **Six dollars** it costs.

<sup>74</sup> The referent of a TOP constituent is either evoked or in a salient set relation to some already evoked or inferable entities from the discourse. Non-topicalized constituents have the same activation properties, such as ‘sciences’ in the example below, Prince’s (1983) example cited by Lambrecht (1994: 160):

[I graduated from high school as] an average student. My initiative didn’t carry me any further than average. **History** I found to be dry. **Math courses** I was never good at. I enjoyed sciences...Football was my bag.

<sup>75</sup> Lambrecht (1994: 161-162) illustrates this by the following example.

Context: a six-year old girl showing additions to her sticker album.

The linking relation can be that of set/subset, part/whole, type/subtype, greater-than/less-than, or simple identity, as illustrated in (32), (33), (34), (35), and (36), respectively (from Birner & Ward 1998: 220-226).<sup>76</sup> The anchoring poset evoked in the prior discourse is indicated by curly brackets and the member(s) of the poset representing the link is in bold face.

(32) Set/subset relation:

- a) The exam can be {either next Thursday or a week from next Thursday}. I think **a week from Thursday** you'll all feel more comfortable with.
- b) We don't get involved in {all the murders}, but **this one** we thought we'd take a look at.
- c) There are {other areas}, but **what those areas are**, we don't know. (the topicalization of an indirect question)

(33) Part/whole relation:

- a) At bottom, things just are the way they are, a heterogeneous reality. Yet {parts of this reality} have a capacity for perception, for acquiring information from other parts, and an accompanying capacity for acting on still others. **Those parts having the capacity for perception and action** we call organisms.
- b) G: How could you take {an exam} with all those students pestering you?  
M: It wasn't easy, but they were all done by three-thirty, and I had until five. **The hard part** I left for the end.

(34) Type/subtype relation:

- a) A: What about me? I'm his mother. I have {love} for him too.  
B: **Your brand of love**, Alexis, he can do very well without.
- b) A: It's amazing. I never dreamed it would last. We met purely by accident. {types of relationships}

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**This one** we traded, **this one** we traded, **this one** she let me have, **this one** she let me have, **this one** we traded; she let me have this one; **this one** we traded.

The difference between the TOP constituents and those in their canonical position is explained in terms of the relation between the referent and the proposition not in terms of the cognitive states of the referents in question. Only one occurrence of 'this one' is not topicalized. By leaving the object 'this one' in its canonical position in the second-to-last clause, the speaker marks the referent as having a focus not a topic relation to the proposition.

<sup>76</sup> **Their** analysis also subsumes Chafe's (1976) and Givón's (1993) analyses of English preposing as contrastive, Clark & Clark's (1977) analysis in terms of 'frame' and 'insert', Prince's (1981b) set-member relations, Reinhart's (1981) links.



B: **Friendships** you develop. **Lovers** you fall into.

(35) Greater-than/less-than relation:

a) R: If there're fewer than five students [waiting in line] then I guess we can start. How many are there?

T: Five.

R: **Five students** we don't have to wait for. **More than that** we would.

(36) Simple identity:

a) I have {a recurring dream} in which ... I can't remember what I say. I usually wake up crying. **This dream** I've had maybe three, four times. (the anchoring poset is composed of a singleton dream)

b) The only time the guy isn't considered a failure is when he resigns and announces his new job. That's the tipoff, "John Smith resigned, future plans unknown" means he was fired. "John Smith resigned to accept the position of president of X company" – then you know he resigned. **This little nuance** you recognize immediately when you're in corporate life. (the link 'nuance' which stands in a relation of identity with the singleton {the nuance} (not explicitly mentioned) is evoked in new terms)

There is no plausible linking relation between the discourse entity evoked by the proposed constituent and the salient entities inferred from the previous context in:

(37) Someone broke into the garage last night. \***My father** I need to talk to (Birner & Ward 1998: 45).

### 3.2.2 Prince (1997, 1998) and Gregory & Michaelis (2001)

This requirement that the entity denoted by the fronted constituent stand in a salient poset relation to the entities already evoked by the previous context does not have to apply to LD. Namely, arguing against the widely held view that the pragmatic function of LD is to mark a sentence topic, assuming topic-comment structure (Halliday 1967, Gundel 1985, Reinhart 1981, *inter alia*), Prince (1997) demonstrates that the function of LD is related to some other planes of discourse as well. One of the three types of LD distinguished on the basis of discourse-

functional oppositions, in particular markedness distinctions,<sup>77</sup> which Prince (1997: 124) terms a ‘simplifying’ LD, ‘serves to simplify the discourse processing of Discourse-new entities by removing them from a syntactic position disfavored for Discourse-new entities and creating a separate processing unit for them’. Consider the following example from Prince (1998: 284):

- (38) My sister got stabbed. She died. Two of my sisters were living together on 18<sup>th</sup> Street. They had gone to bed, and this man, their girlfriend’s husband, came in. He started fussing with my sister and she started to scream. **The landlady, she** went up and he laid her out. So sister went to get a wash cloth to put on her, he stabbed her in the back. /\*So **a wash cloth<sub>i</sub>**, sister went to get **it<sub>i</sub>/one<sub>i</sub>** to put on her, he stabbed her in the back.

According to Prince (1998), ‘the landlady’ is new to the discourse and probably to the hearer<sup>78</sup> and therefore it does not occur in subject position – a position generally disfavored for introducing new information.<sup>79</sup> The dislocated position creates a new information unit, which eases processing.<sup>80</sup> The object position favors discourse-new entities, thus LD is ruled out, as illustrated in the variant of the last sentence in the example. Another position that disfavors discourse-new entities is a possessive position, as illustrated by Prince (1985: 74):

- (39) ...there won’t be any dead up there. There’ll just be tombstones setting there. Because the coal is under the graves. **An old preacher down there<sub>i</sub>**, they augured under the grave where **his<sub>i</sub>** wife was buried. And he’s nearly blind and he prayed and everything.

The other two types of LD imply discourse-old information. Namely, one type termed amnestying LD (discussed in section 3.1.2) prevents an island violation, for example, a complex NP-constraint, as illustrated below:

- (40) **John**, Mary doesn’t believe rumours that **he** might be doing drugs.

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<sup>77</sup> The markedness analysis is based on relations of inclusion among distributional patterns in naturally occurring discourse.

<sup>78</sup> Keenan & Schieffelin (1976) argue that the function of LD is to introduce or reintroduce the referent of the fronted DP into the consciousness of the hearer.

<sup>79</sup> It is assumed that there is a close connection between topichood and subjecthood, as captured by the *Light Subject Constraint* of Chafe (1994), the *Principle of Separation of Reference and Role* of Lambrecht (1994), among other pragmatic constraints. Cf. also section 4.2 of Lambrecht (1994) for an overview.

<sup>80</sup> Ochs & Schieffelin (1976: 255) argue that formally and functionally the expression representing the initial dislocated referent and the expression representing some relevant information (or predication) about it are ‘more or less’ independent communicative acts (since these structures vary in the extent to which they are formally integrated).

The other type triggers a poset inference on the part of the hearer (henceforth the poset LD). Only this type of LD associates a certain discourse status with the fronted element itself. Thus, Prince (1997: 125) compares different functions of the poset LD and TOP structures using the example in (41), where two LDs are followed by a TOP. Prince argues that TOP performs two simultaneous functions. The first overlaps in function with the poset LD, which is to express set relations (including contrastive relations), and the second, additional function is to evoke an open proposition similar to focus-presupposition structure, such as *it*-clefts and *wh*-clefts.<sup>81</sup>

(41) She had an idea for a project. She's going to use three groups of mice. **One<sub>i</sub>**, she'll feed **them<sub>i</sub>** mouse chow, just the regular stuff they make for mice. **Another<sub>i</sub>**, she'll feed **them<sub>i</sub>** veggies. And **the third** she'll feed junk food.

As observed by Prince, by the time the last or TOP sentence is uttered, a set of groups of mice is contextually evoked and each member of the set is paired with the type of food, the (information) focus of the sentence. In other words, an open proposition is evoked. The new information in the TOP sentence is that it is junk food that the third group will be fed. Prince concludes that TOP is more specialized than (the poset) LD (since LD is not so restricted), and, thus, LD should be possible in all contexts where TOP occurs.<sup>82</sup> Although her prediction is not correct, as illustrated in (42) by Gregory & Michaelis (2001: 32), her analysis showed that TOP and LD sentences are related to the discourse in different ways.

(42) Context: A has just outlined some possible policies for local school board.

B: Uh huh. That's some pretty good ideas. Why don't you do something with those? You should run for a local school board position.

A: **That I'm not so sure about.** I've got a lot of things to keep me busy. (TOP)

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<sup>81</sup> Gregory & Michaelis (2001: fn. 8) do not accept this view of TOP. Instead, they assume that the focus articulation evoked by TOP is a garden-variety VP focus for parsimony reasons. Since the particular focus structure is irrelevant for our purposes here, we will not explain it any further.

<sup>82</sup> In her earlier work, Prince (1985: 221, 223) recognizes two types of LD, which she labels LD-1 and LD-2. LD-1 'marks an entity as being already evoked in the discourse or else in a salient set-relation to something already evoked. The entity thus marked is represented by the DP'. LD-2 'creates a separate information unit for an entity not currently in focus and not represented by a DP in a favoured position, e.g. sentence-final, for introducing out-of-focus entities'. Thus, LD is treated as a word order variation. Prince (1985) refers generally to the functional opposition between LD and TOP (not just the poset LD and TOP). TOP has two simultaneous functions, namely marking a certain information status of the entity represented by the DP and marking a certain information status of an open proposition (the relation between the proposition and the context). LD-1 exhibits the first function of TOP, but not the second. TOP has the sole function of LD-2, namely marking a poset relation, but it is more specialized since it has one more function not exhibited by LD-2.

A': \***That I'm not so sure about it.** I've got a lot of things to keep me busy. (LD)

The example shows that there are cases where LD is not possible in contexts where TOP is most expected, i.e. with anaphoric elements.

Based on a corpus study of TOP and LD, Gregory & Michaelis (2001: 1, 10) argue that the primary and over-arching function of LD is 'topic promotion', 'involving both the anaphoric status of the referent and its perseveration in discourse'. By comparing all the LD tokens with all the TOP tokens, Gregory & Michaelis (2001) support their claim by examining the following factors: *givenness* or the *activation status* (by applying the Givenness Hierarchy model by Gundel, Hedberg & Zacharski 1993),<sup>83</sup> *anaphoricity* and *topic persistence*. They found that LD entities have relatively low givenness in discourse. They also tend to have low anaphoricity, i.e. the anaphoric link being: directly mentioned, being a member of an inferable set, none. As opposed to TOP entities, they have high topic persistence (in the sense of remaining the topics of the subsequent discourse).<sup>84</sup> Therefore, their analysis is not incompatible with Prince's account of the poset function of LD, since in order for a discourse-new entity to be established as a (sentence) topic (in the pragmatic aboutness sense (e.g. Halliday 1867b, Reinhart 1981, Gundel 1974, 1988, Lambrecht 1994),<sup>85</sup> there has to be some discourse-available set this entity stands in a certain poset relation with. Their new account of LD indicates that the functional opposition between TOP and LD is not markedness-based, i.e. 'neither is more specialized than the other'. Thus, the infelicity of LD in (42) above is explained by the fact that pronouns are typically topics, thus they cannot be promoted in the way described above.

Barnes (1985) and Geluykens (1992), among others, explore the interactive or conversational dimensions of LD based on a spontaneous conversation corpus-study using a purely empirical methodology (i.e. without any preconceptions about the functions of LD) and assuming a conversational treatment of topic. LD is a conversational phenomenon. Namely, the overt articulation of the utterance into two parts, where the following clause provides some relevant information about 'an ensemble of entities' (Dick 1997: 389), is assumed to be its basic function especially related to the unpredictable character of naturally-occurring conversation and

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<sup>83</sup> This hierarchy will be discussed in greater detail in section 4.2.3 when it will be applied to Serbian.

<sup>84</sup> Their methodology will be discussed in greater detail in section 4.2.2, when applied to Serbian LD data.

<sup>85</sup> Since **they** consider pragmatic constraints on a certain sentential pattern, discourse topic (in the sense of van Dijk 1977, among others) is excluded.

various oral genres (Hidalgo 2002). LD is a strategy of easing syntactic processing by organizing the message into shorter chunks (Barnes 1985, Aijmer 1989, Lambrecht 1994). It introduces a new topic or shifts to a new topic or a subtopic related to a discourse topic (Barnes 1985, Geluykens 1992, Lambrecht 1994, Downing 1997, Prince 1997, Erteshik-Shir 2007, etc.), a device of creating discontinuity in discourse (Givón 1979). As a representative of an applied linguistics approach, Parisse (2008), for example, argues that LD is an unavoidable stage in the child's language development.

Now, let us see what the information-structural nature of these topic-like entities marked by TOP and LD might be.

### 3.2.3 Information-Structural Properties of TOP and LD in English

The idea that TOP (among other preposing structures) is a contrastive topic marking device has been argued in the functional literature by Chafe (1976), Prince (1981, 1997), Ward (1988), Lambrecht (1994), and Birner & Ward (1998), *inter alia*, already presented in this chapter. Contrastive topics have also been studied from the formal semantics point of view (Jackendoff 1972, Roberts 1996/2012, Krifka 1999, Steedman 2000, Büring 1999, 2003, *inter alia*), which considered primarily certain intonational patterns. Like functional approaches, formal semantics approaches assume that contrastive topic marking co-occurs with (information) focus marking, but there is no link between the contrastive topic and the previous context, as pointed out by Sturgeon (2008). Within the framework of alternative semantics, Büring (2003) develops a pragmatic analysis of contrastive topic or CT-marking drawing on Roberts (1996). Discourse is governed by strategies of inquiry represented by d(iscourse)-trees and the entailment (hierarchical) structure is expressed by dominance relations, as illustrated in (44) below. The utterance containing the contrastive topic is a partial answer to a (possibly implicit) larger question in the discourse,<sup>86</sup> for example, 'Who drank what?':

(43) A: What about John? What did **he**<sub>CT</sub> drink?

B: **John**<sub>CT</sub> drank the beer<sub>F</sub>.

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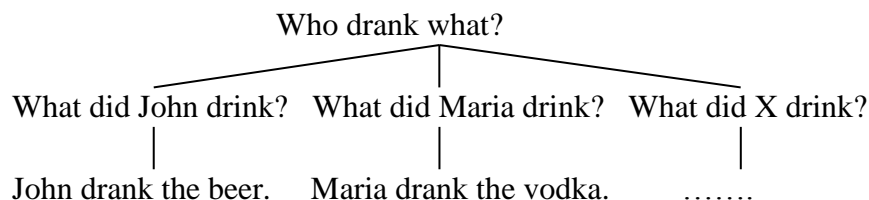
<sup>86</sup> The question can be implicit. The contrastive marking of the subject in B suggests to the hearer that there were also others involved in the discourse who were at some other places at the inquired time (Roberts 1996: 122):

A: Where were you at the time of the murder?

B: **I**<sub>CT</sub> was at home<sub>F</sub>.

A contrastive topic, marked by the B-accent, instructs the hearer how to connect the asserted proposition to a strategy of inquiry. Informally speaking, first, the focused element in: *John<sub>CT</sub> drank the vodka<sub>F</sub>*; is replaced by a *wh*-word and fronted, giving the question: *What did John<sub>CT</sub> drink?* Second, the contrastive topic ‘John’ is replaced by some alternative to it, giving a set of questions: ‘what did X drink?’ The CT-congruence condition requires every declarative sentence containing a CT to answer a (possibly implicit) question, which is a member of a set of alternative questions, as part of the strategy to answer the largest question under discussion, in this case *Who drank what?*

(44) D-tree:



Each node is termed *Move* and consists of sentences representing syntactic objects. D-trees are subject to two well-formedness conditions: (1) *informativity* (don't say known things, don't ask for known things), and (2) *relevance* (stick to a question until it is sufficiently resolved) (Büring 2003: 517).

Among more recent approaches, Szűcs (2014) argues that TOP in English marks contrastive topics. He adopts Titov's (2013) pragmatic concept of contrast, *viz.* that the set-membership is not sufficient for a topic to be interpreted as contrastive, but the contrastive element itself activates the alternatives the moment it is uttered. Szűcs (2014: 121) demonstrates that non-referential expressions can be topicalized, such as verbs (45a), adjectives (45b) and propositions (45c). As shown by Ward & Prince (1991: 1), a non-specific DP can also be topicalized, illustrated in (45d), since specificity or definiteness is unrelated to the poset condition. Possible continuations of the sentences in (45a), (45b) and (45c) are added in brackets to demonstrate the contrastive nature of the topicalized expressions.

- (45) a) **Surrender** we never will (though stumble we sometimes may.)  
 b) **Happy**, Tom will never be (but satisfied he might be when he grows older.)

c) **That Tom was a movie star** we would never have guessed. (That he was a farmer we believed.)

d) A: Do you think you'd be more nervous in a job talk or a job interview?

B: **A job talk** I think you'd have somewhat more control over.

The data from the corpus study of Snider & Zaenen (2006) show that there is a tendency for inanimates to topicalize contrary to the theories which predict that the saliency of referents directly influences the linearization of DPs in the clause (cf. Kempen & Harbush 2004, for example), animate referents being inherently more salient than inanimate ones. This suggests that animacy is also unrelated to the poset condition, i.e. to the requirement that the denotatum of the topicalized expression (the topic of the sentence) be contextually evoked by belonging to a certain poset, thus implying the existence of some alternatives. Furthermore, a topicalized constituent can be interpreted as not having an information-structural effect itself, but it does evoke a certain information-structure, as in (46) below. É. Kiss (2004: 117) shows that the placement of a speaker-oriented adverbial in English, which cannot be a topic, determines IS:

- (46) a) \*[<sub>TP</sub> A baby boy luckily was born].  
b) Luckily [<sub>TP</sub> a baby boy was born].  
c) John luckily [<sub>TP</sub> was born on time].

Example (46a) shows that a sentence adverbial cannot follow a non-specific subject, whereas (46c) shows it can follow a specific/definite subject. According to É. Kiss, this subject is the topic. As for (46b), É. Kiss assumes that it is predicated of an implicit stage topic since a non-specific indefinite cannot be a topic. Erteschik-Shir (2015) argues that fronting an element which does not function as a topic means that none of the other elements in the sentence are to be interpreted as a topic either. The fact that qualifying as a contrastive topic is less restricted (as described above) than qualifying as a 'regular' (referent-establishing) topic remains to be explained.

As for LD, it is generally agreed that it is a 'regular' topic-marking structure. A corpus study by Snider & Zaenen (2006) shows that animate DPs are more likely to be left-dislocated. LD with non-referential topics is considerably degraded, as illustrated by Szűcs (2014: 125):

- (47) a) ?**Surrender**, we will never **do so**.  
b) ?**Happy**, Tom will never be **like that**.  
c) ?**That Tom was a movie star**, we would have never guessed **that**.  
d) \***A job talk** I think you'd have somewhat more control over **it**.

As demonstrated in the previous section, LD either introduces a completely new topic (Prince's 'simplifying' LD) or a subtopic of a discourse topic (Prince's poset LD).

### 3.2.4 Summary

Pragmatically, TOP defines a set-membership the referent of the topicalized element denotatively belongs to and evokes an open proposition at the time of the utterance for felicity. In other words, it introduces a new, contrastive sentence topic and marks the proposition as being about this topic.

Apart from marking a 'regular' or referential sentence topic (hanging topic), LD has other pragmatic functions. As argued by Prince (1997), LD serves three functions: (a) a poset LD expresses set relations on a par with topicalization, associating a certain discourse status with the fronted element, (b) simplifying LD eases discourse processing of discourse-new entities, and (c) amnestying LD preempts syntactic constraints violations. According to Gregory & Michaelis (2001), the unifying function of LD is topic promotion. The conversational dimension of LD includes easing syntactic processing by organizing the message into shorter chunks and introducing a new topic or shifting to a new topic or a subtopic related to a discourse topic.

Let us now consider the database from Serbian.



## 4. Distinguishing Topicalization from Left Dislocation in Serbian

### 4.1 Syntactic Properties of TOP and LD in Serbian

#### 4.1.1 The Nature of Fronted Elements, Case Connectivity and Clitic Placement

Unlike English, which is said to be a (syntax-)configurational language, Serbian, which belongs to the so-called discourse-configurational languages (cf. É. Kiss 1995, 2001),<sup>87</sup> is characterized by a relatively free word order, although its basic or typical word order is SVO (Popović 1997: 16), like in English. In other words, syntactic structure and the linear order of constituents are determined by the discourse functions of topic and focus. Hale (1983) was among the first to suggest the following three defining characteristics of a discourse-configurational language, *viz.* free word order, pro drop and discontinuous NPs. However, as pointed out by van der Wal (2012), there is no strict division of languages into configurational and discourse-configurational since the extent to which word order is determined by discourse functions varies across languages. The word order variation does not alter the propositional meaning of a sentence but it reflects a certain discourse-pragmatic intention, i.e. it determines the contextual appropriateness of a sentence<sup>88, 89</sup>. The first and the last position in the sentence are considered prominent or emphatic (the first more than the last) (Popović 1997: 16, Tošović 2005: 1065) i.e. related to certain discourse functions as in some other languages with free word order such as Czech (cf. Sturgeon 2008) and Russian (cf. Bailyn 2012). The left edge position is associated with continuing and contrastive topic and contrastive focus and the right with information focus (both wide and narrow). Thus, as illustrated in (1) below, with neutral intonation and assuming that the last sentence element carries the pitch accent, ‘Jovan’ is the topic of each sentence in the sense of what the sentence is about, whereas the sentences differ in what is presented as the new information or focus – in (1a) ‘Mariji’, in (1b-c) ‘haljinu’, and in (1d) ‘kupio’.

(1) a) Jovan je kupio haljinu Mariji.

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<sup>87</sup> They are also referred to as non-configurational languages.

<sup>88</sup> Prosody is also important for conveying the content of a sentence. Using prosodic means in Serbian can make a word prominent in any position of the sentence. The thesis will not be considering the prosodic components such as sentence accent or intonation. For the characteristics of prosodic constituents in Serbian, cf. Marković & Milićev (2012, 2016).

<sup>89</sup> In the more contemporary Serbian literature, there are two rather extensive monographs on word order in Serbian within the framework of the Functional Sentence Perspective, *viz.* Popović (1997) and Tošović (2001). As pointed out by Halupka-Rešetar (2011), they are of descriptive nature and they make no predictions about those sentences which are possible but not realized. Halupka-Rešetar (2011) primarily considers word order in Serbian in the function of marking structural focus in the generative (minimalist) tradition.

- John.NOM AUX.CL bought dress.ACC Maria.DAT
- b) Jovan je kupio Mariji haljinu.  
John.NOM AUX.CL bought Maria.DAT dress.ACC
- c) Jovan je Mariji kupio haljinu.  
John.NOM AUX.CL Maria.DAT bought dress.ACC
- d) Jovan je Mariji haljinu kupio.  
John.NOM AUX.CL Maria.DAT dress.ACC bought
- ‘John bought a dress to Maria.’/‘John bought Maria a dress.’<sup>90</sup>

Serbian also belongs to the group of the so-called *scrambling languages* as opposed to *non-scrambling languages* such as English or French. The distinction goes back to Ross (1967) who argued that for languages with free word order there is an optional process of scrambling which changes basic word orders to alternate word orders without semantic import, and treated it as a stylistic rule. For Bailyn (2012: 293) there is ‘no single process of scrambling’; it is ‘a cover term of discourse-related movements deriving non-canonical word orders’. Van Gelderen (2003: 105, fn. 3) defines scrambling as syntactic movement driven by information structure and considers TOP to be an instantiation of such a process, which is the view we will take.<sup>91</sup>

A sentence topic can also be marked by using the structures of TOP and LD, i.e. by placing an element into the position preceding the canonical position of the subject. Applied to the example above, the TOP and LD are illustrated in (2) below.

- (2) a) TOP: **Mariji** je Jovan kupio haljinu.  
Maria.DAT AUX.CL John.NOM bought dress.ACC

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<sup>90</sup> However, it should be pointed out that given the right context, both ‘Marija’ and ‘haljina’ can be sentence topics, as illustrated in (i) and (ii) below. The topic is in boldface. Capital letters indicate the sentence stress (A-accent).

(i) A: A **Marija**? Ko je njoj kupio haljinu?

‘What about Maria? Who bought her the dress?’

B: JOVAN je kupio **Mariji** haljinu.

‘John bought Maria the dress.’

(ii) A: Haljina koju je Marija nosila na žurci je bila najlepša. Ko joj je kupio?

‘The dress Maria wore at the party was the prettiest. Who bought it to her?’

B: JOVAN je kupio Mariji **haljinu**.

‘John bought Maria the dress.’

<sup>91</sup> For a discussion of the theoretical issues in scrambling, namely the ‘economy and motivation problem’, and the ‘feature problem’, and for a critical overview of different accounts of scrambling, cf. chapter 7 of Bailyn (2012). For a description of scrambling in various languages including Russian, Japanese, Dutch, cf. section 3.4 of Erteschik-Shir (2007).

- b) LD: **Marija/?Mariji**, Jovan **joj** je kupio haljinu.  
 Maria.NOM/Maria.DAT John.NOM her.CL.DAT AUX.CL bought dress.ACC
- c) TOP: **Haljinu** je Jovan kupio Mariji.  
 Dress.ACC AUX John.NOM bought Maria.DAT
- d) LD: **Haljina/ ?Haljinu**, Jovan **ju** je kupio Mariji.  
 Dress.NOM/ Dress.ACC John.NOM her.CL.ACC<sup>92</sup> AUX.CL bought Maria.DAT
- e) TOP: **Kupio** Jovan Mariji haljinu jeste.  
 Bought John.NOM Maria.DAT dress.ACC AUX

As shown by the examples in (2), both the indirect object 'Mariji' in (2a) and the direct object 'haljinu' in (2c) can be topicalized and left-dislocated, (2b) and (2d), respectively. The examples also show that the topicalized NP in (2a) retained its dative case and in (2c) its accusative case, whereas the left-dislocated NP in (2b) and (2d) is in the default or nominative case and it is resumed by a clitic pronoun in the dative case 'joj' and a clitic pronoun in the accusative case 'ju', respectively. As for the fronting of the finite verb in (2e), the fact that the auxiliary verb cannot retain the clitic form, but its full form has to be used, seems to suggest the necessarily contrastive reading of the structure. The fronting is perceived as contrastive in the sense of implying the existence of alternatives and eliminating them.

Apart from NPs functioning as a direct or indirect object, the following phrasal categories serving different syntactic functions can also be topicalized in Serbian.<sup>93, 94</sup>

- (3) a) TOP of the indirect object pronoun:

Context: Maria bought something for her boyfriend and something for her sister.

**Njemu** je Marija kupila auto.

Him.DAT AUX.CL Maria.NOM bought car.ACC

'Him Maria bought a car'

<sup>92</sup> Serbian has grammatical gender.

<sup>93</sup> Following Bošković (2005, 2007), Corver (1992), Stjepanović (1998), Zlatić (1998), *inter alia*, we will assume that a noun phrase in Serbian, unlike in English as a language with lexicalized determiners, does not have a D layer, i.e. that the maximal projection is an NP, not a DP. The independent evidence for this syntactic distinction also comes from a semantic analysis of nominals (DPs) by Partee (1987). Winter (2000) proposes syntax-semantics mapping, syntax imposing restrictions on semantics (category shifting), thus uses semantic phenomena to account for syntactic assumptions on DP structures.

<sup>94</sup> Since topics tend to be omitted when subjects or cliticized in Serbian, the context is provided for (3a-b) at this point in order to get the right (non-focused) reading.

b) TOP of a prenominal adjective, prenominal possessive and a demonstrative, respectively:<sup>95</sup>

**Plavu/Svoju/Ovu** je Marija poklonila **haljinu**.  
Blue/ Her/ This AUX.CL Maria.NOM gave away dress.ACC  
'A blue/her/this dress Maria gave away.'

c) TOP of the proposition, CP:

**Da je Marija bogata** niko ne bi rekao.  
That is Maria rich no one not would said  
'That Maria is rich no one would say.'

d) TOP of the VP:

**Prekršiti obećanje** Jovan nikada neće.  
Break promise John.NOM never will.  
'Break a promise John never will.'

e) TOP of the circumstantial PP/AP:

**Iz hobija/ Prilično loše/ U lokalnom baru** (oni) sviraju.  
As hobby/ Quite badly/ In local bar (they) play  
'As a hobby/ Quite badly / In the local bar they play.'

As in English, simple quantified phrases, i.e. non-referential expressions, cannot be topicalized in Serbian either. Consider the following pairs of examples:

(4) a) \***Svako dete** doktor je pregledao.

'\*Every child the doctor examined.'

a') **Svako dete s opekotinama** doktor je pregledao.

'Every child with burns the doctor examined.'

b) \***Bilo koga** policija bi ispitala.

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<sup>95</sup> Bošković (2005) argues that in Serbian, unlike in English, due to the lack of a D layer, AP is a constituent, i.e. Serbian NP does not constitute a phase (if it is assumed that 'NP headed by a noun that takes a non-trace complement is a phase'). Since they are morphologically adjectives, can occur in typical adjectival positions and can 'stack up', following Corver (1992), Bošković (2005) concludes that possessives and demonstratives in Serbian are also adjectives. Since *Left Branch Extraction* is a phrasal movement, it follows that they can be (optionally) left-extracted from an NP. Any prenominal element in Serbian can (optionally) be left-extracted from an NP (a quantifier, demonstrative possessive, and adjective), even from an NP in the embedded clause (cf. Bašić 2004: 28-32, for an overview).

\*Anyone the police would have questioned.'

b') **Bilo koga zatečenog na mestu zločina** policija bi ispitala.

'Anyone found at the crime scene the police would have questioned.'

Apart from NPs functioning as direct or indirect objects, as illustrated in (2b) and (2d) above, a wide range of phrasal categories can be left-dislocated in Serbian, unlike in English, such as an NP functioning as a subject, (5a), a gerund phrase functioning as a direct object (5b), a CP representing an adverbial clause of condition functioning as a subject (5c), a proposition CP functioning as a direct object or as a subject (5d), as shown by the demonstrative resumptive pronouns in the clause. In addition, an AP (5e) and (5f), a PP (5g), and an infinitive VP (5h) can also be left-dislocated, resumed in the clause by a demonstrative pronoun.

(5) a) LD of the subject NP:

**Zelena haljina,** ona je najskuplja u radnji.  
Green dress.NOM, she is most expensive in store  
'The green dress, it is the most expensive in the store.'

b) LD of the gerund direct object:

**Kašnjenje,** to baš ne volim kod Jovana.  
Being late, it really not like about John  
'Being late, I don't really like it about John.'

c) LD of the subject adverbial clause of conditioning/CP:

**Ako bude sunčano,** to će biti dobro za maraton.  
If is sunny, it will be good for marathon  
'If it is sunny, it will be good for the marathon.'

d) LD of the direct object and subject proposition/CP, respectively:

**Da će Jovan pobediti,**(u) to niko ne veruje/ to je malo verovatno.  
That will John win, (in) that no one not believes/ that is hardly likely  
'That John will win, no one believes that/ that is hardly likely.'

e) LD of the adverbial phrase/AP:

**Brzo, tako** je ispio pivo.

Quickly, this way AUX.CL drank up-he beer  
'Quickly he drank up the beer.'

f) LD of the adjectival phrase/AP:

**Modra, takva** je bila njegova ruka.  
Livid, like that AUX.CL was his arm  
'Livid his arm was like.'

g) LD of the PP:

**U lokalni bar, tamo** uglavnom izlazimo.  
To local bar, there mostly go out-we  
'To the local bar we mostly go.'

h) LD of the infinitival VP:

**Da igra, to** dobro zna.  
To dance, that well knows  
'To dance he knows well.'

According to the results of our research, the judgements regarding left-dislocating more than one NP, each resumed by a co-referent pronoun in the canonical position in the clause, illustrated in (6), are rather inconclusive, somewhat more than a half of the respondents considering it acceptable:

- (6) **?Što se tiče Jovana, Marije i auta,** poklonila **mu ga** je.  
As for John Maria and car, gave-she him.CL.DAT him.CL.ACC AUX.CL  
'As for John, Maria and the car, she gave it to him.'

As shown in (2a) and (2b), TOP and LD can sometimes be distinguished on the basis of the case of the fronted element (Halupka-Rešetar 2011). Whereas in the case of TOP, the fronted NP always retains the case assigned by the verb, as illustrated in (7), in the case of LD, the examples with a fronted NP that is not in the default or nominative case are considered unacceptable by the vast majority of our respondents or seriously degraded, shown in (8) below.

(7) TOP:

- a) **Jovanu/ \*Jovan** Marija ne veruje.

John.DAT/ Jovan.NOM Maria not trusts

'John Maria doesn't trust.'

b) **Jovana/ \*Jovan** Marija voli.

John.ACC/ John.NOM Maria loves

'John Maria loves.'

c) **S Jovanom/ \*Jovan** Marija ide u bioskop večeras.

With John/ John.NOM Maria goes to cinema tonight

'With John Maria is going to the cinema tonight.'

d) **O Jovanu/ \*Jovan** Marija razmišlja.

About John/ John.NOM Maria thinks

'About John Maria is thinking.'

e) **Od Jovana/\*Jovan** Marija puno očekuje.

Of John/ Jovan.NOM Maria a lot expects

'Of John Maria expects a lot.'

(8) LD:

a) **\*Jovanu/ Jovan,** Marija **mu** ne veruje.

John.DAT/ John.NOM, Maria him.CL.DAT not believes

a') **?\*Jovanu/ Jovan,** Marija ne veruje **njemu.**

John.DAT/ John.NOM, Maria not believes him.DAT

'John, Maria does not believe him.'

b) **\*Jovana/ Jovan,** Marija **ga** voli.

John.ACC/ John.NOM, Maria him.CL.ACC loves

b') **?\*Jovana/ Jovan,** Marija voli **njega.**

John.ACC/ John.NOM, Maria loves him.ACC

'John, Maria loves him.'

c) **?S Jovanom/ Jovan,** Marija ide s **njim** u bioskop veceras (**s njim**).

With John/ John.NOM, Maria goes with him to cinema tonight (with him).

'John, Maria is going with him to the cinema tonight.'

- d) ?**O Jovanu/ Jovan**, Marija **o njemu** razmišlja (**o njemu**).  
 About John/ John.NOM Maria about him thinks (about him)  
 'John, Maria is thinking about him.'
- e) ?**Od Jovana/Jovan**, Marija **od njega** puno očekuje (**od njega**).  
 Of John/ John.NOM, Maria of him a lot expects (of him)  
 'John, Maria expects a lot of him.'

In (8a-a') and (8b-b'), the respondents preferred the clitic variant. The full pronoun induces focus reading. The judgments regarding (8c), (8d) and (8e), with the RPs in instrumental, locative and genitive case, respectively, are somewhat less definite with the majority of respondents finding both options acceptable but preferring the default case variant. The absence of clitic pronouns in (8c-e) follows from the fact that prepositions are proclitics, i.e. they are attached to the word immediately following them forming an accentual unit with it. Therefore, the pronoun has to take its full or strong form.

Another distinguishing feature between the structures of TOP and LD is the position of auxiliary and pronominal clitics. Marković & Milićev (2011) argue that the position of clitics in Serbian is a diagnostic of the presence of *Intonational Phrases*. Clitics in Serbian exhibit the so-called *second position effect* (2P), i.e. they are required to occur in the second position in their intonational phrase. Clitics attach/encliticize to an element providing a host for the clitic, either the first syntactic constituent/phrase (1P), or the first phonological word (1W), as illustrated in (9a) and (9b), respectively.<sup>96</sup> The clitic is in boldface.

- (9) a) Lep poklon **je** dobila od Jovana. (1P)

<sup>96</sup> There are exceptions to this phonological restriction in the case of appositives (i), parentheticals (ii) and heavy constituents (iii) which form their own IPs, thus clitics cannot attach to them (example (19) from Marković & Milićev 2016 to appear):

- (i) Marija, [profesorica latinskog]<sub>IP</sub>, [objasnila **nam je** ablativ]<sub>IP</sub>.  
 Marija professor of-Latin explained us.CL.DAT AUX ablative  
 'Marija, a professor of Latin, explained ablative to us'
- (ii) Slavna balerina, [kako izveštava 'Politika']<sub>IP</sub>, predstaviće **nam se** u petak]<sub>IP</sub>  
 famous ballerina as reports Politika will-introduce-she us.CL.DAT REFL on Friday  
 'The famous ballerina, as Politika reports, will introduce herself to us on Friday'
- (iii) [U Karakasu, koji nismo planirali da posetimo]<sub>IP</sub>, [ostali **smo** tri nedelje]<sub>IP</sub>.  
 in Caracas which not-AUX planned to visit stayed AUX three weeks  
 'In Caracas, which we didn't plan to visit, we stayed three weeks'



Nice present.ACC AUX.CL got-she from John  
'A nice present she got from John.'

- b) Lep **je** poklon dobila od Jovana. (1W)  
Nice AUX.CL present.ACC got-she from John  
'A nice present she got from John.'

Now, consider the examples of TOP (10) and LD (11) with clitics. In the case of TOP, the sentences containing clitics in the third position are either seriously degraded or ungrammatical, as illustrated by (10):

(9) TOP:

a) **Jovanu je** Marija poklonila auto.  
John.DAT AUX.CL Maria.NOM gave car

a') ?**Jovanu** Marija **je** poklonila auto.  
John.DAT Maria.NOM AUX.CL gave car  
'John Maria gave a car.'

b) **Jovanu ga je** Marija poklonila.  
John.DAT him.CL.ACC AUX.CL Maria.NOM gave

b') \***Jovanu** Marija **ga je** poklonila.  
John.DAT Maria.NOM him.CL.ACC AUX.CL gave

b'') \***Jovanu ga** Marija **je** poklonila  
John.DAT him.CL.ACC Maria.NOM AUX.CL gave

b''') \***Jovanu je** Marija **ga** poklonila.  
John.DAT AUX.CL Maria.NOM him.CL.ACC gave  
'John Maria gave it to.'

In the case of LD, clitics are always found in the third position in the sentence, implying that there is one more IP formed by the LD element, the clitic remaining in the second position in its IP.

(10) LD:

a) Jovan, Marija **mu** **je** poklonila auto.  
John.NOM, Maria.NOM him.CL.DAT AUX.CL gave car

a') \*Jovan, **mu** **je** Marija poklonila auto.  
John.NOM him.CL.DAT AUX.CL Maria.NOM gave car  
'John, Maria gave him a car.'

b) Jovan, Marija **mu** **ga** **je** poklonila  
John.NOM, Maria.NOM him.CL.DAT him.CL.ACC AUX.CL gave

b') \*Jovan, **mu** **ga** **je** Marija poklonila.  
John.NOM him.CL.DAT him.CL.ACC AUX.CL Maria.NOM gave  
'John, Maria gave it to him.'

The left-dislocated element is also set off by an intonational break. This raises the questions whether an LD element belongs to the sentence phonologically and syntactically and how it establishes co-reference and, in some cases, agreement with the RP.

Before concluding this section, let us briefly address the following two issues relevant to our account presented in chapter 6. Though information-structural properties of topics denoted by the process of TOP (and LD) are to be discussed in section 4.2, since it is related to clitic positions, we point out here to Marković & Milićev's (2012, to appear) claim that there are two types of contrastive topic in Serbian. The fact that non-heavy topicalized constituents (containing one phonological word) such as 'U Karakasu' optionally delay clitics (to third position in the sentence), as illustrated in (11) (example (20) from Marković & Milićev (to appear)) suggests that there are two types of contrastive topic having different prosodic realizations and different informational properties, referred to as CT1 and CT2.

- (11) a) [U **Karakasu smo** ostali tri nedelje]<sub>IP</sub>  
b) [U **Karakasu**]<sub>IP</sub>, [ostali **smo** tri nedelje]<sub>IP</sub>  
'In Caracas we stayed three weeks'

The topic in (11a) is CT1, prosodically realized as non-IP allowing clitic-second order. The topic in (11b) is CT2, prosodically realized as an IP, thus causing clitic-delay Marković & Milićev (2012) argue that experimental studies also confirm that CT2 has all the relevant prosodic

features of intonational phrases. Unlike CT1, CT2 seems to be unfelicitous if its referent is previously given in the discourse, consider (12) (example (23) from Marković & Milićev (to appear) involving TOP):

(12) A: U Riju **smo** ostali pet dana.

In Rio AUX.CL stayed five days

‘In Rio we stayed five days.’

B: A u Karakasu? Koliko ste ostali u Karakasu?

‘And in Caracas? How long did you stay in Caracas?’

A: \*U Caracasu, ostali **smo** dve nedelje.

In Caracas stayed AUX.CL two weeks<sup>97</sup>

Finally, as argued by Stjepanović (1999), illustrated in (12) and (13), clitics form a cluster in the second position of their intonational phrase, i.e. at the level of the PF and not in syntax. The first argument in favour of this claim is that the ungrammaticality of (13a) is not due to the broken clitic cluster but to the requirement that clitics must occur in the second position in their intonational phrases, which is for the clitic ‘ga’ in (13b) the second part of the sentence following the inserted material.

(13) a) \*Marija **mu** velikodušno **je** poklonila auto.

Maria.NOM him.CL.DAT generously AUX.CL gave car

‘Maria generously gave him a car.’

<sup>97</sup> There are examples from our corpus which support this claim (i), however, there are those which do not (ii). Both the topicalized constituent and the clitic are in bold.

(i) Britanska pevačica je već neko vreme u medijskog ilegalni. **Poslednji album** izdala **je** pre više od četiri godine, a **u pauzi je** rodila sina u oktobru 2012. godine.

‘The British singer has been absent from the media. The last album she released more than four years ago, and during the break she had a son in October, 2012.’

(<http://zena.blic.rs/Lepota/34800/Na-sceni-je-glamurozna-bez-sminke-izgleda-ovako-Da-li-znate-ko-je-ona>)

Example (i) contains two topicalized constituents: ‘poslednji album’ and ‘u pauzi’. In the former case, there is third-order clitic, in the latter, second-order clitic, ‘poslednji album’ has not been previously introduced in the discourse whereas ‘u pauzi’ has (by a synonym ‘medijskoj ilegalni’).

(ii) Jedan nemački istoričar, on se zove Fric Fišer, napisao je jednu briljantnu knjigu koja se zove Savez elita. **U toj knjizi on je** pokazao da je bez obzira na sve ono što se dešavalo u nemačkoj istoriji, [...], da je postojao jedan savez elita.

‘One German historian, his name is Fritz Fischer, wrote a brilliant book entitled *The Alliance of Elites*. In that book he showed that regardless of what was going on in German history, there was an alliance of elites.’

(<http://forum.b92.net/topic/29707-transkript-emisije-pescanik-23062006/>)

Although the topicalized constituent has been explicitly evoked in the previous sentence, there is third-order clitic.

- b) Marija **je**, kako smo čuli, poklonila **ga** Jovanu.  
 Maria.NOM AUX.CL, as AUX heard, gave him.CL.ACC John.DAT.  
 ‘Maria, as we have heard, gave a car to John.’

The second argument is based on the existence of the hierarchical relationship of clitics, as illustrated by (14) below:

- (14) a) \*Marija **ga mu je** poklonila.  
 Maria.NOM him.CL.ACC him.CL.DAT AUX.CL gave  
 ‘Maria gave it to him.’

- b) Mi **smo mu ga** poklonili i vi **ste mu—ga**  
 We AUX him.CL.DAT him.CL.ACC gave and you AUX him.CL.DAT him.CL.DAT  
 poklonili.  
 gave

- b’) \*Mi **smo mu ga** poklonili i vi **ga ste—mu**  
 We AUX him.CL.DAT him.CL.ACC gave and you him.CL.ACC AUX him.CL.DAT  
 pokloni  
 gave

- b’’) \*Mi **smo mu ga** poklonili i vi **mu ste—ga**  
 We AUX him.CL.DAT him.CL.ACC gave and you him.CL.DAT AUX him.CL.ACC  
 poklonili.  
 gave  
 ‘We gave it to him and you did.’<sup>98</sup>

#### 4.1.2 Two Types of LD in Serbian

LD in Serbian exhibits two kinds of patterns, as illustrated in (15) below:

- (15) a) **Jovan**, Marija **mu** veruje.  
 John.Nom, Maria.NOM him.CL.DAT trusts  
 ‘John, Maria trusts him.’

<sup>98</sup> The fact that the auxiliary clitic ‘je’ is always pronounced last in the cluster of clitics is attributed to some restriction at the level of PF. The evidence shows that it is actually higher in syntax, i.e. outside VP, than pronominal clitics, which are part of VP (see Bošković 2001, 2006 and Halupka-Rešetar 2011: fn. 3, and the references therein).

b) **Jovan/ Jovanu, njemu** Marija veruje t.  
 John.NOM/ John.DAT, him.DAT Maria trusts  
 ‘John, Maria trusts him.’

In (15a), there is no case connectivity between the left-dislocated element and the RP, the left-dislocated element is in the default or nominative case, and, where possible (for the dative and accusative case), resumed by a co-referent weak or clitic pronoun (strongly preferred by native speakers to strong or full pronouns, which tend to induce a contrastive focus interpretation) (cf. examples in (8)). In (15b), the RP is a strong or full pronoun marked by a special accent we will term a contrastive accent, appearing at the left edge of the clause and binding the gap within the clause. Case matching between the dislocated element and the RP is optional.

The type of LD illustrated in (15a) is similar to the phenomenon termed in the literature *Hanging Topic Left Dislocation* (henceforth HTLD) (cf. Sturgeon (2008) for Czech, Grohmann (2000, 2003) for German, etc.).<sup>99, 100</sup> The kind of LD illustrated in (15b) could be termed *Contrastive Left Dislocation* (henceforth CLD). These two types of LD in Serbian are distinguished on the basis of their syntactic properties, prosody and discourse functions (to be discussed in section 4.2), which has not been discussed in the literature so far.

Several examples from our corpus show that in the case of HTLD it is also possible to use the demonstrative pronoun ‘to’ (that) which is not at the left edge of the clause, as exemplified below (this will be addressed in section 4.2):

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<sup>99</sup> In what is termed HTLD I in Czech, there is no case matching between the left-dislocated element and the RP. The dislocated element is in the nominative case. The co-referent RP is usually a demonstrative occurring obligatorily at the left edge of the clause and binding the clause internal gap. In what is termed HTLD II in Czech, the RP is a clitic in the second position in the clause, and case matching between the left-dislocated element and the resumptive clitic is optional. Cf. Sturgeon (2008: 39-41), as illustrated below:

- (i) **Anička? Té** se nic nestalo. (HTLD I)  
 Anička.NOM that.DAT REFL nothing not-happened  
 ‘Anička? Nothing happened to her.’
- (ii) **Ta dívka/ Tu dívku,** znám **ji** ze škole. (HTLD II)  
 that girl.NOM that girl.ACCKnow her.CL.ACC from school  
 ‘That girl, I know her from school.’

It seems that Serbian HTLD shares the syntactic properties of both Czech HTLD I and II.

<sup>100</sup> In German, what is termed HTLD allows for one clause-initial element which is co-referential with a demonstrative or RP lower in the clause. Case matching between the dislocated element and the RP is optional, though the hanging topic is preferably marked by the nominative case (Grohmann 2000: 76).

- (16) **Što se tiče tog belega, mislim** da je **to** jedno mnogo složenije pitanje.<sup>101</sup>

As for that stigma, think-I that is that one much more complex issue

‘As for that stigma, I think that is a much more complex issue.’

The left-dislocated element can also be resumed by an epithet phrase:

- (17) **Jovan, Marija voli tog lažova.**

‘John, Maria loves that liar.’

As in English, HTLD can co-occur with TOP in the same sentence, HTLD preceding TOP:

- (18) a) **U vezi sa Jovanom<sub>LD</sub>, auto<sub>TOP</sub> mu** je Marija poklonila.

As for John, car.ACC him.CL.DAT AUX.CL Maria.NOM gave

‘As for John, a car Maria gave him.’

- b) \***Auto<sub>TOP</sub> u vezi s Jovanom<sub>LD</sub> mu** je Marija poklonila.

The second type of LD found in Serbian will be termed *Contrastive Left Dislocation* (CLD). The RP is always a strong or full pronoun or often a demonstrative pronoun (usually ‘to’ (that) when other phrasal category than NP is dislocated) marked by a special accent we will term a contrastive accent, appearing at the left edge of the clause and binding the gap within the clause. Case matching between the dislocated element and the RP is optional.<sup>102, 103</sup>

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<sup>101</sup> <http://forum.b92.net/topic/25919-transkript-emisije-pescanik-10022006/>

<sup>102</sup> Somewhat more than a half of the respondents preferred the case matching option. In our corpus, both options were found: no case-matching and case matching (more no case matching, however), illustrated below, respectively.

- (i) **A onaj koji me tužio zbog Bele knjige, njemu** je dosije čist.

And one.NOM who me sued because of White book, him.DAT is file clean

‘And the one who sued me because of the White book, his file is clean.’

(<http://forum.b92.net/topic/29897-transkript-emisije-pescanik-30062006/>)

- (ii) **Ove mangupe koji su to snimali, njih** treba goniti jer je to krivično

These thugs.ACC who AUX that recorded them.ACC should prosecute because is that criminal

delo proizvodnje i rasturanja pornografskog materijala.

offense.NOM producing.GEN and distributing.GEN pornographic material.GEN

‘These thugs who were recording that, they should be prosecuted because it is a criminal offense of

producing and distributing a pornographic material.’

(<http://pescanik.net/emisija-26-04-2013/>)

<sup>103</sup> In Czech CLD there is obligatory case matching between the left-dislocated element and the left-edge resumptive demonstrative pronoun, as illustrated below from Sturgeon (2008: 40):

- (i) **Ostatně toho draka, toho** by si mohl tak jedině namalovat...

besides that dragon.ACC that.ACC cond.3sg.cl REFL.CL can so only draw.inf

‘Besides, that dragon, he would only be able to draw him...’

Resuming by an epithet phrase is also possible with CLD:

- (19) **Jovana, tog lažova** Marija voli.  
John.ACC, that liar Maria.NOM loves

The difference is that, unlike in the case of HTLD (17), in the case of CLD, the epithet phrase, i.e. the demonstrative in it, is marked by contrastive stress and raises alternatives in the discourse, i.e. there are more liars other than John that Maria could have chosen. Consider a possible continuation:

- (20) a) HTLD: **Jovan**, Marija voli **tog LAŽOVA**. (#A Marko, ovog lažova ne podnosi)  
b) CLD: **Jovana, TOG lažova** Marija voli. (A Marko, ovog lažova ne podnosi)  
'John, Maria loves that liar. And Marco, she can't stand this liar.'

Example in (21) is ambiguous between HTLD and CLD, reflected in the interpretation, depending on whether the RP is contrastively stressed or not, which will be discussed in section 4.2.

- (21) **Jovan, on** je dobar drug. (Svi ga vole; or Marko, nije.)  
John.NOM, he is good friend 'Everyone loves him.' 'Marco is not.'  
'John, he is a good friend.'

Since the diagnostic of the type of LD in this case and in (21) is their pragmatic effect, it will be discussed in section 4.2.2. For the time being, it will be noted that CLD allows for a wider range of phrasal categories to be left-dislocated than HTLD, which is restricted to nominal expressions.

#### 4.1.2.1 TOP, HTLD, CLD and Reconstruction Effects

TOP exhibits reconstruction effects with respect to Condition A and Condition C of Binding Theory and quantifier binding.<sup>104</sup> As for Condition A (22), in the case of LD, the respondents found the reconstructed reading in the case of HTLD seriously degraded, whereas

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<sup>104</sup> WCO effects are not generally well understood (cf. Hamilton 2013). There are no WCO effects in Serbian (cf. Richards 2001), not even in *wh*-movement., as illustrated in (i), i.e. there is an available reading of in which lawyers and clients are co-indexed.

(i) ?Kojeg advokata<sub>i</sub> njegovih<sub>i</sub> klijenti mrže?  
Which lawyer his clients hate?

However, this does not mean that the movement analysis should be ruled out, which is why its status as a movement diagnostic is not completely reliable.

most of the respondents found the examples with CLD acceptable on reconstruction reading. However, the judgements were much less conclusive in the case of Condition C (23) than in the case of Condition A. The reconstructed readings with both HTLD and CLD were found acceptable by somewhat more than a half of the respondents, however, more in the case of CLD. Consider the equivalents of the English examples from (28) (section 3.1.3) in (23). And finally, as for quantifier binding, both HTLD and CLD were found unacceptable by the respondents, again more unacceptable in the case of HTLD, as illustrated in (24).

(22) Condition A of Binding Theory:

a) Possessive reflexive pronoun

TOP: **Svoj<sub>i</sub> šefa** Jovan<sub>i</sub> ne podnosi.

His own boss John not stands

'His own boss John can't stand.'

HTLD: \***Svoj<sub>i</sub> šef,** Jovan<sub>i</sub> **ga** ne podnosi./?Jovan<sub>i</sub> ne podnosi **njega**.

His own boss, John him.CL.ACC not stands John not stands him.ACC

CLD: **Svoj<sub>i</sub> šefa, njega/tog** Jovan<sub>i</sub> ne podnosi.

His own boss, him/DEM John not stands

'His own boss, John can't stand him.'

b) Non-possessive reflexive pronoun

TOP: **Glasine o sebi<sub>i</sub>** Jovan<sub>i</sub> ne voli.

Rumours of himself John not likes

'Rumours of himself John doesn't like.'

HTLD: ?**Glasine o sebi<sub>i</sub>,** Jovan<sub>i</sub> **ih** ne voli./ ?Jovan<sub>i</sub> ne voli **njih**.

Rumours of himself, John them.CL.ACC not likes John not likes them.ACC

CLD: **Glasine o sebi<sub>i</sub>, njih/ to** Jovan<sub>i</sub> ne voli.

Rumours of himself, them/ it John not likes

'Rumours of himself, John doesn't like them.'

In order for a sentence containing a reflexive pronoun to be grammatical, the reflexive pronoun has to be c-commanded by an antecedent in its binding domain or complete functional complex,



implying that reconstruction to a clause-internal position for the interpretation of the reflexive has taken place. Regarding our examples, the sentence containing the topicalized or left-dislocated element is acceptable if this element is c-commanded by ‘John’ in its canonical position.

(23) Condition C of Binding Theory:

TOP: [**Glasine da je Jovan<sub>i</sub> lažov**]<sub>k</sub> njega<sub>i/j</sub> uopšte ne zanimaju **t<sub>k</sub>**/uopšte ga<sub>i/j</sub>  
 Rumours that is John liar him.ACC at all not care at all him.CL.ACC  
 ne zanimaju **t<sub>k</sub>**.  
 not care  
 ‘Rumours that John is a liar he does not care about at all.’

HTLD: ??[**Glasine da je Jovan<sub>i</sub> lažov**]<sub>k</sub>, njega<sub>i/j</sub> **one<sub>k</sub>** uopšte ne zanimaju.  
 Rumours that is John liar him.ACC they at all not care  
 ‘Rumours that John is a liar, he doesn’t care about them at all.’

CLD: ?[**Glasine da je Jovan<sub>i</sub> lažov**]<sub>k</sub>, **one<sub>k</sub>** ga<sub>i/j</sub> uopšte ne zanimaju **t<sub>k</sub>**. (Samo  
 Rumours that is John liar they him.CL.ACC at all not care (Only  
 ga profit zanima.)  
 him.CL.ACC profit cares)  
 ‘Rumours that John is a liar, he doesn’t care about them at all. (He only cares about the profit.’)

The degraded acceptability of the examples of HTLD and CLD when the co-reference between ‘John’ and ‘him’ is intended, implies that reconstruction has taken place, i.e. that the dislocated constituent containing ‘John’ tends to be interpreted in its canonical position and not be free in reference (everywhere) as required by Principle C (and the dislocated constituent is referential, however, contrary to anti-reconstruction prediction (cf. fn. 69)).

(24) Quantifier binding:

TOP: **Svoji psa** svako dete<sub>i</sub> voli.  
 Their own dog every child loves

HTLD: \***Svoji pas**, svako dete<sub>i</sub> ga/ **njega** voli.

Their own dog every child him.CL.ACC/him.ACC loves

CLD: \***Svogi** **psa, njega** svako dete<sub>i</sub> voli.

Their own dog, him.ACC every child loves

'\*Their own dog, every child loves it.'

The ungrammaticality of CLD and HTLD in (24) suggests that the bound anaphor was not c-commanded by its antecedent in its binding domain. Again, HTLD is found less acceptable than CLD.

TOP and CLD license parasitic gaps (in the adjunct clause as long as the direct object is not in its canonical position, as argued by Godjevac (2000: 228-230)), whereas HTLD does not.

(25) TOP: **Jovana** je Ana kritikovala **e**, a da **e** nije upoznala.

John.ACC AUX Anna.NOM criticized without that not met

'John Anna criticized without meeting.'

HTLD: \***Jovan**, Ana **ga** je kritikovala **e**, a da **e** nije upoznala.

John.NOM, Anna.NOM him.CL.ACC AUX criticized without that not met

'John, Anna criticized him without meeting.'

CLD: **Jovana**, **njega** je Ana kritikovala **e**, a da **e** nije upoznala.

John.ACC, him.ACC AUX Anna.NOM criticized without that not met

'John, Anna criticized him without meeting.'

Like in English, it is possible to topicalize a free or meaningful chunk of an idiom, as illustrated in (26) below, whereas it is not possible to left-dislocate it, as shown in (27):

(26) IDIOM: Jovan je obrao bostan.

'John picked up the tab.'

TOP: **Bostan** je obrao Jovan.

'The tab John picked up.'

(27) HTLD: \***Bostan**, Jovan **ga** je obrao.

CLD: \***Bostan**, **njega** je Jovan obrao.

'\*The tab, John picked it up/ it John picked up'

The aim of this section was to show how TOP, HTLD and CLD pattern with respect to the tests standardly assumed to indicate that the structure was derived by the movement operation. Our data show that TOP passes all the tests, whereas CLD reconstructs with respect to Condition A and licenses parasitic gaps.<sup>105</sup> HTLD fails all the tests.

#### 4.1.3 TOP, LD, Long Distance Dependencies and Island Sensitivity

Like in English, in the case of TOP in Serbian there is the possibility of long distance A'-dependencies associated with a gap within an embedded clause:<sup>106</sup>

- (28) **Jovanu<sub>i</sub>** mislim da su mi rekli da je Marija (**t<sub>i</sub>**) poklonila  
 John.DAT think-I that AUX me.CL.DAT told that AUX Maria.NOM gave  
 auto **t<sub>i</sub>**.  
 car  
 'John I think I was told that Maria gave a car.'

On a par with *wh*-movement, TOP is subject to the island constraints illustrated in (3.1.2) subsumed under subjacency in (29) below.<sup>107</sup> The first example in each pair of examples illustrates TOP, the second one *wh*-movement with respect to the relevant syntactic structure.

- (29) a) Coordinate Structure Constraint:

- i) \***Mariju** Jovan voli Anu i **t**. /\* **Mariju** Jovan  
 Maria.ACC John.NOM loves Anna.ACC and Maria.ACC John.NOM  
 voli **t** i Anu. (TOP)  
 loves and Anna.ACC  
 '\*Maria John loves Anna and?/\*Maria John loves and Anna'  
 i') \***Koga** Jovan voli **Mariju** i **t?** (interrogative *wh*-movement)

<sup>105</sup> Breuning (2015) shows that idioms are not a valid movement diagnostic since idiom chunks are found in structures which do not involve overt movement, e.g. null operator analyses of control and pronominal anaphora.

<sup>106</sup> The trace of the moved constituent is subject to strong crossover, as shown in (i):

- (i) **Njemu<sub>i</sub>** Jovan<sub>i</sub> ne veruje **t<sub>i</sub>**.  
 Him.DAT John.NOM not trusts  
 '\*Him<sub>i</sub> John<sub>i</sub> doesn't trust.'

<sup>107</sup> According to Goodluck & Stojanović (1996), Serbo-Croatian shows both weak and strong island effects under resumption.

Who John.NOM loves Maria.ACC and  
'Who does John love Maria and?'

b) Complex NP Constraint:

i) \***Jovana** smo čuli glasine da Marija voli t. (TOP)  
John.ACC AUX.CL heard-we rumours that Maria.NOM loves  
'\*John we heard rumours that Maria loves.'

i') \*Koga smo čuli glasine da Marija voli t? (interrogative *wh*-movement)  
Who AUX heard rumours that Maria.NOM loves  
'\*Who did we hear rumours that Maria loves?'

ii) \***Jovana** Marija je devojka koja voli t. (TOP)  
John.ACC Maria.NOM is girl who loves  
'\*John Maria is a girl who loves.'

ii') \*Jovan je srećnik koga Marija je devojka koja  
John.ACC is lucky guy.NOM whom Maria.NOM is girl who  
voli t. (relative *wh*-movement)  
loves  
'\*John is the lucky guy whom Maria is a girl who loves.'

c) *Wh*-island Constraint:

i) \***Takav auto** se pitam da li će Jovan pažljivo  
Such car REFL.CL wonder-I if will.CL John.NOM carefully  
voziti t. (TOP)  
drive  
'\*Such a car I wonder if John will carefully drive.'

i') \*Šta se pitaš da li će Jovan pažljivo  
What REFL.CL wonder-you if will.CL John.NOM carefully  
voziti t? (interrogative *wh*-movement)  
drive  
'\*What do you wonder if John will carefully drive?'

ii) \***Jovana** se pitam ko voli **t**. (TOP)

John.ACC REFL.CL ask-I who loves

'\*John I wonder who loves.'

ii') \***Jovan** je momak za koga se pitam ko

John.ACC is guy for whom REFL.CL wonder-I who

voli *t*. (relative *wh*-movement)

loves

'\*John is a guy whom I wonder who loves.'

d) Sentential Subject Constraint:

i) \***Jovana** da Marija voli **t** Anu je iznenadilo. (TOP)

John.ACC that Maria.NOM loves Anna.ACC AUX surprised

'\*John that Maria loves surprised Anna.'

i') \***Jovan** je momak kojeg da Marija voli *t* je Anu

John.NOM is guy who that Maria.NOM loves AUX Anna.ACC

iznenadilo. (relative *wh*-movement)

surprised

'\*John is the guy whom that Maria loves surprised Anna.'

e) Subject Condition:

i) \***O Jovanu** neosnovane glasine **t** nerviraju Mariju. (TOP)

About John unfounded rumours annoy Maria.ACC

'\*About John unfounded rumours annoy Maria.'

i') \***Jovan** je osoba o kojoj neosnovane glasine *t* nerviraju

John.NOM is person about whom unfounded rumours annoy

Mariju. (relative *wh*-movement)

Maria.ACC

'\*John is the person about whom unfounded rumours annoy Maria.'

f) *That*-trace Effect/ECP does not apply in Serbian:<sup>108</sup>

i) **Marija** verujem da **t** voli Jovana. (TOP)

Maria.NOM believe-I that loves John.ACC

’\*Maria I believe that loves John.’

i’) **Marija** je devojka koja verujem da **t** voli Jovana. (relative *wh*-movement)

Maria.NOM is girl who believe-I that loves John.ACC

’\*Maria is the girl who I believe that loves John.’

Let us now see which sentences from (29) are derivationally saved by inserting an RP in the position of the gap, which has been termed the island amnesty function of LD. These examples illustrate HTLD.

(30) a) ?**Marija**, Jovan voli Anu i **nju**./?Jovan voli **nju** i Anu. (Coordinate  
Maria.ACC John.NOM loves Anna and her John.NOM loves her and Anna  
Structure Constraint)

’\*Maria, John loves Anna and her.’

b) **Jovan**, čuli smo glasine da **ga** Marija voli/? čuli

Jovan.NOM heard-we AUX.CL rumours that him.CL.ACC Maria.NOM loves heard-we  
smo glasine da **njega** Marija voli (**njega**). (Complex NP Constraint)

AUX.CL rumours that him.ACC Maria.NOM loves him.ACC

’John, we heard the rumours that Maria loves him.’

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<sup>108</sup> Complex sentences in Serbian rarely contain subordinate sentences formally identical to independent sentences in the sense that they do not have a subordinator. Punctually (and intonationally), these sentences have the following form (from Mrazović & Vukadinović 2009: 568):

(i) Verujem, uskoro će biti bolje.

Believe-I soon will be better

’I believe, soon it will be better.’

(ii) Znam – on uvek tako govori.

Know-I he always like that speaks

’I know – he always speaks like that.’

Like infinitival and participial sentences they can be transformed into proper subordinate sentences:

(i’) Verujem da će uskoro biti bolje.

Believe-I that will soon be better

’I believe that it will soon be better.’

(ii’) Znam da on uvek tako govori.

Know-I that he always like that speaks

’I know that he always speaks like that.’

- c) **Jovan**, Marija je devojka koja **ga** voli/ Marija  
 John.NOM Maria.NOM is girl who him.CL.ACC loves him.ACC loves Maria.NOM  
 je devojka koja **njega** voli (**njega**). (Same as (b))  
 is girl who him.ACC loves him.ACC  
 ‘John, Maria is the girl who loves him.’
- d) **Takav auto**, pitam se da li će **ga** Jovan pažljivo voziti/  
 Such car wonder-I REFL.CL if will.CL him.CL.ACC John.NOM carefully drive  
 ?pitam se da li će **njega** Jovan pažljivo voziti (**njega**). (*Wh*-island constraint)  
 wonder-I CL.REFL if will.CL it John.NOM carefully drive it  
 ‘Such a car, I wonder if he will drive it carefully.’
- e) **Jovan**, pitam se ko **ga** voli/?pitam se ko  
 John.NOM wonder-I REFL.CL who him.CL.ACC loves / wonder-I REFL.CL who  
**njega** voli (**njega**). (Same as (d))  
 him.ACC loves him.ACC  
 ‘John, I wonder who loves him.’
- f) ?**Jovan**, da **ga** Marija voli Anu je iznenadilo./  
 John.NOM that him.CL.ACC Maria.NOM loves Anna.ACC AUX.CL surprised  
 ?da **njega** Marija (**njega**) voli (**njega**) (Sentential Subject Constraint)  
 that him.ACC Maria.NOM him.ACC loves him.ACC  
 ‘\*John, that him Maria loves surprised Anna.’
- g) ?**Jovan**, neosnovane glasine o **njemu** nerviraju Mariju. (Subject Condition)<sup>109</sup>  
 John.NOM, unfounded rumours about him annoy Maria.ACC  
 ‘John, unfounded rumours about him annoy Anna.’

Unlike HTLD, CLD in Serbian exhibits island effects since the RP moves to the left edge of the clause. According to Goodluck & Stojanović (1996), Serbo-Croatian shows both weak and strong island effects under resumption.

(31) a) \***Jovana**, **njega** smo čuli glasine da Marija voli. (Complex NP

<sup>109</sup> More than a half of the respondents find (f) and (g) acceptable.

- John.ACC him.ACC AUX.CL heard-we rumours that Maria.NOM loves  
 Constraint)  
 '\*John, him we heard the rumours that Maria loves.'
- b) \***Jovana, njega** je Marija devojka koja voli. (Same as (a))  
 John.ACC him.ACC is Maria.NOM girl who loves  
 '\*John, him Maria is the girl who loves.'
- c) \***Takav auto, njega** se pitam da li će Jovan pažljivo  
 Such car.ACC/NOM him.ACC REFL.CL wonder-I if will.CL John.NOM carefully  
 voziti. (*Wh*-island constraint)  
 drive  
 '\*Such a car, him I wonder if John will carefully drive.'
- d) \***Jovana, njega** se pitam ko voli. (Same as (c))  
 John.ACC him.ACC REFL.CL wonder-I who loves  
 '\*John, him I wonder who loves.'
- e) \***Jovana, njega** da Marija voli Anu je iznenadilo.  
 John.ACC him.ACC that Maria.NOM loves Anna.ACC AUX.CL surprised  
 (Sentential Subject Constraint)  
 '\*John, him that Maria loves surprised Anna.'
- f) ?**Jovan, o njemu** neosnovane glasine nerviraju Mariju. (Subject Condition)  
 John.NOM about him unfounded rumours annoy Maria.ACC  
 '\*John, about him unfounded rumours annoy Maria.'

#### 4.1.4 TOP, LD and Embedding

Unlike in English, TOP in Serbian is generally possible (though degraded) in root interrogatives in cases where the topicalized element precedes the *wh*-word as long as the clitic is in the second position (32a') and it can also precede the *yes/no* question operator (32b').<sup>110</sup> Let us consider the following examples.

<sup>110</sup> Cf. Halupka-Rešetar (to appear), for an analysis of the structure of the left periphery (CP) in Serbian.



- (32) a) Kome je **knjige** Jovan dao?  
 Whom AUX books.ACC John.NOM gave  
 'Whom the books did John give?'
- a') ?**Knjige** je kome Jovan dao? / \***Knjige** kome je Jovan dao?  
 Books.ACC AUX whom John.NOM gave / Books.ACC whom AUX John.NOM gave  
 'The books whom did John give?' (on the echo reading)
- b) Može li<sup>111</sup> **ovakvo ponašanje** Marija tolerisati?  
 Can this kind behaviour.ACC Maria.NOM tolerate  
 'Can this kind of behaviour Maria tolerate?'
- b') ??**Ovakvo ponašanje** može li Marija tolerisati?  
 This kind behaviour.ACC can Maria.NOM tolerate  
 'This kind of behaviour can Maria tolerate?'

HTLD is also possible in root interrogatives.

- (33) a) **U vezi s knjigama**, kome **ih** je Jovan dao? / ?kome  
 As for books to whom them.CL.ACC AUX.CL John.NOM gave / to whom  
 je **njih** Jovan dao? / ?kome je Jovan dao **njih**?  
 AUX.CL them.ACC John.NOM gave / to whom AUX.CL John.NOM gave them.ACC  
 'As for the books, who did John give them to?'<sup>112</sup>
- b) **Ovakvo ponašanje**, može li **to** Marija tolerisati? / može li Marija  
 This kind behaviour.ACC can it Maria.NOM tolerate / can Maria.NOM  
**to** tolerisati? / može li Marija tolerisati **to**?

<sup>111</sup> The particle 'li' belongs to the group of complementizers (conversational particles) such as 'da', 'da li', 'dok', 'kad', 'iako', etc. It occurs in interrogative utterances without question words (such as in the example above) and in (i) below, or with 'da' (ii), but it can follow question words (iii) and other elements in a sentence (iv), as illustrated by Mrazović (2009: 495). The particle is in boldface.

- i) Dolaziš **li** sutra?  
 ii) Da **li** dolaziš sutra?  
 iii) Kako **li** samo da mu to kažem? (rhetorical use)  
 iv) Ti **li** si to uradio? (surprise and reproach)

The position of complementizers in the left periphery of the clause will be discussed in chapter 5.

<sup>112</sup> CLD is possible on an echo reading:

- (i) **Knjige, njih** je kome Jovan dao?  
 Books, them AUX.CL to whom John.NOM gave

it tolerate/ can Maria.NOM tolerate it  
'This kind of behaviour, can Maria tolerate it?'

c) **Tu knjigu,** kako ćemo **je** razumeti?  
That book.ACC how will-we her.CL.ACC understand  
'That book, how will we understand it?'

Unlike in English, embedded TOP is generally allowed, as illustrated in (34):

(34) a) Da li misliš da bi **genetski modifikovanu hranu** ljudi ovde jeli?  
Do think-you that would genetically modified food.ACC people here eat  
'Do you think that genetically modified food people would eat here?'

b) Ne idemo u šumu zato što **vukove** Jovan je video.  
Not go-we to woods because wolves.ACC John.NOM AUX.CL saw  
'We are not going to the woods because wolves John has seen.'

c) Da je **ovaj auto** Marija poklonila Jovanu Anu je iznenadilo.  
That AUX.CL this car.ACC Maria.NOM gave John.DAT Anna.ACC AUX.CL surprised  
'That this car Maria gave to John surprised Anna.' (Sentential Subject)

d) Ovo je štap s kojim je **ogromnu ribu** Jovan upecao. (Clausal Noun Complement)  
This is rod with which AUX.CL huge fish.ACC John.NOM caught  
'This is the rod with which a huge fish we caught.'

e) Verujem da je **svako pitanje** na testu Jovan pažljivo pročitao.  
Believe-I that AUX.CL every question.ACC on test John.NOM carefully read  
'\*I believe that every question on the test John carefully read.'

f) Jovan zna da **ovo cveće** Marija voli. (Complement of Factive Verbs)  
John.NOM knows that these flowers.ACC Maria.NOM loves  
'\*John knows that these flowers Maria loves.'

g) Kada je **ovu sliku** Jovan video setio se detinjstva.  
 When AUX.CL this picture.ACC John.NOM saw remembered REFL.CL childhood.  
 (Central Adverbial Clause)

‘\*When this picture John saw he remembered his childhood.’

Embedded LD is not generally possible, as illustrated by (35) below, whereas it is considered degraded in the embedded context propositional attitude verbs, as illustrated in (36):

(35) a) \*Nadam se da **Jovan, on** će poštovati saobraćajne propise.  
 Hope-I REFL.CL that John.NOM he will.CL observe traffic regulations  
 ‘\*I hope that John, he will observe traffic regulations.’

b) \*Upozorila sam vas da **uputstvo, (njega)** pažljivo **ga/**  
 Warned-I AUX.CL you that instruction.ACC, (him.ACC) carefully him.CL.ACC  
**njega** pročitate/ **(njega)** pažljivo pročitate.  
 him.ACC read (him.ACC) carefully read  
 ‘\*I have warned you that the instruction, you carefully read it.’

c) \*Savetovali su Jovanu da **ovaj telefon, njega** kupi.  
 Advised-they AUX.CL John.DAT that this phone.ACC him.ACC buys  
 ‘\*They have advised John to buy this phone, it never malfunctions.’

(36) ?Verujem da **Jovan, on** je zaljubljen u Mariju.  
 Believe-I that John.NOM, he is in love with Maria  
 ‘?I believe that John, he is in love with Maria.’

#### 4.1.5 Summary

TOP in Serbian exhibits the following syntactic properties:

- All major phrasal categories serving different syntactic functions can be topicalized.
- TOP is generally allowed in root interrogatives even in cases where the topicalized element precedes the wh-element as long as the clitic is in the second position. The topicalized element can also precede the yes/no question operator.
- Embedded TOP is generally possible.

- On a par with *wh*-movement TOP exhibits long dependencies and island sensitivity.
- TOP exhibits reconstruction effects.
- TOP licenses parasitic gaps.
- It is possible to topicalize a meaningful subpart of an idiom.

It can be said that Serbian exhibits two types of LD, namely HTLD and CLD, based on their syntactic properties and prosody.

HTLD exhibits the following properties:

- The left-dislocated element (typically a DP, possibly a CP, functioning as a subject or object DP) is resumed by a personal pronoun which can also be a demonstrative (only demonstrative in the case of a CP), clitic pronouns being preferred to full pronouns where possible and there is no case connectivity.
- There does not have to be an element co-referential with the dislocated DP in the matrix clause; the function of the resumptive pronoun can be assumed by an epithet phrase in the case of dislocated DPs.
- HTLD can co-occur with TOP in the same sentence, HTLD preceding TOP.
- Reconstructed readings with respect to Condition A and C are found unacceptable and degraded, respectively. There are no reconstruction effects with respect to quantifier binding.
- HTLD does not license parasitic gaps.
- Idiom chunks cannot be left-dislocated.
- HTLD is insensitive to islands.
- HTLD is possible in root interrogatives.
- Embedded HTLD is not possible.

CLD exhibits the following properties:

- The left-dislocated element (any phrasal category) is resumed by a strong personal pronoun or a demonstrative pronoun in the case of DPs and by a demonstrative pronoun in the case of other phrasal categories, marked by a special accent, occurring at the left

edge of the clause and binding the gap within the clause. Case connectivity between the dislocated element and the resumptive pronoun is optional.

- Reconstructed readings with respect to Condition A and Condition C of Binding Theory are found acceptable. There are no reconstruction effects with respect to quantifier binding.
- CLD licenses parasitic gaps.
- Idiom chunks cannot be left-dislocated.
- CLD is sensitive to islands.

#### 4.2 Discourse Functions of Topicalization and Left Dislocation in Serbian

As pointed out in the previous section, in the more contemporary Serbian literature, there are two quite extensive and complex monographs on word order in Serbian in the framework of the functional sentence perspective of descriptive nature, namely Popović (1997) and Tošović (2001). The basic aspects of the functional sentence perspective are presented in Tošović (2005). Halupka-Rešetar (2011) primarily considers word order in Serbian in the function of marking information focus in the generative (minimalist) tradition. None of these sources above mentioned considers functional properties of TOP or LD or the nature of the topics these structures mark or topics in general. Furthermore, LD is noted as a phenomenon only in Halupka-Rešetar (2011: 172-175) in the context of proposing the structure of a sentence in Serbian (with respect to the placement of clitics, discussed in the previous section).

By way of a summary, Tošović (2005: 1064) defines TOP simply as a process of choosing a (sentence) topic without addressing its pragmatic effects (or, as it has been pointed out above, its derivational mechanism). A topic is defined in terms of specificity or referentiality, i.e. something that is typically (informationally) old, familiar or definite on the basis of a context or speech situation;<sup>113</sup> something that a sentence usually begins with, a point of departure. In that sense, since it identifies or names entities or marks non-dynamic properties, it is nouns or nominal expressions (concrete or abstract) and pronouns that are usually thematized or topicalized, i.e. they usually serve as topics (termed *central topics* by Popović 1997: 22).<sup>114</sup>

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<sup>113</sup> Cf. also section 1.2 on definiteness.

<sup>114</sup> Popović (1997: 69) offers a typology of topics in Serbian based on their position in the sentence and the type of their syntactic realization. There are (a) *external topics* (grammatically topicalized rheme (reported speech)) and (b)

Thus, as discussed in section 1.2, topics are pivots of truth values of utterances (Tošović 2005: 1089). Their sentence function is typically that of a grammatical or semantic or logical subject<sup>115</sup> which is outside the scope of the sentential accent and which 'ties and provides orientation for the rhematic information' (Popović 1997: 27). Topics, however, can denote a new entity (indicated in Serbian by the indefinite markers 'neki' (some) or 'jedan' (a/one)),<sup>116</sup> in which case it is also attributed certain rhematic information such as in (37) (Popović 1997: 28).<sup>117</sup>

(37) Neka žena nosi paket u poštu.

'Some/A woman is carrying a package to the post office.'

Topics are chosen from possible denotative options (not discussed) and the function of the information attributed to them, contained in the rhema, is to reduce or eliminate entropy

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*internal (sentential) topics (global (sentential) topic (further divided into optional, constitutional and free), central topic (grammatical or logical subject (cf. fn. 115), or some other nominal phrases such as objects), and additional (anti-rhematic) topic).* Here are some examples:

(i) Dođosmo – reče neko. (external topic) (Ibid., 65)

Arrived-we said somebody

'We have arrived – somebody said.'

(ii) Biljana (central topic) vazu (anti-rhematic topic) pažljivo stavlja na sto. (Ibid., 47)

Biljana.NOM vase.ACC carefully puts on table

'Biljana is putting a vase carefully on the table.'

(iii) Ovu čašu (optional global topic) ja (central topic) podižem... (Ibid., 57)

This glass.ACC I raise

'This glass I am raising...'

A topic can be syntactically realized as a grammatical subject, direct and indirect object, genitive subject, constitutional frame setting nominal phrase which can be interpreted as a logical subject equivalent, and free frame setting nominal phrase (dative)).

<sup>115</sup> A semantic or logical subject (underlined) is not in the nominative case, but in the genitive, dative or accusative case (Stanojčić & Popović 2008), as illustrated below:

Nama se ne ide u bioskop.

We-DAT refl.pron. not goes to cinema

'We don't feel like going to the cinema.'

<sup>116</sup> This is especially obvious in the examples containing the indefinite marker in Serbian 'jedan' (one) or 'neki' (some) (cf. Ivić 1971), as illustrated below:

(i) Neki čovek te čeka.

Some/a man.NOM you-cl.ACC waits

'Some/a man is waiting for you.'

However, if the noun is used alone, the reference is definite:

(ii) Čovek te čeka.

man.NOM you-cl.ACC waits

'The man is waiting for you.'

For more on formal marking of indefiniteness in Serbian, cf. fn. 127.

<sup>117</sup> Popović (1997) associates the information status of a discourse entity with its formal markers of definiteness (morphological and lexical), like Kuno (1972), Gundel (1974), *inter alia*, and does not elaborate on this association. The following, for example, is unacceptable:

(i) \*Neka/ \*Jedna devojka je lepa.

'\*Some/ \*A girl is pretty.'

(indefiniteness); the more denotative options the greater informativity of the utterance (Tošović 2005: 1086). The connection between the formal markers of definiteness and denotative relations is not addressed. And finally, the topic can be left implicit due to the context or speech situation (38a), or in existential or whether sentences (38b), when the subject is left out (38c), impersonal sentences (38d), and one-member nominal sentences (38e) (cf. Tošović 2005: 1103).

- (38) a) Požar!  
'Fire!'
- b) Stigla je jesen.  
'The fall has arrived.'
- c) Došao sam.  
Arrived-I AUX.CL  
'I have arrived.'
- d) Bilo je hladno.  
'It was cold.'
- e) Tišina.  
'Silence.'

The following subsections will consider the pragmatic effects and constraints on TOP and LD in Serbian which have not been discussed in the literature, using data from a corpus as well as elicited examples in the form of a questionnaire to cover the cases of fronting which are possible but not found in the corpus. The corpus is composed of online newspaper articles (from *Blic*, *Danas*, *Večernje novosti* and *Politika*, 14 issues, encompassing the time-span from August 8, 2015 to August 18, 2015), posts from various blogs and message boards (through Google searches), and radio program transcripts (*Peščanik*, 24 broadcasts; air dates: from December 30, 2005 to May 29, 2015). It contains 57 examples of TOP (11 of which are from the transcripts) and 36 examples of LD (28 of CLD and 8 of HTLD, all from the transcripts). We will rely on the corpus to compare the use of TOP and CLD (regarding their activation status or givenness (cf. section 3.2.2) since, as we will show, they both are contrastive topic marking devices, and to see whether HTLD in Serbian is associated with contrastive topic marking or topic promotion. To do this we will employ the methodology of Gregory & Michaelis (2001) as modified by Sturgeon (2008). Since we are exploring discourse functions of the structures in question, the examples in

the following sections are rather lengthy and only their English equivalents are given, i.e. the standard three-line format (glosses) is not used. Therefore, we will try to reflect the structure of Serbian examples as much as possible, which sometimes may result in highly marked or even ungrammatical structures given as English equivalents.

#### 4.2.1 Discourse Function of TOP

In section 3.2, TOP has been shown on English examples to perform two simultaneous functions, namely it establishes a plausible linking relation between the denotatum of the topicalized element and the prior context and evokes a salient or open proposition for felicity at the time of utterance. Let us look at the (morphological and/or semantic) nature of these links and how they are (denotatively) related to the previous context in Serbian. As demonstrated in section 4.1.1, all the major phrasal categories can be topicalized in Serbian. As expected, the majority of topicalized elements from our corpus were NPs (67%) (including pronouns), then PPs (27%), APs (3%) and VPs (3%). Explicitly evoked in the previous discourse or not, the denotatum of the fronted element or the link was related to the prior context or a discourse topic via some denotative, inferential or contextually licensed relation which holds between the link and the anchoring poset, as it is exemplified below. Adopting Birner & Ward's (1998: 219-226) typology based on English examples, the denotative relations found in our corpus are also: the set/subset linking relation, the type/subtype linking relation, the part-whole linking relation, the linking relation of identity and the greater-than linking relation, exemplified in (39), (40), (41), (42), and (43), respectively. One new option is found.

(39) Set/subset relation:

a) Tridesetsedmogodišnja pevačica je bila obučena u drugačijem stilu od onog na koji nas je navikla. [...] **Plavi sako**<sup>118</sup> je ukombinovala sa plavim kratkim šortsem, a laneni komplet joj je savršeno pristajao.<sup>119</sup>

‘The thirty-seven year old singer was dressed differently from what she got us accustomed to. [...] The blue jacket she combined with blue short shorts, and the linen outfit suited her perfectly.

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<sup>118</sup> Note the definite form of the descriptive adjective ‘plavi’. Cf. fn. 127.

<sup>119</sup> <http://zena.blic.rs/Moda/34756/Navikli-smo-da-je-vidjamo-u-seksi-izdanjima-ali-da-li-biste-je-prepoznali-na-ulici>



The link 'plavi sako' has not been explicitly evoked in the previous discourse. The anchoring poset {a certain dress style} is inferred on the basis of the individual poset members.

b) Svaki zločin je strašan ali **od ovog zločina** nema veći zločin.<sup>120</sup>

‘Every crime is horrific but from this crime there is no greater crime.’

The anchoring poset itself, namely {every crime} has been evoked.

The following example from our corpus corresponds to Birner & Ward’s (1998) subtype of set/subset linking relation distinguished syntactically, i.e. involving the topicalization of an indirect question:

c) Context: Interlocutors are talking about the origin of the term and concept ‘Serbian, Croatian, or Albanian lands’ after the disintegration of the former Yugoslavia. The following statement concludes the discussion:

**A o tome šta izaziva bolest nacionalizma**, tek nemamo pojma.<sup>121</sup>

‘And about what causes the disease called nationalism, we have no idea whatsoever.’

The topicalized indirect question addresses one aspect of the proposition already established in the discourse. Here, it has been agreed upon that there is strongly felt nationalism on each part involved.

(40) Type/subtype relation:

Ja sam radio 15 godina 'sve' [advokatura], a krivicu ne radim evo 10 godina.<sup>122</sup>

'I have done "everything" [legal practice] for 15 years, but criminal law I haven't practiced for 10 years now.'

The anchoring poset represents {fields of legal practice}. The link is criminal law.

(41) Part-whole relation:

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<sup>120</sup><http://www.rts.rs/page/stories/sr/story/135/Hronika/1171066/Stravi%C4%8Dno+svedo%C4%8Denje+o+zlo%C4%8Dinima+OVK+.html>

<sup>121</sup> <http://www.politika.rs/pogledi/Vladimir-Milutinovic/Jugoslavija-i-srpske-zemlje.lt.html>

<sup>122</sup> <http://boljaadvokatura.com/kako-da-znamo-koji-je-koji/>

(a) Mi imamo političku scenu koja je prilično jasno definisana. Sve što mene interesuje nalazi se od Koštunice na desnoj strani, pa sve ovamo ulevo do Čede i Nataše. **Za jedne** ću da glasam, ali **druge** ću da podržim, ako budu izabrani, da urade najbolje što mogu.<sup>123</sup>  
'We have a political scene which is pretty clearly defined. Everything that is of interest to me is to the right of Koštunice, and all the way to the left to Čeda and Nataša. One of these I will vote for, but the others I will support, if they are elected, to do the best they can.'

The anchoring poset is {the political scene} defined by politicians which become the links after the anchoring poset has been established in the discourse.

Another possibility is the opposite (not mentioned in Birner & Ward (1998)), illustrated in (b) below:

(b) Nedavno sam pohađao kurs za voditelja jahte (skipera) do 100BT. **Ispit** sam položio, ali sam tokom obuke shvatio koliko rupa u mom znanju o nautici ima, a koje ni hiljadu preplovljenih milja ne mogu zakrpati.<sup>124</sup>

'I have recently attended a course for the driver of a yacht (skipper) up to 100 BT. The exam I passed, but during the course I realized how many gaps in my knowledge of navigation there are, which thousands of miles sailed cannot fill.'

The poset itself {the exam} becomes the link after one of the requirements has been explicitly invoked.

(42) Identity relation:

(a) Dženifer je u svojoj 47. godini konačno ostvarila svoj san i postala majka kada su njen suprug i ona usvojili šestomesečnu devojčicu. [...] **Devojčicu** bi trebalo da donesu kući za par nedelja, a par je prema rečima bliskih prijatelja veoma uzbuđen zbog novog ali i najlepšeg poglavlja života.<sup>125</sup>

'At the age of 47 Jennifer finally realized her dream and became a mother when her husband and her adopted a six-month baby girl. [...] The baby girl they should bring

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<sup>123</sup> <http://forum.b92.net/topic/28450-transkript-emisije-pescanik-12052006/>

<sup>124</sup> <http://www.plovidba.info/forum/postavite-pitanje-koje-vas-muci-u-vezi-nautike/strucnjak-u-nautici/>

<sup>125</sup> <http://zena.blic.rs/Bebe/34989/Cestitamo-Dzenifer-Aniston-konacno-postala-majka>

home in a few weeks, and the couple are, according to their close friend's words, very excited about this new but the most beautiful chapter of their life.'

The poset is composed of a singleton baby girl and no other baby girl is mentioned in the prior discourse.

(43) Greater-than relation:

Mi smo priznali život na Kosovu i mislim da **više od toga** niko i ne treba da nam traži.<sup>126</sup>  
'We have recognized the life on Kosovo and I think that more than that no one should even ask from us.'

The link 'više od' is a higher value in the inferred poset {amounts}.

As it has been pointed out, the vast majority of the topicalized elements in our corpus are NPs, and all of them turned out to be formally and/or semantically definite, i.e. interpreted specifically in a given communicative situation. However, it is possible to topicalize indefinite NPs (formally and/or contextually), as confirmed by our respondents, and illustrated in (41).<sup>127</sup>

(44) (a) TOP of a specific indefinite NP:

Context: Zadatak se sastoji iz dva dela. **Jedan (deo)** ću vam objasniti sada.

'The assignment consists of two parts. One (part) I will explain to you now.'<sup>128</sup>

(b) TOP of a non-specific (non-generic) indefinite NP:

Context: Otac: Šta bi želeo za rođendan: (neki/nekakav) biciklo ili trotinet?

Sin: (**Neki**) **biciklo** sam bas želeo da tražim da mi kupite.

'Father: What would you like for your birthday: a bike or a scooter?'

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<sup>126</sup> <http://www.blic.rs/Vesti/Politika/525417/Vucic-Pet-najvaznijih-stvari>

<sup>127</sup> The indefiniteness of an NP in Serbian is grammaticalized in the form of an indefinite or quantificational adjectival (deictic) pronoun ('neki' (some), 'nečiji' (somebody's), 'nekakav' (of some quality) and 'mnogi' (many), respectively), adjectival pronoun 'jedan' (one) or the indefinite form of a descriptive adjective illustrated below from Mrazović & Vukadinović (2009: 306). The adjectives are underlined.

(i) Ugledali su lep grad na obali mora. (indefinite) (It answers the question 'What kind of town?')  
saw AUX beautiful town at seaside  
'They saw a beautiful town at the seaside.'

(ii) Taj lepi grad je bio Dubrovnik. (definite) (It answers the question 'Which town?')  
that beautiful town AUX was Dubrovnik  
'That beautiful town was Dubrovnik.'

<sup>128</sup> The example is modelled on Birner & Ward (1998: 78).

Son: A bike I was just meaning to ask you to buy me.'

(c) TOP of a quantified indefinite NP:

Context: Da nisam bio taksista ne bih živeo sa najlepšom ženom na svetu, ne bih imao dvoje predivne dece. Ne bih ostvario mnoge svoje snove. U krajnjoj liniji, **mnoge ljude** ne bih upoznao, pa ni vas.<sup>129</sup>

'If I hadn't been a taxi driver I wouldn't live with the most beautiful woman in the world, I wouldn't have two wonderful children. I wouldn't have realized many of my dreams. Ultimately, many people I wouldn't have met, including you.'

These examples show that all indefinite NPs do not represent brand-new discourse entities which cannot be felicitously topicalized (as in: \*Neka/ \*Jedna devojka je lepa. ('\*Some/ \*A girl is pretty. '); cf. section 1.2). What makes these topicalizations felicitous are the linking relations illustrated in (39-43), (part/whole (44a), set/subset (44b), set/subset (44c)), confirming Birner & Ward's (1998: 83) claim that topicalization is independent of (formal and/or semantic) definiteness (cf. section 3.2.1).

In the case of PP, AP and VP topicalizations, specificity is irrelevant, but the linking relations discussed still apply. The topicalization of a PP has been illustrated in (38a). The topicalizations of an AP and a VP are illustrated in (45) and (46) below, respectively:

(45) TOP of an AP:

Za puža se kaže da je spor. Čovek ako je spor, znači da je glup, zato se kaže da je lenj. **Pametnan** jeste ali ga mrzi. Dakle, nisi spor nego si lenj.<sup>130</sup>

'It is said for a snail that it is slow. If a man is slow, it means he is stupid, that it why it is said he is lazy. Smart he is but he doesn't feel like working. So, you are not slow but lazy.'

AP topicalization involves the relation of contrast of the link with one of the members of the anchoring poset, i.e. one (or more) of the adjectives is affirmed, whereas others are negated.

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<sup>129</sup><http://www.mojnovisad.com/gradske-face/caza-zivot-taksiste-medj-gospodom-narkomanima-i-prostitutkama-id2041.html>

<sup>130</sup><http://www.hi-files.com/forum/index.php?/topic/8924-uv-box/page-3>

Contrasting attributes are not restricted to adjectives. The relevant poset includes attributes related to intelligence such as stupid, slow.

(46) TOP of a VP:

Trenutno sam u takvoj situaciji. Devojka mi se dopada kao nijedna do sada, ali ima dečka. Nisam tip koji voli da se meša u tuđe veze ali jednostavno ne mogu da odustanem od nje. Dok god vidim i zrno nade za nas, **odustati** neću.<sup>131</sup>

‘At the moment I am in such a situation. I like this girl like no other before, but she has a boyfriend. I’m not the kind of guy who likes meddling in other people’s affairs but I simply cannot give her up. As long as I see a spark of hope for us, give up I won’t’.

The relation of simple identity holds between the link, the VP 'give up', and the anchoring poset {singleton give up}.

If contrast is understood in the sense of Titov (2013), namely that a contrastively marked element implies a set of (denotatively related) alternatives (discussed above, including the relation of contrast in the sense of affirmation and denial) which are activated at the time of utterance and which need not be explicitly stated in the discourse, then the discourse function of TOP is to mark contrastive sentence topics. The mechanism described in 3.2 (Prince 1998) applies, as illustrated in the Serbian examples as well. The contrastive topic obligatorily co-occurs with a (informationally) focused element and the alternatives, if mentioned, are paired with different focus values (cf. example (41)).

Now let us consider the discourse properties of LD, namely CLD and HTLD in Serbian.

#### **4.2.2 Discourse Functions of CLD and HTLD**

Like TOP, CLD serves the function of marking a contrastive (sentence) topic based on two properties we have seen to serve as diagnostic of contrastive topics (in addition to the contrastive stress), (a) formally, CLD is less restricted (than HTLD) with respect to the kind of phrasal categories which can be left-dislocated, and (b) functionally, the dislocate implies evoking contrasted (denotatively related) alternatives to the discourse entity marked by the dislocated element, namely Birner & Ward's (1998) sets of preposing linking relations discussed in the

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<sup>131</sup> <http://www.domaci.de/viewtopic.php?p=46965>

previous section. Examples in (47) below are taken from the corpus and illustrate this pragmatic effect of CLD and the kind of a phrasal category dislocated (a complex NP (47a), gerund NP (47b), a CP (47c) and a co-ordinated NP (47d)).

(47) (a) Hajde da budemo vrlo precizni kad o tim temama govorimo, a ne samo tako da lepimo nekakve etikete, ovi su autoritarni, pa onda kažemo ‘daj, i ovi su bili autoritarni, daj, i ovi su bili’. Pa da stignemo do naših istoričara kada kažu ‘mi smo uvek takvi bili, mi smo uvek bili autoritarni, uvek smo bili nacionalisti, uvek smo imali partijsku državu, uvek smo bili ratoborni.’ [...] U stvari, **ta građanska opcija koju sam isto u poslednje vreme kritikovala, ona** se na neki način dodiruje sa nacionalistima i da to možda nismo do sada primećivali dok nacionalisti nisu došli na vlast.<sup>132</sup>

‘Let's be very precise when we talk about those topics, and not just attach some labels, these are authoritative, then we say “come on, and these were authoritative, and these were.” So we get to our historians when they say “we have always been like that, we have always been authoritative, we have always been nationalists, we have always has a party state, we have always been belligerent.” [...] In fact, that civic option which I have also criticized recently, it<sup>133</sup> is close to nationalists in a way which we maybe have not noticed until now when nationalists came into power.’

(b) Dakle, jedino što je dotični tekstopisac mogao da otvori kao pitanje jesu politički stavovi Latinke Perović. Moram da kažem kao istoričar i kao neko ko zna Latinku Perović 20 godina, da su mnogi od njenih političkih stavova apsolutno pogrešni. Ali **korišćenje privatnog bekgranda da bi se jedna osoba javno profilisala, da bi se pokazalo valjda koliko je ona loša i negativna pojava u srpskom društvu, to je** mislim nešto što je zaista za apsolutnu osudu.<sup>134</sup>

‘So, the only thing that the aforementioned article writer could have raised as an issue are the political views of Latinka Perović. I have to say that as a historian and someone who has known Latinka Perović for 20 years, that many of her political views are absolutely wrong. But using a private background to profile a person publicly, to show I guess how

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<sup>132</sup> <http://pescanik.net/emisija-26-04-2013/>

<sup>133</sup> It is ‘she’ in the original (grammatical gender).

<sup>134</sup> <http://forum.b92.net/topic/29503-transkript-emisije-pescanik-16062006/>

bad they are and what a negative figure in Serbian society, that I think is something that is absolutely reprehensible.’

(c) Pa ljudi, ako mi po njihovim procenama ulazimo u Evropsku uniju 2020, znači, to je 15 godina, pa **ako nam za svaki od tih zahteva treba po tri godine, to** znači da mi imamo još jedno pet zahteva da ispunimo.<sup>135</sup>

‘And folks, if we according to their assessments join the European Union in 2020, it means, that is 15 years, and if for every of those conditions we need three years, it means that we have five more conditions to meet.’

(d) Ako se pogledaju pojedinačne odredbe ovoga zakona, videće se da nema ni jednog člana na koji se ne može staviti primedba, počev od same definicije slobode veroispovesti, koja je teistička. [...] **Što se tiče pravnog položaja crkava i verskih zajednica, tu** je zaista došlo do pravnog galimatijasa.<sup>136</sup>

‘If one looks at the individual articles of this law, they will see that there is no single article that cannot be made objection to, starting from the very definition of the freedom of religion, which is theistic. [...] As for the legal position of churches and religious communities, it is there that real galimatias has taken place.’

Thus, the discourse entities denoted by CLD elements are contrasted with alternative members of a set. On the other hand, the discourse entities denoted by HTLD elements (an NP, a complex NP and an NP, respectively) do not evoke any contrasted alternatives, as illustrated in (48) below from the corpus:

(48) (a) **A što se tiče Tadića**, ja sam izgubio na skupštini Demokratske stranke od **njega**, bili smo protivkandidati za predsednika stranke.<sup>137</sup>

‘As for Tadić, I lost to him in the assembly of the Democratic party, we were candidates for the president of the party.’

(b) **Ti koji se pozivaju neprekidno na taj narod**, nešto **s njima** nije u redu.<sup>138</sup>

‘Those who continuously refer to those people, something is wrong with them.’

<sup>135</sup> <http://forum.b92.net/topic/27942-transkript-emisije-pescanik-21042006/>

<sup>136</sup> <http://forum.b92.net/topic/26302-transkript-emisije-pescanik-24022006/>

<sup>137</sup> <http://forum.b92.net/topic/26987-transkript-emisije-pescanik-17032006/>

<sup>138</sup> <http://forum.b92.net/topic/28081-transkript-emisije-pescanik-28042006/>

(c) **Jočić**, [...], **on** je izgledao kao da bi uhapsio Blera na licu mesta, tako je bio dinamičan.<sup>139</sup>

‘Jocić, [...], he looked like he would have arrested Blair on the spot, he was so dynamic.’

The clitic is not allowed in (48a) or (48b) due to the presence of a preposition (which is a proclitic). In (48c), the dislocated constituent functions as a subject.

Five examples from the corpus contain the demonstrative RP ‘to’ (it), but the left-dislocated element does not evoke any alternatives, the demonstrative is not necessarily at the left edge of the clause and it does not carry a contrastive stress as exemplified in (49a) and (49b), respectively, illustrating, in fact, HTLD:

(49) (a) **Što se tiče tog belega**, mislim da je **to** jedno mnogo složenije pitanje.

‘As for that stigma, I think that is a much more complex issue.’

(b) **Ta mašina koju mi vozimo**, **to** je kao motor koji troši 300 litara benzina a ima brzinu 3 km na sat i pokvari se posle 10 kilometara puta.

‘That machine which we are driving, that is like an engine which spends 300 litres of petrol but attains the speed of 3 km per hour and breaks down after 10 km.’

Thus, as exemplified above, unlike TOP and CLD, HTLD is not a contrastive topic marking device. However, like in the case of TOP and CLD, the entity is discourse familiar in the sense that it either has been mentioned in the prior context or it is a member of the salient poset of linking relations discussed above.

In order to show whether HTLD in Serbian is a topic-promoting device, the following methodology is applied. Following Gregory & Michaelis (2001) both the previous and subsequent contexts are considered since topics tend to persist in the subsequent context. As already pointed out (cf. section 1.2), the role of topic, topicality or topichood is not to be equated with the discourse status of the entity (givenness or familiarity), since discourse-new entities can also serve as topics via membership in a previously evoked poset. However, since there is a high correlation between topichood and evoked status, when considering the prior context or the ‘retrospective discourse status’ of the entity denoted by the dislocate, Gregory & Michaelis

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<sup>139</sup> <http://forum.b92.net/topic/29897-transkript-emisije-pescanik-30062006/>



(2001: 13) employ two measures which 'jointly define discourse status but which are not mutually entailing', namely givenness or activation status<sup>140</sup> (as a predictability scale)<sup>141</sup> and anaphoricity (the degree to which a referent is said to have a discourse antecedent). Anaphoricity of tokens is measured on a scale of 0-2; a score of '0' meaning there is no discourse antecedent, '1' meaning the discourse entity is a member of a previously evoked poset, and '2' meaning the discourse entity has been previously mentioned. Since already topical referents cannot be promoted to topics, Sturgeon (2008: 135) further differentiates between previously mentioned entities (the score of '2') employing the Centering Theory (cf. section 1.2). Backward looking centers (BLCs), equated with continuing topics, tend to be the discourse referents of DPs occupying the syntactic subject position in one or more of the past two clauses. If the referent of a dislocate was mentioned in previous two clauses and it is not in the syntactic subject position, then it is not a BLC, or a topic, and can be promoted to a topic status. This also applies to our corpus. There is one example in which 'ja' (I) is in the syntactic subject position in the previous sentence that contains 4 clauses (in the first clause and in the last clause in the form of zero anaphora (in brackets)), then reintroduced by the dislocation in the second sentence and persists in the following 5 clauses as a topic, as illustrated in (50) below:

(50) **Ja** nemam ništa protiv, neka ga sahrane tako nehigijenski u tom njegovom dvorištu, neka ga tamo Mira oplakuje, ako se uopšte pojavi, a (**ja**) verujem da neće. **Što se mene tiče, ja** zaista o Miloševiću i njegovom liku i delu uopšte nemam više šta da kažem, (**ja**) mislim, što se mene tiče, (**ja**) ne znam, gotov je, i to je to. Ako bi (**ja**) sada trebalo da pričam o tome šta rade Koštunica, Jočić, Stojković, [...], **ja** se tako osećam da bih sad mogao samo da vrištim. Ali stvarno, nivo frustracije je toliko veliki zbog tih ljudi iz DSS-a da jedino ostaje vrištanje. A pošto (**ja**) nisam sposoban trenutno da artikulišem neke normalne rečenice kada su ti ljudi u pitanju, **ja** bih ti radije nešto rekao o ponašanju, pa evo, G17 i SPO.<sup>142</sup>

<sup>140</sup> Givenness is to be understood in Chafe's (1974: 11) sense as 'that which the speaker assumes to be already present in the addressee's consciousness at the time of utterance.'

<sup>141</sup> The model of givenness as a predictability scale is based on the correlation between the morphosyntactic type of the referring expression used by the speaker and the speaker's assumptions about the hearer's knowledge of a certain referent. The model employed is the Givenness Hierarchy by Gundel, Hedberg & Zacharski (1993). This model will be considered in greater detail in section 4.2.3 when contrasting the occurrence of TOP and CLD since they both serve the same pragmatic function.

<sup>142</sup> <http://forum.b92.net/topic/27718-transkript-emisije-pescanik-14-4-2006/>

‘I have nothing against it, let them bury him so unhygienically in his backyard, let Mira mourn him there, if she shows up in the first place, and I believe she won’t. As far as I am concerned, I have really nothing more to say about Milošević’s character and work, I think, as far as I’m concerned, I don’t know, he’s finished, and that’s about it. If I should now talk about what Koštunica, Jočić, Stojković are doing [...], I feel like I could only scream now. And really, the level of frustration is such that because of those people from DSS that screaming only remains. And since at the moment I am not capable of articulating any normal sentences when those people are concerned, I would rather say something about the behavior of, say, G17 and SPO.’

Subject pronouns in Serbian are not omitted when used contrastively (‘ja’ (I) in the first sentence). The contrastive stress is also present on the resumptive pronoun suggesting that this is CLD rather than HTLD. Every overt usage of ‘ja’ is perceived as contrastive in the rest of the example, in the sense of evoking alternative speakers. Thus, this suggests that CLD is not a topic-promoting but a contrasting device.

As for measuring topic persistence, we adopt Gregory & Michaelis's (2001) modification of Givón's (1984: 908) quantitative criterion of topic persistence (‘the number of times the referent persists as an argument in the subsequent 10 clauses following the current clause’) in that it is sufficient to consider 5 following utterances to gain insight into the discourse status of the referent denoted by the fronted element due to the conversational nature of the corpus considered (the Switchboard corpus).<sup>143</sup> A topic persists if its denotatum is referred to in subsequent clauses by a lexical NP (repeating), a score of ‘1’, or by pronouns, a score of ‘2’. A score of ‘0’ means no reference is made to it. As for the examples from our corpus, in 6 examples of HTLD (out of 8) the topic continues in three to six following clauses, in one example only in two (example (49b)). No examples of HTLD were found which could be said to have the score of topic persistence ‘0’. In the case of CLD, in 18 examples (out of 28), the score of topic persistence is ‘0’. This result also leads to the conclusion that CLD unlike HTLD is not a topic-promoting device.

The following example of HTLD illustrates no topic persistence in the above described sense. However, the denotatum of the hanging topic ‘the change of opinion’, a kind of

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<sup>143</sup> Givón (1984) considered the verbatim transcript of the life story of a 55-year old man from New Mexico.

conclusion poset of the following segment of speech, referred to by a demonstrative, is promoted to the topic which persists by evoking things or events related to the change, namely ‘intellectual respect, interview, crazy Serb’(set/subset relation).

(51) **A što se tiče te promjene mišljenja**, mene je **to** doslovno fasciniralo 89-e, kada sam radio intervju sa Ljubomirom Tadićem u Beogradu. Ja sam studirao filozofiju u Zagrebu i zapravo sam prema tim praksisovcima imao neku vrstu u najmanju ruku intelektualnog poštovanja. Mi smo u tadašnjem Startu koji me je poslao da napravim intervju, sve to radili veoma profesionalno, ja sam tri mjeseca prije iščitao sve knjige Ljubomira Tadića i sa mojom urednicom Vesnom Kesić svako pitanje provjerio. I ja sam onda došao sa svim tim pitanjima i preda mnom je bio jedan potpuno poludjeli Srbin, koji je vjerovao u Slobodana Miloševića, koji je vjerovao da su oni vojvođanski četnici koji su imali naravno brade, jedna hipi kategorija, da su oni zapravo posthipici ili tako nešto. Ja sam rekao - ali oni se pozivaju na četništvo. Ne, vi kolega to ne razumjete. Danas mi je to sve skupa jako smješno [...].<sup>144</sup>

‘As for that change of opinion, that literally fascinated me in 89 when I was doing an interview with Ljubomir Tadić in Belgrade. I was studying philosophy in Zagreb and in fact I had at least some kind of intellectual respect for that praxis. At the then Start which sent me to do the interview we did everything very professionally, three months before I had read all the books by Ljubomir Tadić and with my editor Vesna Kesić checked every question. And then I came with all those questions and in front of me was a completely crazy Serb, who believed in Slobodan Milošević, who believed that they are Vojvodina’s Chetniks who of course had beards, a hippy category, that they are actually post hippies or something like that. I said – but they refer to chetnicism. No, you colleague don’t understand. Today it is altogether so funny [...].’

Finally, let us compare the discourse distributions of TOP and CLD since they are both said to have the same pragmatic function.

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<sup>144</sup> <http://forum.b92.net/topic/27134-transkript-emisije-pescanik-24032006/>

### 4.2.3 TOP versus CLD

We have seen that both TOP and CLD serve the pragmatic function of marking contrastive topics. In order to see whether these two structures have different discourse distributions, we will consider the activation status of the contrastive topic they mark by applying the Givenness Hierarchy model by Gundel, Hedberg & Zacharski (1993) as proposed by Gregory & Michaelis (2001).

In brief, this model, presented in (52) below, distinguishes among 6 cognitive states or statuses (information about location in memory and attention state) conventionally indicated by different morphosyntactic forms of referring expressions (demonstratives and pronouns) which fall into it, the cognitive statuses being explained below.

(52) The Givenness Hierarchy (Gundel et al. 1993: 275)<sup>145</sup>

in focus	>	activated	>	familiar	>	uniquely identifiable	>	referential	>	type identifiable
{it,		{that, this		{that N}		{the N}		{indefinite		{a N}
unstressed		this N,						this N}		
personal		stressed								
pronouns		personal								
(he)}		pronouns								
		(HE)}								

*Type Identifiable* – The addressee has a representation of a type of referent. E.g. I couldn't sleep last night. A dog kept me awake.

*Referential* – The referent is specific, being introduced into the discourse, unknown to the addressee. The addressee can identify the intended speaker's referent by the time the sentence has been processed. E.g. I couldn't sleep last night. This dog (next door) kept me awake.

*Uniquely Identifiable* – The addressee can identify the speaker's intended referent based on the form of the noun phrase constructing a new representation if there is no one in memory. E.g. I couldn't sleep last night. The dog (next door) kept me awake.

<sup>145</sup> Adapted from [http://www.sfu.ca/~hedberg/Givenness\\_Hierarchy.pdf](http://www.sfu.ca/~hedberg/Givenness_Hierarchy.pdf)

*Familiar* – The representation of a referent is in the addressee’s memory. E.g. I couldn’t sleep last night. That dog (next door) kept me awake.

*Activated* – The representation of a referent is in the addressee’s current short-term memory, including other entities in the immediate discourse. E.g. I couldn’t sleep last night. That kept me awake.

*In focus* – The referent is at the current centre of attention. E.g. I couldn’t sleep last night. It kept me awake.

The scale is implicational in the sense that 'each status entails (and is therefore included by) all lower statuses [to the right], but not vice versa' (Gundel et al. 1993: 276), the contexts corresponding to higher statuses becoming increasingly restrictive (thus termed a hierarchy). Since the choice of a certain referring expression puts a lower limit on the intended cognitive state, speakers can use a less informative form to communicate something more informative (corresponding to a lower and a higher position on the hierarchy, respectively). As an illustration, consider the example from Gundel (1993: 296):

(53) Dr. Smith told me that exercise helps. Since I heard it from A DOCTOR, I'm inclined to believe it.

Although denoted by an indefinite noun which conventionally signals the *type-identifiable* status, the entity here is assumed to be *uniquely identifiable*. If lower statuses were compatible with higher statuses, i.e. if the only usage of an indefinite referring expression were introducing discourse-new entities, then the meaning conveyed by this sentence would be that the speaker believes that exercise helps because he heard it from someone other than Dr. Smith (Gundel et al. 1993: 296). This upwardly compatible nature of reference interacts with Grice's (1975: 26) *Maxim of Quantity* which explains the distribution of forms over contexts, i.e. the choice among referring forms when requirements for the use of more than one form are met (Gundel et al. 1993: 295).<sup>146</sup> Gregory & Michaelis (2001: 15) find that the context of the referential act is

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<sup>146</sup> In accordance with the first clause of the quantity maxim, Q1, (make your contributions as informative as required), 'speakers who use a weaker form [less informative] (entailed) conversationally implicate that a stronger form [more informative] (entailing) does not obtain' (Gundel et al. 1993: 295) (cf. also Horn 1972), e.g. I'll tell you some of my secrets. +> not all. By contrast, in accordance with Q2 (do not make your contribution more informative than is required), 'the use of a weaker (entailed) form implicates a stronger (entailing) form' (Gundel et al. 1993: 295)

instrumental in determining the givenness status of the referring expression, as illustrated in (51) below:

- (54) B: Both my husband and I work and our children are sixth, fourth, and third grade. And the school years are wonderful, they're just wonderful.  
A: Uh-huh.  
B: **The kids, they** are real people and they are interesting, and...

Judging by the morphosyntactic form of the dislocate 'the kids' alone, it would be labeled as *uniquely identifiable*. However, it is evident from the prior context that the referent of the dislocate has been activated by mentioning the referring expression 'our children'. In order to capture sources of activation other than the morphosyntactic form, Gregory & Michaelis employ Prince's (1981: 245) Scale of Assumed Familiarity based on the relationship of an entity to the discourse, the category of 'inferrable' showing how an entity can acquire a particular cognitive status (not representing a distinguishing status or equated with definiteness) (Gundel 1993: 281), thus providing the information not captured by the Givenness Hierarchy.<sup>147</sup>

Applying the Givenness Hierarchy on our Serbian corpus, we can see that a smaller number of categories is necessary to cover the overall data pattern in Serbian than in English, as expected since Serbian does not have the category of article. There are no uniquely identifiable and referential statuses. Considering the data from the transcripts solely (since the transcripts only contained instances of both CLD and TOP), the following results were obtained.<sup>148</sup> In the case of TOP, 54% of examples were coded as *activated* (referred to by a stressed personal pronoun, 'ovaj N' ('this N')), whereas in the case of CLD, 36%, as illustrated in (55a) and (55b), respectively. The rest were labeled as *familiar* (referred to by 'taj N' ('that N') or N), as illustrated in (56a) and (56b), respectively.

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when the meaning associated with the stronger form is stereotypical (familiar) (Atlas & Levinson (1981)), e.g. You'll pass this exam if you study harder. +> only if.

<sup>147</sup> Consider the examples from Prince (1981: 237):

(i) I went to the post office and the stupid clerk couldn't find a stamp.

(ii) Have you heard the incredible claim that the devil speaks English backwards.

In (i), 'the stupid clerk' is inferred via its linking relation to the previously evoked entity 'the post office'. In (ii), 'the incredible claim' is inferred by means of the information contained in the DP.

<sup>148</sup> The cases of CLD where a CP was dislocated were not considered (3 cases).

- (55) a) **O ovim katastrofalnim poplavama** naravno predsednik vlade nije našao za shodno da kaže ni jednu jedinu reč.  
 ‘About these catastrophic floods, of course, the prime minister did not deign to say a single word.’  
 b) **Ovo sa ovim bakicama i dekimama na aerodromu**, to je užasno uzbudljivo.  
 ‘This with these grannies and grandpas at the airport, that is terribly exciting.’
- (56) a) **Tu barijeru** ćemo morati da prevazidemo.  
 ‘That barrier we will have to overcome.’  
 b) Recimo, **taj prigovor kako su nevladine organizacije indiferentne prema kršenjima prava Srba, to** činjenično nije tačno.  
 ‘Say, that objection that non-governmental organizations are indifferent to the infringement of the rights of Serbs, that is not factually true.’

The results suggest that TOP tends to be used to refer to discourse entities with a higher activation status than CLD. Since the fronted element in both TOP and CLD is marked by a contrastive stress and the highest degree of discourse salience *in focus* allows for unstressed pronouns, no instance of TOP or CLD was labeled as *in focus*.

#### 4.2.4 Summary

TOP is a contrastive topic marking device. ‘Contrastive’ is to be understood in the sense of Titov (2013) as evoking alternatives to the entity marked by the topicalized element at the time of utterance by establishing a linking relation between the entity and the set of alternatives it is a member of with respect to an open proposition. TOP is independent of (formal and/or semantic) definiteness. Discourse-new entities can be felicitously topicalized if a certain linking relation applies. One new option to Birner & Ward’s (1998) typology is illustrated. In the case of topicalization of PPs, VPs and APs, the definiteness is irrelevant, but the linking relations still apply.

Based on analyzing the preceding context (applying the anaphoricity scale by Gregory & Michaelis’s (2001) and the notion of BLC as proposed by Sturgeon (2008)) and the following context (applying topic-persistence scale by Gregory & Michaelis’s 2001 and illustrating another

form of topic-persistence realization found in the corpus), we have concluded that HTLD is a topic-promoting device whereas CLD marks contrastive topics.

CLD and TOP perform the same discourse function, namely that of marking contrastive topics. However, with respect to the activation status of the contrastive topic they mark (analyzed by applying the Givenness Hierarchy by Gundel et al. (1993) shown to exhibit a smaller number of categories in Serbian to cover the overall data pattern), we have found that CLD and TOP tend to have different discourse distributions, namely TOP tends to refer to discourse entities with a higher activation status than CLD.



## 5. Previous Accounts of TOP and LD within the MP

This chapter gives an overview of different accounts of TOP and LD<sup>149</sup> found within the MP reflecting different notions of the left-peripheral position. We will not be detained here by discussing in detail different earlier generative analyses of TOP and LD before the seminal works of Chomsky (1995), Kayne (1994) and Rizzi (1997) whose interaction resulted in abandoning the notions of A- and A'-positions and shaped new views of the notion of the left-peripheral position and the structure of the left periphery in the MP (Adger & de Cat 2004), as presented in the following sections. Basically, the earlier analyses identified the notion of a left-peripheral position with an A'-position or a non-thematic/ $\theta$ -position, A-positions or  $\theta$ -positions generally being closer to the  $\theta$ -role assigning head, representing the core of the sentence in GB (in the sense of Chomsky 1995). However, as pointed out by Adger & de Cat (2004: 2), in: e.g. *Grainne quickly kissed Diarmaid*; the adjoined position of the adverb 'quickly', which is an A'-position, intervenes (linearly and hierarchically) between the subject and the object, which are A-positions. In other words, the subject c-commands the adverb which c-commands the object, thus it is obvious that the notion of a peripheral position cannot be equated with the notion of A'-position.

The following sections will consider different analyses of TOP and LD within the MP various aspects of which will be relevant for formulating our proposal in chapter 6. Traditional adjunction approaches in a new guise (Barbosa 2000, Bailyn 2012) are presented in section 5.1. Section 5.2 discusses approaches which assume that information-structural information is syntactically determined, i.e. that there are designated topic positions, Rizzi (1997, 2004, 2006) (5.2.1), Grohmann (2000, 2003) and Sturgeon (2008), section 5.2.2, argument fronting as a main clause phenomenon, section 5.2.3, the truncation approach by Emonds (2004), section 5.2.3.1, and the competition approach by Jiménez-Fernández & Miyagawa (2014), section 5.2.3.2.

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<sup>149</sup> We will focus here on the types of LD found in the languages in question, viz. HTLD and CLD. For Clitic Left Dislocation (CLLD), see Cinque (1977, 1990), Iatridou (1995), Anagnostopoulou (1997), Frascarelli (2000 and subsequent work), Suñer (2006), López (2007, 2009), *inter alia*.

## 5.1 Traditional Adjunction Approaches Reincarnated

In line with with Ross (1967), Chomsky (1977), Lasnik & Uriagereka (1988), and Lasnik & Saito (1992), *inter alia*, Bailyn (2012) argues that TOP is the result of a movement process since the fronted phrase is case-marked, there is a gap in the canonical position, and the structure is subject to movement constraints (i.e. subjacency conditions) to an adjoined position. On the other (HT)LD is the result of a base-generation process to an adjoined position (the fronted phrase is marked by a default case, there is a resumptive pronoun in the canonical position, and the structure is insensitive to movement constraints). Bailyn (2012: 270-272) assumes that some TOP processes in Russian involve TP(/IP)-adjunction since they can occur in embedded contexts such as the one in (1) below, whereas an LD phrase is base-generated to a position adjoined to CP since it can precede *wh*-words in SpecCP (exemplified in (2)) and only occurs in main clauses, both structures being represented by the simplified tree-diagrams in (3):

- (1) TOP: Vse        znajut, čto generalov        on nenavidit \_.  
 everyone knows that generals.ACC he hates \_  
 ‘Everyone knows that generals, he hates.’
- LD: \*Vse        znajut, čto generalov        on ix        nenavidit.  
 everyone knows that generals<sub>i</sub>.ACC he them<sub>i</sub>.ACC hates  
 \*‘Everyone knows that generals, he hates them.’
- (2) LD: Ivan,        gde (on) rabotaet?<sup>150</sup>  
 Ivan.NOM, where (he) works  
 ‘Ivan, where does he work?’

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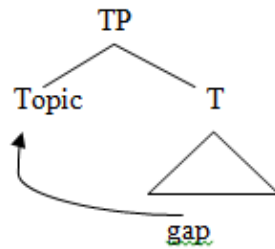
<sup>150</sup> In Russian, there is a sub-case of LD in which the embedded subject pronoun can optionally be omitted under discourse conditions, as illustrated in (i) from Bailyn (2012: 272):

- (i) Ivan, počemu ty uveren, čto \_ spit?  
 Ivan why you sure that \_ sleeps  
 ‘Ivan, why are you sure (he) sleeps?’

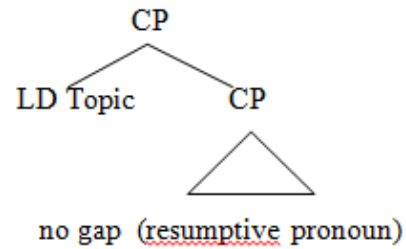
Since *that*-trace effect applies in Russian, as illustrated in (ii) below, Bailyn concludes that the above case represents not a TOP but a kind of LD containing a null RP. This optional dropping of the nominative RP is ascribed to ‘the near-universal tendency to avoid subject resumptives’, as suggested by Keenan & Comrie (1977).

- (ii) \*Kto        ty znaeš’, čto \_ pozvonil Maše?  
 Who.NOM you know that \_ called Mashe.DAT  
 \*‘Who do you know that called Masha?’

(3) a) TOP



b) (HT)LD

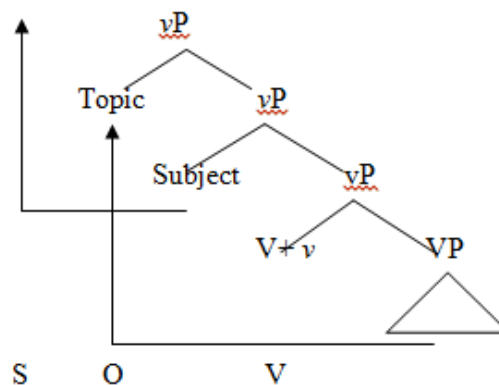


However, there is no explanation of how the coreference between the left-dislocated phrase and the (null) resumptive pronoun is established. Bailyn further recognizes a kind of TOP he refers to as Middle-Field Topicalization (M-TOP) whereby a topic appears medially, typically in SOV constructions, i.e. the object moves to a position to the left of the (surface position of the) verb and to the right of the subject, as exemplified in (4):

- (4) M-TOP: Ivan knigu čitaet \_.  
 Ivan.NOM book.ACC reads\_  
 'Ivan is reading the book.'

He assumes it is adjoined to the vP domain, as illustrated by the tree-diagram in (5). The fact that pronouns naturally occur in this position in intonationally neutral sentences suggests that this pre-verbal position is associated with topicality.

(5) Middle-Field Topicalization



Since there are two types of TOP in Russian, Bailyn (2012: 274) concludes that there is no unique topic position in the surface word order in Russian, i.e. that 'elements at the left edge of phasal domains (CP, vP, TP?, DP?) are interpreted as Topics'. Movement to the far left (MFL)

(A'-movement) is triggered by discourse (informational) requirements which are encoded at the Functional Form (FF), a distinct linguistic interface between linguistic and non-linguistic systems in addition to the LF and the PF (Bailyn 2012: 320).<sup>151</sup> At the FF, discourse organization is uniform across languages. Languages differ in the way in which FF relations are realized in the surface form. Russian (canonical) SVO word order can be functionally ambiguous (as their English equivalents (cf. example (19) in section 1.2, which also holds for Serbian counterparts), i.e. (6) can answer any of the questions in (7) (Bailyn 2012: 322):

(6) *Deti pojut pesni.*

Children sing songs

(7) a) *Čto proisxodit?*

what happens

‘What’s happening?’

A: [Ø] The children are singing songs

b) *Čto delajut deti?*

what do children

‘What are the children doing?’

A: [the children are] Singing songs

c) *Čto pojut deti / deti pojut?*

what sing children / children sing

‘What are the children singing?’

A: [children sing] Songs

In interaction with intonation, MFL ‘fixes’ this ambiguity in that the constituent moved to the left is the presupposed/given information or theme and the rest of the sentence is the information focus or rheme. MFL is employed when the PF is being sent a derivation with neutral intonation and the theme-rheme structures demands a certain representation not available under SVO. A syntactic derivation proceeds as follows. Arguments move from their canonical positions. Either a basic [+F] is assigned to the sentence final constituent marked with Intonation Contour termed IK-1 (allowing spreading of the rheme in accordance with the Phrasal Focus Rule)<sup>152</sup> or a stress

<sup>151</sup> It is similar to Zubizarreta’s (1998) post LF Assertion Structure, each being characterized by a certain intonational pattern.

<sup>152</sup> *Phrasal Focus Rule* (Russian):

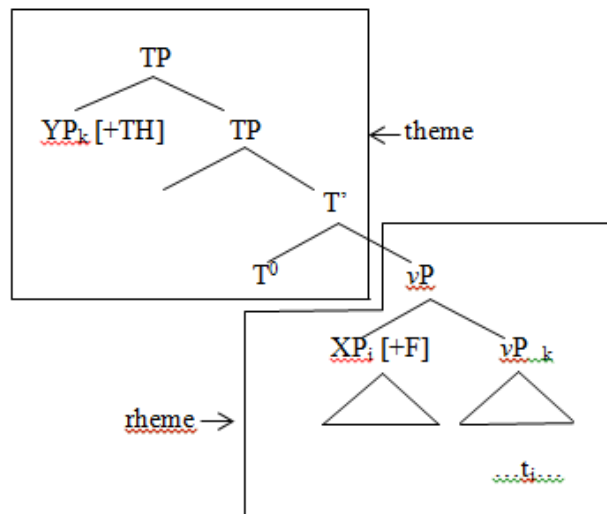
An XP or the Complete Functional Complex (CFC) containing all arguments and adjuncts of X0 may become [+F] under the following conditions:

a. no element in XP is [+SF]

[+SF]<sup>153</sup> (contrastive stress, disallowing spreading) is assigned to some constituent marked IK-2. The theme is determined by the rule given in (8) and the resulting functional representation is given in (9):

- (8) a) *Theme Identification Rule*: All material not marked [+F] is part of the theme and receives the feature [+TH].  
 b) *Focus Raising*: All material marked [+F] is adjoined to vP.  
 c) *Theme Raising*: All material marked [+TH] is adjoined to TP/CP.  
 d) *Generalized Tree Splitting*: The tree splits into theme and rheme, illustrated in (9).

(9) Generalized Tree Splitting:



Now, consider example (10), modelled on (4):

- (10) Knigu Ivan čitaet.  
 Book.ACC Ivan.NOM reads  
 'The book Ivan is reading.'

---

b. no element within XP can become [+F] if a less *prominent element* on the Prominence Hierarchy element is [+F].

*Prominence Hierarchy*:

ZP Compl. of X<sup>0</sup> > Spec of X<sup>0</sup> > (X<sup>0</sup> itself) > Args of X<sup>0</sup> > Adjunct of X<sup>0</sup> The ZP complement of X<sup>0</sup> is more prominent than its Specifier which is more prominent than X<sup>0</sup> itself which is more prominent than other arguments of X<sup>0</sup> which are more prominent than adjuncts to/in XP (Bailyn 2012: 329).

<sup>153</sup> [+SF] is a subcase of [+F] in that it does not allow for rheme spreading. However, the FF treats them identically.

Under the neutral intonation falling on the final element, here the verb 'čitaet', there are multiple topics, 'Ivan' in the Spec of TP and 'knigu' in the Spec of the adjoined TP. The sentence answers the question *What is Ivan doing with the book?* It seems that under this account there is no interpretational difference between: *Ivan knigu čitaet.* (example (4)) and *Knigu Ivan čitaet.* In Serbian, the equivalent constructions are not interchangeable in the given context. The former would be an appropriate answer to *What is Ivan doing with the book?*, and the latter to, e.g. *What is Ivan doing with the book and the newspapers?* Therefore, some additional mechanism would be required with respect to choosing the topic, i.e. the [+TH] marked constituent, to account for the Serbian data.

On the other hand, Raposo (1996) and Barbosa (1996a, 2000: 57) assume that TOP in European Portuguese does not involve movement of the topic from a position within CP.<sup>154</sup> What moves is an empty or null operator whose trace serves as an open position the reference of which is determined by the topic. Instead, topics are base-generated to a position adjoined to the XP which is predicated of them, containing the open position. This rule of predication is not further characterized but it is assumed to apply before movement, i.e. to traces of movement. The idea of moving an empty operator is supported by the evidence from null object constructions, the position of fronted quantificational operators and *wh*-words (cf. Barbosa 2000: 57-59, for examples). The evidence that topics are adjoined comes from observing the distribution of the complementizer 'ca'. 'să' (a subjunctive particle) is assumed to be the head of the MoodP (MP) which can co-occur with the complementizer 'ca'. If 'ca' is assumed to signal the presence of a CP (Bošković 1996), (11) and (12) are analyzed as follows.

(11) Vreau [<sub>CP</sub> ca [<sub>MP</sub> miine [<sub>MP</sub> să vina Ion]]]  
 Want-I that tomorrow să come John  
 'I want John to come tomorrow.'

(12) a) \*Vreau [<sub>MP</sub> miine [<sub>MP</sub> să vina Ion]]  
 Want-I tomorrow să come John  
 'I want John to come tomorrow.'

b) Vreau [<sub>MP</sub> MIINE [<sub>M'</sub> să vina Ion]]

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<sup>154</sup> In Romance languages the topic-comment articulation is expressed by TOP and CLLD.

Want-I tomorrow să come John  
'I want John to come tomorrow.'

The analysis basically rests on the distinction between adjunct and specifiers (contrary to Rizzi's (1997) extension of Kayne's (1994) antisymmetry hypothesis (presented in the following section)) and the assumption that adjunction to an argument is disallowed (Chomsky 1986, McCloskey 1996, Bošković 1996). Since MP is not an argument, adjunction in (11a) is allowed. In (12a), the adverb is adjoined to the argument of the verb, thus the sentence is ungrammatical. (12b) does not involve adjunction, the adverb being in the Spec position of the MP. Therefore, topics (like sentential adverbs) are adjoined to CP, whereas *wh*-words and quantificational operators occur in a position within CP, i.e. they move to the specifier of the MP (or FocusP), occupying a position between IP and CP. Topics can adjoin to this projection (they can be sandwiched between two complementizers). By referring to Raposo (1996) and Duarte (1987), Barbosa (2000: 57) adopts that unlike TOP, CLLD is not subject to subjacency and does not license parasitic gaps or exhibit reconstruction or weak crossover effects. CLLDed topics (like sentential adverbs) are base-generated in a position adjoined to the XP (CP) that is predicated of them provided that it is not adjoined to an argument (distinguishing it from focus-movement and quantificational operator movement) (Barbosa 2000: 56). The proposed account relies on the evidence from the language particular data and no such evidence can be found in Serbian or English.

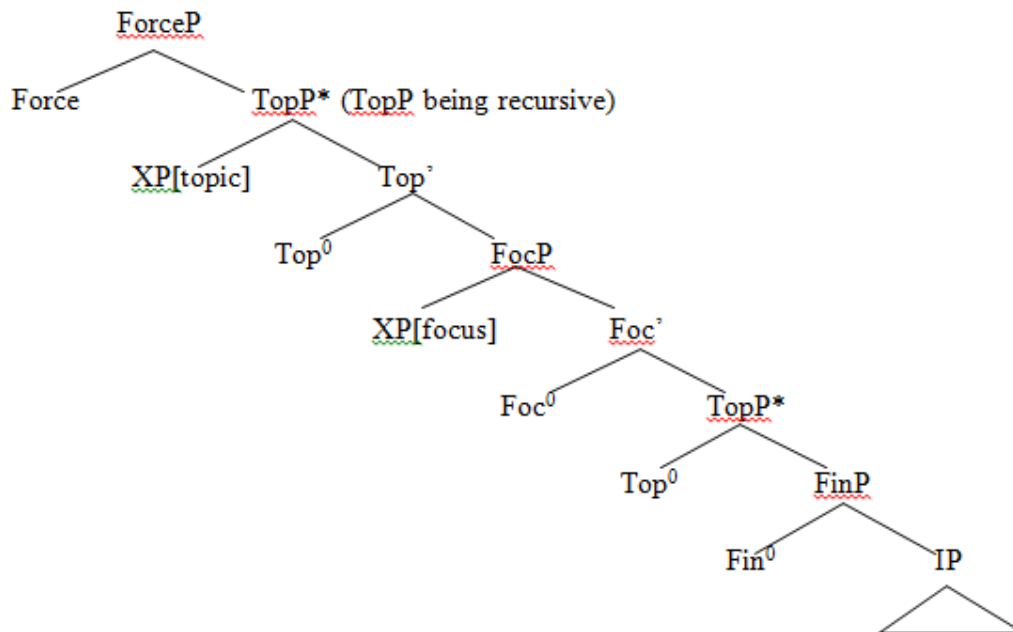
## **5.2 Information-structural Import Syntactically Encoded**

### **5.2.1 Rizzi (1997, 2004, 2006)**

After proposals for split IP and VP domains (cf. Pollock (1989) and Larson (1988), Pesetsky (1995), *inter alia*), Rizzi (1997) argues for the CP domain as a hierarchical sequence of functional heads hosting features with interpretive import (Wh, Top, Foc, Neg), the highest and the lowest of which represent two basic projections, always present within CP, encoding the selectional relations between the C system and the immediately higher and lower structural systems, *viz.* the specification of Force, relating to the outside of the CP domain, i.e. encoding the clausal type (e.g. interrogative, declarative, relative and the like) selected by some higher predicate, and the one of Finiteness, relating to its inside, i.e. entering agreement-like relations between C and I (AgrS in Rizzi's system) such as mood distinctions, tense and subject (person)

agreement, and selecting the embedded IP. Between the highest and the lowest of these projections are heads whose specifiers are interpreted as topics or focus, i.e. possibly more topic projections and one focus projection at most. These projections are present ‘only if needed’, i.e. when an element has topic or focus features to be satisfied or checked in a Spec-head configuration with Top or Foc, respectively (termed Spec-head criterion on a par with Wh and Neg Criteria of Rizzi (1991) and Haegeman (1995)), thus ruling out optional adjunction to IP. In some languages the heads  $Top^0$  and  $Foc^0$  are not phonetically null (cf. Heine & Reh (1983), Gundel (1988), Aboh (1995, 2010), Zerbian (2006)). Rizzi (1997: 297) arrives at the following fine structure or map of the left periphery by considering the properties and constraints on the ordering of various elements which occur there in Italian, illustrated by the tree-diagram in (13):

(13) The map of the left periphery:



Based on their distribution, *wh*-phrases are assumed to move to or through Spec,FocP, i.e. the *wh*-operator moves to Spec,Foc in main questions where it competes with a focalized phrase since question operators must follow topics in main questions. In embedded questions, it can follow or (slightly marginally) precede them. The relative clause operator is assumed to move to the Spec of the highest or Force projection since, in Italian, it always precedes topics.



In Rizzi (1997), Relativized Minimality (RM) is a representational locality principle assumed, and the core structural relation is head government. Rizzi (2004) provides a more refined, generalizing version of RM (without reference to government; more selective than the A/A'-distinction and less selective than the Minimal Link Condition), given in (14) below, as 'a natural principle of mental computation', and shows how it interacts with the proposed map of the syntactic configuration of the left periphery.

(14) Relativized Minimality:

Y is in a Minimal Configuration with X iff there is no Z such that

- (i) Z is of the same structural type as X (heads or specifiers (subject or *wh*-element), under binary branching and since there is no phrasal adjunction) and
- (ii) Z intervenes between X and Y (i.e. Z c-commands Y and Z does not c-command X)

This definition encompasses the basic syntactic properties of chains, *viz.* identity, prominence and locality. As argued by Rizzi (2004: 243), specifiers are licensed by the featural content of their heads ('possibly through the mediation of the EPP-feature, a kind of meta-feature formally licensing specifiers, as in Chomsky 2000, 2001', *viz.* argumental, quantificational, modifier and topic features). Noting argument/adjunct asymmetries in A'-movement with respect to the RM,<sup>155</sup> Rizzi introduces a third, Mod(ifier) head between Force and Fin targeted by adverbs in ordinary preposing, neither topic nor focus, but made prominent, i.e. representing 'the substantive relation between an adverb and the structure it relates to'. The following fine structure of the C system is obtained (Int is the position where higher *wh*-elements such as Italian 'perché' can appear (cf. Rizzi 2001a)):<sup>156</sup>

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<sup>155</sup> Two 'anomalies' have been detected (cited from Rizzi 2004: 229):

- 1) Not all elements moved to an A'-specifier are subject to RM-effects: for instance, *wh*-phrases with special formal and interpretive properties (D-linking, specificity, etc) are not.
- 2) Not all intervening A'-specifiers trigger a minimality effect on A'-chains: some finer typology is then needed.

<sup>156</sup> In Rizzi (1997), adverbs were assumed to be in regular topic positions appealing to the intonational contour similar to the topic intonation. However, the assumption was not interpretatively plausible. Unlike a sentence with a topic, a preposed adverb is felicitous in out-of-the-blue or 'what happened?' contexts. But even elements which are not typical topics (i.e. they are not referential nominal expressions), such as adverbs, can become topics when they have been mentioned in the prior discourse, and then occupy a topic position. However, even in such cases, unlike topics, preposed adverbs do not give rise to any island effects, otherwise imposed by adverbial syntax (*viz.* locality imposed by the absence of focalization or the presence of negation).

(15) [ForceP [TopP\* [IntP [TopP\* [FocusP [ModP\* [TopP\* [FinP IP]]]]]]]]]

In accordance with minimalist derivation, Rizzi (2006) proposes that a *riterial* head has an uninterpretable feature which is valued and deleted by the appropriate interpretable feature. An edge feature triggers movement of the element bearing that interpretable feature. A phrase meets a *riterion* (reaches a position dedicated to a particular scope-discourse interpretive property), ‘shed[ding] light [...] on the structure and functioning of the cognitive systems at the interface with the syntactic module’ (Cinque & Rizzi 2010: 63) and then it gets frozen in place, resisting further movement to a higher criterial position (*Criterial Freezing*) (Rizzi 2003). In other words, the same element cannot satisfy two or more criteria in different positions.<sup>157</sup>

As for some problems for Rizzi’s approach, it is important to point here to the technical issue of the recursivity of topic projections (cf. also section 2.2). Rizzi allows for the possibility of an adjunction analysis of these topic projections (less restrictive than Kayne’s 1994 view on adjunction). Since both topic and focus involve an X’-schema, as illustrated in (13) above, the asymmetry is ensured by assuming that while the topic projection is recursive, the focus projection is not (support being of speculative nature as pointed out by Rizzi 1997: 297). The problem is related to the mechanism of feature checking in these kinds of projections, especially in the case of adverbial topics, since features are assumed to be checked in a spec-head and not an adjunct-XP structure (De Cat 2004). Rizzi (2004: 246) leaves unresolved the issue of intervening topics (in the case of more than one topic per a sentence) and minimality effects.<sup>158</sup>

<sup>157</sup> In the case of *wh*-movement, in languages such as English and French, for example, the highest *wh*-element in the structure moves to Spec,Foc, obeying the *Superiority Condition* of Chomsky (1973: 246), which explains the contrast in:

- (i) a) Who bought what?
- b) \*What bought who?

However, in a language like Serbian, question *wh*-elements are stacked in the initial position regardless of their ordering (ii) and some material can be inserted between the fronted *wh*-elements (iii):

- (ii) a) Ko je kome šta kupio?  
      Who AUX.CL whom what bought
- b) Šta je kome ko kupio? ...  
      What AUX.CL whom who bought

- (iii) Ko mudro koga savetuje? (example (33) from Halupka-Rešetar (to appear)).  
      Who cleverly whom advises

The Serbian data suggest that *wh*-question words have some focus feature which allows them to occur in positions in which focalized elements without a question feature occur. In order to avoid criterial freezing, it is necessary to consider focalization and *wh*-movement different kind of operator movement (cf. Halupka-Rešetar to appear).

<sup>158</sup> Rizzi (2004: 246) entertains the possibility of topic being negatively specified within his proposed featural system, thus exempt from RM-effects.

### 5.2.2 Grohmann (2000, 2003) and Sturgeon (2008)

Grohmann (2000, 2003) also assumes an exploded functional layer similar to Rizzi's (1997) proposal, the subject position marking the boundary between C- and T-domains. **He** offers a movement account for CLD and a base-generation account for HTLD (two types of LD identified in German)<sup>159</sup> based on case connectivity, WCO, Principle A and C effects and idiom chunking which are exhibited by CLD but not by HTLD. Grohmann adopts the copy and checking theory of Chomsky (1995) and [Top] is a feature to be checked on a par with [ $\varphi$ ] and [ $\theta$ ] features and others, and distinguishes among three clausal areas involved in deriving a sentence termed *prolific domains* ( $\Delta$ ), given in (16):

- (16) *V-/ $\theta$ -domain*: thematic relations ( $\theta$ : theta-features)  
*T-/ $\varphi$ -domain*: grammatical relations ( $\varphi$ : nominal and verbal agreement, EPP ...)  
*C-/ $\omega$ -domain*: information relations ( $\omega$ : clause type, [Wh], [Top], [Foc] ...)

The domain becomes prolific if the relevant feature is satisfied within it, thus domains are derived cyclically (phase-like). One feature is checked per a domain, as imposed by a syntactic condition termed *Condition on Domain-Exclusivity* (CDE), whereby legibility is satisfied at the interfaces, CDE having an effect on the PF-interface. In other words, the movement of an XP within the same domain is not allowed unless it has a bearing on interpretation at the interfaces, in which case, the XP must phonetically spell out its copy. Therefore, CLD has the following derivation in (17), illustrated in (18):

- (17)  $[_{\omega\Delta} [_{LD-ed-XP}]_i [_{d-RP}_i V \dots [_{\varphi\Delta} \dots t'_i \dots [_{\theta\Delta} \dots t_i \dots ]]]]$

- (18) **Den Frosch, den** hat die Prinzessin geküßt.  
this frog RP has the princess kissed  
'The frog, the princess kissed.'

The LD-ed phrase is generated within the V-domain, satisfying its thematic role, then moved to the T-domain for grammatical relations followed by the movement to the C-domain to check its [Top] feature in SpecTopP (TOP). It then moves (subsequent LD) within the same domain to the

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<sup>159</sup> The distinguishing syntactic properties considered are: the nature of fronted phrases and RPs, the possibility of multiple LD, connectivity effects (case, WCO, reconstruction, binding, idioms), embedding, island sensitivity.

leftmost clausal position, SpecCP. The possibility of reconstruction accounts for connectivity effects. As required by CDE, its copy in topic position gets spelled out as a d(emonstrative)-pronoun. The movement of the dislocated phrase from SpecTopP to SpecCP is motivated by assigning C<sup>0</sup> a [Dis](course) feature on a par with [Top] feature generating a ‘syntactically well-formed and pragmatically interpretable (C)LD-construction’ justified by the fact that LD is functionally different from topicalization (as shown by Birner & Ward 1998). As for HTLD, Grohmann argues that it is base-generated in the position adjoined to C since it is possible to have CLD and HTLD in the same sentence whereby HTLD-ed phrase precedes the CLD-ed one. The derivation is given in (19) and illustrated in (20), respectively.

- (19) a) [HTLD-ed-**XP<sub>i</sub>** [CLD-ed-**XP<sub>j</sub>** [**RP<sub>j</sub>** V ... [ ... **RP<sub>i</sub>** ... ]]]]  
 b) \*[CLD-ed-**XP<sub>j</sub>** [HTLD-ed-**XP<sub>i</sub>** [**RP<sub>i/j</sub>** V ... [ ... **RP<sub>j/i</sub>** ... ]]]]
- (20) a) **Dieser Frosch<sub>i</sub>, gestern<sub>j</sub>, da<sub>j</sub>** hat die Prinzessin **den<sub>i</sub>** geküßt.  
       this frog       yesterday RP has the princess   RP kissed  
       ‘This frog, yesterday the princess kissed him.’  
 b) \***Gestern<sub>j</sub>, dieser Frosch<sub>i</sub>, den<sub>i</sub>** hat die Prinzessin **da<sub>j</sub>** geküßt.

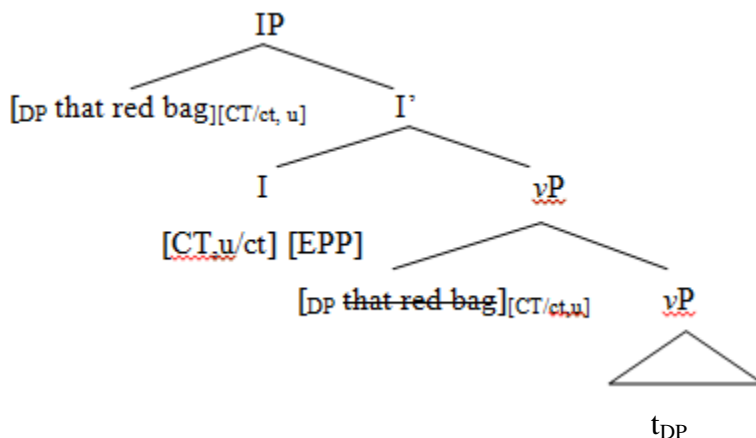
In the case of HTLD, the RP can be a d- or p(ersonal) pronoun which can topicalize (high RP) (18a) or move to the regular argument position in the T-domain (low RP) (18b), illustrated in (22a) and (22b), respectively:

- (21) a) [CP [CP **XP** [TopP *d-/p*-**RP<sub>i</sub>** V ... [TP... RP<sub>i</sub> ... [VP...(RP)<sub>i</sub> ... ]]]]  
 b) [CP [CP **XP** [TopP ZP V ... [TP... *d-/p*-**RP<sub>i</sub>** ... [VP...(RP)<sub>i</sub> ... ]]]]
- (22) a) **De-r/-n Frosch, den/ihn** hat die Prinzessin geküßt.  
       ‘The frog, the princess kissed him.’  
 b) **De-r/-n Frosch, die Prinzessin** hat **den/ihn** geküßt.  
       ‘The frog, the princess kissed him.’

As pointed out by Sturgeon (2008), under a movement account, the resumptive is not the head of the movement chain, but a copy which is not supposed to be pronounced at PF and Grohmann invokes a theory-internal rule, *viz.* CDE, to account for the spell out of the resumptive. However, this purely syntactic condition does not reflect the pragmatic properties of

LD constructions. Sturgeon (2008) also assumes that there are designated structural positions in the left periphery for XPs serving topic and contrastive topic (and focus) discourse functions in Czech. However, based on the evidence of the low position of the verb (the head of the lowest *vP*) and that only one left-peripheral XP is allowed, Sturgeon finds it unnecessary to postulate a split CP or even a CP projection in most cases, as preferred by economy considerations. Due to the similarity of the syntactic behavior of topicalization to that of operator movement in *wh*-constructions<sup>160</sup> (*viz.* ranging over a possibly non-singleton set (Lasnik & Stowell (1991)) and possible pairings of two sets (Authier 1993), Sturgeon (2008: 34) proposes that the head of the topicalized XP bear an interpretable CT (contrastive) feature (on a par with an interpretable *wh*-feature) and an uninterpretable CT operator feature, *ct*-feature (on a par with the *q*-/*wh*-operator feature). The  $I^0$  head bears an interpretable *ct*-feature, uninterpretable CT-feature and the EPP. The derivation of ‘THAT red bag Jana bought’ is illustrated by the tree-diagram in (23):

(23) Derivation:



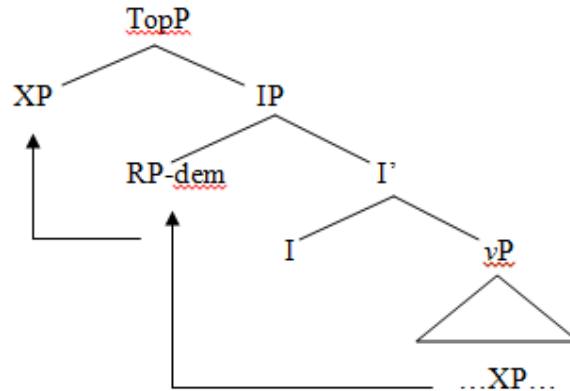
The topicalized DP first moves to a *vP*-adjoined position (to obviate WCO effects, cf. Sturgeon 2008: 30-32), then raises to SpecIP for the EPP feature on  $I^0$  and the uninterpretable features on both the DP and  $I^0$ . Under the Copy and Delete theory of movement, the lowest copy is deleted and the highest copy is pronounced.<sup>161</sup> Based on the presence of reconstruction and connectivity effects, Sturgeon (2008: 43) assumes that CLD is derived by the movement of the left-dislocated phrase from its base-generated position through SpecIP to the SpecTopP, a functional projection

<sup>160</sup> For approaches to operator movement in the MP, cf. Fox (2002), Adger & Ramchand (2005), Zavitnevich-Beaulac (2005), Cable (2007), *inter alia*.

<sup>161</sup> However, there is non-contrastive topicalization in, for example, European and Brazilian Portugeses, as argued by Kato & Raposo (2007), in German, Light (2013), and in Japanese, Nasu (2014).

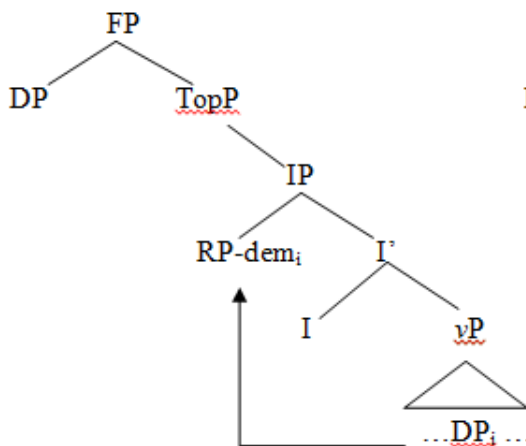
in the C-domain. The RP is a Spelled Out copy of the left-dislocate, the derivation given in (24), and illustrated in (26a):

(24) CLD:

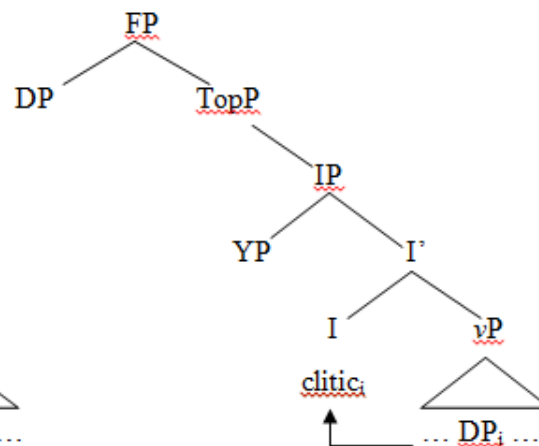


Based on the absence of reconstruction and connectivity effects in HTLD I and HTLD II, Sturgeon (2008: 43-44) suggests that hanging topics be base-generated in a functional projection FP adjoined to the TopP and related to the RP via co-reference. The RP is either a demonstrative topicalized to SpecIP (as suggested by long-distance dependencies and island sensitivity) or a second-position clitic, the derivations presented in (25a) and (24b), respectively, and illustrated in (26a) and (26b).

(25) a. HTLD I



b. HTLD II



(26) a) Ostatně **toho draka**, **toho** by si mohl tak jedině namalovat... (CLD)  
 besides that dragon.ACC that.ACC cond.3SG.CL REFL.CL can so only draw

‘Besides, that dragon, he would only be able to draw him...’

(b) **Anička?** **Té** se nic nestalo. (HTLD I)

Anička.NOM that.DAT REFL nothing not-happened

‘Anička? Nothing happened to her.’

(c) **Ta dívka/ Tu dívku,** znám **ji** ze školy. (HTLD II)

that girl.NOM that girl.ACC know her.CL.ACC from school

‘That girl, I know her from school.’

HTLD-ed phrases are higher than CLD-ed based on evidence from co-occurrence (Sturgeon 2008: 61).

(27) a) **Honzu<sub>2</sub> Janě<sub>1</sub>, té<sub>1</sub> ho<sub>2</sub>** představila. (HTLD II, CLD)

Honza.ACC Jana.DAT that.DAT him.ACC.CL introduced

‘Honza Jana, she introduced him to her.’

b) \***Janě<sub>1</sub> Honzu<sub>2</sub>, té<sub>1</sub> ho<sub>2</sub>** představila. (CLD, HTLD II)

Jana.DAT Honza.ACC that.DAT him.ACC.CL introduced

Intended: ‘Jana Honza, she introduced him to her.’

Sturgeon also addresses the question of the co-reference between the dislocated phrase and the RP. Under Sturgeon’s account, which draws on Landau’s (2005b) analysis of VP topicalization in Hebrew, the pattern of the spell out of a resumptive falls out from the interaction between the syntax, prosody and pragmatics of Czech LDs. Two assumptions are fundamental: null elements cannot bear a prosodic rise and economy principles require minimal spell out where possible. Consequently, since the CT rising pitch accent obligatorily falls on Spec,IP position, the movement copy in that position has to be spelled out. Economy further requires that a resumptive spells out rather than a full movement copy. The nature of the resumptive (a demonstrative or personal pronoun) reflects the interaction between discourse functions and the distribution of different pronominal elements in the language in general. Resumption is an overt realization of either the syntactic or the semantic category of the copy of the CLD-ed XP in Spec,IP. For DPs, the resumptive overtly represents the  $\phi$ -feature of the copy of the dislocate (and not of the discourse referent of the dislocate, as suggested by evidence from

the resumption of conjoined structures). For properties and propositions, the resumptive overtly realizes the semantic type of the dislocate.

### 5.2.3 Argument Fronting as a Main Clause Phenomenon

Since Emonds (1970, 1976), the occurrence of a class of syntactic phenomena termed the ‘Root Transformations’ (RTS) or Main Clause Phenomena (MCP) (Hooper & Thompson 1973) argument fronting (topicalization) belongs to, have been observed to be restricted to matrix clauses and a subset of (finite) embedded clauses. Hooper & Thompson (1973) note that embedded clauses must be asserted in order to allow for MCP; assertion being a property of declarative matrix clauses (cf. Green 1996, Krifka 2001). Clauses which are not asserted, i.e. which are presupposed, are not compatible with MCP (cf., e.g., Heycock 2006 and Haegeman 2010, for a survey of the clause types which are generally agreed to be (im)compatible with MPC). As exemplified in (28), argument fronting is possible in finite *that*-complements to ‘believe’ (28a) and peripheral adverbial clauses (PAC, concessive and reason, cf. Haegeman (2003)) (28b), but disallowed in finite *that*-complements to factive verbs such as ‘regret’ (28c) and central adverbial clauses (CAC, temporal and conditional) (28d) (from Haegeman 2012: 257, 159, 155, respectively):

- (28) a) John believes that **this book**, Mary read. (non-factive complement)  
b) His face not many admired, while **his character** still fewer felt they could praise (PAC)  
c) \*John regrets that **this book** Mary read. (factive complement)  
d) \*While **this paper** I was revising last week, I thought of another analysis. (CAC)

To explain the unavailability of MCP in complements such as (28c) and (28d), two syntactic accounts have been proposed, *viz.* the truncation account and the intervention account, both correctly predicting data. Under the former strand of proposals, the unavailability of MCP is related to the lack of structure of the left periphery necessary for these processes to take place, not to the lack of the left periphery altogether, i.e. the clausal domains which are incompatible with MCP are said to be structurally ‘truncated’. The idea that ‘structural truncation is a primitive that determines the distribution of MCP’ (Authier & Haegeman 2014) has been elaborated on in Kuroda (1991), Benincà & Poletto (2004), Emonds (2004), McCloskey (2006),



Haegeman (2006), Basse (2008), de Cuba & Ürögdi (2010), *inter alia*. De Cuba & Ürögdi (2010) employ the concept of referentiality as opposed to factivity or assertion of Haegeman (2006). Basse (2008) treats assertion as a feature on Force whose presence licenses MPC in the clausal complement. Haegeman (2007, 2009, 2010, 2012) abandons her earlier, truncation approach in favour of an intervention and movement account and proposes that MCP are blocked in central adverbial clauses as well as in factive *that*-complements due to the *wh*-movement of an operator (which is null in the case of *that* clauses, *if* clauses and temporal clauses introduced by a preposition (*before, after, until, since*)) hosted in the left periphery and related to a TP-internal position, thus giving rise to intervention effects in the case of argument fronting and other MCP. Building on Haegeman (2010) and Haegeman & Ürögdi (2010), Jiménez-Fernández & Miyagawa (2014) propose a competition account of the MCP. Since we will be building on some of the insights of Emonds (2004) and Jiménez-Fernández & Miyagawa (2014), let us briefly present their approaches in the following sections concluding our overview.

### 5.2.3.1 The Truncation Approach by Emonds (2004)

In his syntactic approach to a wide range of root transformations in English, French and German, including TOP, Emonds (2004: 76-77) proposes that root transformations<sup>162</sup> and ‘root-like indirect discourse embedding’ (RIDEs), finite complements ‘which tend to be governed by V or A rather than by N or P’, project a *Discourse Shell* above IP, whose Spec is the landing site of the topicalized constituent. It is an XP of an undifferentiated C-domain of *Discourse Projections* (matrix and embedded IPs compatible with MCP) which is ‘categorically unspecified’ before movement, capturing the fact any type of category can move to its specifier. (*Augmented Structure Preservation*<sup>163</sup> covers the root and root-like movements into the a-categorial heads and specifiers of Discourse Shells. The transformations identified by Emonds naturally occur in asserted clauses (Hooper & Thompson (1973)).<sup>164</sup> Drawing on Chomsky’s (1973) *Tensed S*

<sup>162</sup> A root is either the highest S in a tree, an S immediately dominated by the highest S or the reported S in indirect discourse (Emonds 1969: 6).

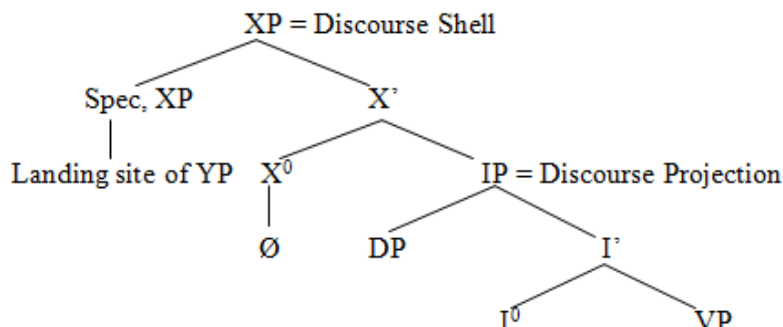
<sup>163</sup> A structure-preserving transformational operation is one in which  $\alpha$  substitutes for  $\beta$ , where  $\beta$  cannot be specified for a feature differently than  $\alpha$ , i.e. V to I and N to D preserve structure because D and I have fewer categorial features than their lexical counterparts N and V.

<sup>164</sup> However, there are examples of complements which do not correspond to Emond’s concept of RIDEs or (original) root (cf. Heycock 2006), such as in (i), the complement of ‘found out’ containing Negative Constituent Preposing (i) (which is assumed to occur in the highest S and reported S environment) (example (119) from Hooper & Thompson 1973):

(i) I found out that never before had he had to borrow money.

*Constraint* (cf. below) and based on the incompatibility data regarding root transformations, there is only one landing site (escape hatch) for such operations. In English, a Discourse Shell is licensed by a phonetically null head (or ‘null at PF’). ‘ $\emptyset$ ’ denotes that the syntactic category of the lexical item is not interpreted, i.e. it is ‘null at LF’, as illustrated in (29).

(29) Discourse Shell



For left dislocations set off by comma, Emonds (2004: 108) proposes multiple Discourse Shells (ZP, YP, and XP), illustrated in (30) (typical of spoken French, the English equivalent is given):

(30) [<sub>ZP</sub> That guy<sub>i</sub>, [<sub>Z</sub>  $\emptyset$ ][<sub>YP</sub> after the play, [<sub>Y</sub>  $\emptyset$ ][<sub>XP</sub> according to Sue, [<sub>X</sub>  $\emptyset$ ] he<sub>i</sub> wept]].

This follows from the *Tensed S Constraint*, viz. a trace of TOP in a Discourse Projection IP is bound by a closest binder in the Discourse Shell immediately above IP, and any potential binder preceding a left-dislocated phrase is ‘too high’, as illustrated in (31a) and (31b) from Emonds (2004: 107), respectively (binder-trace pairs being in bold face). An intonation break is indicated by a comma.

(31) a) [My supervisor]<sub>j</sub>, [<sub>XP</sub> [<sub>Spec,XP</sub> **a man like that**]<sub>i</sub> [<sub>X</sub>  $\emptyset$ ] [<sub>IP</sub> she<sub>j</sub> would never hire **t<sub>i</sub>**]].  
 b) \*[**A man like that**]<sub>i</sub>, [my supervisor]<sub>j</sub>, [<sub>IP</sub> she<sub>j</sub> would never hire **t<sub>i</sub>**]. (modified)<sup>165</sup>

The observation is that if [Spec, XP] is a DP argument, it is paired with an RP (Emonds does not explain how or why). The head of a dislocated shell has to meet two conflicting requirements, viz. *Empty Category* and *Morphemes as Categories* conditions, given in (32) and (33), respectively:

(32) Empty Categories Condition:

<sup>165</sup> In order to get a minimal pair, we modified the second example. The original example is: \*A man like that, my supervisor, I don't think she would hire.

All categories must be phonologically realized except as explicitly permitted by sub-theories such as binding and movement.

(33) Morphemes as Categories Condition:

Overt morphemes that are part of syntax must be members of labeled syntactic categories.

Since, on the one hand, the heads of left-dislocated shells are not licensed by binding or movement, as required by (32), and on the other hand, they are a-categorial, thus not allowed to be overt by (33), the only way for these two conflicting conditions to be satisfied is for the head to be realized as ‘a pause potential’ or ‘comma intonation’ as captured by (34):

(34) Pause Prosody Corollary:

An unlinked,<sup>166</sup> category-less head  $X^0$  must be realized in PF as a pause potential (comma intonation).

In other words, a left-dislocated element is followed by a comma intonation.

### 5.2.3.2 The Competition Approach by Jiménez-Fernández & Miyagawa (2014)

Intervention approaches (*viz.* Haegeman 2012, Authier & Haegeman 2014, *inter alia*) agree that TOP does not occur in the context illustrated in (28b) due to intervention effects arising in the context of a feature-based formulation of Rizzi’s (2004) Relativized Minimality. Namely, assuming a cartographic approach, a constituent becomes an intervener if it has a ‘richer feature set’ than another constituent which tries to cross it (Haegeman 2012: 107). By way of illustration, consider (35) below. Haegeman (2010) and Haegeman & Ürögdi (2010) assume that an (event) operator which is generated above TP moves to Spec, CP in certain adverbial and complement clauses blocking movement of some constituent with ‘an impoverished feature set’.<sup>167</sup>

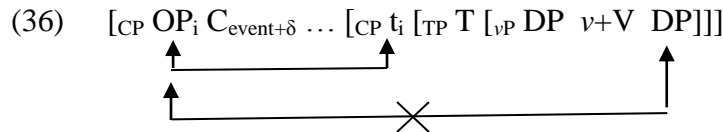
(35) [CP OP<sub>i</sub> C ... [FP t<sub>i</sub> [TP...]]]

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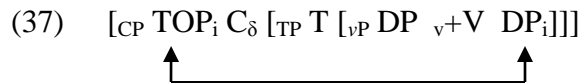
<sup>166</sup> The Spec of  $X^0$  does not bind a trace inside the (finite) complement of  $X^0$  (Emons 2004: 104).

<sup>167</sup> According to Rizzi (1997: 289), relative operator can co-occur with CLLD, whereby the relative operator has to precede the CLLD-ed constituent.

Jiménez-Fernández & Miyagawa (2014), opt for the notion of competition (den Besten 1977) instead of intervention in order to eliminate ‘uncertainties’ with respect to the features relevant to intervention operations the clauses in (28c) and (28d) are argued to have (cf. Melvold 1991, Watanabe 1993, Hiraiwa 2010, *inter alia*). Thus, the event operator which has moved from the embedded CP to occupy the root Spec, CP blocks the movement of a topicalized constituent (or any other) to the same syntactic position, as illustrated in (36) ( $\delta$  stands for discourse features):



If there is no operator (as assumed for non-factive complements and peripheral adverbial clauses), there is no competition for the root Spec, CP position, and TOP can take place:



Assuming the Uniformity Principle of Chomsky (2001a: 2),<sup>168</sup> Miyagawa (2010: 19) proposes the following typological classification of languages based on what kind of feature is inherited by T from C in order to explain the fact TOP (and focus) may occur within TP (characteristic of discourse-configurational languages). The typology is given in (38) ( $\varphi$  stands for agreement features, and  $\delta$  for discourse features):

- (38) a)  $C_{\varphi, \delta} \rightarrow T_\delta \dots$  (discourse-prominent languages, e.g. Japanese, Korean)  
 b)  $C_{\varphi, \delta} \rightarrow T_\varphi \dots$  (agreement-prominent languages, e.g. English and most Indo-European languages)

When a discourse feature is inherited by T it drives movement of the goal to Spec, TP, just as an agreement feature drives movement to Spec, TP in agreement-based languages. Drawing on Miyagawa (2010), Jiménez-Fernández (2010) proposes a third possibility, *viz.* that both agreement and discourse features are inherited by T, as given in (39):

<sup>168</sup> ‘In the absence of compelling evidence to the contrary, assume languages to be uniform, with variety restricted to easily detectable properties of utterances.’

(39)  $C_{\varphi, \delta} \rightarrow T_{\varphi, \delta} \dots$  (discourse-prominent, agreement oriented, e.g. Spanish, Turkish)

Adopting the concept of feature inheritance (FI), Miyagawa (2010) proposes that in languages of a Type (38a), T inherits a discourse feature from C, and then T drives movement of topic or focus to Spec, TP, thus TOP does not intervene with the operator in question located in Spec, CP. The idea is motivated by evidence that there is something like A-scrambling, therefore movement within TP, as discussed by Miyagawa (2010), Saito (1992) and Hoji (1985). As Jiménez-Fernández & Miyagawa (2014: examples (45) and (46)) demonstrate, A-movement (40b) ameliorates a typical WCO violation in English (40a):

- (40) a) ??<sub>[CP Who<sub>i</sub> does [TP his<sub>i</sub> mother love t<sub>i</sub>]]?</sub>
- b) <sub>[TP Who<sub>i</sub> appears to his<sub>i</sub> mother t<sub>j</sub> to be sick]?</sub>

After providing a brief, critical overview of the accounts of TOP and LD in the MP, let us now present our proposal in the following chapter.

## 6. A Feature-based Account of TOP and LD in English and Serbian

### 6.1 The Main Theoretical Assumptions

This section offers an association of the fundamental theoretical assumptions our proposal builds on in deriving the processes of TOP and LD in English and Serbian illustrated in sections 6.2 and 6.3, respectively. The line of reasoning is presented as follows.

The lexicon or ‘mental dictionary’ (Smith 2004) represents the input to the computational system which by means of features (the primitives of the system, as standardly assumed) builds structure compositionally, i.e. via ‘incremental chunks’ termed phases (Boeckx 2012), and also gives rise to displacement effects (in line with Rizzi 2006, Aboh 2010, Müller 2011, *inter alia*). The lexicon and syntax also mediate between the semantic component (LF) and the phonological component (PF), one of the main postulates of the MP (and its predecessor, GB) if the link between the prosodic prominence and information structure (IS) is to be maintained (cf. focus models of Selkirk 1995, Winkler 1997, Zubizarreta 1998, *inter alia*).

In view of the fact that IS interacts with both the PF (contrastive and sentential stress) and the LF (the case of scope properties) (cf. section 1.2), we assume that the additional, pragmatic component (encoding IS relations) is accessed along with the PF and LF at the interface (cf. also Chomsky 1995b: 220), encompassing them, i.e. encompassing the entire complex interplay of linguistic components and extra-linguistic (situational and other non-verbal) factors (a reformulation of Linell’s 2005 interpretation of Lyons 1977: 591).<sup>169</sup> The pragmatic, phonological and semantic information is related as follows.

Since, as already pointed out in section 1.2, pragmatics is concerned with the felicity of sentences not discourses, it belongs to sentence grammar. As argued by Aboh (2010), the particular form of a ‘natural’ or felicitous answer to a question<sup>170</sup> is a product of syntax and in order not to violate the Inclusiveness Condition of Chomsky (1995b: 228) (banning any additional marking of minimal and maximal projections including features), this information has to come from the numeration too. Furthermore, the existence of topic and focus markers in a number of languages such as Japanese, Gungbe, the Bantu languages, etc. (cf. Kuno 1976, Aboh

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<sup>169</sup> Available from: <http://langs.eserver.org/linell/chapter07.html>.

<sup>170</sup> If an association between the context of the question and the information-structure of the answer is assumed.

2010, Biloa 1995, respectively), which represent heads (phonologically null in other languages) with agreeing phrases in their specifiers, provides conclusive evidence that information-structural information is indeed already present in the numeration.

Since the notion of topic (and focus) is uninformative about the syntactic properties of the constituent marked as such (López 2009) and since the existence of contrastive topic (and contrastive focus) suggests a featural composition of what is termed a topic (and focus), we propose that the notion of topic be deconstructed in a combination of syntactic primitives, similarly to López (2009), *viz.* the features [+/-a(nchored), +/-c(ontrastive)], where *anchored* means that the constituent marked as such is linked to a previous context or an anchoring poset via a ‘plausible’ linking relation, as discussed by Birner & Ward (1998), whereas *contrastive* is interpreted in the (pragmatic) sense of Titov (2013) as evoking alternatives at the moment of utterance with respect to what is anchored, thus parasitic on [+a]. In our database, topics of the following featural content are found: [+a, +c], marked by the processes of TOP and CLD, and [+a, -c], marked by HTLD.

The derivation starts by selecting a numeration (also lexical array) or the ‘workspace’ of the derivation (Müller 2011). The numeration contains lexical items and functional heads, *viz.* core functional categories C, T, *v*, which can be (phonologically) null. Lexical items come from the numeration with all their properties or features. In addition to features relevant to the LF (in the sense of having an unchanging meaning representation such as negation, quantification and telicity), to the PF (involving different Spell-Out options of chains and of heads in the case of linearization, non-pronunciation, and prosodic correlations with information structure in the case of focus marking) and to syntactic operations (formal or theory-internal features defining dependency relations such as the EPP, Case,  $\phi$ -features, interpretability, valuation) (Adger & Svenonius 2009, 2011), these also include properties relevant to the pragmatic component, *i.e.* the domain where presuppositionality, focusing and co-reference effects are interpreted (Rebuschi & Tuller 1999). As proposed by Chomsky (1995: 235-241), semantic and phonological features are intrinsic to lexical entries, *i.e.* they are unpredictable from their other properties (*e.g.* gender, case-assigning properties of verbs, or subcategorization properties of lexical entries), whereas formal features relevant to the derivation are added optionally by the operation which forms the

numeration.<sup>171</sup> The operation which forms the numeration optionally adds formal features relevant to the derivation. Like formal features, pragmatic features are added arbitrarily to lexical entries in the process of forming the numeration. However, unlike formal features, pragmatic features affect the other items in the numeration, for example, assigning [+a] to a DP/NP requires all the constituent of the DP/NP to be [+a] with respect to the previous context, as illustrated in (1) (modeled on López (2009: 150)):<sup>172</sup>

- (1) Have you received the results of the finals? - Yes. **The results of the maths test/#the blood test** I find unexpected.

It follows that on a par with formal features (as argued by Chomsky 1995b: 225-227, 237-238), Biskup 2009a: 45, *inter alia*) allocating pragmatic features in the numeration does not violate the Inclusiveness Condition.

The interpretation of an element marked as a topic is the result of its featural content and its syntactic position, reflecting the interaction of syntax, prosody and pragmatics (in line with Sturgeon 2008, *inter alia*), as follows.

Adopting Pesetsky & Torrego's (2007) proposal that valuation and interpretability of features be independent concepts, resulting in four possible combinations of the (un)valued and (un)interpretable property, we assume that the pragmatic feature [+a] comes as valued (based on (1)), but uninterpretable rendering the syntactic object containing it (goal) active and enabling it to be targeted by syntactic operations (Chomsky 2000: 123). The notion of interpretability is (rather) extended to refer to the meaningful contribution to the relevant (pragmatic) component as well (as suggested by Kidwai (1999) for PF-interpretable features on a par with [+FOCUS], which in our system would be [-a, -c] for information focus, and [-a, +c] for contrastive focus. All features have to be valued in order to be interpreted at the relevant interface. The probe (head) is then unvalued and interpretable, departing from Chomsky's proposal that probes are always unvalued and uninterpretable (cf. also Bošković 2007, 2011). The probe has to c-command the goal (reflecting left to right ordering). Now, as it has been pointed out, [+c] is

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<sup>171</sup> Some formal features can be intrinsic to lexical entries, for example, number in the case of *pluralia tantum* nouns, or grammatical gender.

<sup>172</sup> In his example, the DP and its constituents are said to be anaphoric with respect to an antecedent and the example does not involve TOP.



parasitic on [+a], but it is spelled out, i.e. it is PF-interpretable, and thus it never deletes and can survive to the PF-interface unchecked since it is not intrinsic to the lexical item (as argued by Kidwai 1999: 230, in which case it would have to be checked by morphology). However, in order to receive the right interpretation, although interpretable, it has to be valued. Since it is parasitic on [+a], its valuation is ancillary to the checking of [+a].<sup>173</sup> As it was argued in chapters 3 and 4, TOP in both English and Serbian marks contrastive topics whose featural content is: [(u, val)+a, (i, uval) +c]. This [+c] feature parasitic on [+a] (or [-a] in the case of foci), marking contrastive topics, represents what has been termed in the literature the fall-rise of the B-accent as opposed to the fall of the A-accent, the primary or nuclear accent marking all foci ([-a, +/-c]) (Büring 2003, Jackendoff 1972). The accent patterns, viz. B+A, or A+B, are consistently dependent on certain contexts, thus predictable from their felicity conditions, as illustrated in (2a) and (2b), respectively (Büring 2003: 511-512):

(2) a) A: Well, what about Fred? What did he eat?

B: **Fred**<sub>CT</sub> ate the beans<sub>F</sub>.

b) A: Well, what about the beans? Who ate them?

B: Fred<sub>F</sub> ate **the beans**<sub>CT</sub>.

As argued by Büring (2003) (cf. also Prince 1981, Krifka 1999, *inter alia*), the B-accent marking of contrastive topics indicates to the hearer that the utterance is a partial answer to a larger (possibly implicit) question in the discourse (the question under discussion), and that alternatives to the contrastive topic are under consideration (CT congruence), illustrated in (3) (cf. section 3.2.3):

(3) A: Who ate what?

B: **Fred**<sub>CT</sub> ate the beans<sub>F</sub> but **Anna**<sub>CT</sub> ate the peas<sub>F</sub>.

Both TOP and focus preposing as preposing constructions mark open propositions (OPs) as salient in the discourse (Prince 1981, Birner & Ward 1998), as discussed in section 3.2, illustrated in (4a) and (4b), respectively (OPs being presented in the canonical word order):

(4) a) What about the beans? Who ate them? - **The beans**<sub>CT</sub> Fred<sub>F</sub> ate.

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<sup>173</sup> Chomsky (1998, 2000, 2001a) suggests that Case checking be ‘ancillary’ to the checking of  $\phi$ -features.

OP = X ate {the vegetables}, where X is a member of the poset {e.g. guests}  
Fred<sub>F</sub> ate the beans.

b) What did Fred eat? - The beans<sub>F</sub> Fred ate.

OP = Fred ate X, where X is a member of the poset {the vegetables}  
Fred ate the beans<sub>F</sub>.

In the case of TOP, two constituents of the utterance are given prosodic prominence in (4a), the contrastive topic ‘the beans’ is marked with a B-accent and ‘Fred’ with an A-accent being the focus of the utterance. In the case of focus preposing in (4b), the utterance has only one prosodically prominent constituent, the preposed focus marked with an A-accent. Therefore, the main function of TOP, as argued by Lambrecht (1994: 161), is to syntactically mark the referent of the fronted constituent as a topic in the proposition in which it is an argument by creating a marked presuppositional position thus making the proposition being about that referent. Otherwise, accented constituents in the unmarked presuppositional structure (i.e. the focus domain being the predicate minus the topicalized constituent) would be interpreted as focus.<sup>174</sup>

Following Chomsky (2005, 2008), Gallego (2010) and Müller (2011: 122), we adopt that phasal specifiers or edges (the left-side remainder outside X’, or a non-first merged, non-head element) have an instrumental derivational role. Only the edge and the head X<sup>0</sup> are accessible to the operations outside XP, as required by the locality constraint, *viz.* the Phase Impenetrability Condition (PIC) imposing successive-cyclic movement via phase edges, stated in (5) below (a restatement of Richards (2008: 568)):

(5) Phase Impenetrability Condition:

The edge and the complement of a phase are transferred [spelled out] separately.

There are two types of features which drive operations: probe features and edge features. Probe features trigger feature checking or Agree(ment), but not displacement, as illustrated in (6) (from Adger & Svenonius 2009: 10):

(6) There seem/\*-s to be many men in the garden.

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<sup>174</sup> Accented topic expressions mark a new topic or a topic shift, therefore the ‘non-canonical configurations allow speakers to separate the REFERRING function of noun phrases from the RELATIONAL role their denotata play as arguments in the proposition’ (Lambrecht 1994: 184).

The expletive (which has no case or  $\phi$ -features) checks the EPP on T whereas the  $\phi$ -features of T are valued by the associate of the expletive, the thematic argument of the embedded copulative verb, the DP ‘many men’, the verb ‘seem’ obviously agrees with<sup>175</sup> (Agree being a syntax-internal operation with interpretation effects at the interfaces).<sup>176</sup>

In section 2.2, we said that feature checking drives movement or IM under Last Resort and the Inclusiveness Condition. Features are checked under the operation Agree. In search of an independent motivation for A'-movement, Chomsky (2005: 15-16) divorces it from agreement. Chomsky assumes that phase heads C and  $v^*$  have two probes: the edge feature (EF) that is automatically available for a lexical item (and enables it to be merged) and that drives its movement to the edge (spec) of C or  $v^*$ , respectively, (A'-position) without feature matching or agreement, and an agree- or  $\phi$ -feature which T inherits from C and V from  $v^*$  by means of FI and which attracts a DP as far as T (A(-position)). Edge and agree-features are checked in parallel.<sup>177</sup> Edge features trigger movement to the specifier of the head which contains them, forming an EF-chain. As pointed out, the PIC forces this movement to take place via phase edges since only they are visible from the higher phase. All A'-movements (TOP, focus movement, wh-movement) are driven by an EF (Chomsky 2005), as it will be discussed further in the text and in the following section. Movement is copying and deletion. The uninterpretable feature must be checked by its interpretable counterpart via Agree, which is a prerequisite for deletion, and deletion is in turn a prerequisite for the interpretation at the relevant interface. The valuation creates a link between features, the outcome being a single feature shared by two (or more) locations. (PF-)Deletion applies to *instances* of features (a feature-location pair), not to the entire *occurrences* (a distinct feature that may enter Agree), entailing that a feature must be interpreted in some syntactic position, as suggested by Pesetsky & Torrego (2007), or if it has ‘exhaust[ed] the lexical subarray [sub-numeration] which it is derived from’ (Chomsky 2000: 109).

After a numeration is selected, a sub-numeration (the domain in which Merge pre-empts Move) is selected from the numeration and the computational system maps the lexical items by

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<sup>175</sup> Chomsky (1998, 2000, 2001) divorces case-checking from the EPP and relates it to agreement in  $\phi$ -features.

<sup>176</sup> There is another possibility, given in (i). The verb ‘seem’ as a raising verb fails to assign ACC to its complement and to theta mark an external argument (Burzio’s generalization). ‘Many men’ theta marked by ‘be’ moves to the subject position of ‘seem’ to check its case against the finite T and to satisfy the EPP on T.

(i) Many men seem to be in the garden.

<sup>177</sup> Cf. Slioussar (2007) for criticism.

the External Merge operation.<sup>178</sup> It is triggered by subcategorization features (e.g.  $\theta$ -roles, V, D, P) and applies to the numeration and the material in already formed syntactic objects (trees) (Müller 2011).<sup>179</sup> A general condition Last Resort, stated in (7) below (adapted from Müller 2011: 166),<sup>180</sup> requires that every syntactic operation must satisfy either of the types of features, edge and probe features being of interest to our account.

(7) Last Resort:

Every syntactic operation must check either a structure-building feature [an edge or a subcategorization feature] or a probe feature.

A sub-numeration is determined by a single phase head (Biskup 2009a, Richards 2011). There is disagreement in the literature on what serves as a phase. Svenonious (2004), Hiraiwa (2005), *inter alia*, argue that a DP is a phase as well. Epstein & Seely (2002), Boeckx (2007), Müller (2011), for example, consider all phrases phases. According to Bošković (2014), all lexical categories, *viz.* Ns, Vs, As, and Ps, project phases, whereby the phase is the highest phrase in their extended projections.<sup>181</sup> Since in an incremental (phase) derivational approach (resting on cyclicity) which incorporates the PIC it is desirable to reduce the goal search space, which reduces complexity and eliminates look-ahead (Müller 2011), we will adopt the assumption that every phrase is a phase in the dynamic (contextual) sense of Bošković (2014).<sup>182</sup> It is also conceptually desirable not to consider the notion of phasehood 'picky' (Bošković 2014). Following Rizzi (1997) and Roberts (2005), we assume that when there is a TOP or FOC projection, in languages such as the Serbian one in question, C splits into Force (encoding clause type and illocutionary force) and Fin (encoding the (non-)finiteness of the clause)). Although Rizzi (1997: 282) opts for the criterial approach to structure building rather than feature checking, feature checking is not denied, as pointed out by (Aboh 2010, *inter alia*).

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<sup>178</sup> The following pair of sentences are not assumed to be related by Move, but they are considered to have different numerations:

(i) There seem to be many men in the garden.

(ii) Many men seem to be in the garden.

<sup>179</sup> External Merge is here conceived as 'costly' (since feature-driven), contrary to Chomsky (1995b).

<sup>180</sup> Feature ordering is not relevant to our purposes.

<sup>181</sup> CP is not the extended projection of VP. The nature of the CP projection is left to be addressed in future research.

<sup>182</sup> Bošković's (2014) proposal captures the empirical facts such as that NP constitutes a phase in Serbian, but not in English, that complements of Vs, Ns, Ps and As can undergo movement given the right syntactic environment (a fact problematic for the approach that all phrases are phases, since the PIC keeps their complements immobile).

When the sub-numeration is exhausted, a new sub-numeration is selected from the numeration. The computational system is at work again and so on until the numeration is exhausted. Two conditions apply here, as proposed by Biskup (2009a). First, Biskup's (2009a: 47) modification of *Feature Balance*, given in (8), applies in the numeration requiring that there is a one-to-one relation between every probe and goal feature:

(8) Feature Balance:

For every probe feature F, there must be exactly one goal feature F in the numeration.<sup>183</sup>

If this condition is met, the derivation continues and Biskup's (2009a: 45) *Phase Featuring Principle*, stated in (9) applies, otherwise it crashes.

(9) Phase Featuring Principle:

If a goal feature F does not have its movement probe feature F in its current phase sub-numeration, add an unvalued uninterpretable F-feature onto the phase head.

This principle ensures the cyclicity of movement without 'look-ahead' of Chomsky (1995b) or Bošković's (2007) 'greedy' movement proposal. Each step in a derivation must be locally proper (Crash-proof Syntax) (Lavine 2003: 360). The fundamental assumption is that allocating features in sub-numerations does not violate the Inclusiveness condition either. The intermediate feature is unvalued because it functions as a probe and uninterpretable because it has no bearing on the semantic properties of the phase head (scopal or binding effects).<sup>184</sup> An intermediate feature can be assigned only if it is required by some non-local phase head (Müller 2011).

As already pointed out, the featural content of topics derived by the processes of TOP (in both English and Serbian) and CLD (in Serbian) is [+a, +c]. In the following section, we argue that they are derived by movement or Internal Merge.<sup>185</sup> On the other hand, the featural composition of topics marked by HTLD is [+a, -c], and they are argued not to be derived by

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<sup>183</sup> Müller (2008: 10), states that 'For every feature specification [*\*F:α\**], there must be a matching feature specification [*F:α*]' (asterisks indicating a probe feature). 'specification' is left out here because the probe and the goal feature do not have to bear the same value (or specification). It is (standardly) assumed that probe features are unvalued (Biskup 2009a: 47).

<sup>184</sup> Though a moved element can give rise to new scopal or binding relations (Biskup 2009a: 46).

<sup>185</sup> Actually, since everything the computational system operates with has to be present in the numeration, in the case of CLD, we assume that it is the resumptive pronoun that moves to the left edge of the clause where it establishes co-reference with the CLD-ed element merged into the spec of the LD projection which is adjoined to the clausal CP (cf. section 6.3).

movement. However, [+c] (on [+a]) does not trigger displacement since it is checked in structural positions whose existence is independent of the presence of contrast, as illustrated in (10) by using examples from (2) and (3):

(10) a) A: Well, what about the beans? Who ate them?

B: Fred<sub>F</sub> ate **the beans**<sub>CT</sub>.

b) **Fred**<sub>CT</sub> ate the beans<sub>F</sub> but **Anna**<sub>CT</sub> ate the peas<sub>F</sub>.

Adopting a modification of Müller's (2011: 169) *Edge Feature Condition*, given in (11),<sup>186</sup> we assume that an edge feature can be assigned to the head of a phase which is not complete (or balanced in Müller's terms) (11a), i.e. which does not have all its (structure-building) features checked (11b) (original notation being left out):

(11) Edge Feature Condition:

An edge feature can be assigned to the head H of the phase only if (a) and (b) hold:

a) The phase headed by H is not otherwise complete.

b) H has not discharged yet all its structure-building or probe features.

(11b) informs the derivation about the timing of the edge feature assigning. The edge feature assignment takes place in the numeration, as explained above.

The following two sections illustrate the derivations of TOP and LD in English and Serbian, respectively, tackling the differences between the English and Serbian data presented in chapters 3 and 4. Let us start with TOP.

## 6.2 Deriving TOP in English and Serbian

Since TOP in both English and Serbian passes most of the tests standardly assumed to be diagnostic of movement, *viz.* obeying subjacency (Coordinate Structure Constraint, Complex NP Constraint, *Wh*-island Constraint, Sentential Subject Constraint, Subject Condition (cf. sections 3.1.2 and 4.1.3, respectively), reconstruction effects for the purposes of proper binding (Conditions A and C of Binding Theory, quantifier binding, idiom chunking) and licensing of parasitic gaps (cf. sections 3.1.3 and 4.1.2.1, respectively)), we assume that TOP in both English

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<sup>186</sup> We leave out the feature ordering part since it is irrelevant to our purposes.

and Serbian marks sentence topics by movement or Internal Merge. This movement proceeds via phase edges as required by the PIC.

Consider the derivation of the following English sentence (from section 3.1.2) and its Serbian counterpart given parallel in (12a) and (12b), respectively. Square brackets indicate sub-numerations defined by a single phase head, as pointed out in the previous section. ‘ $t_b/t_p$ ’ marks the trace of the topicalized phrase in the intermediate landing position (TPs are omitted for expository purposes).

- (12) a) [<sub>ForceP</sub> [<sub>TopP</sub> **Beans**<sub>b[(u, val)+a, (i, uval) +c]</sub> [<sub>Top</sub><sup>0</sup> [(i, uval)+a, (u, val) +c] [[<sub>FinP</sub>  $t'$  I<sub>i</sub> don't [<sub>vP4</sub> [<sub>Spec2</sub>  $t_b$ ' [<sub>Spec1</sub>  $t_i$  think [<sub>CP2</sub>  $t_b$ ' that you<sub>y</sub>'ll [<sub>vP3</sub> [<sub>Spec2</sub>  $t_b$ ' [<sub>Spec1</sub>  $t_y$  be able to [<sub>vP2</sub> [<sub>Spec2</sub>  $t_b$ ' [<sub>Spec1</sub>  $t_{PROy}$ <sup>187</sup> convince me [<sub>CP1</sub>  $t_b$ ' (that) Harry<sub>h</sub> has [<sub>vP1</sub> [<sub>Spec2</sub>  $t_b$ ' [<sub>Spec1</sub>  $t_h$  ever tasted  $t_b$ '<sub>[(u, val)+a, (i, uval) +c]</sub> in his life]]]]]]]]]]]]]]]]]]]]].
- b) [<sub>ForceP</sub> [<sub>TopP</sub> **Pasulj**<sub>p[(u, val)+a, (i, uval) +c]</sub> [<sub>Top</sub><sup>0</sup> [(i, uval)+a, (u, val) +c] [<sub>FinP</sub>  $t_p$ ' (ja<sub>j</sub>) ne [<sub>vP4</sub> [<sub>Spec2</sub>  $t_p$ ' [<sub>Spec2</sub>  $t_j$  verujem [<sub>CP3</sub>  $t_p$ ' da (ti<sub>t</sub>) ćeš [<sub>vP3</sub> [<sub>Spec2</sub>  $t_p$ ' [<sub>Spec1</sub>  $t_t$  biti u stanju [<sub>CP2</sub>  $t_p$ ' da me [<sub>vP2</sub> [<sub>Spec2</sub>  $t_p$ ' [<sub>Spec1</sub>  $t_{PROt}$  uveriš [<sub>CP1</sub>  $t'$  da je Hari<sub>h</sub> [<sub>vP1</sub> [<sub>Spec2</sub>  $t_p$ ' [<sub>Spec1</sub>  $t_h$  ikada probao  $t_p$ '<sub>[(u, val)+a, (i, uval) +c]</sub> u svom životu]]]]]]]]]]]]]]]]]]].

As argued in the previous section, the topicalized phrase ‘the beans’ or ‘pasulj’ starts its derivational journey by being specified for [+a, +c] pragmatic features in the process of forming the numeration. This does not violate the Inclusiveness Condition, as illustrated in (1). The topicalized phrase is a goal specified for [(u, val)+a, (i, uval) +c]. Its probe, the TOP head of Rizzi (1997), is specified for [(i, uval)+a, (u, val) +c]. Feature Balance, stated in (8), applies first requiring a one-to-one relation between the probe-goal features in the numeration. Since the probe of the goal is present in the numeration, the derivation proceeds (bottom-up) by selecting the first sub-numeration or phase (the goal in our example belongs to), *viz.*  $vP_1$ .<sup>188</sup> Since the goal does not find its probe in this phase (and there is a non-local probe phase head), the Phase Featuring Principle, given in (9), applies adding an unvalued uninterpretable, intermediate F-feature onto the phase head which attracts the goal to its spec in order to be visible to the next merged phase, *viz.*  $CP_1$ . This eliminates the ‘look-ahead’ problem. The same applies until the

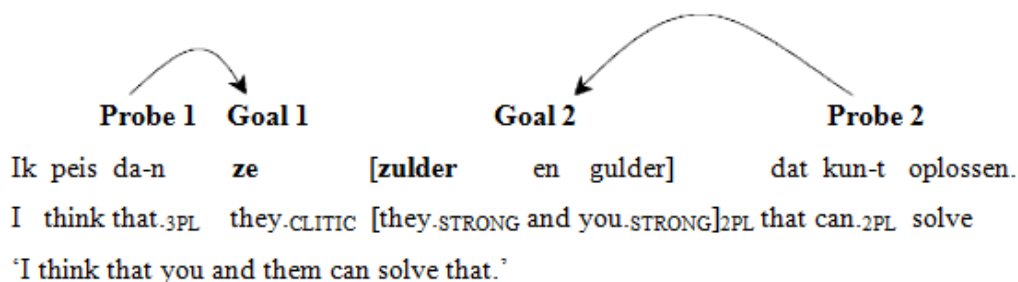
<sup>187</sup> PRO is a phonologically unexpressed subject of non-finite complements.

<sup>188</sup> The first phase is actually the PP ‘in his life’.

goal meets its probe, i.e. until it lands in the Spec of TopP. In the case of  $vP$  whose Spec is already filled with the trace of the subject (e.g. ‘Harry’ in  $vP_1$ ), the phase head  $v$  provides an escape hatch for the topicalized phrase by projecting another Spec due to the allocated feature which has no semantic effects whatsoever. Since topicalization is an instance of A’-movement, its intermediate landing positions are not subject to feature checking or Last Resort. The topic, i.e. its null operator,<sup>189</sup> binds the null constant (Lasnik & Stowell 1991 and Rizzi 1997)<sup>190</sup> by means of the operation Agree via its functional head (Reuland 2001, 2005, 2011, Chomsky 2008, *inter alia*), licensing a link between the antecedent (topic) and the gap in the comment. As argued in the previous section, probe features do not drive movement, but they are a precondition for receiving an edge feature. The question is how the Top probe head acquires its edge feature.

As pointed out in the previous section, when there is a TOP or FOC projection, the C head splits into Force and Fin heads. T is standardly assumed to be a non-phase head and thus it has no uninterpretable features of its own.<sup>191</sup> The only way for T to acquire its uninterpretable features (the EPP and  $\phi$ -features), which enable it to enter into Agree with the subject in its scope, is to inherit them from a local phase head. The only candidate is the Fin head. This is what van Craenenbroeck & van Koppen (2007) argue for based on evidence from subject clitic doubling in Dutch dialects. As argued by Chomsky (2005) on C-T probing, if more than one probe inherits its uninterpretable features from the same phase head, then these probes would have to bear the same features. However, clitic doubling of co-ordinated subjects in Dutch dialects exhibits different  $\phi$ -probe specifications. This implies that the different  $\phi$ -feature could have come only from another phase head, as illustrated below:

(13) Subject clitic doubling in Nieuwkerken-Waas Dutch:



<sup>189</sup> The anaphoric operator is overt in Germanic languages, the so-called D-pronoun (cf. Rizzi 1997: 294).

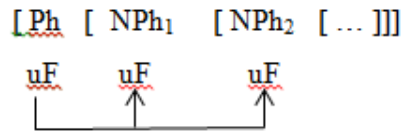
<sup>190</sup> It is not a variable since it does not give rise to WCO, nor does it meet the conditions for PRO, *pro* or a DP-trace.

<sup>191</sup> Cf. Citko (2014: 47-49), for a discussion of both empirical and conceptual problems if T is considered a phase head instead.

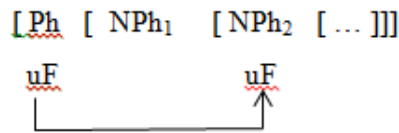


T inherits uninterpretable features from the phase head  $F_{in}$  via the mechanism termed *Feature Inheritance* (FI). FI is conceptually motivated as the only way to meet the conflicting requirements that valuation and transfer (Spell-Out) of the uninterpretable features of a phase head must take place at the same time and to conform to the PIC requiring that the edge and the complement are transferred (spelled out) separately. Therefore, uninterpretable features are inherited by the non-phase head. Consequently, any further FI mechanisms such as multiple FI or non-local F, as illustrated below, are unmotivated and banned (van Craenenbroeck & van Koppen (2007: 3)) (uF stands for an uninterpretable feature, Ph for a phase, and NPh for a non-phase).

(14) a) Multiple Feature Inheritance:



b) Non-local Feature Inheritance:



Now, let us consider the distribution of TOP and give an overview of syntactic contexts which allow and those which disallow TOP in English (presented in chapter 3), and their Serbian equivalents, illustrated in (15), (16), and (17) below.

English and Serbian pattern alike with respect to allowing TOP in complements of non-factive verbs and peripheral adverbial clauses, as illustrated in (15). In accordance with the mechanism developed above, assuming that the Top head inherits its movement-inducing feature from Force accounts for the grammaticality of the examples.

(15) TOP in Non-factive Complements:

a) John believes [<sub>ForceP</sub> that [<sub>TopP</sub> **this book** [<sub>FinP</sub> [<sub>TP</sub> Mary read **t**]]]]. (Breul 2004: 211)

a') Jovan veruje [<sub>ForceP</sub> da je<sup>192</sup> [<sub>TopP</sub> **ovu knjigu** [<sub>FinP</sub> [<sub>TP</sub> Marija pročitala **t**]]]].

TOP in Peripheral Adverbial Clauses:

b) His face not many admired, [<sub>ForceP</sub> while [<sub>TopP</sub> **his character** [<sub>FinP</sub> [<sub>TP</sub> still fewer felt they could praise **t**]]]]. (Haegeman 2012: 257)

b') Njegovom licu se nisu mnogi divili, [<sub>ForceP</sub> dok bi [<sub>TopP</sub> **njegov karakter** [<sub>FinP</sub> [<sub>TP</sub> još manje ljudi moglo da pohvali **t**]]]].

However, TOP is blocked in the following types of embedded clauses in English whereas it is allowed in their corresponding structures in Serbian, given in (16) below.

(16) TOP in Factive Complements:

a) \*John regrets that **this book** Mary read. (Haegeman 2012: 155)

a') Jovan žali što je **ovu knjigu** Marija pročitala.

TOP in Central Adverbial Clauses:

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<sup>192</sup> Bošković (2001: 9-96) broadly classifies approaches to second position cliticization in Serbo-Croatian (SC) into *strong* and *weak syntax approaches* and *strong* and *weak phonology approaches* with respect to whether they permit reordering at the PF to some extent. Both *strong* and *weak syntax approaches* assume that (a) clitics form a cluster in the same syntactic position, (b) the position is structurally fixed for all constructions, and (c) the clitic cluster is located high in the tree leaving no room for more than one element to precede them. The movement has to be strictly local. Clitics are located in: (a) C<sup>0</sup> (Franks & Progovac 1994, King 1996, Schütze 1994, Tomić 1996a, Wilder & Čavar 1994b), (b) in the specifier (Rivero 1997) or (c) the head position of a phrase located between C<sup>0</sup> and I<sup>0</sup> (Percus 1993, Roberts 1994) or (d) they are adjoined to it (Halpern 1993). They differ in that strong approaches do not permit sentence-initial clitics in the overt syntax. It is assumed that elements which can undergo syntactic movement can host clitics. Under weak approaches, if the clitic is found in the sentence-initial position, it undergoes phonological movement (Prosodic Inversion (PI)) in search of an appropriate host, a stressed element to encliticize to, as required by its lexical property. Evidence against PI (in favour of the syntactic movement account) comes from the syntactic mobility of clitic hosts, complex PP splits, predicate fronting, *li*-constructions. On the other hand, empirical evidence against the assumption of the strong syntax accounts that clitics have a structurally fixed position comes from sentential adverbs placement, participle movement and overt C, *wh*-superiority, coordination, gerunds, split-clitics constructions, order of clitics. Purely syntactic approaches cannot account for delayed clitic placement (in the case of appositives, parentheticals and fronted heavy constituents), VP ellipsis construction contrast, and infinitival complements of verbs and nouns. *The strong phonology approach* (Radanović-Kocić 1998) holds that the phonology solely drives the movement of SC clitics to the second position by assigning a [+clitic] feature, deriving clitics and the corresponding full forms from the same elements. Arguments against this proposal are numerous pointing out to (unwelcome) optionality and additional non-obvious assumptions attempting to ascribe the phonology operations which are not applicable to it. *The weak phonology approach* (Bošković 1995, 2001) holds that the phonology determines the position of clitics by 'passively filtering' or ruling out some syntactically well-formed sentences because they violate phonological requirements on clitics. SC clitics are specified for their phonological properties in the lexicon. All clitic movement takes place in the syntax (eliminating certain ungrammatical word orders). This approach accounts for the fact that (a) clitics do not have a fixed structural position, (b) that they can be low in the tree, and (c) that they do not have to cluster in the syntax. As under the strong syntax approach, this account holds that clitics can attach only to syntactically mobile elements. We will address this approach again in section 6.3.

b) \*While **this paper** John was revising last week, he thought of another analysis. (modified, Haegeman (2012: 155))<sup>193</sup>

b') Dok je **ovaj rad** Jovan revidirao prošle nedelje, setio se druge analize.

TOP in Relative Clauses:

c) \*Has Maria shown you the broom that **these steps** John swept with? (modified, Emonds (1964: 24))<sup>194</sup>

c') Da li ti je Marija pokazala metlu s kojom je **ove stepenice** Jovan čistio?

TOP is also incompatible with (root/matrix) *wh*- or *yes/no*-questions in English, again contrary to Serbian, as given in (17):

(17) TOP and *Wh*-movement:

a) \*Whom **the books** did John give away to? (Chomsky 1977: 92)

a') Kome je **knjige** Jovan dao? (with a possible non-contrastive reading)

b) \***The books** whom did John give away to? (our modification)

b') ?**Knjige** je kome Jovan dao?

TOP and Head-movement:

c) \*Can this **kind of behavior** John tolerate? (modified Radford (1997: 312))

c') Može li **ovakvo ponašanje** Jovan tolerisati?

d) \***This kind of behavior** can John tolerate?

d') ??**Ovakvo ponašanje** može li Jovan tolerisati?

These examples show that the compatibility of various types of syntactic contexts and TOP, which has also been referred to as a main clause or root phenomenon or transformation (MCP or RT, respectively) (Emonds 1976, 2004, Hooper & Thompson 1973, Haegeman 2014, 2006, *inter alia*) is subject to cross-linguistic variation, i.e. languages vary in the manner in which they allow for MCP in various kinds of complement clauses (Jiménez-Fernández & Miyagawa 2014). As shown by our examples above, this parametric variation cannot solely be captured by the factive

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<sup>193</sup> Some English examples have been modified in order to avoid omitting the subject in Serbian for expository purposes.

<sup>194</sup> Radford (2009: 327), analyzes the sentence in (i) as grammatical using cartography, as in our (14) above:

(i) A university is the kind of place [<sub>ForceP</sub> in which<sub>i</sub> [<sub>TopP</sub> **that kind of behavior**<sub>j</sub> [<sub>TP</sub> we cannot tolerate **t<sub>j</sub>** t<sub>i</sub>]]].

However, our native speakers consulted find this sentence unacceptable as the one in (15c).

(non-assertive)/non-factive (assertive) or referential/non-referential distinction, as argued by truncation approaches (cf. Haegeman 2006 and De Cuba & Ürögdi 2010, respectively). Emonds's (2004) concept of 'root-like indirect discourse embedding' (RIDEs) does not cover the whole picture either (cf. Heycock 2006). As it has been pointed out when introducing Serbian data in chapter 4, unlike English, which was said to be (syntax-)configurational, Serbian belongs to the group of the so-called discourse-configurational languages characterized by a relatively free word order. According to É. Kiss (1995: 6), a language is considered to be discourse-configurational if topic or focus is expressed by means of a structural relation, i.e. by being related to a certain structural position in the former case, or by movement to a certain structural position in the latter case, or both topic and focus are derived by movement. However, there are numerous variations among languages and there is no single discourse- or syntax-configurational type (Pensalfini 2004, Cruschina 2009, *inter alia*).

Since, as already pointed out in chapter 4, we assume that TOP is a form of scrambling which, however, has interpretative effects, i.e. it marks the fronted constituent as a sentence topic (the entity the sentence is about), we readily adapt the observation of Jiménez-Fernández & Miyagawa (2014), presented in section 5.2.3.2, to the mechanism developed in our account. Namely, unlike English which belongs to the group of agreement-prominent languages, Serbian can be said to belong to the group of discourse-prominent and agreement-oriented languages. In other words, unlike in English, the non-phase head T head in Serbian can inherit an edge (discourse) feature from the phase head C, in addition to agreement features. The generalization which also follows from our examples is that TOP (as a RT) is not compatible with syntactic contexts containing operators since TOP itself contains it (Haegeman 2012, Authier & Haegeman 2014, *inter alia*), unlike in Serbian, at least, at first sight. As already pointed out, TOP is assumed to contain an anaphoric operator which binds a null constant (Rizzi 1997: 292). The assumption is that these operators compete for the same position, presumably Spec, CP, as argued by Jiménez-Fernández & Miyagawa (2014). Assuming that it belongs to the group of discourse-prominent and agreement-oriented languages, what seems to happen in Serbian is that it is possible for an edge feature to be inherited by the non-phase head T, which creates a new position for TOP, hosting its operator. Thus, T inherits an edge feature from the root C, C being endowed with it in accordance with the Edge Feature Condition stated in (11). This edge feature licenses the TopP in Spec, T. A head can have as many specifiers as it has features to license

them (Chomsky 1995b: 286). Thus, T ends up having two Specs, viz. TopP and the subject DP (Chomsky 1995b, 1998: 16), since both word orders are acceptable in the context, e.g. *There are only notebooks left on the table*, as shown in (23b) and (23b'), and illustrated together with the ungrammatical English equivalent in (24) by the tree-diagram:

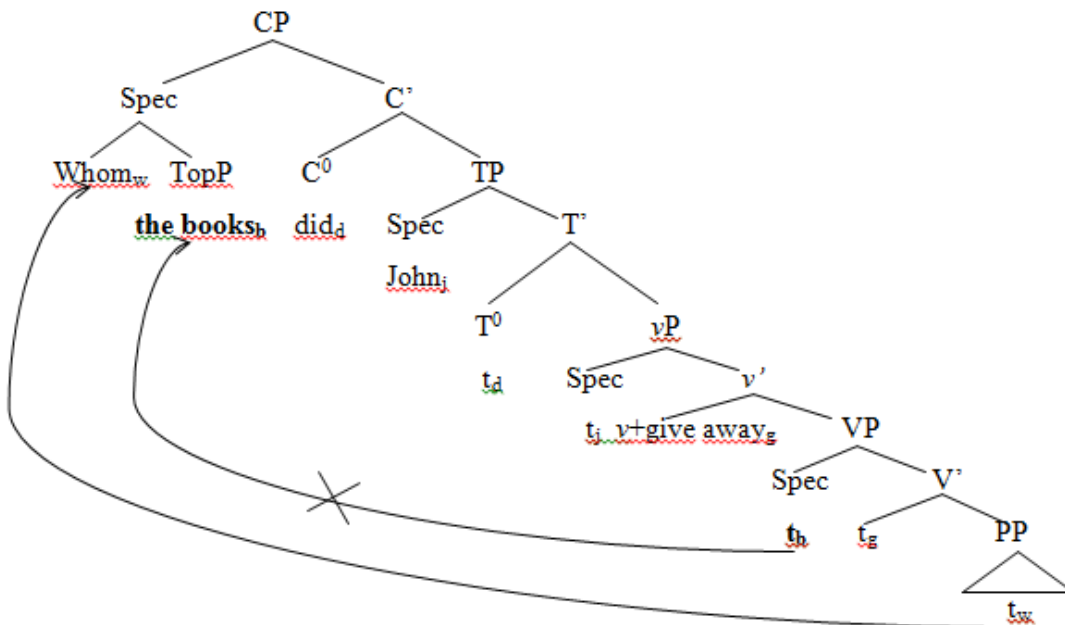
(23) Wh-movement:

a) \*Whom **the books** did John give away to?

a) Kome je<sup>195</sup> **knjige** Jovan dao?

a') Kome je Jovan **knjige** dao?<sup>196</sup>

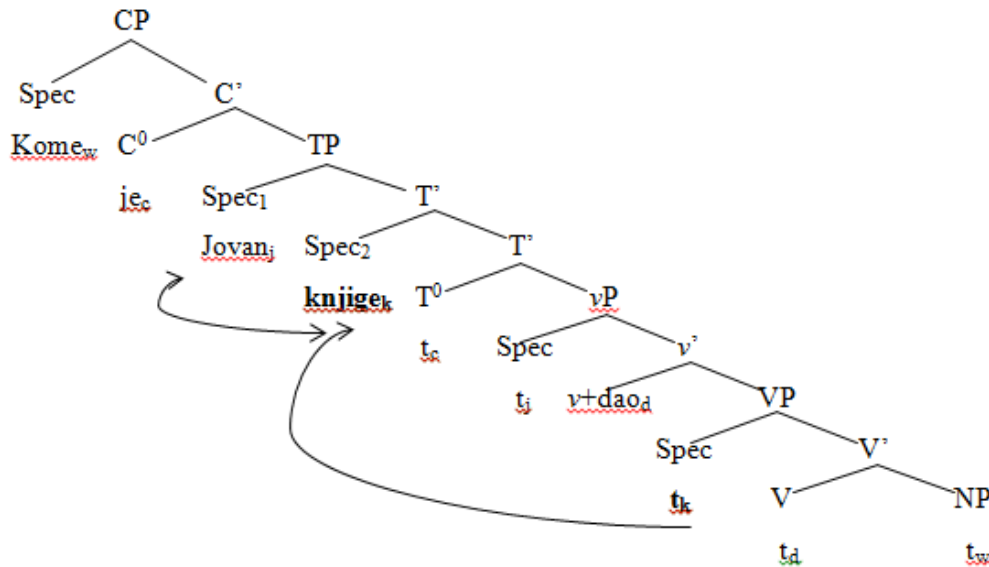
(24) a)



<sup>195</sup> The movement of clitics will be addressed in the following section.

<sup>196</sup> In the given context, it is also possible to ask: *Kome je Jovan dao knjige?* since, as argued [+c] does not trigger movement, and the constituent marked by it is not in the unmarked presuppositional structure, 'kome' bearing the sentential stress.

b) & b')



Since T is not a phase head, we assume that it cannot create a new position for the TopP other than its Spec. According to Richards (2006/2011), given the availability of multiple specifiers on C, the reason non-phase functional heads exist at all is to receive features from phase heads,<sup>197</sup> disallowing either phase heads or non-phase heads to occur in succession. The remaining examples will be bracketed in (25). The English equivalents are left out. The two-headed arrow indicates that the subject and the topicalized phrase can swap places.

(25) a) Head-movement:

[<sub>CP</sub> Može li [<sub>TP</sub> [<sub>Spec1</sub> Jovan [<sub>Spec2</sub> **ovakvo ponašanje<sub>p</sub>** tolerisati **t<sub>p</sub>**]]]]?

b) TOP in Factive Complements:

[<sub>TP</sub><sup>198</sup> Jovan žali [<sub>CP</sub> što je [<sub>TP</sub> [<sub>Spec1</sub> Marija [<sub>Spec2</sub> **ovu knjigu<sub>k</sub>** pročitala **t<sub>k</sub>**]]]]].

c) TOP in Central Adverbial Clauses:

[<sub>CP</sub> Dok je [<sub>TP</sub> [<sub>Spec1</sub> Jovan [<sub>Spec2</sub> **ovaj rad<sub>r</sub>** revidirao **t<sub>r</sub>** prošle nedelje, setio se druge analize]]]].

<sup>197</sup> Since it is the only way to meet the conflicting requirements of transfer (spell out) and valuation, as explained in section 2.2.

<sup>198</sup> Or CP. Friedemann & Rizzi (2000: 116) argue that in the adult language system, ForceP (the highest projection of the split CP as proposed by Rizzi 1997) is always projected because it is 'the necessary end point of syntactic representations'.

d) TOP in Relative Clauses:

[<sub>CP</sub> Da li ti je [<sub>TP</sub> Marija pokazala [<sub>NP</sub> metlu [<sub>CP</sub> s kojom je [<sub>TP</sub> [<sub>Spec1</sub> Jovan [<sub>Spec2</sub> **ove** **stepenice**<sub>s</sub> čistio **t<sub>s</sub>**]]]]]]].

The example in (26a) shows that the movement of the topic to Spec, T has A-properties in that it ‘repairs’ (26b), i.e. it makes the intended co-reference possible.

(26) a) Kome je **političara<sub>i</sub>** njegova<sub>i/j</sub> žena kritikovala?  
 To whom AUX.CL politician.ACC his wife.NOM criticized  
 ‘To whom was the politician criticized by his wife?’

b) \*Kome je njegova<sub>i</sub> žena kritikovala **političara<sub>i</sub>**?  
 To whom AUX.CL his wife.NOM criticized politician.ACC  
 ‘To whom did his wife criticize the politician?’

The topicalized phrase also has wide scope, as illustrated in (27):

(27) Kome je **neku primedbu** svaki nastavnik dao? (∃ > ∀)  
 To whom AUX.CL some remark every teacher gave?  
 ‘Who was given some remark by every teacher?’

The meaning of the question is that there exists a single remark such that every teacher in the relevant set gave. In the case of ‘svaki nastavnik’ having wide scope reading, the interpretation would be that every teacher in the relevant set gave a remark, possibly different.

The following two patterns, given in (28), remain to be accounted for. Examples (16b) and (16b’) are repeated here as (28a) and (28a’), whereas examples (16d) and (16d’) are repeated as (28b) and (28b’), respectively.

(28) a) \*<sub>[ForceP [TopP **The books** [<sub>FinP</sub> whom [<sub>Fin</sub> did [<sub>TP</sub> John give away to **t**]]]]]]?]  
 a’) ?<sub>[ForceP [TopP **Knjige**<sub>i</sub> [<sub>FinP</sub> [<sub>Fin</sub> je [<sub>TP</sub> [<sub>Spec1</sub> FocP kome<sub>j</sub> [<sub>Spec2</sub> Jovan dao **t<sub>i</sub> t<sub>j</sub>**]]]]]]]]?]  
 b) \*<sub>[ForceP [TopP **This kind of behavior** [<sub>FinP</sub> [<sub>Fin</sub> can [<sub>TP</sub> John tolerate **t**]]]]]]?]  
 b’) ??<sub>[ForceP [TopP **Ovakvo ponašanje** [<sub>FinP</sub> [<sub>Fin</sub> može li [<sub>TP</sub> Jovan tolerisati **t**]]]]]]?]</sub></sub></sub></sub>

Fin encodes finiteness and cannot host a *wh*-word or encode clause typing. Fin is a phase head, but in English, due to agreement-prominence, it cannot give a discourse feature to its

complement T and make room for the *wh*-expression in order to balance the phase, which takes place in Serbian, which is discourse-prominent and agreement-oriented. The irrelevant ordering of ‘kome’ and ‘Jovan’ supports the assumption that they are both found in Specs of TP, as shown in (29):

(29) ?[<sub>ForceP</sub> [<sub>TopP</sub> **Knjige**<sub>i</sub> [<sub>FinP</sub> [<sub>Fin</sub> je [<sub>TP</sub> [<sub>Spec1</sub> Jovan [<sub>Spec2</sub> FocP kome<sub>j</sub> dao t<sub>i</sub> t<sub>j</sub>]]]]]]]?

In (28b), the question operator interferes with the operator licensing the topicalized expression. As for (28b’), the position of the clitic, on the one hand, and the absence of an RP, on the other hand, suggest that this may be a clitic-delay case, as argued by Marković & Milićev (2012, to appear), as presented in section 4.1.1. In other words, the topicalized phrase represents a separate intonational phrase (IP).

In conclusion, what follows from our data and the observation made by Jiménez-Fernández & Miyagawa (2014) is that Serbian, unlike English, allows for TOP in both assertive and non-assertive contexts due to the (parametric) syntactic possibility of endowing the non-phase T head with an edge (discourse) feature which enables it to license the TopP in its Spec.

Let us now consider the derivation of LD in English and Serbian.

### 6.3 Deriving HTLD in English and Serbian and CLD in Serbian

As argued in chapters 3 and 4, one type of LD, termed Hanging Topic Left Dislocation (HTLD), is found in English, and two types of LD, termed Hanging Topic Left Dislocation (HTLD) and Contrastive Left Dislocation (CLD), are identified in Serbian.

HTLD in both English and Serbian exhibits parallel behavior with respect to the lack of case connectivity between the left-dislocated constituent and the RP, illustrated in (30a) and (30b), respectively. The left-dislocated constituent is always in the default (Nominative) case.

(30) a) **Maria**/\***To Maria**, John gave **her** a present.  
 b) **Marija**/ \***Mariji**, Jovan **joj** je dao poklon.  
 Maria.NOM/Mariji.DAT John.NOM her.CL.DAT AUX gave present

However, unlike in English where the RP is a (full) personal pronoun in its canonical position, in Serbian, the situation is much more complex. The RP is a second-position clitic pronoun if



marked by Dative or Accusative, the full pronoun induces focus reading, as illustrated in (31a) and (31b), respectively. Capitals indicate the sentential stress.

- (31) a) **Jovan**, Marija **ga** voli.  
 John.NOM, Maria.NOM him.CL.ACC loves  
 a') ?**Jovan**, Marija voli **NJEGA/ \*ga**.  
 John.NOM Maria.NOM loves him.ACC him.ACC.CL  
 a'') ?**Jovan**, Marija **NJEGA** voli.  
 John.NOM Maria.NOM him.ACC loves  
 'John, Maria loves him.'
- b) **Jovan**, Marija **mu** veruje.  
 John.NOM Maria.NOM him.CL.DAT trusts  
 b') ?**Jovan**, Marija veruje **NJEMU**.  
 John.NOM Maria.NOM trusts him.DAT  
 b'') ?**Jovan**, Marija **NJEMU** veruje.  
 John.NOM Maria.NOM him.DAT trusts  
 'John, Maria trust him.'

If the RP is marked by some other case, due to the presence of a preposition (proclitic) the RP has to take its full form and it can occur in its canonical position, or precede the verb, as given in (32) (from section 4.1.1):

- (32) a) **Jovan**, Marija ide u bioskom večeras **s njim**.  
 John.NOM, Maria.NOM goes to cinema tonight with him.  
 a') **Jovan**, Marija ide **s njim** u bioskom večeras.  
 John.NOM, Maria.NOM goes with him to cinema tonight  
 'John, Maria is going with him to the cinema tonight.'

In addition, the RP in the case of Serbian HTLD can be a demonstrative in its canonical position, not giving rise to any alternatives which are under consideration in the discourse and eliminating them, as confirmed by our corpus, given in (33) (cf. examples in (49) from section 4.2.2):

- (33) a) **Što se tiče tog belega**, mislim da je **to** jedno mnogo složenije pitanje.  
 As for that stigma, think-I that is that one much more complex issue  
 ‘As for that stigma, I think that is a much more complex issue.’

In the case of the other type of LD identified in Serbian, *viz.* CLD the RP is a full personal pronoun or a demonstrative occupying the left-edge position of the clause and binding the clause-internal gap. The RP is marked by contrastive stress (hence the full form) and gives rise to alternatives which are under consideration in the discourse and eliminates them, as showed by our corpus. Case matching between the left-dislocated constituent and the RP is optional, as confirmed by our respondents and the corpus.

- (34) **Jovan/ Jovanu, njemu/ tom** Marija ne veruje t.  
 John.NOM/ John.DAT him.DAT DEM Maria.NOM not trusts  
 ‘John, Maria doesn’t trust him/someone like that.’

Both HTLD and CLD allow for resuming with an epithet phrase (as illustrated in (20) from section 4.1.2, the difference being that in the case of CLD, the epithet phrase (the demonstrative) is marked by contrastive stress and raises alternatives in the discourse.

Finally, CLD allows for a wider range of phrasal categories to be left-dislocated than HTLD (a fact still unaccounted for in the literature), as illustrated in section 4.1.1. The explanation could lie in the fact that contrastive topics are in a way focal as well in the sense that they raise alternatives in the form of sentences or propositions at the moment of utterance, i.e. the fact that every alternative member of the introduced set is associated with a potential focus value considerably increases chances of its identification in the discourse than in the case of the simple reference denoted by an expression, usually a nominal one.

We assume that LD topics (both HTLD and CLD) are licensed by a morphologically null LD head realized as *pause* or *comma intonation*, as proposed by Emonds (2004), presented in section 5.2.3.1. Since, on the one hand, we assume that the heads of left-dislocated constituents are not licensed by binding or movement<sup>199</sup> (as required by the Empty Category Condition), and on the other hand, they are a-categorial (cf. (7) from section 3.1.1.1 and (5) from section 4.1.1

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<sup>199</sup> Both the left-dislocated element and the RP have to be present in the numeration, otherwise the Inclusiveness Condition is violated, which will be taken up shortly.

exemplifying what categories can be left-dislocated in English and Serbian, respectively), thus not allowed to be overt (by the Morphemes as Category Condition), the only way for these two conflicting conditions to be met is for the LD head to be realized as ‘a pause potential’ or ‘comma intonation’.

LD projections are adjoined to the clausal CP, not IP as argued shortly further in the text. Given this assumption, it is expected that recursive LD projections or multiple dislocations are allowed. Indeed, in English more than one DP can be left-dislocated, each resumed by a co-referential pronoun in its canonical position in the clause, as illustrated in section 3.1.1.1, repeated here as (35):

(35) (As for) **Bill, Sue and that damn snake**, he told **her** to get **it** out of their sleeping bag.

In Serbian, the judgments regarding HTLD are rather inconclusive with almost half of the respondents finding it acceptable (from section 4.1.1):

(36) ?**Što se tiče Jovana, Marije i auta**, poklonila **mu** **ga** je.  
 As for John Maria and car, gave-she him.CL.DAT him.CL.ACC AUX  
 ‘As for John, Maria and the car, she gave it to him.’

As for CLD, the dislocation of a co-ordinated NP is possible, as illustrated in (37):

(37) **Mariji, Ani i Jovanu, njima** je nastavnik dao nagradu.  
 Maria.DAT Anna.DAT and John.DAT, them AUX teacher gave reward  
 ‘Maria, Anna and John, the teacher gave them the reward.’

Regarding where the LD projection gets attached, consider the example of embedded LD from section 3.1.1.2, repeated here as (38a) and its Serbian equivalent (38b):

(38) a) I said that **my father, he** was tight as a hoot-owl.  
 b) Rekao sam da (je) **moj otac, on** je ćutao kao zaliven.

As argued by Anagnostopoulou (1997: 167), embedded LD is permitted in CP-recursion contexts, such as the ones of the so-called ‘bridge verbs’ such as ‘say’ and ‘think’, otherwise examples in (39) should be grammatical, i.e. LD should be able to attach to a TP/IP:

- (39) a) \*I acknowledged that **my father, he** was tight as a hoot-owl.  
 b) \*Priznao sam da je **moj otac, on** je ćutao kao zaliven.

This could be taken as an argument that HTLD always adjoins to a CP. As for CLD in Serbian, we assume that it is also attached to a CP since the RP is topicalized (based on subjacency effects, as argued below), and what licenses TOP in the mechanism developed here is the edge feature on Force. CLD cannot co-occur with HTLD either.

As it has been illustrated in (31), in Serbian HTLD, an RP if marked by Dative or Accusative is typically a clitic obligatorily found in the second position in the clause (its intonational phrase (IP)), and this is a PF requirement, as argued by Stjepanović (1999) (cf. examples (13) and (14) from section 4.1.1). We follow Bošković (2001) in assuming that clitics are specified in the lexicon for their phonological properties,<sup>200</sup> in particular that they must be right-adjacent to an I-phrase boundary and that they must be suffixes in the sense that they must follow its host.

In order to avoid losing its label (cf. section 2.2), thus not being identifiable for further operations as predicted by the labelling algorithm proposed by Chomsky (2008: 145), given in (40) below, we follow Boeckx & Gallego (2008) in assuming that the clitic as a head should project, i.e. it should be an XP (not head) movement:

(40) Labelling Algorithm:

- a) In  $\{H, \alpha\}$ , H an LI [lexical item], H is the label  
 b) If  $\alpha$  is internally merged to  $\beta$ , forming  $\{\alpha, \beta\}$ , then the label of  $\beta$  is the label of  $\{\alpha, \beta\}$ .

When two lexical items (heads) merge, either may project according to (40a). When a linguistic item  $\alpha$  is internally merged to a non-linguistic item  $\beta$  (e.g. a CP or TP), according to (40a),  $\alpha$  is the label, whereas according to (40b), which is relevant here,  $\beta$  is the label. However, if  $\alpha$  is an XP instead of a head, it forms a two-segment category with the host YP (as argued in section 2.2) (labelled as an ordered pair), the label of which is determined trivially, as either the label of XP,

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<sup>200</sup> Bošković (2001: 81, fn. 79) points out that the lexical properties Serbo-Croatian clitics are strictly phonological, i.e. there is no significant difference between the syntactic and the phonological attachment of clitics. Like other lexical elements they undergo movement driven by feature checking.

or the label of YP, satisfying the output conditions (if the interpretation of the structure is actually assigned).<sup>201</sup>

Torrego (1985) and Uriagereka (1988) propose clitics are determiners. They do not occur in thematic positions, but: adjoined to Infl (Kayne 1991, 1994), or to  $v^*$  (Torrego 1998), or occur in F (lower than C, higher than Infl) (Raposo & Uriagereka 2005, Uriagereka 1995, 1988), in a clitic projection (Sportiche 1998, Zubizarreta 1999). They move for checking (Torrego 1998, Rizzi 1993) or for PF-requirements (Raposo & Uriagereka 2005). However, Serbian is a language for which it is said not to have the class of determiners. It exhibits a wide range of types of clitic phenomena, such as pronominal clitics, verbal auxiliary clitics, other clausal domain clitics such as ‘li’ (cf. fn. 111). Since, for example, the pronominal clitic ‘ga’ (him) is the weak form of the strong or full pronoun ‘njega’ (him) and the verbal auxiliary clitic ‘je’ (is) is the weak form of the full verb ‘jeste’ (is), we will take clitics to be maximal projections labeled as the category of their corresponding full forms.<sup>202</sup>

According to our mechanism, the object clitic is marked [+a, -c] in the numeration. [+a] is valued, but uninterpretable, thus active, making the phase unbalanced. However, as argued in previous sections, [+a] does not trigger movement. In the case of Serbian clitics, movement to the relevant host (head) is triggered by the PF-requirement that a clitic occupy the second position in its intonational phrase. In (41), the relevant head is T.

- (41) **Jovan<sub>i</sub>**, [<sub>CP</sub> [<sub>TP</sub> Marija [<sub>T</sub> **mu<sub>i</sub>** je<sup>203</sup> [<sub>VP</sub> poklonila auto **t<sub>i</sub>]]]]].  
 John.NOM Maria.NOM him.CL.DAT AUX.CL gave car  
 ‘John, Maria gave him a car.’**

Now, the questions pending answers are: how the pragmatic features get checked and how co-reference with the left-dislocated constituent is established.

RPs are traditionally considered to be (operator) bound by their antecedent in an A'-position, and unlike ‘regular’ pronouns, they cannot freely choose a contextually salient referent

<sup>201</sup> Labelling applies freely sometimes, however, yielding deviant expressions. The outcome meets the empirical conditions on the internal grammar if these interpretations are actually attributed (Chomsky 2008).

<sup>202</sup> ‘li’ is a conversational particle belonging to the class of complementizers.

<sup>203</sup> The fact that the auxiliary clitic ‘je’ is always pronounced last in the cluster of clitics is attributed to some restriction at the level of PF. The evidence shows that it is actually higher in syntax, i.e. outside VP, than pronominal clitics, which are part of VP (see Bošković 2001, 2006 and Halupka-Rešetar 2011: fn.3, and the references therein).

(cf. fn. 49). RPs in English and Serbian HTLD are insensitive to islands, i.e. an island boundary can come between an RP and its left-dislocated antecedent without cancelling the intended co-reference, as illustrated by examples in (23) from section 3.1.2 and examples in (30) from section 4.1.3, respectively.<sup>204</sup> For the purposes of illustration, let us take an example of HTLD where the RP is found within a complex NP island (an English sentence and its Serbian counterpart), given here in (42a) and (42b), respectively:

- (42) a) [<sub>LDP</sub> **John**<sub>i</sub>, [<sub>CP</sub> [<sub>TP</sub> we [<sub>VP</sub> heard [<sub>DP</sub> the rumour [<sub>CP</sub> that [<sub>TP</sub> Maria [<sub>VP</sub> loves **him**]]]]]]]]].  
 b) [<sub>LDP</sub> **Jovani**<sub>i</sub>, [<sub>CP</sub> [<sub>TP</sub> (mi) [<sub>VP</sub> čuli smo [<sub>DP</sub> glasine [<sub>CP</sub> da **ga**<sub>i</sub> [<sub>TP</sub> Marija [<sub>VP</sub> voli **t<sub>i</sub>**]]]]]]]]].

In the numeration, the RP is specified for [+a, -c], and its antecedent, the left-dislocated element, carries the corresponding pragmatic features. The Feature Balance applies allowing the derivation to continue. As it is well known, unlike movement or Internal Merge which can use an escape hatch if available, Agree is subject to locality (the PIC),<sup>205</sup> i.e. islands do not block movement, but Agree. Within the phase theory of Chomsky (2001a), Boeckx (2003: 2-3) points out that features of the probe and goal may interact in three ways, given in (43):

- (43) a) Features *Match* (e.g. there are  $\varphi$ -features on a subject NP that match those on finite T).  
 b) (Properties of) features trigger *Agree* (e.g. the values of the  $\varphi$ -features of the subject NP are transmitted to T).  
 c) (Properties of) features trigger *Move* (the subject NP raises to Spec, TP).

Now, Agree operates under Match, but not every Match involves Agree (Chomsky 2000: 122). To support the separation of the two operations, Chomsky gives an example of Icelandic Quirky subject constructions, what he terms 'defective intervention effects'. Although serving as a subject, a quirky subject cannot trigger agreement with the finite verb, as shown in (44):

- (44) Stelpunum                      var              hjálpað.  
       the girls.DAT.PL.FEM was.3SG helped.NEUTER.SG  
       'The girls were helped.'

<sup>204</sup> Cf. also Lavine (2003), for resumption in Slavic.

<sup>205</sup> The phenomenon of Long-Distance Agree (LDA) refers to the configuration: [...V $\varphi$ <sub>i</sub> ... [<sub>XP</sub> ...DP $\varphi$ <sub>i</sub> ...]], where a finite verb from the matrix clause agrees with the  $\varphi$ -features of a DP in the subordinate clause. The general assumption is that the XP allowing for LDA can be a VP,  $\nu$ P, TP, but not a CP (cf. Boeckx 2009: 5-6). However, there is evidence that Agree crosses a finite CP boundary in control constructions (cf. Landau 1999 and his subsequent work, Bošković 2003, 2007, and Miškeljin 2012).

Being closer to the verb, the presence of the quirky subject NP blocks agreement of the verb with the nominative NP, as shown in (45a), otherwise established in (45b):

- (45) a) *Mér fannst/\*fundust henni leiðast þeir.*  
 me.DAT seemed.3SG/3PL her.DAT bore they.NOM  
 ‘I thought she was bored with them.’
- b) *Mér virðist/virðast þeir vera skemmtilegir.*  
 me.DAT seem.3SG/3PL they.NOM be interesting  
 ‘It seems to me that they are interesting.’

The only way to explain this intervention effect in (45b) since the quirky element cannot trigger agreement with the verb, is to assume that Match is independent of Agree. This is the assumption we adopt to explain the co-reference between the left-dislocated constituent and the RP in the case of English and Serbian HTLD. Since there is no case connectivity and RPs are found in their canonical positions in English, whereas in Serbian, if they are clitic, they move to the relevant host in the second position in their intonational phrase in order to prevent a crash at the PF, following Boeckx (2003), we assume that the co-reference between the left-dislocated constituent and the RP is established via Match without Agree.<sup>206</sup>

When the RP in Serbian is marked with a case other than dative or accusative, it can occur in the canonical or in an intermediate position, as illustrated in (32). Since cases other than nominative, dative and accusative occur in a combination with a preposition, such as the one illustrated (genitive), the RP is case marked by the preposition. We assume that the intermediate position is adjoined to *vP* since the order of the RP and the adverb ‘puno’ is irrelevant, as shown in (46b):

- (46) a) [<sub>LDP</sub> **Jovan**<sub>i</sub>, [CP [<sub>TP</sub> Marija [<sub>vP</sub> **od njega**<sub>i</sub> [<sub>vP</sub> puno [<sub>VP</sub> očekuje **t<sub>i</sub>**]]]]]]]  
 Jovan.NOM Maria.NOM of hum a lot expects  
 ‘John, Maria expects a lot from him.’
- b) [<sub>LDP</sub> **Jovan**<sub>i</sub>, [CP [<sub>TP</sub> Marija [<sub>vP</sub> puno [<sub>vP</sub> **od njega**<sub>i</sub> [<sub>VP</sub> očekuje **t<sub>i</sub>**]]]]]]]

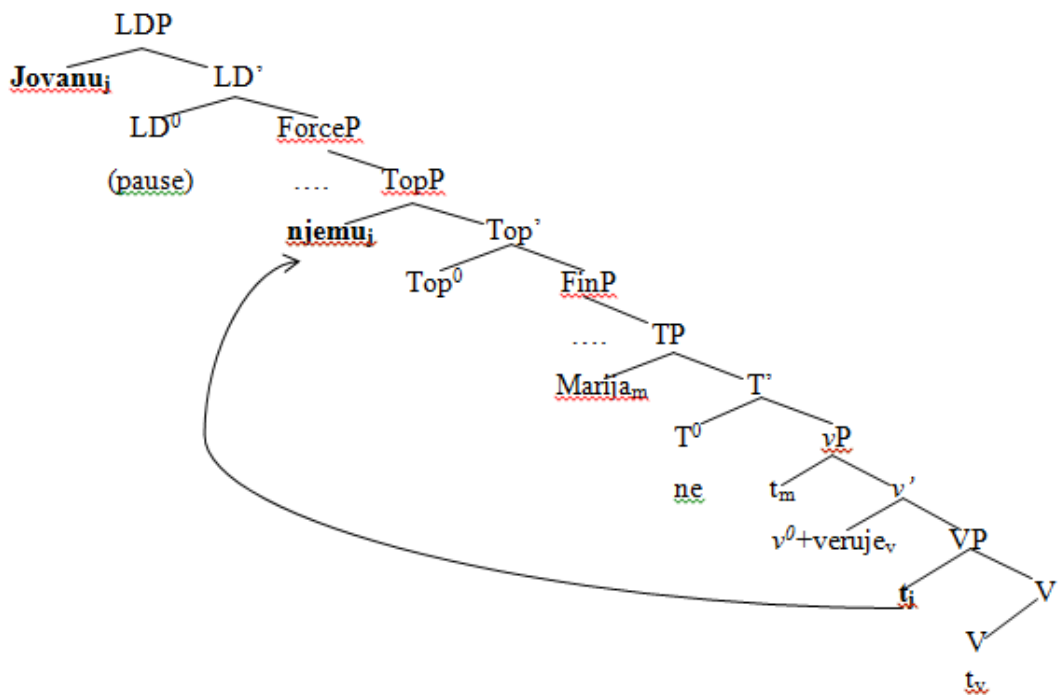
<sup>206</sup> As explained in section 2.2, Match refers to non-distinctness, not strictly speaking identity. In other words, features which match are the same features, e.g. [+a], independent of their value.

Therefore, this suggests that this is not movement of the RP, but its adjunction.

Unlike HTLD, CLD in Serbian exhibits island effects since the RP (a full/strong personal pronoun or demonstrative) moves to the left edge of the clause, as illustrated in (31) from section 4.1.3. According to Goodluck & Stojanović (1996), Serbo-Croatian shows both weak and strong island effects under resumption. The derivation of (34) is given in (47) and illustrated by the tree-diagram in (48):

- (47) [LDP **Jovanu<sub>i</sub>**, [ForceP [TopP **njemu<sub>i</sub>**<sub>[(u, val)+a, (i, uval)+c]</sub> [Top0[(i, uval)+a, (u, val)+c] [FinP [TP Marija  
 John.DAT him.DAT Maria.NOM  
 ne [<sub>VP</sub> veruje **t<sub>i</sub>**]]]]]].  
 not trusts  
 ‘John, Maria doesn’t trust him.’

(48)



The RP is (contrastively) accented (in the numeration). Its canonical position is in the unmarked presuppositional structure (as explained in section 6.1), and in order to get the right interpretation, it has to move outside this structure. This [+c] pragmatic feature (parasitic on [+a]) is interpretable, but unvalued, making the RP active (or a goal), but it does not drive its



movement, as explained in section 6.1. It becomes topicalized due to the edge or discourse feature assigned to C (Force) in the numeration for the purposes of interpretation which licenses the TopP (the head of which is the probe). The RP ends up in the operator position binding its gap. For this reason the clustering of RPs is not allowed (there is no multiple CLD). As shown in section 4.2.3, although they both mark contrastive topics, CLD and TOP have different discourse distributions, which justifies the attaching of the LDP to the ForceP. The co-reference between the left-dislocated element and the RP is established via Match if there is no case connectivity between the left-dislocated element and the RP, or via Match+Agree if the left-dislocated element and the RP are marked with the same case which the left-dislocated element gets from the RP via Agree.<sup>207</sup> Agree crosses the CP boundary, which has been evidenced in the case of control constructions in Serbian (cf. Miškeljin 2012 drawing on Landau 1999, 2004). However, this case matching in Serbian is optional, which should be the subject of further research.

Since reconstruction is also considered to be diagnostic of movement, it has to be addressed here. Since we assume that it is the RP that moves and that the left-dislocated element is base-generated in its surface position (which is the only way to avoid violating the Inclusiveness Condition), we have to assume that reconstruction applies since the RP and the left-dislocated element are co-indexed, and the heaviest element in terms of its content in such a (co-indexed) chain is reconstructed, i.e. the left-dislocated element is lowered to the right to get the appropriate structure for the LF interpretation (Vat 1997).<sup>208</sup> As it was shown in section 4.1.2.1, CLD exhibits reconstruction effects with respect to Condition A of Binding Theory, whereas it exhibits anti-reconstruction effects with respect to Condition C. Cross-linguistically, reconstruction (considered a unitary phenomenon) as a diagnostic tool gives a perplexing picture rather than giving answers. For example, Rouveret (2008) notes reconstruction effects for anaphoric and pronominal binding by quantifiers, but no reconstruction effects for Condition C in Welsh. Krapova (2010) observes no reconstruction effects for binding and Condition C in Bulgarian, whereas Guillot & Malkawi (2006) note reconstruction effects even with RPs

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<sup>207</sup> According to Van Riemsdijk & Zwarts (1974/1997) and Van Riemsdijk (1978), the dislocated element ‘attracts the case’ from the RP.

<sup>208</sup> Assuming that the left-dislocated element moves from the rightmost position, then leaves an RP immediately before reaching its landing site is problematic due to the Inclusiveness Condition. According to Vergnaud (1974), both the left-dislocated XP and the RP are base-generated in a sisterhood relation. They move to Spec, CP (or TopP) from where the XP moves on. The question is what would motivate the further movement of the XP under the current theory.

contained in strong islands in French and Jordanian Arabic. Until a deeper understanding of this phenomenon is arrived at, it should not be considered conclusive evidence.

## 7. Concluding Summary and Pending Research

The dissertation has described syntactic, information-structural and discourse properties of the structures of TOP and LD in English and Serbian and offered a generative account of the data by employing a hypothetico-deductive or top-down method, the generative framework (with focus on the Minimalist Program and Phase Theory). The analysis is not contrastive in the sense that we are looking for English-Serbian counterparts or vice versa, but the *tertium comparationis* are the phenomena of topicalization and left dislocation in the languages in question. An important contribution of the dissertation is laying out the fundamental diagnostics of differentiating between the two variants of LD identified in Serbian, which has not been discussed in the literature so far. Our predictions were tested against various sources of language data such as examples from literature, (electronic) newspapers, blogs, message boards, Google searches, radio program transcripts as well as elicited examples in the form of questionnaires. Eliciting sentences is an indispensable source of data since the aim of generative grammar is to formulate a grammar that produces all of the (theoretically) possible sentences in a language (and all languages), thus relying exclusively on data obtained from various forms of corpora would be limiting. The collected data were subjected to descriptive statistics computation such as percentages.

TOP in both English and Serbian and CLD in Serbian are argued to mark contrastive topics, whereas HTLD in both English and Serbian is argued to be a topic-promoting device. Although they both mark contrastive topics, TOP and CLD in Serbian are shown to have different discourse distributions. After giving a critical overview of the relevant approaches to TOP and LD within the MP, our proposal is presented. It is argued that the lexicon feeds the computational system which by means of features builds structure via phases and also gives rise to displacement. An additional, pragmatic component encoding IS relations is accessed along with the PF and LF at the interface, encompassing them. The IS information comes from the numeration (in line with Aboh 2010). The notion of a topic is deconstructed in a combination of the features [+/-a(nchored), +/-c(contrastive)], similarly to López (2009), anchored in the sense of Birner & Ward (1998), and contrastive, interpreted in the (pragmatic) sense of Titov (2013) as evoking alternatives at the moment of utterance with respect to what is anchored, thus parasitic on [+a]. TOP in both English and Serbian, and CLD in Serbian mark topics [+a, +c], whereas HTLD in both English and Serbian marks topic [+a, -c]. The operation which forms the

numeration optionally adds formal and pragmatic features relevant to the derivation, which does not violate the Inclusiveness Condition. The interpretation of an element marked as a topic is the result of its featural content and its syntactic position, reflecting the interaction of syntax, prosody and pragmatics (in line with Sturgeon 2008). Pesetsky & Torrego's (2007) proposal that valuation and interpretability of features be independent concepts is adopted. Pragmatic features are drawn from the lexicon as valued but uninterpretable rendering the syntactic object containing it active for syntactic operations. Probe (pragmatic) features trigger feature checking or Agree(ment), but not displacement. It is an edge feature that drives movement. For both conceptual and empirical reasons, it is adopted that every phrase is a phase in the dynamic (contextual) sense of Bošković (2014). Following Rizzi (1997), it is assumed that when there is a TOP projection (licensed by an edge feature on C), C splits into Force and Fin, opting for a feature-checking instead of criterial approach. Two derivational conditions are important. Biskup's (2009a) modification of Müller's (2008, 2011) Feature Balance applies in the numeration requiring a one-to-one relation between features, otherwise the derivation crashes. If it is met, the derivation continues and the Phase Featuring Principle applies ensuring the cyclicity of movement without 'look-ahead' of Chomsky (1995b).

TOP in both English and Serbian is generated by movement or Internal Merge. The edge feature on C (Force) licenses the TopP if it is required for the interpretation and if it is structurally possible. Namely, building on the observation by Jiménez-Fernández & Miyagawa (2014), it is assumed that, unlike in English, the non-phase head T in Serbian can inherit an edge feature from C and license the TopP in the Spec,TP in those structures which are said to be incompatible with TOP in English due to the competition of the anaphoric operator and the operators those structures are assumed to have, presumably in the Spec,CP. The head which licenses the left-dislocated element is realized as comma intonation, as argued by Emonds (2004). HTLD in both English and Serbian is derived by base-generation of the left-dislocated constituent in its surface position (adjoined to a CP), whereas CLD in Serbian is derived by movement (also to a position attached to a CP). Namely, what moves is the RP, and then co-reference is established upon adjoining of the left-dislocated element via the operation Match or Match+Agree of Boeckx (2003), which is the only way not to violate the Inclusiveness Condition. Although both TOP and CLD mark contrastive topics, they have different discourse distributions, as shown by our corpus, thus this adjoining of a left-dislocated element is justified.

In the case of HTLD, co-reference between the left-dislocated element and the RP is established via the operation Match of Boeckx (2003). If the RP is a clitic, it moves to the second position in its intonational phrase triggered by the phonological requirement.

In a nutshell, the dissertation has made the following contributions:

- Two types of LD in Serbian are identified, *viz.* HTLD and CLD, laying out the fundamental diagnostics of differentiating between them.
- The conditions under which TOP in Serbian is possible (or not) are more precisely determined.
- Relying on a corpus, TOP and CLD in Serbian (like TOP in English) are shown to mark contrastive topics, whereas HTLD in Serbian (like HTLD in English) is shown to be a topic promoting device marking referential topics. In addition, TOP and CLD in Serbian are shown to have different discourse distributions, which was an important fact for our account of these structures.
- Our account of TOP and LD in English and Serbian unifies the idea that IS information is already present in the numeration (also empirically confirmed in a number of languages) and the fundamental assumption of the minimalist framework that structure is built by means of features in accordance with the most recent theoretical developments, *viz.* the phase theory and edge-feature driven movement.

What requires further research is:

- the exact nature of the operations of Match and Match+Agree
- the optionality of the application of Match or Match+Agree in the case of CLD
- characterizing prosodic constituents in Serbian and investigating their relation to information structure

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## Appendix 1: Questionnaire Serbian

Ovaj upitnik sadrži pitanja sa više ponuđenih odgovora. Nema tačnog ili netačnog odgovora i ne testira se vaše znanje iz gramatike. Upitnik ima za cilj da izvuče određene zaključke o strukturama u pitanjima na osnovu vaših sudova kao izvornih govornika srpskog jezika za potrebe izrade doktorske disertacije pod nazivom *Tematizacija i leva dislokacija u engleskom i srpskom jeziku*. Zarez označava svojevrsnu pauzu u govoru, odnosno prekid intonacije rečenice. Pod 'da li vam je prihvatljiva rečenica' misli se na to da li biste takvu rečenicu izgovorili u nekoj situaciji.

PITANJE	ODGOVOR
<p>Koju biste rečenicu izgovorili od ponuđenih parova rečenica? Upišite u kolonu odgovor 1, 2, 3 ili 4, gde je:</p> <p><b>1.</b> (a), nikada ne bih izgovorio/la (b)  <b>2.</b> (b), nikada ne bih izgovorio/la (a)  <b>3.</b> i (a) i (b), prednost dajem (a)  <b>4.</b> i (a) i (b), prednost dajem (b)</p> <p>a) Jovan, Marija mu ne veruje.  b) Jovanu, Marija mu ne veruje.</p> <p>a) Jovan, Marija ga voli.  b) Jovana, Marija ga voli.</p> <p>a) Jovan, Marija ide s njim u bioskop večeras.  b) S Jovanom, Marija ide s njim u bioskop večeras.</p> <p>a) Jovan, Marija o njemu razmišlja.  b) O Jovanu, Marija o njemu razmišlja.</p> <p>a) Jovan, Marija od njega puno očekuje.  b) Od Jovana, Marija od njega puno očekuje.</p>	
<p><b>2.</b> Koju biste rečenicu izgovorili? Upišite Upišite u kolonu odgovor 1, 2, 3 ili</p>	

	<p>4, gde je:</p> <ol style="list-style-type: none"> <li>1. (a), nikada ne bih izgovorio/la (b)</li> <li>2. (b), nikada ne bih izgovorio/la (a)</li> <li>3. i (a) i (b), prednost dajem (a)</li> <li>4. i (a) i (b), prednost dajem (b)</li> </ol> <p>a) Jovan, Marija ga voli. b) Jovan, Marija njega voli.</p>	
3.	<p>Koju biste rečenicu izgovorili od ponuđenih parova rečenica? Upišite u kolonu odgovor 1, 2, 3 ili 4, gde je:</p> <ol style="list-style-type: none"> <li>1. (a), nikada ne bih izgovorio/la (b)</li> <li>2. (b), nikada ne bih izgovorio/la (a)</li> <li>3. i (a) i (b), prednost dajem (a)</li> <li>4. i (a) i (b), prednost dajem (b)</li> </ol> <p>a) Jovan, njemu Marija veruje. b) Jovanu, njemu Marija veruje.</p> <p>a) Jovan, s njim se više ne vozimo. b) S Jovanom, s njim se više ne vozimo.</p>	
4.	<p>Koju biste rečenicu izgovorili od ponuđenih parova rečenica? Upišite u kolonu odgovor 1, 2, 3, 4 ili 5, gde je:</p> <ol style="list-style-type: none"> <li>1. (a), nikada ne bih izgovorio/la (b)</li> <li>2. (b), nikada ne bih izgovorio/la (a)</li> <li>3. ni (a) ni (b)</li> <li>4. i (a) i (b), prednost dajem (a)</li> <li>5. i (a) i (b), prednost dajem (b)</li> </ol> <p>a) Svog šefa, njega Jovan ne podnosi. b) Svoj šef, Jovan ga ne podnosi.</p> <p>a) Glasine o sebi, njih/to Jovan ne voli.</p>	

	b) Glasine o sebi, Jovan ih ne voli.	
5.	<p>Da li možete da shvatite da su 'Jovan' i 'njega' u rečenici (a), i 'Jovan' i 'ga' u rečenici (b) ista osoba?</p> <p>a) Glasine da je Jovan lažov, njega one uopšte ne zanimaju.</p> <p>b) Glasine da je Jovan lažov, one ga uopšte ne zanimaju.</p>	
6.	<p>Da li sledeću rečenicu smatrate prihvatljivom?</p> <p>a) Svog psa, njega svako voli.</p> <p>b) Svoj pas, svako ga voli.</p>	
7.	<p>Da li sledeću rečenicu smatrate prihvatljivom?</p> <p>Što se tiče Jovana, Marije i auta, poklonila mu ga je.</p>	
8.	<p>Da li 'njegovu sestru' možete da tumačite kao Jovanovu sestru?</p> <p>a) Jovan, njegova sestra ga je nazvala moronom.</p> <p>b) Jovan/a, njega je njegova sestra nazvala moronom.</p>	
9.	<p>Da li su vam prihvatljive sledeće rečenice?</p> <p>a) Jovana je Ana kritikovala, a da nije upoznala.</p> <p>b) Jovana, njega je Ana kritikovala, a da nije upoznala.</p> <p>c) Jovan, Ana ga je kritikovala, a da nije upoznala.</p>	
10.	<p>Da li sledeće rečenice smatrate prihvatljivim u smislu da je Jovan naderao?</p> <p>a) Bostan je obrao Jovan.</p> <p>b) Bostan, Jovan ga je obrao.</p> <p>c) Bostan, njega je Jovan obrao.</p>	
11.	<p>Da li sledeće rečenice smatrate prihvatljivim?</p> <p>a) Jovanu mislim da su mi rekli da je Marija poklonila auto.</p> <p>b) Jovana smo čuli glasine da Marija voli.</p> <p>c) Jovana Marija je devojka koja voli.</p> <p>d) Takav auto se pitam da li će Jovan pažljivo voziti.</p> <p>e) Jovana se pitam ko voli.</p>	



	<p>f) O Jovanu neosnovane glasine nerviraju Mariju.</p> <p>g) Jovana da Marija voli sve je iznenadilo.</p> <p>h) Marija verujem da voli Jovana. (u kontekstu gde razgovaramo o tome da su Marija i Ana, na primer, zaljubljene. Ana verujem da voli Marka.)</p>	
12.	<p>Da li sledeće rečenice smatrate prihvatljivim?</p> <p>a) Koga smo čuli glasine da Marija voli?</p> <p>b) Jovan je srećnik koga Marija je devojka koja voli.</p> <p>c) Šta se pitaš da li će Jovan pažljivo voziti?</p> <p>d) Jova je momak za koga se pitam ko voli.</p> <p>e) Jovan je momak kojeg da Marija voli je sve iznenadilo.</p> <p>f) Jovan je osoba o kojoj neosnovane glasine nerviraju Mariju.</p> <p>g) Marija je devojka koja verujem da voli Jovana. (u kontekstu 11h)</p> <p>h) Mariju Jovan voli i Anu.</p>	
13.	<p>Da li sledeće rečenice smatrate prihvatljivim?</p> <p>a) Marija, Jovan voli Anu i nju.</p> <p>b) Jovan, neosnovane glasine o njemu nerviraju Mariju.</p>	
14.	<p>Koju biste rečenicu izgovorili od ponuđenih parova rečenica? Upišite u kolonu odgovor 1, 2, 3, 4 ili 5, gde je:</p> <p><b>1.</b> (a), nikada ne bih izgovorio/la (b)</p> <p><b>2.</b> (b), nikada ne bih izgovorio/la (a)</p> <p><b>3.</b> ni (a) ni (b)</p> <p><b>4.</b> i (a) i (b), prednost dajem (a)</p> <p><b>5.</b> i (a) i (b), prednost dajem (b)</p> <p>a) Jovan, da ga Marija voli sve je iznenadilo.</p> <p>b) Jovan, da Marija njega voli sve je iznenadilo.</p> <p>a) Jovan, čuli smo glasine da ga Marija voli.</p> <p>b) Jovan, čuli smo glasine da Marija njega voli.</p> <p>a) Jovan, Marija je devojka koja ga voli.</p>	

	<p>b) Jovan, Marija je devojka koja njega voli.</p> <p>a) Takav auto pitam se da li će ga Jovan pažljivo voziti.</p> <p>b) Takav auto, pitam se da li će njega Jovan pažljivo voziti.</p> <p>a) Jovan, pitam se ko ga voli.</p> <p>b) Jovan, pitam se ko njega voli.</p>	
15.	<p>Da li sledeće rečenice smatrate prihvatljivim?</p> <p>a) Jovana, njega smo čuli glasine da Marija voli.</p> <p>b) Jovana, njega je Marija devojka koja voli.</p> <p>c) Takav auto, njega se pitam da li će Jovan pažljivo voziti.</p> <p>d) Jovana, njega se pitam ko voli.</p> <p>e) Jovana, njega da Marija voli Anu je iznradilo.</p> <p>f) Jovan, o njemu neosnovane glasine nerviraju Mariju.</p>	
16.	<p>Da li su vam prihvatljive sledeće rečenice?</p> <p>a) Kome je knjige Jovan dao?</p> <p>b) Knjige kome je Jovan dao?</p> <p>c) Knjige je kome Jovan dao?</p> <p>d) Tu knjigu ćemo kako razumeti?</p> <p>e) Tu knjigu kako ćemo razumeti?</p> <p>f) Može li takvo ponašanje Marija tolerisati?</p> <p>d) Takvo ponašanje može li Marija tolerisati?</p> <p>e) Da je ovaj auto Marija poklonila Jovanu sve je iznenadilo.</p> <p>f) Jovan zna da ovo cveće Marija voli.</p> <p>g) Kada sam ovu sliku videla setila sam se detinjstva.</p>	
17.	<p>Da li sledeću rečenicu smatrate prihvatljivo?</p> <p>a) U vezi s Jovanom, auto mu je Marija poklonila.</p>	
18.	<p>Koju rečenicu smatrate prihvatljivom uzimajući u obzir nastavak dat u zagradi. Velika slova znače da taj rečenični član treba naglasiti u izgovoru.</p> <p>a) Jovan, Marija voli tog LAŽOVA. (A Marka, ovog lažova ne podnosi.)</p>	

	b) Jovan, Marija voli TOG lažova. (A Marka, ovog lažova ne podnosi.)	
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## Appendix 2: Questionnaire English

This questionnaire contains multiple answer questions. There is no right or wrong answer and your grammatical knowledge is not being tested. The aim of the questionnaire is to reach certain conclusions regarding the structures in the questions below based on your native speaker judgements for the purposes of writing a dissertation entitled *Topicalization and Left Dislocation in English and Serbian*. A comma indicates a sentence intonation break. 'acceptable' means whether you would use or utter the sentence in some situation.

QUESTION	ANSWER
<p>1. Do you find the following sentences acceptable:</p> <ul style="list-style-type: none"> <li>a) I fear (that) each part John examined carefully.</li> <li>b) Do you think that socialist theory many Czechs would deny?</li> <li>c) That this house he left to a friend was generous of him.</li> <li>d) The books to whom did John give away?</li> <li>e) Whom the books did John give away to?</li> <li>f) This kind of behaviour can we tolerate?</li> <li>g) Can this kind of behaviour we tolerate?</li> <li>h) You know that this kind of behaviour we cannot tolerate.</li> <li>i) On that subject, who should I consult with?</li> </ul>	
<p>2. Do you find the following sentences acceptable:</p> <ul style="list-style-type: none"> <li>a) A big car, John bought it and a red bike.</li> <li>b) Bill, I believe the report that John met him.</li> <li>c) John, I never liked the people who believed him.</li> <li>d) John, I was wondering who liked him.</li> <li>e) John, that Susan saw him surprised me.</li> <li>f) John, an expensive picture of him would surprise me.</li> </ul>	
<p>3. Do you find the following sentences acceptable:</p> <ul style="list-style-type: none"> <li>a) Rumours about himself John doesn't like.</li> <li>b) Rumours about himself, John doesn't like them.</li> </ul>	

	c) Their own pet every child loves. d) Their own pet, every child loves it.	
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