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# Second language acquisition of Bulgarian object clitics: a test case for the interface hypothesis

Ivan Prodanov Ivanov  
*University of Iowa*

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SECOND LANGUAGE ACQUISITION OF BULGARIAN  
OBJECT CLITICS: A TEST CASE FOR  
THE INTERFACE HYPOTHESIS

by

Ivan Prodanov Ivanov

An Abstract

Of a thesis submitted in partial fulfillment  
of the requirements for the Doctor of  
Philosophy degree in Linguistics  
in the Graduate College of  
The University of Iowa

July 2009

Thesis Supervisor: Associate Professor Roumyana Slabakova

## ABSTRACT

The primary objective of this dissertation is to expand the testing ground of the Interface Hypothesis, which states that interface properties involving the syntax and other cognitive domains (such as discourse) may trigger residual optionality effects at the end-state. The target of investigation were Bulgarian object clitics whose syntactic and discursive properties provide a good testing ground for theoretical approaches to second language acquisition. Ten advanced and 14 intermediate L2 speakers of Bulgarian, as well as a control group of Bulgarian native speakers, participated in the study. The test materials included a proficiency test, a grammaticality judgment task to check syntactic knowledge of clitics, and a pragmatic felicity task. The latter was aimed at investigating the degree to which L2 learners of Bulgarian, with English as their L1, had acquired a syntax-discourse interface property of Bulgarian, namely the pragmatic function of clitic doubling. In Bulgarian, clitic doubling serves as an overt marker of topicality and ‘undoubled’ object topics are deemed infelicitous.

The results of the experiments in this dissertation present a challenge to some theoretical approaches to second language acquisition, namely the Interpretability Hypothesis and the Interface Hypothesis. The results showed that the intermediate participants did not differentiate between the felicitous and the infelicitous options in the pragmatic felicity task in a target-like manner as their responses either did not exhibit statistically significant difference or favored the response closest to the L1. However, the advanced L2 learners of Bulgarian had successfully acquired the syntax of clitics as well as the pragmatic meaning of clitic doubling in Bulgarian. They displayed target-like convergence with respect to the syntactic properties of Bulgarian object clitics and distinguished between the felicitous and the infelicitous options in the pragmatic task in a native-like manner.

The study highlights the fact that successful learning at the syntax-discourse interface cannot be excluded and a lot more research, exploring as many interface conditions as possible, needs to be done in order to validate the Interface Hypothesis as a legitimate constraint which permanently hinders native-like performance.

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Graduate College  
The University of Iowa  
Iowa City, Iowa

CERTIFICATE OF APPROVAL

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PH.D. THESIS

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This is to certify that the Ph.D. thesis of

Ivan Prodanov Ivanov

has been approved by the Examining Committee for the thesis requirement for the Doctor of Philosophy degree in Linguistics at the July 2009 graduation.

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Jason Rothman

To my parents

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The primary objective of this dissertation is to expand the testing ground of the Interface Hypothesis, which states that interface properties involving the syntax and other cognitive domains (such as discourse) may trigger residual optionality effects at the end-state. The target of investigation were Bulgarian object clitics whose syntactic and discursive properties provide a good testing ground for theoretical approaches to second language acquisition. Ten advanced and 14 intermediate L2 speakers of Bulgarian, as well as a control group of Bulgarian native speakers, participated in the study. The test materials included a proficiency test, a grammaticality judgment task to check syntactic knowledge of clitics, and a pragmatic felicity task. The latter was aimed at investigating the degree to which L2 learners of Bulgarian, with English as their L1, had acquired a syntax-discourse interface property of Bulgarian, namely the pragmatic function of clitic doubling. In Bulgarian, clitic doubling serves as an overt marker of topicality and ‘undoubled’ object topics are deemed infelicitous.

The results of the experiments in this dissertation present a challenge to some theoretical approaches to second language acquisition, namely the Interpretability Hypothesis and the Interface Hypothesis. The results showed that the intermediate participants did not differentiate between the felicitous and the infelicitous options in the pragmatic felicity task in a target-like manner as their responses either did not exhibit statistically significant difference or favored the response closest to the L1. However, the advanced L2 learners of Bulgarian had successfully acquired the syntax of clitics as well as the pragmatic meaning of clitic doubling in Bulgarian. They displayed target-like convergence with respect to the syntactic properties of Bulgarian object clitics and distinguished between the felicitous and the infelicitous options in the pragmatic task in a native-like manner.

The study highlights the fact that successful learning at the syntax-discourse interface cannot be excluded and a lot more research, exploring as many interface conditions as possible, needs to be done in order to validate the Interface Hypothesis as a legitimate constraint which permanently hinders native-like performance.

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## LIST OF ABBREVIATIONS

1<sup>st</sup> , 2<sup>nd</sup> , 3<sup>rd</sup> p. - person marker

sg. - singular number

pl. - plural number

masc. - masculine gender

fem. - feminine gender

neut. - neuter gender

pres. - present tense

past - past tense

part. - participle

pron - pronoun

refl. - reflexive clitic

FUT - future tense clitic

cl. - clitic

poss. - possessive

def. – definite article

ACC - accusative case

DAT - dative case

Q - Question particle

FT/FA - Full Transfer/Full Access Hypothesis

IH - Interpretability Hypothesis

UG - Universal Grammar

DP - Determiner Phrase

O1, 2, 3, 4 - Option 1, 2, 3, 4

n/s - not statistically significant

A 1, 2, 3, etc. - Advanced Subject 1, 2, 3, etc.

C 1, 2, 3, etc. - Control Subject 1, 2, 3, etc.

I 1, 2, 3, etc. - Intermediate Subject 1, 2, 3, etc.

# CHAPTER 1

## INTRODUCTION

### 1.1. Introduction

This dissertation investigates the L2 acquisition of a property at the syntax-discourse interface by Bulgarian L2 speakers with English as their native language. The specific target of investigation is Bulgarian object clitics whose syntactic and discursive properties provide a good testing ground for theoretical approaches to second language acquisition. Analysis of the experimental data will specifically focus on the predictions of the Interface Hypothesis (Sorace, 2006) for unavoidable learnability problems in the acquisition of interface conditions even at the ultimate stages of acquisition.

### 1.2. Hypotheses of the end-state in L2 acquisition

While the end result in acquiring one's native language is typically beyond doubt, the ultimate steady state which is attained in the second language is not homogeneous across learners and convergence with the native grammar is not inevitable.

White (1996) points to three possible outcomes with respect to the L2 end-state:

- target-convergent (subject to the same UG constraints and exhibiting the same parameter setting as the native grammar)
- target-divergent and UG constrained (some of the parameter settings are not native-like; however, the L2 grammar is still UG-constrained and displays parameter settings that are either L1-bases or belong to a grammar that is neither the L1 nor the L2)

- target-divergent and UG-unconstrained (the L2 grammar is not UG-constrained and has properties that are not attested in any native language)

Within the generative framework, there are two main trends as regards the degree of UG accessibility in L2 acquisition and the possibilities for native-like convergence. On the one hand, the advocates of the Failed Functional Feature Hypothesis (Hawkins and Chan, 1997), the Representational Deficit Hypothesis (Hawkins, 2000, 2005; Hawkins and Hattori (2007)) and the Interpretability Hypothesis (IH) (Tsimpli and Dimitrakopoulou, 2007; Tsimpli and Mastropavlou, 2008) argue for impairment in the L2 representation at the level of narrow syntax due to partial availability of UG, which can be accessed only through the L1. The more extreme version of that line of theoretical thinking argues that features and functional categories that are not instantiated in the L1 are impossible to acquire. However, more recent accounts of the partial UG availability stance (Hawkins and Hattori, 2007; Tsimpli and Dimitrakopoulou, 2007) consider only uninterpretable features (such as  $\phi$ -features on verbs and the [Case] feature), which are intrinsic to the linguistic module and necessary for syntactic computations but inapplicable at LF, to be maturationally constrained and a permanent locus of L2 divergence. In contrast, interpretable features (such as [definiteness],  $\phi$ -features on nouns, the [Q] feature in interrogatives), which are linked with categories from the Conceptual-Intentional system and thus visible at LF, are UG-accessible at all times.

On the other hand, the Full Transfer/Full Access Hypothesis (FT/FA) (Schwartz and Sprouse 1994, 1996) maintains that UG is fully accessible for L2 learners and the most likely outcome in second language acquisition is a native-like grammar. FT/FA attaches equal significance to the L1 and to the L2 input. According to FT/FA, L1

constitutes the initial stage of L2 acquisition as the L1 grammar, with all its functional categories, features and feature strengths, accommodates the L2 input. However, in response to that input, ‘restructuring’ of the interlanguage takes place in a UG-constrained manner and L2 convergence is a possible end result. This should not be taken to imply inevitable native-like representations as in some cases, due to ambiguous input and the possibility for the L1 grammar to successfully accommodate the L2 data, target divergence can occur (Inagaki, 2001).

The above hypotheses are the main representatives of the ‘full access’ and ‘partial access’ views on the role of UG in L2 acquisition. However, they are mainly focused on the acquisition of narrow syntactic properties and have little to say about those cases which involve the integration of more than one linguistic module or the interaction between narrow syntax and other cognitive domains (e.g. discourse).

As observed by White (2007), recent research in generative second language acquisition has seen a shift in focus from topics such as UG accessibility, parameter resetting and, generally, acquisition of the abstract syntax, to L2 performance at the interfaces. The domain of linguistic interfaces has manifested itself as a source of persistent target divergence even at the latter stages of L2 acquisition and even when UG access has been unequivocally displayed. A strong impetus to this line of research has been given by Sorace’s (2006) Interface Hypothesis. While making predictions for L2 grammars at the end-state, that hypothesis is primarily concerned with interface conditions and places the locus of L2 divergence in the complexity of those cases where coordination between syntax and pragmatics is required. Since the main purpose of this thesis is to present experimental data on the acquisition of Bulgarian clitic doubling as a



marker of topicality, the theoretical approach which will be evaluated here is the Interface Hypothesis. The other two hypotheses (FT/FA and IH) will be used mainly for evaluating the syntactic data from a grammaticality judgment task as they are not concerned with acquisition of the interfaces. Nevertheless, if we assume that interface properties are triggered by interpretable features such as [topic shift], both the Full Transfer/Full Access Hypothesis and the Interpretability Hypothesis have their default predictions for a possible L2 convergence.

### 1.3. Dissertation objectives

The primary objective of this dissertation is to provide empirical evidence for testing the validity of the Interface Hypothesis (Sorace, 2006). The Interface Hypothesis maintains that interface properties are subject to L2 fossilization. Sorace (2005, 2006) claims that near-native L2 speakers are not target-convergent with respect to such properties and exhibit ‘residual optionality’ when the use of a syntactic structure needs to be coordinated with a discourse requirement.

Another aim of the dissertation is to establish a possible asymmetry in the acquisition of purely syntactic properties and properties at the interface of syntax and pragmatics. A comparison in the performance of the L2 learners in the two experiments presented in the dissertation (a syntactic and a pragmatic one) will provide evidence for the existence of an order in the acquisition of syntactic and interface properties and an expected delay in the acquisition of the latter.

Also, the results of the syntactic experiment will show if the predictions of the Interpretability Hypothesis (Tsimplici and Dimitrakopoulou, 2007) for L2 divergence with

respect to functional categories that are based on uninterpretable features (3<sup>rd</sup> person clitics are assumed to be a bundle of uninterpretable  $\phi$ - and case features) are borne out.

#### 1.4. Dissertation organization

This dissertation is organized in the following way: Chapter 2 presents theoretical approaches in generative second language acquisition to parameter resetting and L2 acquisition of functional categories.

Chapter 3 introduces the topic of L2 acquisition at the interfaces and describes some of the major findings of research related to L2 knowledge of internal and external interfaces.

Chapter 4 gives an overview of the syntactic and pragmatic properties of Bulgarian object clitics as well as a review of the major theoretical approaches to clitics and clitic doubling, in general, and to Bulgarian object clitics, in particular.

The next two chapters, Chapter 5 and Chapter 6, present two experimental studies on the acquisition of Bulgarian clitics which are aimed at providing empirical evidence to the theoretical questions described in chapters 2 and 3.

Chapter 5 presents a grammaticality judgment task on the L2 acquisition of the syntactic properties of Bulgarian object clitics.

Chapter 6 reports on a context sentence evaluation task which seeks to investigate the L2 acquisition of a syntax-discourse interface property in Bulgarian, namely overt topicality marking via clitic doubling.

Finally, Chapter 7 summarizes the findings of the experimental studies and evaluates the predictions of the theoretical approaches with regard to those studies.

## CHAPTER 2

### SECOND LANGUAGE ACQUISITION OF FUNCTIONAL CATEGORIES

#### 2.1. Universal Grammar and theoretical approaches to

##### L2 parameter resetting

The scientific study of second language acquisition (SLA), as pointed out by Gregg (1993), needs to provide the answer to two fundamental questions: what is the knowledge possessed by the L2 learner and how does the attainment of that knowledge take place? Therefore, a learnability model for adult second language acquisition should be established along the lines of both a property theory and a transition theory (Cummins, 1983). The property theory of SLA should account for the principles underlying the instantiation of linguistic knowledge in the mind of the learner (Robinson, 2001). The theory of Universal Grammar (UG), as developed in the generative Principles and Parameters framework, is the only well-developed theory of language competence and as such it has had tremendous influence on the field of second language acquisition. As observed by Eubank and Gregg (1995), 'for acquisition researchers working within the UG framework, there is a rich, well-developed theory of linguistic competence at hand with one enormous strong point: it is the only one there is (p.51)'.

A transition theory of SLA, on the other hand, is concerned with the changes in the state of knowledge, the triggers which cause those changes and the properties of the L2 grammar in the separate stages of L2 acquisition, culminating in the state of ultimate attainment. The application of the theoretical insights of the linguistic generative

approach to the facts observed in the process of learning a language different from one's native language has led to the creation of the field of generative second language acquisition (GSLA). Since the Principles and Parameters framework and most recently the Minimalist Program (Chomsky 1995) present the best property theory available, GSLA has emerged as the leading linguistic approach to SLA.

Central to the Principles and Parameters approach (Chomsky & Lasnik, 1993) is the existence of two components which invariably constrain human linguistic behavior and are fundamental to the innate linguistic knowledge as represented by UG. On the one hand, all human languages abide by a set of essential and strictly inviolable syntactic principles. On the other hand, a finite set of possibly binary parameters are responsible for cross-linguistic variety. UG provides two options for parameter setting and in the process of L1 acquisition, one of those options is chosen in consistency with the primary linguistic input of the specific language. The value of a single parameter is associated with a whole cluster of syntactic properties, which are simultaneously triggered upon parameter setting.

One of the fundamental questions in generative SLA refers to the extent to which the process of acquiring a non-native language resembles first language acquisition. In other words, is the unconscious grammatical knowledge of the second language the result of constraints imposed by the universal principles and parameters of UG, the biological linguistic endowment accountable for the effortless and inevitably successful L1 acquisition? Linguistic nativism as represented by UG serves as compelling evidence for the unfailing success in overcoming the 'logical problem of language acquisition' (Chomsky, 1965, 1986) whereby the insufficient and inconsistent input (this issue is also

referred to as poverty-of-the stimulus) does not hinder the attainment of ultimate native language proficiency.

However, UG advocates differ in their views on its availability in the process of learning a language different from the native one. Unlike in L1 acquisition, the final result in L2 acquisition is not so uniform and there might be optionality (co-existence of target-convergent and target-divergent forms) even at the stage of ultimate attainment (Lardiere, 1998, 2006; Prévost & White, 1999, 2000; Sorace, 2000, 2003, 2005; Goad and White, 2006; Sorace and Filiaci, 2006). At the same time, there have been examples of successful L2 acquisition of semantic entailments where poverty-of-the-stimulus obtains (Pérez-Leroux and Glass, 1999; Dekydtspotter and Sprouse, 2001; Montrul and Slabakova, 2003), which can be accounted by UG availability.

Hawkins (2008) refers to several pieces of evidence in favor of a nativist (UG-based) approach to L2 acquisition as opposed to the emergentist outlook (O'Grady, 2001, 2008; Ellis, 2002) which also supports the existence of a mental capacity responsible for language acquisition. The crucial difference between UG and the emergentist mental faculty, however, consists in the purely linguistic nature of the former in contrast to the more general cognitive capacity, which emergentists deem central to the acquisition process. In emergentism, the target L2 form 'emerges' as a result of direct experience with the relevant input, 'structural regularities of language emerge from learners' lifetime analysis of the distributional characteristics of the language input' (Ellis, 2002) whereas in nativism, it already exists as a constituent of the cognitive linguistic endowment and can get activated in a manner appropriate to the target grammar via (minimal) exposure to the input. Hawkins (2008) argues for the necessity of a specifically linguistic innate

knowledge in L2 acquisition which overrides cases of strong underdeterminacy whereby the end result cannot logically be ascribed to experience or to a general deductive property of the human mind. For that purpose, Hawkins presents two strong examples of syntactic L2 acquisition outcomes which can be convincingly attributed to innate linguistic knowledge and present a serious challenge to an emergentist account. In the first example, the outcome is successful L2 acquisition due to UG. In the second example, the outcome is neither L1-like, nor target-like (L2) performance but rather a fluctuation between two options allowed by UG.

To take one example, the knowledge which L2 learners display of the Overt Pronoun Constraint (OPC) in L2 Japanese and L2 Spanish in studies by Kanno (1997) and Pérez-Leroux and Glass (1997,1999) cannot be explained by exposure to input and L2 linguistic experience. The OPC (Montalbetti, 1984) refers to the restriction of antecedents which can bind overt and null pronouns. Overt pronouns c-commanded by a quantifier phrase cannot receive a bound variable interpretation in languages allowing null pronouns (null subjects or pro objects in clitic constructions) and the L2 input with respect to that constraint is quite scarce to trigger a successful acquisition via a deductive, non-innate approach.

A second example comes from a study by Ionin, Ko and Wexler (2004) where native speakers of Russian and Korean (languages which do not use articles) were found to supply definite and indefinite articles in a forced-choice elicitation task in a way which is not consistent with the requirement of English but is consistent with the options laid down by UG. Ionin et al. argue that UG allows for two possible grammatical meanings encoded in articles, namely definiteness and specificity. Whereas some languages (such

as English) select only definiteness to be represented in articles, others (such as Samoan) use articles for encoding specificity. Native speakers of languages with no articles (Russian and Korean) were found to fluctuate between the two options allowed by their innate linguistic knowledge rather than performing in a random, unconstrained and infinitely variable way. In the above case, as Hawkins points out, a major challenge for emergentism would be to explain how the non-linguistic cognitive deductive mechanism that emergentists adhere to fails to produce other potentially viable criteria for article identification, different from the ones that have already been attested cross-linguistically and thus allowed by UG.

The debate on UG access in second language acquisition has produced two opposing positions on the possibility for L2 acquisition replicating UG-constrained course of L1 acquisition. On the one hand, proponents of no UG access argue for the availability of UG only in the process of L1 acquisition. This accounts for the fundamental difference (Bley-Vroman 1990) between the UG-constrained native language acquisition and the strategy of pattern matching (Bley-Vroman 1997) underlying the attainment of the second language. For Bley-Vroman, the only genuine access L2 learners have to UG is through their native grammar and that is exemplified by their knowledge of UG principles and all similarly set parameters. On the other hand, advocates of UG access maintain that the innate linguistic endowment of UG is operative in second language acquisition although the extent of its involvement and its capacity for parameter resetting are still a subject of debate.

This chapter continues with a short review of the two basic views on the role of UG in L2 acquisition, namely No Parameter Resetting and Parameter Resetting.

Although the initial debate was between two extreme versions, namely absolute availability versus absolute unavailability of UG in L2 acquisition, recent research has brought forward empirical evidence which caused a split within the Parameter Resetting group as to the degree of UG access.

### 2.1.1. No parameter resetting

The proponents of the No Parameter Resetting position argue for non-existent or defective L2 parameter setting due to the lack of full access to UG after the critical period. Whereas the more extreme position argues for a global impairment and the lack of any parameter setting in the L2 interlanguage, the local impairment view contends that parameters exist in the L2 grammar but they are not full-fledged and their underdevelopment leads to infinite variability with respect to certain structures whose realization is based on the particular settings of those parameters.

The main advocates of the breakdown of the parametric system in the L2 grammar are Clahsen and Myusken (1986), Schachter (1988), Bley-Vroman (1989), Clahsen and Hong (1995), Neeleman and Weerman (1997). Next, I will present the evolving views of this general stance.

Clahsen and Myusken (1986) argue that adult L2 learners no longer have full access to UG and acquire the second language via learning strategies and ad hoc rules. They use evidence from L2 German word order and claim that the rules used by these speakers are not natural language rules. However, in a subsequent response to Clahsen and Myusken's claims, duPlessis, Solin, Travis and White (1987) use three distinct parameters (head position, proper government and adjunction) in order to account for the



mistakes made by the L2 learners in that experiment. They prove that although those mistakes are related to a setting of the above three parameters different from what the requirements of German are, those non-German settings and the subsequent errors are perfectly compatible with existing natural languages.

Schachter(1988)identifies four points of difference between L1 and L2 grammar - completeness, equipotentiality, previous knowledge, and fossilization – and argues that those differences make it impossible to maintain that L1 and L2 acquisition share similar underlying processes; hence parameter setting and resetting in L2 is unattainable.

Bley-Vroman (1989) formulated a central hypothesis largely representative of the No Full Access/No Parameter Resetting position. In his Fundamenatal Difference Hypothesis he argues that foreign language acquisition, unlike L1 acquisition, is a piecemeal, construction-by-construction or pattern-by-pattern process rather than UG-constrained. Surface forms, rather than underlying representations, are taken into account by an unconscious process of finding differences and similarities between those forms. UG operates in some ‘attenuated form’ by ‘reconstructing’ certain properties via L1.

More recently, Clahsen and Hong (1995) and Neeleman and Weerman (1997) argue for a global breakdown of parameters in the L2 representation and construction-specific grammars, allowing for UG access only in terms of its principles as manifested in the L1. They claim that sets of properties which normally cluster around individual parameter settings fail to do so in the L2 grammar. The presumed absence of clustering is found with the null-subject parameter in L2 German (lack of clustering of agreement and overt subject) and the word-order parameter (OV/VO) in L2 Dutch (the properties

investigated for clustering were scrambling, distribution of particles, extraction of objects from particle constructions, exceptional case marking).

### 2.1.2. Parameter resetting - L2 Acquisition of functional categories

The issue of availability of functional categories in the L2 interlanguage and the possibility for them to be acquired and used in a native-like manner has triggered considerable debate in the field of generative second language acquisition. A crucial division among the variety of theories and hypotheses in second language acquisition is based on the possibility for attaining native-like syntactic representations of functional categories in a UG-constrained manner. The No Parameter Resetting stance asserts inevitable presence of non-native like syntactic representations in the L2 grammar due to the existence of global and local impairments. The proponents of the global impairment view (Bley-Vroman, 1989; Clahsen 1988) assume crucial differences between first and second language acquisition as UG is considered operative and readily accessible only in L1 acquisition but crucially not in L2 acquisition.

As noted above, the Parameter Resetting group is divided on the issue of the extent of UG availability in second language acquisition. On the one hand, the supporters of Full Access argue against a syntactic representational deficit in L2 grammar, assuming full UG access and limited interference by L1. Instances of non-native production are attributed to difficulties in the surface mapping of the fully specified abstract syntax (Lardiere 1998, 2000; Prévost & White 1999, 2000; White 2003; White, Valenzuela, Kozłowska-Macgregor and Leung 2004). As L2 acquisition is postulated to be

constrained by Universal Grammar (UG), the unavailability of an L2 feature or functional category in the learners' L1s might not have any negative impact on L2 production.

An alternative, albeit still UG-constrained, approach belongs to supporters of L2 impairment of functional categories (Hawkins, 2000; Hawkins & Chan, 1997; Hawkins & Liszka, 2003; Smith & Tsimpli, 1995). They contend that access to UG is partially available but only through the L1. Features and functional categories that are not instantiated in the L1 but available in the L2 will not be acquired. This hypothesis is referred to as the Failed Functional Feature Hypothesis or the Representational Deficit Hypothesis. Hawkins (2004) proposes that L2 learners' syntax is selectively impaired and marked by 'a representational deficit' due to the lack of parameterized formal features and functional categories. If those are not present in the L1, they are no longer accessible following the critical period for acquisition.

The latest development in the debate on L2 acquisition of functional categories and UG availability emerges from the Minimalist idea of feature interpretability. The distinction between LF-interpretable and uninterpretable features underlies L2 learnability and the extent to which target-like representations are attained (Tsimpli, 2003; Tsimpli and Dimitrakopoulou, 2007; Hawkins and Hattori, 2007; Tsimpli and Mastropavlou, 2008). This distinction is explained in more detail in the next section.

#### 2.1.2.1. Feature interpretability and partial parameter resetting

Chomsky (1995) maintains that morphosyntactic features are properties of lexical items which are responsible for encoding semantic content as well as rules of syntactic behavior. There are two types of formal (morphosyntactic) features: interpretable and

uninterpretable. Interpretable features (such as [definiteness],  $\phi$ -features on nouns, the [Q] feature in interrogatives) are typically not involved in syntactic operations and they are visible at LF for their semantic content. Conversely, the primary purpose of uninterpretable features (such as  $\phi$ -features on verbs and the [Case] feature) is in constructing the syntactic derivation; consequently, they play no role at LF.

Uninterpretable features are primarily responsible for cross-linguistic parametric variation although parameterization based on interpretable features has also been suggested (e.g., syntactically active topic and focus in Hungarian, K. É. Kiss, 1998).

Tsimplici & Mastropavlou (2008) and Tsimplici & Dimitrakopoulou (2007) propose involvement of both interpretable and uninterpretable features in parameterization. Both sets of features are associated with syntactic operations but they differ with regard to their activeness or the lack thereof at the level of LF. Tsimplici & Mastropavlou (2008) claim that interpretable features have a dual status in the mental lexicon – linguistic and conceptual. They are invariably linked with categories from the Conceptual-Intentional (CI) system, the output to which is provided by an LF representation converging via feature matching and the Principle of Full Interpretation (Chomsky, 1995).

Uninterpretable features, on the other hand, are intrinsic to the narrow syntax and they are relevant only for linguistic computations; hence their LF inapplicability.

Earlier work on functional impairment in UG-constrained L2 representations (Hawkins, 2000; Hawkins & Chan, 1997; Smith & Tsimplici, 1995) generalized with respect to the impossibility for the acquisition of formal features (both interpretable and uninterpretable) following the critical period of acquisition. The most recent work on feature involvement in language acquisition, the Interpretability Hypothesis (Tsimplici &

Dimitrakopoulou, 2007) maintains that learnability problems exist only with regard to the acquisition of uninterpretable features because they are subject to maturational constraints and are not accessible for L2 learners. If they are not selected during the critical period of acquisition when all features are readily available through UG, they become permanently out of reach and their morpho-syntactic realizations in the L2 are often non-native. However, all aspects of the genetic endowment of UG that are not related to uninterpretable features remain available in SLA. The latter refer to all computational principles and operations such as Merge, Agree, Move as well as the LF-visible interpretable features. Hawkins and Hattori (2007) suggest two reasons for the unavailability of uninterpretable features after the critical period. One of them is their functional uselessness as compared to interpretable features which are ‘required for constructing new open class lexical items (p.271)’. Uninterpretable features are associated with a limited number of closed class items and they are not relevant to any subsequent semantic enhancements that may occur at all ages. They also adduce a neuro-anatomical argument by claiming that the unavailability of uninterpretable features might be related to the brain’s capacity for achieving energy efficiency:

‘If it is true that the brain operates under some energy efficiency constraint that ‘disconnects’ components not directly required for cognitive functioning after a certain time lapse, unselected uninterpretable syntactic features could be a plausible target for such disconnection.’(Hawkins and Hattori, 2007, p.272)

The above approach is significantly at odds with SLA empirical data which show native-like performance with regard to features and processes linked to uninterpretable features such as V-to-I movement and case. Under the Interpretability Hypothesis those would never be acquired. As this is easily empirically falsifiable and there is ample

evidence to show successful acquisition where uninterpretable features regulate instances of morpho-syntactic realization, Tsimpli and Mastropavlou provide the following explanation:

‘We would claim that if interpretable features are also specified on a lexical item, acquisition should be facilitated. The reason is that the learner will proceed using the interpretable feature as a cue, thus establishing at least optional use of the item in question. The uninterpretable features will remain problematic and will be acquired later, either in context-specific patterns or learned.’ (Tsimpli & Mastropavlou, 2008, footnote No.7, p.152)

The question, then, is what happens in cases when interpretable features are not available alongside uninterpretable ones on a particular lexical item. Are morpho-syntactic processes involving such items which are clusters of uninterpretable features only attainable in L2 acquisition? The answer is ‘yes’ but that involves a specific compensatory mechanism:

‘We could identify two stages in L2 acquisition. In the first one the L2 grammar fails to analyze the input, and as a result, exhibits true optionality in the use of the relevant items. The second stage involves misanalysis of the input, that is non-target feature specification which, nevertheless, constrains the use of the L2 items. The features involved during this stage are interpretable features which are assigned by the learner to the problematic items in order to regularize their distribution.’ (Tsimpli and Mastropavlou, 2008, p.156)

Tsimpli & Mastropavlou argue that since UG does not tolerate optionality, L2 learners employ a remedial strategy of misanalyzing L2 input which is problematic due to its uninterpretable features. L2 speakers resort to a special interpretability assignment on functional heads, which are defined by inherently uninterpretable features, by analyzing them as a set of interpretable and therefore UG-accessible features. In their study on L2 and SLI acquisition of Greek clitics and determiners, Tsimpli & Mastropavlou (2008) contend that due to unavailability of uninterpretable features in the post-critical period,

native-like performance is achieved via misanalysis of the feature clusters associated with third-person clitics and the definite article. More specifically, the [-definite] interpretable feature of the indefinite article and the [+person] interpretable feature of the first- and second-person clitics are transferred onto the definite articles and the third-person accusative clitics respectively. Thus definite articles become [+specific] and third-person accusative clitics are analyzed as possessing the interpretable [+person] feature rather than just a cluster of agreement ( $\phi$ -features) and case features which are uninterpretable at LF (Tsimplici & Stavrakaki, 1999). The observed target-like structures are subsequently attributed to this compensatory mechanism of assigning interpretable and therefore UG-accessible features.

To sum up, the partial parameter resetting position, as reviewed above, is the one which has undergone most significant metamorphosis over the years. It starts out with the assumption that all formal features responsible for parametric variation are unavailable following the critical period for language acquisition (Failed Functional Features Hypothesis – Hawkins and Chan, 1997). Therefore, acquisition of L2 features which are not available in the L1 and the subsequent parameter resetting are impossible similarly to what has been claimed by proponents of the No Access/No Parameter Resetting position.

Eventually, Tsimplici (2003) and Hawkins and Hattori (2007), perhaps prompted by the ample empirical evidence for successful L2 parameter resetting, narrow down the array of unavailable features only to uninterpretable ones, which have been imputed to non-target-like structures in the L2 interlanguage.

Finally, the Interpretability Hypothesis provides two remedial mechanisms which account for cases when morphosyntactic features regulated by unacquirable

uninterpretable features are realized in a target-like manner. First, interpretable features which often occur alongside uninterpretable ones can be used as a cue triggering target-like realizations. Second, if the feature make-up consists of only uninterpretable features and no interpretable cues are available, the former are subject to misanalysis and non-target interpretability assignment. This is aimed at eliminating optionality which is not allowed by principles of UG (those are not subject to critical period) and attaining native-like regularity. In terms of predictive outcome, the last two stipulations bring the partial parameter resetting position closer to that assumed by the proponents of Full Access/Full Parameter Resetting. However, this happens at the cost of enormous stipulative burden and numerous theoretical assumptions which often render this position unfalsifiable.

#### 2.1.2.2. Full Access

Advocates of the Full Access position contend that L2 interlanguage grammars are fully constrained by UG. Subsequently, the functional domain does not experience any deficiency and has target-like characteristics as new functional features, feature values as well as entirely new functional categories are subject to successful acquisition.

The Full Access (without Transfer) Hypothesis, advanced by Flynn and Martohardjono (1994), Flynn (1996) and Epstein, Flynn and Martohardjono (1996, 1998), maintains that UG constitutes the initial stage of language acquisition and there is no L1 transfer. Development in the abstract properties of functional categories is not needed as UG is fully implicated from the onset of L2 acquisition and the target structures are learned directly by exposure to the L2 input. Although the L1 is considered as irrelevant to the L2 acquisition process, the proponents of the Full Access (without



Transfer) Hypothesis recognize the occasional presence of L1 effects. The ultimate result, according to the Full Access Hypothesis, is native-like competence and any observable differences between L2 learners and native speakers are due to performance factors (Flynn, 1996).

The Full Transfer/Full Access (FT/FA) Hypothesis (Schwartz and Sprouse 1994, 1996) also argues for a fully UG-constrained L2 acquisition. However, the L1 with all its functional categories and feature values is viewed as constituting the initial stage of acquisition. Under the influence of the input and within the principles and parameters sanctioned by UG, the functional properties of the interlanguage are restructured and L2 convergence is possible. FT/FA predicts different developmental paths for L2 learners depending on their L1. However, the ultimate L2 grammar is not inevitably native-like. Sometimes, the L1 grammar can successfully account for some of the L2 input and no restructuring takes place. Such occurrences mostly refer to cases when an L1 property needs to be de-learned rather than when a new L2 property needs to be acquired. In a study on the acquisition of motion verbs with goal prepositional phrases in English and Japanese, Inagaki (2001) found that the Japanese L2 learners of English were able to learn the English conflation pattern of motion verbs, which unite motion and manner, in response to the positive input. However, due to the lack of negative L2 input as to the unacceptability of combining motion verbs with goal prepositional phrases, the English L2 learners did not succeed in acquiring the Japanese conflation pattern with those verbs as they were not able to delearn one of the patterns offered by the L2.

## 2.2. L2 Acquisition of object clitics – a testing ground for parameter resetting

The L2 acquisition of clitics as a functional category<sup>1</sup> which is utilized by some languages but not by others, is a suitable means for providing empirical evidence to the validity of the above approaches. In the first scenario, L2 learners of a language with syntactic clitics (such as Bulgarian) whose L1 (English) does not use clitic constructions perform successfully in clitic-related grammaticality judgment tasks and distinguish between lexical categories such as strong pronouns and functional categories such as clitics. This could be interpreted as evidence for the accessibility of UG in L2 acquisition since the unavailability of the functional category responsible for clitic representations in the L1 grammar makes L1 an impossible source for the acquisition of the functional category. If the opposite scenario obtains and the L2 learners' performance is clearly non-native with respect to clitic usage, the conclusion could be that a functional category is not acquired and used in a native-like manner due to the inaccessibility of UG and the absence of that category in the L1.

A detailed discussion of the syntactic analyses of clitics and clitic doubling in Romance and Slavic languages follows in chapter 4.

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<sup>1</sup> Franks and Rudin's (2005) analysis of Bulgarian clitics as a functional category is adopted in this thesis, see section 4.2.2.3. on p. 50.

## CHAPTER 3

### SECOND LANGUAGE ACQUISITION AT THE INTERFACES

#### 3.1. Optionality in second language acquisition

Recent research on L2 acquisition has established optionality as one type of divergence which characterizes L2 end-states. Optionality, described as the co-occurrence of forms that are mutually incompatible in adult native grammar, is observed in both developing L1 and L2 grammars. However, the types of optionality exhibited in the early L1 grammar and in the L2 interlanguage are different in several respects. Children undergo a stage of temporary optionality when forms mutually exclusive in adult grammar are used side by side. Developing L1 grammars are subject to maturational constraints, a typical example of which is the Unique Checking Constraint (Wexler, 1998), which accounts for two types of optionality, namely root infinitives and clitic omission. Maturational constraints are active at the very onset of acquisition and their effect inevitably dies out at the latter stages of acquisition when children retain only the option allowed by the adult grammar. On the other hand, L2 optionality, as argued by Sorace (1999), differs from L1 optionality in at least two respects: first, L2 learners have their L1 as an extra source of optionality, and, second, advanced stages of L2 acquisition, even L2 ultimate attainment, are not immune to residual optionality. Sorace also contends that those instances of lingering optionality provide evidence against the power of pre-emption as an invariably successful mechanism, which eliminates non-target forms at the end-state (Trahey & White, 1993).

Divergence at the level of ultimate attainment, however, is not unrestrained and ubiquitous. It manifests itself in the rare surfacing of options that are not favored by the target grammar but, overall, there is a strong preference for the native-like options. The interplay of two main causes is often viewed as accountable for optionality at advanced stages of L2 acquisition (Sorace, 1999). One is the lack of robustness and frequency of the input leading to particular structures and aspects of grammar being more susceptible to optionality effects than others. Secondly, the makings of an optionality environment are further fostered and reinforced by potential interference from the L1 when it is structured differently with respect to the grammatical aspects which exhibit optionality.

### 3.2. Optionality at the interfaces -

#### internal vs external interfaces

Generative second language acquisition research at the earliest stages of its development was primarily concerned with issues related to UG accessibility, L2 syntactic knowledge and the possibility for successful parameter resetting (White, 2007). The syntactic component of the interlanguage grammar received most of the attention and the principal debate was on the possibility for L2 acquisition in a UG-constrained manner parallel to what was conceived to be the case in the acquisition of one's native language. Instances of successfully acquired constructions where poverty of the stimulus made it unlikely to ascribe target-like performance to the primary linguistic input and the employment of basic cognitive capacities (e.g. successful acquisition of the Overt Pronoun Constraint as described in Pérez-Leroux and Glass (1997) and Rothman (2009)), served as a solid argument for the availability of UG beyond the critical stage for

language acquisition (Gregg, 1996; White, 2003). However, based on the postulation of a modular architecture of linguistic systems, the emphasis over the last decade has seen a clear shift toward integrating the various grammar-internal modules (syntax, morphology, phonology, semantics), on the one hand, and the grammar-external domains (the conceptual-intentional and the articulatory-perceptual systems) on the other hand, in accounting for acquisition data. Cross-modular integration of grammar-internal and grammar-external domains is very often necessary for the construction of grammatically correct and pragmatically felicitous linguistic output. The need for such integration and the increased complexity associated with it is deemed likely to create acquisition problems and to be one of the primary loci of persistent non-target performance among L2 learners. This expectation is further reinforced by research which reveals interface coordination difficulties in areas outside L2 acquisition, namely L1 acquisition (Schaeffer, 2000), bilingual acquisition (Haznedar, 2006; Serratrice, Sorace and Paoli, 2004), heritage language acquisition (Montrul, 2004) and L1 attrition (Tsimpli, Sorace, Heycock and Filiaci, 2004).

White (2007) establishes a division between internal and external interfaces. The former refer to those instances whereby a particular linguistic structure abides by requirements set by more than one of the modules which constitute grammar. Syntax-semantics, syntax-morphology and phonology-morphology are interfaces which are internal to the grammatical system. On the other hand, in external interfaces, modules of the computational system interact with external domains (conceptual-intentional, articulatory-perceptual or sentence processing). As White (2007) points out, a closer look at the interfaces shows a dichotomy between the internal and the external interfaces with

regard to the degree of fossilization and target-deviant behavior. As a first approximation, it seems as if the external interfaces are associated with a higher degree of severity when it comes to persistent non-native-like performance and strong L1 transfer even at the stage of ultimate attainment (Tsimplici and Sorace, 2006), whereas the internal interfaces, problematic as they might be themselves, are often characterized by a successful acquisition outcome in spite of a usual delay.

### 3.2.1. L2 optionality at the internal interfaces

An internal interface which has exhibited a relatively high success rate of native-like convergence is the syntax-semantics interface. In a review of 15 studies on L2 acquisition of the syntax-semantics interface by Slabakova (2006), she concludes that knowledge of properties pertaining to that interface is inevitably acquired by L2 learners in spite of the poverty of the stimulus and it does not abide by any critical period constraints. In one of the studies included in the aforementioned review, Slabakova (2006) investigates a bidirectional parameter resetting of the Bare Noun/Proper Name Parameter (Longobardi, 2001) in L2 acquisition of Italian by English L1 speakers and vice versa. In that case, the availability of a UG-instantiated parameter which integrates a semantic and a syntactic property and which needs to be reset in accordance with the parameter setting of the target language, accounts for the successful acquisition in either direction. A sentence matching procedure in the manner proposed by Bley-Vroman (1990) would have failed to explain the results of that study as it involved a specific poverty-of-the-stimulus case where target convergence required for one of the interpretations to be 'delearned'.

Another instance of a successfully attained syntax-semantic interface condition comes from a study by Dekydtspotter, Sprouse and Swanson (2001). They explore the degree to which L2 learners of French are sensitive to a subtle interpretative distinction stemming from two different word orders with *combien* 'how many'. When *combien* is adjacent to its complement, a universal quantifier (*tous*) can take both wide and narrow scope. However, when that complement is detached from *combien* and occurs sentence-finally, only narrow scope reading of the universal quantifier is possible. The results of the study showed that the advanced L2 learners performed in a similar way as the control group by rejecting the wide scope reading of the quantifier with a detached complement and accepting the narrow reading with either position of the complement.

The results from studies on the syntax-semantics interface, which reveal the possibility for ultimate convergence, are not always matched by the findings in the L2 acquisition of another internal interface, namely the one involving syntax and morphology. Studies by Haznedar and Schwartz (1997), Lardiere (1998, 2000), Prévost and White (2000), Haznedar (2003) and White (2003) attempt to reconcile the obvious failure by L2 learners to produce inflectional morphology and definite articles with their ability to construct unimpaired target-like syntactic representations by postulating the Missing Surface Inflection Hypothesis. They claim that L2 learners acquire the syntactic structure at the initial stage, whereas target-like inflection can be significantly delayed due to a 'mapping problem' (Lardiere, 2000) which makes it difficult for them to establish the correspondence between the abstract syntactic properties and the overt inflectional morphology and which often leads to the use of defaults.

Another internal interface which has been investigated for native-like convergence is the one which integrates the phonological and the morphological component. Goad, White and Steele (2003) propose the Prosodic Transfer Hypothesis, which states that differences in the prosodic structures of the L1 and the L2 may explain the failure on the part of the Chinese L2 learners of English to supply English inflectional morphemes. In the prosodic structure of English, inflectional suffixes are adjoined to the prosodic word. This prosodic structure, however, is not available in Chinese, which is characterized by minimal inflection; furthermore, whenever inflection occurs, it is adjoined at the foot level rather than at the prosodic word level. Goad et al. argue that the suppliance of target-like past tense inflection by Chinese learners of English is hindered by their inability to adjoin inflectional morphemes to prosodic words in production. Therefore, they either delete the inflectional material, or adopt the L1 strategy and allow for it to be misadjoined within the prosodic word to the foot when possible. A more recent study, Goad and White (2006), suggests that at the stage of ultimate attainment, convergence can be achieved with the internal phonology-morphology interface and the new L2 prosodic structure successfully acquired.

### 3.2.2. L2 optionality at the external interfaces

Recent studies on end-state grammars (Belletti, Bennati & Sorace, 2007; Tsimpli & Sorace, 2006; Sorace and Filiaci, 2006; Lozano, 2006; Sorace, 2005; Tsimpli, Sorace, Heycock & Filiaci, 2004; Hopp 2004) reveal vulnerability at the syntax-discourse interface where L1 interference is active even at advanced levels of L2 attainment.



Belletti et al. (2007) conduct an experiment on the production and interpretation of postverbal subjects, and null and overt pronominal subjects by English near-native L2 learners of Italian. Although the participants in the experiment exhibit native-like syntactic proficiency, the results show non-native-like performance in the use of postverbal subjects and overuse of overt pronominal subjects. Those non-native aspects in the production of L2 learners at the end-state are attributed to difficulties in the coordination of syntax and discourse as the use of null or overt subjects as well as postverbal subjects in Italian is conditioned by discourse factors and the features [topic-shift] and [focus].

Tsimpli & Sorace's (2006) experiment on the use of null subject pronouns in L2 Greek by native speakers of Russian reveals significant overuse of overt subjects even among advanced L2 speakers. The results are ascribed to interference of the L1 discourse factors accountable for the distribution of null and overt subject pronouns with the L2 discourse factors which regulate that distribution.

Sorace and Filiaci (2006), in an experiment on the interpretation of intrasentential anaphora in Italian by advanced English L2 speakers of Italian, show that the L2 learners have acquired the syntactic constraints on pronominal subjects in Italian but display 'residual indeterminacy' with respect to the discourse strategies which are involved in the interpretation of those pronouns. Lozano (2006) presents evidence for deficient application of the discourse properties regulating Subject-Verb and Verb-Subject distribution in Spanish by L2 learners who are native speakers of Greek. Hopp (2004) examines scrambling in the L2 interlanguage of near-native English and Japanese learners of German. The results of that experiment show that L2 learners exhibit native-

like knowledge with respect to the UG-specified syntactic representations but occasionally fail in integrating discourse interpretation into the syntax.

### 3.3. The Interface Hypothesis

As evident from the brief overview above, many of those studies reveal the presence of a protracted divergence between L2 end-state and adult native grammars which is due to the lack of knowledge not of the syntactic representations which underlie particular structures but of their realization as triggered in the interplay with the specific discourse requirements. The hypothesis that narrow syntactic properties are fully acquired at the stage of ultimate attainment whereas interface properties which involve both the syntax and other cognitive domains (e.g. discourse) may trigger residual optionality effects is referred to as the Interface Hypothesis (Sorace, 2006). Sorace argues for a division between ‘narrow’ syntax and ‘interface’ syntax and places the causes of residual optionality with the latter.

Interface Hypothesis (Sorace, 2006):

- Non-interpretable features that are internal to the computational system of syntax proper and drive syntactic derivations are categorical in native grammars and are acquired successfully by adult L2 learners.
- Interpretable features that lean on syntactic options and belong to the interface between syntax and discourse may exhibit gradedness in native grammars and residual optionality in near-native grammars due to the influence of the L1 even at the most advanced competence stage. The attainment of ‘perfect’ L2 knowledge is

restricted to properties related to LF representations but optionality and cross-linguistic effects remain possible at the interfaces where L2 use is constrained by discourse factors and processing deficiency.

Processing deficiency is viewed as another possible cause of L2 optionality, besides lack of input frequency and robustness and L1 transfer. In fact, alongside the presence of insubstantial input, processing cost might be an essential contributor to the observed optionality, whereas L1 transfer only plays the role of a remedial strategy. Sorace (2006) argues that structures which involve the integration of purely syntactic knowledge with knowledge from other domains, such as discourse, are more complex than structures which involve syntactic knowledge alone. Therefore, the realization of those complex structures warrants additional processing effort, which makes them more costly processing-wise. Insufficient processing resources among L2 learners for an unfailingly successful coordination of syntax with the domain of discourse leads to their resort to a 'low-cost' and most 'economical' option, which is L1 transfer. Sorace also maintains that resource allocation ('the ability to direct attentional resources where they are needed, especially in tasks that are more demanding') exhibits a greater proneness to failure in discourse processing rather than in 'the more automatic aspects of language processing'. Hence, resource allocation effects manifest themselves more distinctly at external interfaces than at internal interfaces.

#### 3.4. Successful attainment at the interfaces

The findings of the studies described in section 3.2.2. revealed unsuccessful coordination of syntactic and pragmatic knowledge and optionality effects at the end-

state. However, recent research on the acquisition of external interfaces has produced results that are far from conclusive and, in contrast to the studies where the predictions of the Interface Hypothesis are borne out, there is abundant data which points to outcomes that are at odds with those predictions. In this section, I will summarize briefly some of those studies.

Rothman (2008) conducts a study on the L2 distribution of null and overt subject pronouns by English-speaking L2 learners of Spanish. The results of the study show that while intermediate learners are aware of the syntactic properties of Spanish null subjects, they do not exhibit target-like knowledge with respect to the pragmatic requirements which regulate the distribution of null-subjects in Spanish. However, the advanced learners in the study performed in a native-like manner, which pointed to a delay in the acquisition of structures which involved the integration of syntactic and pragmatic knowledge, but, crucially, not to inevitable L2 fossilization. Rothman ascribed the observed delay to 'the inherent complexity of the syntax-pragmatics interface' when compared to purely syntactic properties.

Iverson, Kempchinsky and Rothman (2008) explore the L2 acquisition of two classes of subjunctive complement clauses in L2 Spanish. On the one hand, they study the purely syntactic subjunctive complements of volitional predicates. However, they also examine the L2 acquisition of the discourse dependent distinction between subjunctive and indicative complements with negated epistemic matrix predicates. The results of that study also pose a challenge to the predictions of the Interface Hypothesis for obligatory residual optionality and L2 fossilization at the interfaces as it reveals target convergence with respect to the investigated interface property. English learners of Spanish are found

to be able to acquire successfully both types of subjunctives, the one involving purely syntactic knowledge (volitional subjunctive complements) and the one requiring the coordination of syntactic and discourse information (indicative/subjunctive distinction with negated epistemic predicates).

Donaldson (2009) investigated the L2 acquisition of right dislocations by near-native L2 speakers of French with English as their L1. Right dislocation in French involves a particular syntactic structure which has a specific discourse function, namely to encode topic. The results of the study, which included production data, revealed target-like use of right dislocations by the near-native L2 speakers as they were able to felicitously integrate that structure into spontaneous oral discourse. However, the near-natives differed from the control group in producing significantly fewer right-dislocation constructions in the production task.

Lieberman(2009) examined the acquisition of direct and indirect scalar implicatures by Japanese-speaking L2 learners of English. The findings of his study reveal a similar pattern of scalar implicature interpretation between the native group and the L2 learners with both groups finding indirect implicatures more difficult than the direct ones. This shows that L2 speakers can perform at the syntax/pragmatics interface, when it is necessary for interpretation, in an L2-convergent way.

### 3.5. L2 Acquisition of the pragmatic effects of clitic doubling in Bulgarian – a testing ground for the Interface Hypothesis

Current research on acquisition of the interfaces that was briefly introduced in this chapter thus leads to the research question of the present thesis. One of its purposes is to

present an experimental study introducing another case of interface construction by investigating the degree to which L2 learners of Bulgarian, with English as their native language, have acquired the pragmatic function of clitic doubling in Bulgarian. The participants of the study were advanced speakers of L2 Bulgarian who had resided in Bulgaria for a time sufficient to attain a level of proficiency to be possibly aware of the subtlety of a pragmatically felicitous instance of clitic doubling marking overt topicality. A group of intermediate L2 learners of Bulgarian is included in order to compare competence at or near the end-state with interlanguage grammar at an earlier stage in the acquisition process.

The results could shed light on the extent to which the pragmatic significance of a specific syntactic construction in Bulgarian has been acquired by near-native L2 learners whose native language not only lacks that construction but also lacks the clitic system of marking referential direct and indirect objects.

The results of the experiment could also provide an empirical test of the Interface Hypothesis since mastery of clitic doubling marking overt topicality requires both the correct syntactic representation of clitic doubling and knowledge of the discourse interface conditions that govern the felicitous use of that construction. The data obtained in the experiment will be investigated for traces of non-native optionality among the advanced learners at the end-state and more specifically for the overuse of L1 transferred constructions.

This study is also significant in introducing L2 acquisition data from a language that is different from Romance, on which the majority of research on L2 clitics acquisition and L2 acquisition at the interfaces has been based.

CHAPTER 4  
BULGARIAN OBJECT CLITICS – SYNTACTIC AND INTERFACE  
PROPERTIES

4.1. Clitics as functional categories

4.1.1 What are clitics?

Clitics are unstressed affix-like particles which have the syntactic characteristics of a word but cannot exist by themselves and need a phonological host to attach to. The prosodic deficiency of clitics results in three types of attachment with regard to their host – they can precede it (proclitics), follow it (enclitics) or appear within their host, between the stem and other affixes (mesoclitics). The examples below illustrate the three positions in which object clitics can occur with respect to their phonological hosts.

(1) Lo      vi              ayer      (Spanish)

    him-cl. saw-1p.sg. yesterday

    ‘I saw him yesterday.’

(2) Vidjax      go              (Bulgarian)

    saw-1p.sg. him-cl.ACC

    ‘I saw him.’

(3) Eles darnoloão              (Portuguese)

    they give-us-it-FUT

    ‘They will give it to us’

Sometimes, a clitic may change its status from a proclitic to an enclitic within the same language due to additional phonological constraints that might be imposed on their

distribution within the intonational phrase. For example, the hosting conditions on Bulgarian object clitics are determined by the existence of phonological material before them, even though they do not need to encliticize to it. The default position of Bulgarian object clitics is to the left of their phonological host, which is invariably the verb.

However, if the default proclitic position results in the clitic being the first element in the sentence, a phonological constraint, known as the Tobler-Mussafia effect, imposes the occurrence of the clitic post-verbally as an enclitic (cf. 2 and 4)

(4) Včera go vidjax  
 yesterday him-cl.ACC saw-1p.sg. (Bulgarian)

‘I saw him yesterday.’

Although the position of clitics is sometimes subject to additional constraints such as the Tobler-Musafia effect, their occurrence within a particular language is to a large extent fixed. Cross-linguistically, the most typical positions of object clitics are second position (also known as Wackernagel position) as in Serbian, and verb-adjacent position as in Spanish and Bulgarian.

In contrast to their phonological deficiency, clitics are independent elements morpho-syntactically and this distinguishes them from the morphologically bound affixes. Zwicky (1977) distinguishes between simple and special clitics. Examples of the former are proclitic prepositions, the possessive particle ‘s in English, proclitic definite and indefinite articles (such as the and an in English), enclitic definite articles (as in Bulgarian and Romanian). Simple clitics always have a syntactically predictable distribution and they usually do not have non-clitic counterparts. Special clitics, on the other hand, correspond to different functional and nominal categories. The most typical



special clitic categories are subject and object pronouns, auxiliaries, adverbs and various particles (e.g. the future particle *šte* and the interrogative particle *li* in Bulgarian). They often have non-clitic counterparts (e.g. strong object pronouns and object clitics). Their position is relatively fixed when compared to their distributionally more flexible non-clitic counterparts, although very often special clitics occur in positions in which the non-clitic counterparts cannot appear. Special clitics also enter in clitic clusters where special language-specific ordering rules apply.

Since object clitics are the primary concern of this thesis, the rest of this chapter will review some major theoretical approaches as regards object clitics in the two language families which have been most extensively studied in that respect, namely Romance and Slavic.

#### 4.1.2. Theoretical approaches to Romance clitics

Clitics in Romance languages have received considerable attention over the years resulting in a number of syntactic analyses. Theoretical approaches to Romance clitics are divided into two major groups: movement analyses (Kayne, 1975, 1991; Uriagereka, 1995) and base-generation analyses (Strozer, 1976; Jaeggli, 1982; Borer, 1984; Sportiche, 1996).

The base-generation analyses argue that clitics are generated in their surface position and head their own functional projections whereas movement analyses maintain that clitics are generated in canonical argument positions and then move to their surface position in order to satisfy syntactic and phonological requirements.

Kayne (1975) proposes the first movement analysis of clitics based on data from French where object clitics and argument DPs are in complementary distribution. Kayne (1989, 1991) argues that Romance clitics are base-generated as heads in the canonical object position and move up and are left-adjoined to a higher functional projection in a head-to-head movement. In assigning head status to object clitics and claiming that they move as heads rather than XPs, Kayne uses evidence from clitic climbing in restructuring contexts in Italian.

(5) Mario, non lo<sub>i</sub>        saprei                a chi    affidare t<sub>i</sub>

Mario not him-cl. know-1<sup>st</sup> p.subj. a whom entrust

‘Mario, I wouldn’t know to whom to entrust him.’

(6) \*Su questo problema, non lo<sub>i</sub>        saprei        se        consigliare t<sub>i</sub>

on this    problem, not him-cl. know-subj. whether advise

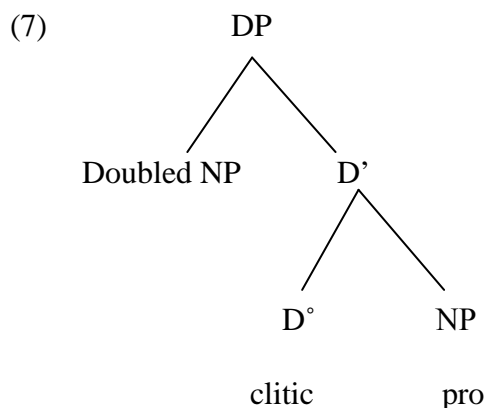
‘On this problem, I wouldn’t know whether to advise him.’

(Anagnostopoulou, 2006)

The fact that the wh-phrase *a chi* does not interfere with clitic climbing whereas the wh-complementizer *se* blocks it, is used by Kayne to argue in favor of the object clitic being generated as a head and undergoing head-to-head movement. The head movement of the object clitic in (5) is not interrupted by the presence of an XP (*a chi*) while it is rendered impossible in (6) due to the presence of an intervening head in C, the complementizer *se*. However, his approach is challenged by Strozer (1976), Jaeggli (1982) and Borer (1984) with data from other Romance languages (Spanish and Romanian) as well as Hebrew where argument DPs and coreferential clitics can occur within the same clause. Strozer

(1976) was the first to observe and discuss clitic doubling phenomena as a major argument for a base-generation analysis.

To address the possibility for cooccurrence of argument DPs and coreferential clitics, Uriagereka (1988, 1995) argues that third person clitics are determiners and they are generated as heads under D°.



In non-doubled clitic constructions, clitics select for a null NP and that is also what determiners can do in Spanish as in the following examples from Uriagereka (1988).

(8) a. el/la que vino

the who come-past.3p.sg.

‘the one who came’

b. el/la de Francia

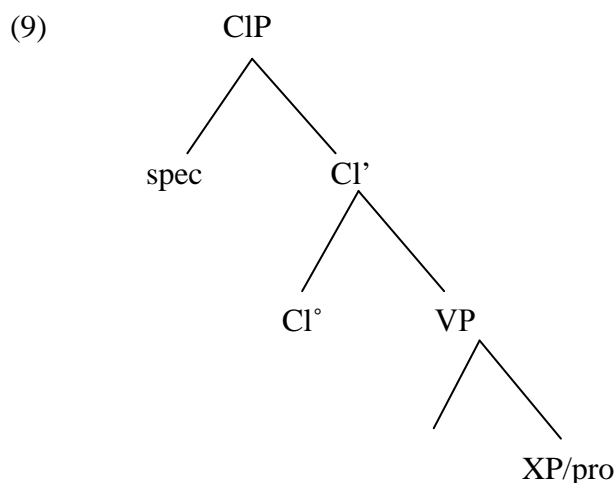
the from France

‘the one from France’

Uriagereka argues that in Romance clitic doubling constructions, the doubled NP is in the specifier position of the DP, which is headed by a co-referential clitic selecting for a null complement. He postulates the Clitic Doubling Parameter in Romance and attributes the possibility for clitic doubling to determiner strength. Strong determiners, as in Spanish,

can license a doubled NP in the specifier position of DP whereas weak determiners, as in French and Italian, cannot. In Uriagereka's (1995) analysis object clitics invariably leave their VP-internal position and move to a functional projection FP in the left periphery. This movement is necessitated by the referential nature of the clitics, which can be licensed only VP-externally.<sup>2</sup>

One of the most influential theoretical approaches to object clitics belongs to Sportiche (1996) who proposes a base-generated analysis whereby clitics are generated as functional heads in their own projection CIP (referred to as Clitic Voice) in the INFL domain (see 9). The clitic associate is a *pro* in cases of no clitic doubling and a full DP in clitic doubling constructions. It is base-generated in the canonical object position as a V complement and undergoes overt movement to [spec,CIP] as *pro* when there is no clitic doubling and covert movement to the same position in instances of clitic doubling when the associate is a full DP, thus licensing the clitic in  $CI^\circ$  in a spec-head configuration.




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<sup>2</sup> Uriagereka (1995) claims that in their VP-internal position clitics are underspecified for one of their referential properties, namely person.

In parallel with Rizzi's (1991) Wh-criterion, which motivates wh-movement, Sportiche proposes the Clitic Criterion, which accounts for the XP movement necessary to license the clitic.

(10) Clitic Criterion (Sportiche, 1996)

At LF:

- a. A clitic must be in a spec-head configuration with a [+F]<sup>3</sup> XP
- b. A [+F] XP must be in a spec-head configuration with a clitic

Sportiche (1996) also postulates the Clitic Constructions Parameter, which unites cliticization and scrambling as constructions that are triggered by similar licensing procedures.

(11) Clitic Constructions Parameter (Sportiche, 1996)

Movement of XP to [spec,CIP] occurs overtly or covertly

Head is overt or covert.

XP is overt or covert.

The following settings are available with regard to this parameter:

- in undoubled clitic constructions (e.g. in French, Italian), a covert XP moves covertly or overtly to the overt head
- in clitic doubling constructions (e.g. in Spanish), an overt XP moves covertly to an overt head
- in scrambling (e.g. in Dutch), an overt XP moves overtly to a covert head

---

<sup>3</sup> [+F] represents a set of properties which trigger movement (e.g. Wh, Neg, Foc, etc.)

#### 4.1.3. Theoretical approaches to Slavic clitics

Unlike Romance where object clitics are preverbal, Slavic languages are divided in terms of the position in which their clitics can appear. Clitics in Serbo-Croatian, Slovenian and Czech occupy the second (or Wackernagel's) position in the clause, whereas Bulgarian and Macedonian clitics are invariably verb-adjacent. Two of the most recent theoretical approaches to Slavic clitics which try to capture their specific syntactic behavior are offered by Bošković (2001, 2002) and Franks and Rudin (2005).

Bošković (2001) attempts to present second-position clitic placement as an interface condition between the syntax and the phonological form. He uses the Minimalist Copy Theory whereby the operation Move creates identical copies of the moved element in each of the positions occupied by that element on its way from the base-generated position (the tail) to its highest position in the phrase structure (the head). Bošković assumes that clitics in Serbo-Croatian move to the functional projection AgrOP where they are realized either in the head or specifier position. Bošković resolves the problem of the status of clitics in the derivation by assuming that they are non-branching elements (Chomsky, 1995) which makes them ambiguous between a head and a phrase. Non-branching elements can move as heads, but similar to phrases, they can occupy specifier positions. In order to account for the second position of Serbo-Croatian clitics, Bošković allows for either a higher or lower copy of the verb to be pronounced, so that the PF requirement for a clitic to be prosodically attached to the right of the first word in the sentence is satisfied. Thus, lower copies of the verb are sometimes pronounced since the pronouncing of a higher copy and the presence of additional material in the left

periphery would result in the clitic not being in second position and a violation of the PF requirement.

An earlier attempt to use a PF requirement in order to explain second-position clitic placement was made by Halpern (1995), who introduced the strategy of Prosodic Inversion in order to save derivations where the clitic is not in second position at spell-out. Prosodic Inversion is a post-syntactic PF operation whereby a second-position clitic is inverted with the following prosodic word as a last resort operation to provide the clitic with a host to its left. Halpern assumes that second-position clitics are functional heads which are adjoined in the left periphery and are defined by a special prosodic subcategorization for preceding phonological material that they could attach to. Syntactic constructions which involve the raising of some maximal projection to the left periphery satisfy that requirement and no additional phonological operations are required. However, in the absence of such raising and with the clitic being the leftmost surface element in the syntactic derivation, prosodic inversion with the adjacent prosodic word takes place.

Franks and Rudin (2005), in what is the most recent analysis of Slavic clitics, suggest that all Slavic clitics are generated in their argument position as functional heads in K(ase) Phrase. The crucial difference between languages with second-position clitics (Serbo-Croatian, Czech) and languages with verb-adjacent clitics (Bulgarian, Macedonian) is reflected in the nature of the maximal projection which is headed by  $K^\circ$ . In the former, clitics occupy the head position of a non-branching maximal projection where KP exhaustively dominates  $K^\circ$  as in (12).

(12) [<sub>KP</sub>  $K^\circ$ ]

In the latter, clitics occupy the head position of a branching maximal projection which takes DP as a complement(13). The DP complement contains the doubled full DP in clitic doubling constructions.

(13) [<sub>KP</sub> K°[DP...]

The structure in (12) accounts for the lack of clitic doubling constructions in languages with second-position clitics and for their availability in languages with verb-adjacent clitics as allowed by the structure in (13). The surface derivation results from the clitics moving to a second (as in Serbian) or verb-adjacent position (as in Bulgarian).

Sometimes, the relevant surface positions can be achieved by less economical means such as the pronunciation of a lower rather than the head copy.

## 4.2. Overview of Bulgarian object clitics

### 4.2.1. Syntactic properties of Bulgarian object clitics

Bulgarian has an intricate system of clitics, which includes accusative and dative pronominal clitics, possessive clitics, a future clitic, the present tense forms of the verb ‘to be’, accusative and dative reflexive clitics and an interrogative clitic. Pronominal clitics, in line with Cardinaletti and Starke’s (1999) analysis regarding the typology of structural deficiency, can be referred to as instances of ‘severe deficiency’ as opposed to ‘mild deficiency’ with weak pronouns and no deficiency with strong pronominal elements. Syntactically, clitics differ from weak and strong pronouns as the former are base-generated as heads whereas the latter are invariably XPs. Cardinaletti and Starke (1999) provide a thorough analysis of the morphological, syntactic, semantic and



prosodic asymmetry between deficient and strong pronouns<sup>4</sup> and distinguish between two types of asymmetric properties: relational and monadic. Relational properties establish a connection between elements from the two classes:

1) Deficient pronouns are reduced with respect to strong ones, if a difference obtains (morphological asymmetry)

(14) nego (3<sup>rd</sup> person sg. object pronoun) → go (3<sup>rd</sup> person sg. object clitic)

2) When possible, deficient pronouns are preferred over strong ones. The strong form is used only when the deficient one is excluded as in instances of contrastive stress, pointing gesture (ostension) or coordination. In the following example the short answer to a question as in 15(A) could only consist of a strong pronoun, but not of a clitic.

(15) A: Kogo vidja?

Whom saw-3<sup>rd</sup> p.sg.

Whom did you see?

B: Nego/ \*Go

him-3<sup>rd</sup> p.sg. pronoun / him-3<sup>rd</sup> p.sg. clitic

Monadic properties, on the other hand, refer to one of the classes of pronominal elements but not to the other:

1) Only deficient pronouns must occur at S-structure in a special derived position.

They cannot occur in  $\Theta$ -positions, dislocation, cleft-positions (syntactic asymmetry)

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<sup>4</sup> Bulgarian displays a binary opposition between deficient pronouns (clitics) and strong pronouns, whereas some languages such as Slovak, Italian (examples provided in Cardinaletti and Starke (1999)) exhibit a tripartite distinction between strong pronouns and two types of deficient pronouns, namely 'mildly deficient' weak pronouns and 'strongly deficient' clitics.

- 2) Only deficient pronouns cannot be coordinated and modified (syntactic asymmetry)

(16) Vidjax \*go/nego i brat mu.

See-1<sup>st</sup> p.sg. him-cl/him-pronoun and brother his-cl. poss.

‘I saw him and his brother’

- 3) Only deficient pronouns may prosodically restructure and be involved in liaison and reduction processes. (prosodic asymmetry)
- 4) A strong pronoun cannot be semantically vacuous and must always be referential. Deficient pronouns can be non-referential (expletives, impersonals); otherwise, they must always have a prominent discourse antecedent.<sup>5</sup> (semantic asymmetry)

Since only pronominal clitics are within the scope of this study, I will provide a short description of their paradigm and distribution in Bulgarian. Bulgarian object clitics are preverbal clitics, which distinguishes them from some other Slavic object clitics (e.g. Serbian), which are second-position (Wackernagel) clitics (Franks and King, 2000). They invariably appear before the verb regardless of how much material precedes them as illustrated in (17) below.

(17) a. Toj sigurno ne ja vižda  
 he perhaps not her-cl.ACC see-3p.sg

‘Maybe he doesn’t see her’

b. \*Toj ja sigurno ne vižda.

---

<sup>5</sup> This property refers to subject pronouns as opposed to subject clitics but it is not applicable to object clitics, which are always referential.

Their strictly preverbal position is violated only in cases when it will lead to their being a first element in the sentence and then they appear post-verbally, which in line with the Romance tradition is referred to as Tobler-Musafia effect.

- (18) a. Ø Vidjax go  
 pro saw-1<sup>st</sup> p.sg. him-cl.ACC  
 ‘I saw him’  
 b. \*Go vidjax

As Pancheva (2005) observes, Bulgarian clitics present a phenomenon rarely attested cross-linguistically (Brazilian Portuguese is another example) as their placement is subject to the interplay of what she calls ‘divergent dependencies’ (Pancheva 2005). On the one hand, clitics cannot occur clause-initially as they exhibit a phonological dependency on their left (Tobler-Musafia effect). Any constituent can satisfy that requirement for a left hand-side phonological host as even prosodically lighter elements such as the negative particle *ne* and the future clitic *šte* can serve that purpose.

- (19) a. Ne go vidjax  
 not him-cl.ACC saw-1p.sg.  
 ‘I didn’t see him’  
 b. Šte go vidja  
 FUT him-cl.ACC see-1<sup>st</sup> p.sg.  
 ‘I will see him’

On the other hand, the syntactic and prosodic dependency on a verb to the right accounts for the syntactically proclitic nature of Bulgarian pronominal clitics. Barring two specific environments, Bulgarian clitics always occur preverbally (i.e. procliticize)

and form a prosodic word with their verbal host. One of those environments when they encliticize and form a prosodic word with an element on their left refers to cases when a Tobler-Musaffia effect obtains and the phonological dependency overrides the syntactic one. Then the clitic appears to the right of its syntactic and prosodic host, the verb (see 18). The other instance of encliticizing occurs when the preverbal clitic is preceded by the negative particle *ne* (see 19), which is known to trigger stress on the element immediately following it, even if that element is a clitic (Izvorski et al. 1997, Franks and Rudin 2000). As a result of this stress assignment by the negative particle, the clitic forms a prosodic word with it and therefore encliticizes.

Table 1 Paradigm of Bulgarian accusative and dative clitics and corresponding strong pronouns

|                        | Singular                                    |   |   | Plural                                      |
|------------------------|---|---|---|---|
| 1 <sup>st</sup> person | me/mene (Accusative)<br>mi/na mene (Dative) |   |   | ni/nas (Accusative)<br>ni/na nas (Dative)   |
| 2 <sup>nd</sup> person | te/tebe (Accusative)<br>ti/na tebe (Dative) |   |   | vi/vas (Accusative)<br>vi/na vas (Dative)   |
| 3 <sup>rd</sup> person | Masc.                                       | Fem.  | Neut.                                       | gi/tjax (Accusative)<br>im/na tjax (Dative) |
|                        | go/nego<br>(Acc.)<br>mu/na nego<br>(Dative) | ja/neja<br>(Acc.)<br>ji/na neja<br>(Dative) | go/nego<br>(Acc.)<br>mu/na nego<br>(Dative) |   |

Bulgarian object clitics appear in an 8-member paradigm as illustrated in Table 1, and they are marked for case, number and person as well as gender for 3<sup>rd</sup> person singular clitics. Gender specification of the clitic triggers no agreement in the VP. In Bulgarian, gender agreement takes place only between the subject and the lexical verb marked for past tense. Since Bulgarian does not exhibit a case system, Dative strong pronouns differ from Accusative strong pronouns only by the addition of the preposition *na*. However, clitics have retained their case marking and with the exception of 1<sup>st</sup> and 2<sup>nd</sup> person plural, dative and accusative clitics have different forms.

Bulgarian clitics (and clitics in general) follow a strict clustering order in which they resemble agreement markers. Hauge (1999) provides the most comprehensive templatic account of the rules governing the linear ordering of clitics in contemporary Bulgarian. He establishes the following clustering template of Bulgarian clitics:

(20) *li* > *da* > *ne* > *šte* > *sâm* > DAT > ACC > *e*

Q to Neg. Fut. to be to be(3<sup>rd</sup> p.sg.)

Since this thesis is concerned with dative and accusative object clitics and they are later described in terms of L2 acquisition, the following rule referring to object clitic placement in ditransitive constructions can be extracted from the above template:

- Dative clitics always precede accusative clitics when they cluster in ditransitive construction

(21) a. Dade li knigata na Maria.

gave-2<sup>nd</sup> p.sg. Q book-def. to Maria

‘Did you give the book to Maria?’

b. Dadox            ji            ja.  
       gave-1<sup>st</sup> p.sg. her-cl.DAT her-cl.ACC

‘I gave it to her.’

c. \*Dadox ja ji.

Bulgarian clitics are also involved in clitic doubling constructions, which are described in more detail in section 4.4.

#### 4.2.2. Syntactic analyses of Bulgarian object clitics

##### 4.2.2.1. Rudin (1997)

Rudin (1997) explores two possible analyses of Bulgarian pronominal clitics - clitics as arguments and clitics as agreement markers. She concludes that clitics in Bulgarian, and in clitic doubling languages in general, are agreement markers rather than arguments and as such they head their own functional projection. If clitics were assumed to be arguments and generated in the same argument position as full DPs and strong pronouns, clitic doubling as well as the impossibility for clitics to be conjoined or to be the object of prepositions would be difficult to account for.

Rudin argues that in instances of clitic occurrence without a doubled full DP, the latter is a null *pro* argument, which similarly to null subjects must obey certain referentiality constraints, that is, to be [+referential]. She also contends that instances of overt objects with no concomitant clitic occurrence can be analyzed as ‘null agreement’.

To sum up, according to Rudin (1997), overt object DPs in Bulgarian co-occur with null clitic agreement, whereas null objects require overt clitic agreement. However,

in those cases when the object DP possesses the features [+topic, +specific], it could be licensed only by an overt clitic and hence clitic doubling.

#### 4.2.2.2. Franks and King (2000)

Rudin's analysis is supported by Franks and King (2000) who also argue in favor of clitics as agreement markers on the verb as they are invariably verb adjacent, show internal ordering and are subject to co-occurrence constraints, all of which are properties normally observed among other verb agreement markers. Crucially, a possible theta-criterion controversy is resolved in instances of clitic doubling as only the doubled full DP is an argument receiving a theta-role from the verb whereas the clitic as an agreement marker needs no theta-role of its own.

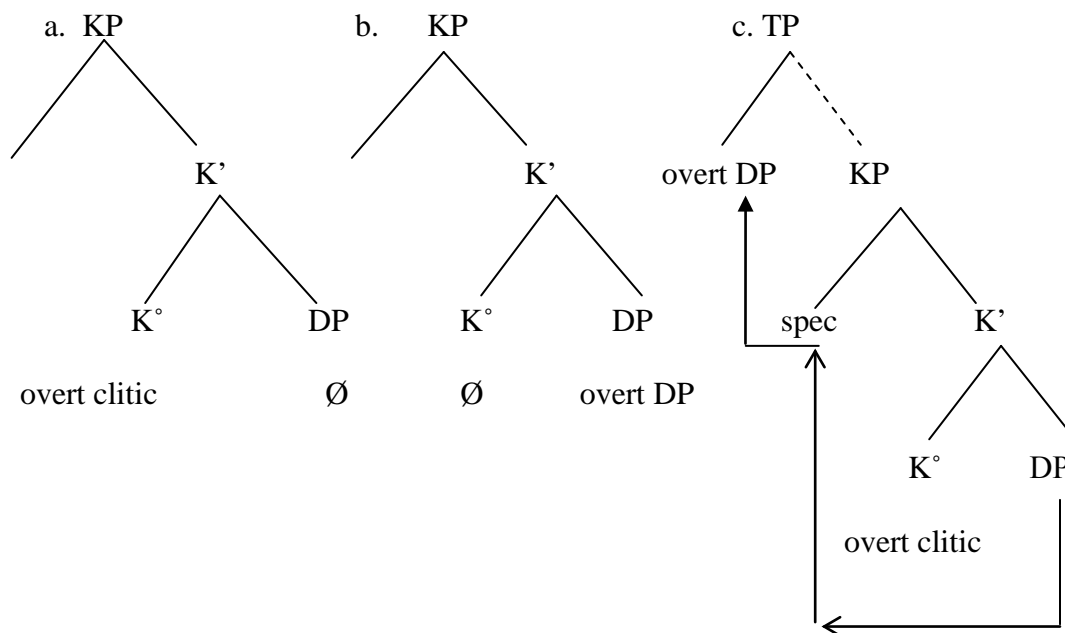
#### 4.2.2.3. Franks and Rudin (2005)

In line with Uriagereka (1995), Kayne (2002) and Boeckx (2003), Franks and Rudin (2005), in the most recent syntactic analysis of Bulgarian pronominal clitics, argue that the associate (the DP coreferential with the clitic in clitic doubling constructions) and the clitic are introduced in a single projection, so that clitics are heads which take their associates as complements. In that analysis, clitics head their own functional projection K(ase)P and take DPs as their complement (see 22). The clitic, which is the overt form of the K head, appears only when the DP complement is null (22a) and has a null realization in the presence of an overt DP (22b). In the instances when both a clitic and an overt DP associate occur (clitic doubling), the latter is usually a TOPIC and as such needs to move out of its complement position to a topic position. On its way to the peripheral TP, the DP

associate (and complement of KP) moves through [spec,KP] and triggers spec-head agreement (22c). This spec-head agreement instantiates the overt realization of a clitic despite the presence of a non-null DP.

Franks and Rudin (2005) also argue that topic constructions with clitic doubling in Bulgarian have all the characteristics of movement and an analysis which generates object clitics in argument position and full DP topics as adjuncts in the left periphery cannot adequately account for the data. As shown in Arnaudova (2002), topicalization with clitic doubling and wh-movement in Bulgarian are subject to the same classic island constraints, namely Complex NP Constraint (see 23a/24a) and Adjunct Constraint (see 23b/24b), but not to wh-islands (see 23c/24c).

(22) Franks and Rudin (2005)



(23) a. \*Maria sreštmax [mâža [kojto ja            običa \_\_ ]]

Maria met    man    who    her-cl.ACC loves

‘I met the man who loves Maria’



b. \*Vestnika zaspá [dokato go četeše \_\_ ]  
 newspaper fell-asleep while him-cl.ACC read-3<sup>rd</sup> p.sg.past

‘He fell asleep while reading the newspaper.’

c. Knigata ni objasni Maria, [kâde ja e kupila \_\_ ]  
 book us-cl.DAT explained Maria where her-cl.ACC is bought

‘Maria explained to us where she bought the book.’

(24) a. \*Kogo sreštnax [mâža [kojto obiça \_\_ ]]?  
 whom met man who loves

‘I met the man that loves whom?’

b. \*Kakvo zaspá [dokato četeše \_\_ ]?
 what fell-asleep while read-2<sup>nd</sup> p.sg.past

‘You fell asleep while you were reading what?’

c. Kakvo vi objasni Maria, [kâde e kupila \_\_ ]?  
 what you-cl.DAT explained Maria where is bought

‘What did Maria explain to you where she bought?’

#### 4.3. Clitic doubling

Cross-linguistically, clitic doubling is attested in Albanian, Greek, Romance (Romanian, Spanish), Slavic (Bulgarian, Macedonian) and Semitic (Hebrew) languages. It has always had a special significance in the study of clitics since its manifestations across languages has provided important evidence in resolving the debate on movement versus base-generation of clitics. On the one hand, Kayne’s (1975) movement analysis of French clitics (which cannot occur alongside co-referential objects) postulates their

generation in argument position and subsequent movement to their surface position. On the other hand, Jaeggli(1982) and Borer (1984), using evidence from clitic doubling in Spanish, first argue in favor of a base-generated analysis whereby clitics head their own functional projections. In defining the Clitic Doubling Parameter, they focus on the fact that in Romance and Semitic clitic doubling, the co-referential object DPs are preceded by special prepositions (a in Spanish, pe in Romanian and šel in Hebrew). The generalization that clitic doubling occurs only in languages where the doubled object DP is introduced by a preposition is known as Kayne’s Generalization (Jaeggli, 1986). The need for a preposition is attributed to case absorption on the part of the base-generated clitic which leaves the argument case-less and thus a preposition is inserted with the function of a case assigner.

- (25) La oían a la niña  
 her-cl. listen-3<sup>rd</sup> p.pl.past a det. girl  
 ‘They listened to the girl.’

Rioplatense Spanish (Anagnostopoulou 2006)

Suñer (1988) presents data from Argentinean Spanish, where clitic doubling is not dependent on the insertion of a special preposition before the doubled object. She refers to those special prepositions as animacy markers and argues that clitic doubling occurs only when the doubled argument is partitive or discourse-specific.

Two of the most influential proposals for analyzing clitic doubling constructions, described in more detail earlier in this chapter, belong to Sportiche (1996, 1998) and Uriagereka (1988, 1995)

When discussing clitic doubling, one of the crucial distinctions which has to be made is between clitic doubling and two similar constructions, namely clitic left dislocation (CLLD) and right dislocation (Anagnostopoulou 2006). It is important to note that languages which exhibit clitic doubling of the type illustrated in (25), also permit CLLD constructions. However, the possibility for CLLD in a particular language does not entail the availability of clitic doubling. Italian and French, as pointed out by Anagnostopoulou (2006), are typical examples of such languages. Examples (26) and (27) from Cinque (1990) show an acceptable CLLD construction and an unacceptable clitic doubling construction in Italian.

(26) Gianni, lo vedró domani

Gianni, him-cl. see-fut. tomorrow

‘I will see Gianni tomorrow.’

(27) \*Lo vedró domani Gianni

him-cl. see-fut. tomorrow Gianni

‘I will see Gianni tomorrow.’

Another argument in favor of the analysis of CLLD and clitic doubling as distinct constructions is provided by languages where only clitic doubling, but not CLLD, is subject to Kayne’s Generalization. The relevant examples (28 and 29 below), provided by Anagnostopoulou (2006), come from Rioplatense Spanish.

(28) a. Lo vimos a Juan

him-cl. see-1<sup>st</sup> p.pl.past a Juan

‘We saw Juan.’

b. \*Lo compramos el libro

him-cl. buy-1<sup>st</sup> p.pl.past det. book

‘We bought the book.’

(29) a. A Juan, lo vimos ayer

a Juan, him-cl. see-1<sup>st</sup> p.pl.past yesterday

‘We saw Juan yesterday.’

b. El libro, lo compramos ayer

det. book him-cl. buy-1<sup>st</sup> p.pl.past yesterday

‘We bought the book.’

In view of the above examples, Cinque (1990), Iatridou (1995) and Anagnostopoulou (1994) argue that CLLD is not simply a movement variety of an underlyingly clitic doubling construction. They propose an analysis of CLLD whereby the left-dislocated constituent is base-generated in the left periphery rather than subject to movement from the postverbal argument position.

As argued by Guentchéva (1985, 1994), in CLLD constructions a clitic has anaphoric relationship with an XP, which appears sentence-initially. CLLD represents a ‘single syntactic structure for two predicative relations’ whereas clitic doubling refers to those cases when a direct or indirect object is doubled by a co-referential clitic occurring within the same clause and in a single predicative relation.

(30) Mljakoto<sub>1</sub>, Ivan go<sub>1</sub> izpi

milk-def. Ivan it-cl.ACC drank-3<sup>rd</sup> p.sg.

‘As for the milk, Ivan drank it.’

(31) Ivan go izpi mljakoto

Ivan it-cl.ACC drank-3<sup>rd</sup> p.sg. milk-def.

‘Ivan drank the milk.’

Examples (30) and (31) above illustrate the distinction between CLLD and clitic doubling in Bulgarian. In CLLD constructions such as (30), the left-dislocated constituent is separated from the rest of the sentence by an intonation break (and by a comma in the punctuation). Guentchéva (2008) contends that such a constituent has the function of a presentative and can be paraphrased by ‘as far as X is concerned’. The reference with the following clitic is established via a standard anaphoric mechanism whereby an anaphora (in this case the accusative clitic) is co-indexed with a DP in the preceding context. Conversely, in a clitic doubling construction such as (31), the DP and the co-referential accusative clitic appear within the same clause. They are coindexed but not in an anaphoric relationship and they are part of the same predicate.

#### 4.4. Pragmatic effects of clitic doubling in Bulgarian

Bulgarian (alongside Macedonian) displays a phenomenon, which is not to be found among other Slavic languages, namely clitic doubling, whereby a direct or indirect object DP and a coreferential clitic occur within the same clause (32).

(32) Ivan go vidja Maria

Ivan him-cl.ACC saw- 3<sup>rd</sup> p.sg. Maria

‘Maria saw Ivan.’

Clitic doubling is considered one of the defining characteristics of the Balkan Sprachbund (Albanian, Bulgarian, Greek, Macedonia, Romanian)<sup>6</sup>. As observed by

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<sup>5</sup>The languages in the Balkan Sprachbund exhibit a number of common features which while uniting them, also set them apart from other languages in their language families. Some of those shared characteristics are clitic doubling, prepositional phrases in the place of oblique

Guentchéva (2008), in comparison to other Balkan languages, Bulgarian clitic doubling exhibits the slightest degree of grammaticalization and the highest degree of pragmatic significance. In Macedonian, all definite direct and indirect objects need to be doubled by a co-referential clitic (Tomić, 2004). Albanian doubles all indirect objects (Kallulli, 2000). Romanian clitic doubling occurs with post-verbal direct objects and the presence of the special preposition *pe*. The function which is most consistently applicable to the usage of clitic doubling in Bulgarian is overt marking of topicality (Leafgren 1992, 1997). In that regard, Lopašov (1978) establishes a grammaticalization continuum for clitic doubling in Balkan languages with Macedonian and Bulgarian at the two extremes and Albanian, Romanian and Greek coming in between those two in decreasing order of grammaticalization.

Purely syntactic analyses of Bulgarian clitic doubling contend that case disambiguation in instances of non-neutral (non-SVO) word order is the primary function of clitic doubling. Bulgarian has no system of overt case marking and since word order is very often quite flexible, a sentence such as (32) would be ambiguous as to ‘who saw whom’ unless a masculine object clitic doubles the fronted object. The placement of a feminine object clitic in preverbal position would immediately change the syntactic functions of the two proper names (see 33) and the interpretation would be of a standard SVO word order.

(33) Ivan ja vidja Maria  
 I her-cl.ACC saw-3<sup>rd</sup>p.sg. Maria

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cases, an enclitic definite article, lack of ‘proper’ infinitives, a periphrastic future tense, adnominal possessive clitics, the Aorist-Imperfect opposition (Dimitrova-Vulchanova and Vulchanov, 2008).

‘Ivan saw Maria’

However, there are two strong arguments against a purely case disambiguation analysis of clitic doubling. Firstly, in cases when subject and object share gender specification, the insertion of a co-referential clitic does not provide any assistance in determining which of the two nouns is the subject (or object).

(34) Ivan go vidja Peter

Ivan him-cl.ACC saw-3<sup>rd</sup>p.sg. Peter

‘Peter saw Ivan’ or ‘Ivan saw Peter’

Secondly, when the object is a non-clitic (strong) pronoun, accusative case is unambiguously marked on it and no disambiguation is needed but clitic doubling still obtains. Moreover, its absence in those cases makes the sentence severely degraded with neutral non-contrastive focus intonation.

(35) Nego \*(go) vidja Maria

him-pronoun him-cl see-3<sup>rd</sup>p.sg.past Maria

‘Maria saw him’

More pragmatics-oriented analyses often associate clitic doubling with overt marking of object definiteness or with providing additional emphasis on the objects, or even with a pragmatic function of expressivity (Tchizmarova 2004). However, the above observations, despite undoubtedly being a common characteristic in a number of clitic doubling usages, cannot provide a uniform and consistent description of its functional and interpretive properties. The common denominator, which is most consistently applicable to the usage of that construction, is its association with overt marking of topicality as described in a number of studies. Among those studies Leafgren (1992

dissertation, 1997) stands out as the most thorough and detailed analysis of the relationship between clitic doubling in Bulgarian and the topic-comment structure of the clause. Leafgren (1997) adopts Sgall's (1975) approach to topic at the clause level whereby TOPIC is described as the 'element whose referent represents the place in the listener's memory where the information provided in the clause is to be stored' (Sgall 1975, p.303). Leafgren himself defines topic as 'the element which represents that about which the speaker is providing or requesting information' (Leafgren, 1997, p.297). He argues that, in Bulgarian, topicality of the object is a prerequisite for its being doubled by a clitic, which agrees in person, gender and number with its full DP associate. Since only topical objects are doubled, that serves as an overt signal to the listener that a background is established about which the speaker provides or requests information. Leafgren also argues that since most topics are subjects, in cases of object clitic doubling, the speaker intends to overtly mark 'rare instances' of object topics.

Topicality and clitic doubling have very often been related to definiteness and givenness. Adopting Chafe (1976), Leafgren defines a definite noun phrase as one which:

- has a particular referent in the mind of the speaker
- has a referent, which is identifiable by the listener

In order for definiteness to obtain, both criteria need to be satisfied. If either or both definiteness conditions are not met, the noun phrase is indefinite. There are three types of indefiniteness:

- If only the first condition is satisfied, that is the noun phrase has a particular referent in the mind of the speaker but one which is not identifiable by the listener, we have an instance of a specific indefinite noun phrase.



- If only the second condition is satisfied, that is the noun phrase lacks a particular referent, but has a referent which stands for a whole class and is easily identifiable by the listener, we have a generic indefinite noun phrase.
- If a noun phrase meets neither of the definiteness conditions, then we have a true indefinite noun phrase.

There are two approaches to the connection between definiteness and topicality. Some researchers argue that topics are always definite whereas others, such as Leafgren (1997), adopt a less conservative view and claim that, although almost all topics are definite, it is not impossible to have indefinite topics as well. The only indefinites, which cannot serve as topics are the true indefinites, whereas specific and generic indefinites can be topicalized. The following examples of indefinite topics provide evidence for the above claim:

(36) Pokorna glava sabja ja ne seče.

Submissive head sword her-cl.ACC not cut

‘A submissive head doesn’t get cut by a sword’

In example (36), the generic indefinite noun phrase *pokorna glava* ‘submissive head’ does not have a particular referent but stands for a whole class. However, clitic doubling of the fronted object is not only possible but sounds even better than the undoubled version.

(37) Edna žena ja blâsna kola taja sutrin.

One woman her-cl.ACC hit-3<sup>rd</sup> p.sg. car this morning

‘A car hit a woman this morning’

Example (37) presents doubling of a fronted specific indefinite object noun phrase. The indefiniteness of the noun phrase *edna žena* ‘one woman’ is signaled by the numeral *edna* ‘one’. However, the indefinite noun phrase has a particular referent in the mind of the speaker, which makes it specific and therefore eligible for clitic doubling.

(38) \**Edin šokolad go iskam.*

One chocolate him-cl.ACC want-1<sup>st</sup> p.sg.

‘I want a chocolate.’

Sentence (38) provides an example of a true (neither generic, nor specific) indefinite noun phrase, which according to Leafgren cannot be topicalized and doubled. Therefore, it could be claimed that not only definite, but also two types of indefinite noun phrases, namely specific and generic indefinites, can acquire a topic status and be subsequently doubled by a clitic. The only clitic doubling restriction applies to true indefinites, which can never be topics and can never be doubled by a co-referential clitic. However, it should be noted that instances of indefinite topics and their being doubled by clitic are a lot less common than cases when a definite topic is subject to clitic doubling.

Besides definiteness, topicality is very often associated with the notion of givenness and the distinction between ‘given’ and ‘new’ information. Chafe (1976, p.30) provides the following definition of ‘given’ versus ‘new’ information:

- Given information is what the speaker assumes to be already in the listener’s consciousness whereas new information is what the speaker assumes he/she is introducing into the listener’s consciousness.

As with definiteness, there are more conservative claims, which contend that topics must always present given information, but there are also looser claims, such as

Leafgren's (1997). He argues that although topics are most often associated with given information, it is not impossible to topicalize new information. I will provide an example, which supports that view. If we take example (39) in the following context:

(39) Znaeš                    li    kakvo stana            dnes    dokato vârvjax  
       know-2<sup>nd</sup> p.sg.    Q    what    happened today while    walked-1<sup>st</sup> p.sg.  
       za učilište? Vidjax            kak    edna žena        ja  
       to school    saw-1<sup>st</sup> p.sg.    how one    woman her-cl.ACC  
       blâsna            kola.  
       hit-3<sup>rd</sup> p.sg.    car

‘Do you know what happened today while I was walking to school? I saw how a woman was hit by a car.’

In the above example, it is obvious that the specific indefinite noun phrase ‘edna žena’ presents new information, and, still, it can be doubled by a clitic and it can achieve topic status.

Doubling of topical objects is sometimes argued to be optional since topicality can be expressed via other language means such as fronting and intonational pattern. However, there are plenty of cases when its occurrence is pragmatically required and the lack of clitic doubling would often compromise the felicity and even the grammaticality of the utterance. Let us consider the short dialogue in (40).

(40) A: Njakoj            viždal        li    e    Ivan    dnes?  
       somebody seen-part.    Q    is    Ivan    today?  
       ‘Has anybody seen Ivan today?’

- B: a. Ivan \*(go) vidjax sutrinta.  
       Ivan him-cl.DAT saw-1<sup>st</sup> p.sg. in the morning  
       ‘I saw Ivan in the morning.’
- b. Ivan sutrinta \*(go) vidjax.
- c. Sutrinta #(go) vidjax Ivan.

The answer to a question as in (40) would be deemed pragmatically felicitous if the fronted topic is doubled by a preverbal agreeing clitic. As shown in answers (40a) and (40b), in instances where the object DP is extracted from its canonical object position and fronted for the purpose of revealing its topic nature, overt clitic doubling is strictly required and its absence would render the sentence pragmatically flawed and, to some extent, even grammatically incorrect unless some pair-list reading is imposed on it. Unlike the double topicality marking (fronting + clitic doubling) in (40a) and (40b), (40c) has its topical object DP in its canonical position and the only way its topic status could be expressed and the pragmatic felicitousness of the utterance saved is by the insertion of an agreeing clitic in preverbal position. If no clitic doubling is available, the clearly topic nature of the object DP would not be signaled in any way and that would render the sentence pragmatically odd. Moreover, Bulgarian tends to have its focused components in clause-final position, which could further aggravate the pragmatic felicitousness of that sentence as it might not only be lacking in topicality marking, but also be potentially interpretable as a focal construction.

Besides clitic doubling, which serves as an overt marker of topicality, Bulgarian also exhibits obligatory doubling in cases when the associate is a topicalized oblique subject, i.e. an argument which is thematically most prominent, but not a canonical

nominative subject and typically has the semantic role of Experiencer (Franks & Rudin 2005):

(41) a. Na Peter mu e studeno.

to Peter him-cl.DAT is cold

‘Peter is cold.’

b. Studeno mu e na Peter.

(42) a. Na Maria ji e lesno.

to Maria her-cl.DAT is easy

‘It’s easy for Maria.’

b. Lesno ji e na Maria.

(43) a. Ivan go boli glava-ta

Ivan him-cl.ACC. hurts head-det

‘Ivan has a headache’

(44) a. Maria ja e strax.

Maria her-cl.ACC. is afraid

‘Maria is afraid’

In the constructions of examples (41) and (42), the noun phrase which holds the semantic role of Experiencer is doubled by a dative clitic and is introduced itself by the preposition *na* rather than dative case marking as Bulgarian is an analytical language and case is marked only on pronouns and pronominal clitics. In (43) and (44), the Experiencer is doubled by an accusative clitic, whose presence, as in the previous two examples with dative clitic doubling, is obligatory and its absence would render the sentences severely degraded grammatically.

In two particular environments the use of clitic doubling is believed to have a remedial effect on constructions which are in violation of certain linguistic principles:

- Clitic doubling eliminating apparent superiority violations with multiple wh-constructions

(45) a. Koj kogo (\*go) narisuva.  
 who whom (him-cl) draw- 3<sup>rd</sup> p.sg.past

b. Kogo koj \*(go) narisuva.  
 whom who (him-cl) draw-3<sup>rd</sup> p. sg.past

‘Who drew whom?’ (Jaeger 2003)

- Clitic doubling eliminating weak cross-over effects

(46) Vsijako dete majka mu \*(go) običa.  
 every child mother his-poss.cl. him-cl. love-3p,sg

‘Every child is loved by his mother’ (Arnaudova 2002)

However, in terms of frequency of occurrence, the above two constructions are very uncommon and their significance is mostly in providing evidence for certain theoretical claims (e.g. the presence of A-bar movement).

## CHAPTER 5

### A STUDY ON THE L2 ACQUISITION OF THE SYNTACTIC PROPERTIES OF BULGARIAN OBJECT CLITICS

#### 5.1. Research question

This chapter presents an experimental study whose purpose is to investigate the extent to which Bulgarian L2 learners with English as their L1 have acquired the main syntactic properties of Bulgarian object clitics. Since English does not utilize object clitics but only strong pronouns, L2 acquisition of the former involves knowledge of a new functional category responsible for clitic representations in the L2 grammar. Successful acquisition of a new functional category such as KP where Bulgarian object clitics are argued to be base-generated (Franks and Rudin, 2005) can serve as evidence for the accessibility of UG in L2 acquisition since the unavailability of a clitic-related functional category in the L1 grammar makes it an impossible source for the acquisition of the functional category. If the L2 learners' performance at advanced levels of proficiency is still non-native with respect to syntactic properties of object clitics, it could be concluded that a functional category is not acquired and used in a native-like manner due to the inaccessibility of UG and the absence of that category in the L1.

The results of the syntactic experiment in this chapter will also serve as a point of comparison with the results of the following syntax-discourse study in order to establish a possible delay in the acquisition of interface properties in comparison to the acquisition of properties that are related to the syntax proper.

## 5.2. Specific Hypotheses

This section will present a brief outline of the prediction of two central hypotheses in generative second language acquisition as regards the acquisition of Bulgarian object clitics.

The Full Transfer/Full Access Hypothesis predicts that the learners' L1 grammar (with L1 functional categories and L1 parameter settings) will constitute the initial stage of acquisition. Subsequently, because of the learners' failure to assign an appropriate representation to input data, they will proceed with restructuring of their mental representations in accordance with the L2 input and the options presented to them by the fully accessible UG. The ultimate result will be L2 convergence and the specific functional category will be included in L2 learners' array of categories that represent the functional make-up of the particular language. In the particular case of L2 acquisition of object clitics by learners whose L1 does not use clitics (and therefore does not have a functional projection to host clitics), the L2 learners are expected to transfer their L1 representations for direct and indirect referential objects. In those representations, pronominal objects occupy argument positions and that is where Bulgarian clitics are expected to be placed at the earlier stages of acquisition. Under the influence of the abundant input related to object clitics, the L2 learners are expected to restructure their mental representations in due time and to include the functional category associated with clitics. Ultimately, complete target convergence is expected.

The Interpretability Hypothesis of Tsimpli and Dimitrakopoulou (2007), which is the latest version of the theoretical line initiated by Hawkins and Chan's (1997) Failed Functional Feature Hypothesis and its later version, the Representational Deficit



Hypothesis, attributes target divergent behavior among L2 learners to uninterpretable features which are not available in the post-critical period due to the lack of full UG accessibility. Uninterpretable features are intrinsic to the linguistic module, they take part in linguistic computations but are irrelevant to LF in contrast to interpretable features, which are associated with categories of the Conceptual-Intentional system and have a significant role at LF. With regard to object clitics, the Interpretability Hypothesis has a specific prediction which is advanced in Tsimpli and Mastropavlou (2008). They argue that 1<sup>st</sup> and 2<sup>nd</sup> person clitics have the interpretable feature [+person] which is not part of the feature make-up of 3<sup>rd</sup> person clitics as they are a bundle of two uninterpretable features, namely agreement ( $\phi$ -features) and case features which are uninterpretable at LF (Tsimpli & Stavrakaki, 1999). Therefore, 3<sup>rd</sup> person clitics are more likely to be problematic for L2 learners unless those learners resort to a remedial strategy of interpretability mis-assignment, which brings them native-like performance but not native-like representations. In order to explore the viability of this hypothesis, most of the clitics in the following study were 3<sup>rd</sup> person clitics. Two of the conditions which allowed for L1 transfer and misinterpretation of object clitics as strong pronouns were the preverbal vs argument position task and the coordination task (clitics never occupy argument positions and they can never be coordinated with a full DP). Those conditions had 75% 3<sup>rd</sup> person clitics and 100% 3<sup>rd</sup> person clitics, respectively.

### 5.3. Bulgarian object clitics summarized

Bulgarian object clitics appear in an 8-member paradigm (see Table 1 in chapter 4) and they are marked for case (accusative and dative), person and number. Third person clitics are also marked for gender.

Object clitics in Bulgarian are invariably pre-verbal as opposed to second-position (Wackernagel) clitics that are found in other Slavic languages. They cannot appear sentence-initially and in those cases when the pre-verbal position is also sentence-initial, they appear after the verb (Tobler-Musafia effect).

Bulgarian object clitics in ditransitive constructions are often involved in clitic clusters where the dative clitic always precedes the accusative clitic.

Participation in the clitic doubling construction, whereby a full DP and a coreferential clitic appear within the same clause, is another specific feature of object clitics in Bulgarian. In addition to its pragmatic function of marking topical object, clitic doubling in Bulgarian can occur with the following specific predicates:

- psych and physical perception predicates with dative experiencers (e.g. xaresva mi ‘it appeals to me)
- psych and physical perception predicates with accusative experiencers (mârzi me ‘feel lazy’)
- feel-like constructions (spi mi se ‘feel like sleeping)
- some modal predicates (trjabva mi ‘I need’)
- predicates indicating presence or absence (njama go ‘he is not here’)

(Krapova and Cinque, 2008)

The syntactic properties described above were tested in the experimental study presented in the next section.

#### 5.4. The Experiment

##### 5.4.1. Participants

The participants in the study were 24 native speakers of English who were divided into two groups – advanced and intermediate learners of Bulgarian. The division was based on a proficiency test which is described in the following section.

Proficiency turned out to be closely correlated to the number of years that the participants had learned Bulgarian, either in a classroom setting or in daily communication (in most cases, both). Tables 2 and 3 show the participants' age and number of years they had been exposed to Bulgarian.

All participants were native speakers of British English or American English and they had started studying Bulgarian long after the critical period of acquisition. The advanced participants (n=10) had a mean age of 39.2 years and their mean number of years of exposure to Bulgarian was 12.7 (only one advanced L2 learner had studied Bulgarian for less than 10 years). All 10 participants in the advanced group had lived in Bulgaria for a number of years and all but one of them were still living there at the time of the experiment.

The participants in the advanced group came from various occupational backgrounds – a Bulgarian-English translator, three journalists (one is a New York Times correspondent and two of them work for Bulgarian magazines), a non-fictional writer, an artist, a PhD student of Bulgarian folk music, a Bulgarian National Television employee,

a member of a religious mission and the Canadian wife of a Bulgarian linguist. Four of those advanced learners had Bulgarian spouses and two of them had children who were native speakers of Bulgarian. All of them used Bulgarian on a daily basis and for most of them native-like proficiency in the language was crucial in their professional environment.

Table 2 Advanced group – age and years of experience with Bulgarian

| Name | Age        | Years of Experience with Bulgarian |
|------|------------|------------------------------------|
| A-1  | 40         | 18                                 |
| A-2  | 38         | 10                                 |
| A-3  | 34         | 12                                 |
| A-4  | 39         | 17                                 |
| A-5  | 33         | 11                                 |
| A-6  | 51         | 17                                 |
| A-7  | 33         | 6                                  |
| A-8  | 50         | 14                                 |
| A-9  | 37         | 10                                 |
| A-10 | 37         | 12                                 |
|      | Mean: 39.2 | Mean: 12.7                         |

The intermediate participants (n=14) had a mean age of 31.9 years and they had been exposed to Bulgarian for an average of 2.6 years (see Table 3). Five of them were employees at the US Embassy in Bulgaria; there were also college professors, ESL teachers, a scientist, members of religious missions in Bulgaria and Peace Corps volunteers. At the time of the experiment, most of them were residing in Bulgaria. Many of them were taking formal classes in Bulgarian or had a Bulgarian tutor. Most intermediate learners claimed that they used Bulgarian on a daily basis and their understanding of the language was essential in their work place. Nevertheless, some admitted that they were still struggling with Bulgarian but were generally satisfied with their progress and were hoping to attain a higher level of proficiency.

Finally, there was a control group (n=16) of monolingual native Bulgarian speakers. Their mean age was 30.7 years and they were all living in Bulgaria when the experiment was conducted. Ten of the participants in the control group lived in the capital of Bulgaria, Sofia, and six came from other regions in the country. Since there are no dialectal distinctions in the use of Bulgarian clitics, the regional variety of the participants in the control group could not have had any effect on their results. All control subjects had attended higher education institutions in Bulgaria and held university degrees. Although they had an excellent command of Standard Bulgarian, none of them had studied Bulgarian linguistics.

Table 3 Intermediate group – age and years of experience with Bulgarian

| Name | Age        | Years of Experience with Bulgarian |
|------|------------|------------------------------------|
| I-1  | 37         | 2                                  |
| I-2  | 30         | 1                                  |
| I-3  | 30         | 2                                  |
| I-4  | 26         | 3                                  |
| I-5  | 31         | 3                                  |
| I-6  | 27         | 2                                  |
| I-7  | 26         | 2                                  |
| I-8  | 20         | 1                                  |
| I-9  | 42         | 5                                  |
| I-10 | 46         | 4                                  |
| I-11 | 38         | 6                                  |
| I-12 | 42         | 3                                  |
| I-13 | 28         | 1                                  |
| I-14 | 23         | 2                                  |
|      | Mean: 31.9 | Mean: 2.6                          |

#### 5.4.2. Proficiency assessment

Since the experiments in this thesis are primarily interested in the performance of advanced L2 learners, the main purpose of the proficiency assessment was to separate the participants into advanced and non-advanced. That division, as expected, was very strongly correlated with the number of years of experience with Bulgarian as revealed by Tables 2 and 3. A further fine-grained division within the non-advanced group was not needed in view of the research questions posed by this thesis, so they were treated as intermediate learners, since they had studied Bulgarian for at least one year.

The two main experimental tasks were very demanding and time-consuming and it was imperative not to exhaust and discourage my informants with a detailed and lengthy proficiency test. For that reason I chose a cloze test along the lines of Chen (1996) and Slabakova (2001). It included a short adapted version of a popular fairy tale (Little Red Riding Hood) where words were deleted at regular intervals (every sixth or seventh word was deleted) until there were 40 blanks. The subjects were asked to fill in each blank with a word that they thought would be the best meaningful fit (the cloze test is given in Appendix A). If a blank was filled with exactly the same word as the original, 1 point was given. If the supplied word was different from the original deleted word, no point was given, even if that word was meaningful in the particular context. The maximum total number of points for the cloze test was 40.

First, the score range of the control group was determined. Then, the raw scores of the L2 subjects were compared with the control range and those participants who fell in that range were considered advanced. Subjects who fell below the control range were counted as non-advanced. The lowest score among the control subjects was found to be

Table 4 Cloze test - control group

| Participant | Score      |
|-------------|------------|
| C-1         | 30         |
| C-2         | 29         |
| C-3         | 32         |
| C-4         | 29         |
| C-5         | 34         |
| C-6         | 31         |
| C-7         | 29         |
| C-8         | 23         |
| C-9         | 23         |
| C-10        | 31         |
| C-11        | 32         |
| C-12        | 27         |
| C-13        | 29         |
| C-14        | 30         |
| C-15        | 32         |
| C-16        | 29         |
|             | Mean: 29.4 |



23 (see Table 4), so that was taken to be the cut-off point and each participant whose score fell above 23 was considered advanced.

Table 5 Cloze test – advanced group

| Participant | Score      |
|-------------|------------|
| A-1         | 26         |
| A-2         | 24         |
| A-3         | 26         |
| A-4         | 25         |
| A-5         | 27         |
| A-6         | 26         |
| A-7         | 26         |
| A-8         | 25         |
| A-9         | 24         |
| A-10        | 29         |
|             | Mean: 25.8 |

Table 6 Cloze test – intermediate group

| Participant | Score      |
|-------------|------------|
| I-1         | 12         |
| I-2         | 14         |
| I-3         | 13         |
| I-4         | 17         |
| I-5         | 9          |
| I-6         | 10         |
| I-7         | 12         |
| I-8         | 10         |
| I-9         | 20         |
| I-10        | 11         |
| I-11        | 18         |
| I-12        | 13         |
| I-13        | 15         |
| I-14        | 12         |
|             | Mean: 13.3 |

#### 5.4.3. Methodology – grammaticality judgment task

Ten L2 learners were found to have scores that were above 23 and they formed the advanced group (see Table 5). All other participants were significantly below the cut-off point and they were all placed into the intermediate group (see Table 6).

Although the above procedure seemed quite simple and arbitrary, it was successful in separating the advanced learners from the total of 24 participants as was confirmed by the results in the subsequent experimental tasks.

The experiment consisted of a grammaticality judgment task with corrections, which was administered via WebSurveyor. The participants were given short dialogues consisting of a question and a response. They were asked to evaluate the grammaticality/acceptability of the responses by marking them as either grammatical or ungrammatical. In those cases when a response was marked as ungrammatical, the participant had to provide the necessary correction in order to render it grammatical. The total number of test items was 70, five of the six properties which were investigated were represented by ten test items and one of them (non-argument position) was represented by twenty items. There was an equal number of grammatical and ungrammatical responses and the test items were randomized across all six properties.

A cluster of six syntactic properties of Bulgarian clitics was established. Four of the properties, taken together, were specific to Bulgarian object clitics and distinguished them from clitics in other languages (e.g. Spanish or Serbo-Croatian). Those were pre-verbal (as opposed to Wackernagel) position, Tobler-Musafia effect, object clitic clustering and obligatory clitic doubling. Although some, or most of those properties,

occurred in other clitic languages, the combination of all four was considered characteristic of Bulgarian object clitics.

Two of the investigated properties are typical of object clitics cross-linguistically and are related to their special status as functional elements rather than part of the argument structure of a sentence. Clitics do not appear in argument positions (typologically, object clitics occur pre-verbally or occupy second position in the sentence) and they cannot be coordinated with full DPs.

Below is a list of the properties included in the grammaticality judgment task illustrated with an ungrammatical test item:

- Pre-verbal (non-argument) position: Bulgarian object clitics invariably appear before the verb (unless Tobler-Musafia effect obtains). All the test items for this property excluded Tobler-Musafia environments and were aimed at ascertaining the extent to which the non-argument position of Bulgarian object clitics was acquired. L2 learners' grammaticality judgments on this property could also reveal possible L1 transfer and misanalysis of object clitics as object strong pronouns by participants at a lower proficiency level

There were 20 test items related to preverbal, non-argument position of Bulgarian object clitics – 10 with accusative clitics and 10 with dative clitics. Half of them were ungrammatical and had to be corrected. Here are two examples, with an accusative and with a dative clitic:

- (47) A: Koj izmi činiite?  
 who washed-3<sup>rd</sup> p.sg. dishes-def.  
 'Who washed the dishes?'

B: \*Az izmix gi  
I washed-1<sup>st</sup> p.sg. them-cl.ACC

‘I washed them’

Correct: Az gi izmix

(48) A: Kakvo kupi na Maria ot razprodažbata?

what bought-2<sup>nd</sup> p.sg. to Maria from sale-def.

‘What did you buy for Maria from the sale?’

B: \*Ništo ne kupix ji.

nothing not bought-1<sup>st</sup> p.sg. her-cl.DAT

‘I didn’t buy her anything.’

Correct: Ništo ne ji kupix.

- Pre-verbal vs Wackernagel position: Bulgarian object clitics are always verb adjacent unlike object clitics in other Slavic languages (Serbian, Czech), which are 2<sup>nd</sup> position (Wackernagel) clitics. Test items for this property included sentences where the pre-verbal clitic occupied third position in the sentence. A Wackernagel position in such cases violates the requirement for verb adjacency and renders the sentence ungrammatical:

(49) A: Njakoj viždal li e Maria?

someone seen-participle Q be-3p.sg Maria

‘Has anyone seen Maria?’

B: \*Az ja včera vidjax.

I her-cl.ACC yesterday saw-1<sup>st</sup> p.sg.

‘I saw her yesterday.’

Correct: Az včera ja vidjax.

- Tobler-Musafia effect: Bulgarian object clitics always need a phonological host to their left. In cases when the pre-verbal position of object clitics places them sentence-initially, they follow the verb.

(50) A: Izpi                      li mljakoto?

drank-2<sup>nd</sup> p.sg. Q milk-def.

‘Did you drink the milk?’

B: \*Go              izpix              ošte včera.

it-cl.ACC drank-1<sup>st</sup> p.sg. still yesterday

‘I drank it yesterday.’

Correct: Izpix go ošte včera.

- Object clitic clustering: in ditransitive constructions the dative clitic always precedes the accusative clitic

(51) A: Koga izprati              pismoto do Ivan?

when sent-2<sup>nd</sup> p.sg. letter-def . to Ivan

‘When did you send the letter to Ivan?’

B: \*Včera              go              mu              izpratix.

yesterday it-cl.ACC him-cl.DAT sent-1<sup>st</sup> p.sg.

Correct: Včera mu go izpratix.

- No coordination with full DPs: one of the syntactic asymmetries between strong and ‘deficient’ pronouns as established by Cardinaletti and Starke (1999) refers to coordination which is possible only with strong pronouns

(52) A: Pokani li Petja?

invited-2<sup>nd</sup> p.sg. Q Petja

B: \*Pokanix ja i sestra ji

invited -1<sup>st</sup> p.sg. her-cl.ACC and sister her-poss.

minalata sedmica

last week

‘I invited her and her sister last week.’

Correct: Pokanix neja i sestra ji minalata sedmica.

- Obligatory clitic doubling: clitic doubling is obligatory in Bulgarian with specific predicates (see 5.3. for a list of such predicates)

(53) A: Zašto sa ti tezi hapčeta?

why are to you those pills

‘Why do you need those pills?’

B: \*Petja boli glavata.

Petja hurt-3<sup>rd</sup> p.sg. head-def.

‘Petja has a headache’ (lit. The head hurts Petja)

Correct: Petja ja boli glavata.

Petja her-cl.ACC hurt-3<sup>rd</sup> p.sg head-def.

## 5.5. Results

### 5.5.1. Group results

Table 7 shows the group results for each of the six properties investigated by the grammaticality judgment task. Credit was given to correct judgment on grammatical

answers and to correct judgment on ungrammatical answers followed by an appropriate correction. There was no partial credit and if an answer was marked as ungrammatical but no correction was provided, it received no credit.

Table 7 Group results of grammaticality judgment task

|                       | P 1 | P 2 | P 3  | P 4  | P 5 | P 6 |
|-----------------------|-----|-----|------|------|-----|-----|
| Control<br>Group      | 99% | 99% | 100% | 100% | 99% | 99% |
| Advanced<br>Group     | 97% | 98% | 100% | 98%  | 95% | 92% |
| Intermediate<br>Group | 66% | 64% | 91%  | 67%  | 51% | 52% |

Note: The abbreviations in this table stand for the following properties – P1 (Pre-verbal/Non-argument position), P2 (Pre-verbal/Non-Wackernagel position), P3 (Tobler-Musafia effect), P4 (Clustering), P5 (No coordination), P6 (Obligatory clitic doubling)

As expected the native group provided correct grammaticality judgments for almost 100% of the test items. The judgments of the advanced group were above 90% correct on all six clitic properties. In contrast, the group results of the intermediate group were significantly lower than the results of the control and the advanced groups for all but one (Tobler-Musafia effect) of the properties. In order to establish the points of statistical difference a repeated measures two-factor ANOVA was performed with



properties as a within-subjects dependent variable and group as a between-subjects factor. The ANOVA revealed significant group effect ( $F(1,37)=2028,241$ ,  $p<0.001$ ) and the following Tukey HSD post hoc comparison identified the point of significant difference, which was found to be between the control and the advanced group, on the one hand, and the intermediate group, on the other hand. There was no statistical difference in the judgments of the control and the advanced group.

### 5.5.2. Individual results

In evaluating the individual results, a cut-off point of 80% represented performance on 10 items that was sufficiently different from chance. Thus a score of 80% or above was taken as an indicator of successful knowledge of a clitic-related property. As the individual results of the control group (see Table 8) reveal, they had an almost 100% accuracy in their grammaticality judgment for all six properties.

Due to their exposure to Bulgarian for a significant amount of time and in view of the abundant input related to object clitics, the advanced group was expected to behave in a native-like manner on all properties. The individual results in Table 9 corroborate that expectation; with the single exception of participant A-7 who was below the cut-off point for one of the investigated properties (70% for obligatory clitic doubling), all advanced subjects were at or above 80% accuracy in their grammaticality judgments and corrections.

Most interesting, however, were the results of the intermediate group. As revealed by the repeated measures two-factor ANOVA, their judgments significantly differed from those of the control and the advanced groups.

Table 8 Individual results of grammaticality judgment task – control group

|             | P 1  | P 2  | P 3  | P 4  | P 5  | P 6  |
|-------------|------|------|------|------|------|------|
| C-1         | 100% | 100% | 100% | 100% | 100% | 100% |
| C-2         | 100% | 100% | 100% | 100% | 100% | 100% |
| C-3         | 100% | 90%  | 100% | 100% | 100% | 100% |
| C-4         | 100% | 100% | 100% | 100% | 100% | 100% |
| C-5         | 100% | 100% | 100% | 100% | 100% | 100% |
| C-6         | 100% | 100% | 100% | 100% | 90%  | 100% |
| C-7         | 100% | 100% | 100% | 100% | 100% | 100% |
| C-8         | 100% | 100% | 100% | 100% | 100% | 100% |
| C-9         | 100% | 100% | 100% | 100% | 100% | 100% |
| C-10        | 100% | 100% | 100% | 100% | 100% | 100% |
| C-11        | 100% | 100% | 100% | 100% | 90%  | 100% |
| C-12        | 100% | 100% | 100% | 100% | 100% | 100% |
| C-13        | 100% | 100% | 100% | 100% | 100% | 100% |
| C-14        | 100% | 100% | 100% | 100% | 100% | 100% |
| C-15        | 100% | 100% | 100% | 100% | 100% | 90%  |
| C-16        | 90%  | 100% | 100% | 100% | 100% | 100% |
| Group means | 99%  | 99%  | 100% | 100% | 99%  | 99%  |

Table 9 Individual results of grammaticality judgment task – advanced group

|             | P 1  | P 2  | P 3  | P 4  | P 5  | P 6  |
|-------------|------|------|------|------|------|------|
| A-1         | 100% | 100% | 100% | 100% | 100% | 90%  |
| A-2         | 100% | 100% | 100% | 100% | 100% | 100% |
| A-3         | 100% | 100% | 100% | 100% | 100% | 100% |
| A-4         | 100% | 90%  | 100% | 100% | 90%  | 90%  |
| A-5         | 100% | 100% | 100% | 100% | 100% | 100% |
| A-6         | 100% | 100% | 100% | 100% | 80%  | 90%  |
| A-7         | 80%  | 90%  | 100% | 90%  | 90%  | 70%  |
| A-8         | 90%  | 100% | 100% | 90%  | 100% | 100% |
| A-9         | 100% | 100% | 100% | 100% | 90%  | 80%  |
| A-10        | 100% | 100% | 100% | 100% | 100% | 100% |
| Group means | 97%  | 98%  | 100% | 98%  | 95%  | 92%  |

Note: The abbreviations in this table stand for the following properties – P1 (Pre-verbal/Non-argument position), P2 (Pre-verbal/Non-Wackernagel position), P3 (Tobler-Musafia effect), P4 (Clustering), P5 (No ccoordination), P6 (Obligatory clitic doubling)

Table 10 Individual results of grammaticality judgment task – intermediate group

|            | P 1  | P 2   | P 3   | P 4   | P 5   | P 6   |
|------------|------|-------|-------|-------|-------|-------|
| I-1        | 70%  | 30%   | 90%   | 50%   | 40%   | 20%   |
| I-2        | 20%  | 40%   | 80%   | 40%   | 20%   | 40%   |
| I-3        | 90%  | 60%   | 90%   | 70%   | 70%   | 60%   |
| I-4        | 80%  | 90%   | 100%  | 70%   | 40%   | 60%   |
| I-5        | 30%  | 60%   | 100%  | 70%   | 20%   | 40%   |
| I-6        | 40%  | 50%   | 80%   | 40%   | 50%   | 40%   |
| I-7        | 80%  | 70%   | 100%  | 70%   | 70%   | 40%   |
| I-8        | 50%  | 40%   | 90%   | 80%   | 30%   | 30%   |
| I-9        | 90%  | 90%   | 100%  | 80%   | 80%   | 100%  |
| I-10       | 80%  | 80%   | 100%  | 90%   | 70%   | 60%   |
| I-11       | 100% | 80%   | 100%  | 90%   | 80%   | 90%   |
| I-12       | 90%  | 100%  | 100%  | 80%   | 80%   | 90%   |
| I-13       | 30%  | 20%   | 60%   | 20%   | 10%   | 20%   |
| I-14       | 80%  | 90%   | 80%   | 90%   | 60%   | 40%   |
| Group mean | 66%  | 64.3% | 90.7% | 67.1% | 51.4% | 52.1% |

Note: The abbreviations in this table stand for the following properties – P1 (Pre-verbal/Non-argument position), P2 (Pre-verbal/Non-Wackernagel position), P3 (Tobler-Musafia effect), P4 (Clustering), P5 (No ccoordination), P6 (Obligatory clitic doubling)

The individual results (Table 10) showed lack of homogeneity in the performance of the intermediate group. Three of the subjects, I-9, I-11 and I-12 performed in a native-like manner and were at or above the 80% cut-off point in their judgments for all six properties. Two subjects (I-10 and I-14) had 80% or more correct judgments on four of the properties. There were five subjects whose judgments were at least 80% correct for only one (P3 – Tobler-Musafia) or for none of the six properties.

A repeated-measures ANOVA with the properties as dependent variables revealed a significant main effect on type of property ( $F(5,65)=16.463, p<0.001$ ). The following Tukey HSD post hoc comparison established three homogeneous sets in terms of percentage of correct judgment. On the one hand, the correct judgments on P3 (Tobler-Musafia effect) were significantly higher than the correct judgments on all the other six properties. On the other hand, the correct judgments on P1 (pre-verbal/non-argument position), P2 (preverbal/non-Wackernagel position) and P4 (clitic clustering) were significantly higher than the correct responses to the remaining two conditions, namely P4 (coordination) and P5 (obligatory clitic doubling).

### 5.6. Summary

The data from the grammaticality judgment task on Bulgarian object clitics showed that contrary to the expectations of the Interpretability Hypothesis (Tsimplici and Dimitrakopoulou (2007), the advanced L2 learners of Bulgarian had acquired the syntactic properties of clitics as their performance on all six properties was at or above the 80% threshold. The Interpretability Hypothesis predicts that 3<sup>rd</sup> person clitics are

particularly problematic for the L2 learners; nevertheless, the predominance of 3<sup>rd</sup> person clitics in the test items did not affect the native-like responses of the advanced subjects.

In one of the conditions (P1- pre-verbal/non-argument position), 75% of the clitics were 3<sup>rd</sup> person clitics and 25% were 1<sup>st</sup> or 2<sup>nd</sup> person clitics. Out of the 123 incorrect judgments (44% of the total of 280 grammaticality judgments) by the intermediate group with regard to that property, 23 were related to 1<sup>st</sup> or 2<sup>nd</sup> person clitics, which constituted 18% of the total. Keeping in mind that only 25% of the clitics in the test items for that property were 1<sup>st</sup> or 2<sup>nd</sup> person clitics, they did not appear to be immune to L2 learners' mistakes. Thus the predicted different accuracies between 1<sup>st</sup>/2<sup>nd</sup> person clitics and 3<sup>rd</sup> person clitics is not supported.

The performance of the intermediate learners was strongly in line with the predictions of the Full Transfer/Full Access Hypothesis. Most of the participants in that group accepted object clitics in argument positions and in coordination with full DPs. This was indicative of clitics being mis-analyzed as strong pronouns as that was the only way they could fit into the L1-based mental representation lacking in the functional projection hosting object clitics.

## CHAPTER 6

### A STUDY ON THE L2 ACQUISITION OF CLITIC DOUBLING AS OVERT MARKING OF TOPICALITY IN BULGARIAN

#### 6.1. Research questions

This chapter presents an experimental study aimed at ascertaining the extent to which native speakers of English had learned a subtle property of Bulgarian grammar which does not occur in their L1, namely, marking of topical objects via clitic-doubling. Since the construction investigated in this study presented a clear case of an interface condition and one of the two groups of participants consisted of very advanced L2 speakers of Bulgarian, it was an effective tool for testing the claims of Sorace's (2006) Interface Hypothesis for end-state divergence with respect to L2 interface properties.

Furthermore, a comparison with the results of the syntactic grammaticality judgment task as described in chapter 5 will provide evidence for or against a possible dissociation between the acquisition of purely syntactic properties and properties that require coordination between syntax and discourse.

#### 6.2. Specific Hypotheses

This section will present a brief summary (for more details see chapters 2 and 3) of the three central hypotheses in generative second language acquisition which make predictions with regard to the end-state – Full Transfer/Full Access (FT/FA)(Schwarz and Sprouse 1994, 1996), the Interpretability Hypothesis (Tsimpli and Mastropavlou, 2007), the Interface Hypothesis (Sorace, 2006).

FT/FA argues for an initial period of L2 acquisition which is solely based on L1 transfer (hence Full Transfer). During the initial stage, all L1 and L2 features and feature strengths are transferred onto the L2, which results in non-native-like performance with regard to some properties. However, that initial stage is followed by a period of ‘restructuring’ which is fully UG-constrained (hence Full Access) and parameter resetting takes place. L2 learners’ mental representations at the end-state are generally native-like with the possible exception of cases when L1 properties need to be de-learned or when the input does not allow learners to restructure a grammar feature. The proponents of FT/FA claim that in some rare cases the linguistic input can be ambiguous with respect to some analyses which will not allow the learners to successfully restructure their grammar.

Tsimpili and Dimitrakopoulou’s (2007) Interpretability Hypothesis also allows for an initial stage of L1 transfer and subsequent restructuring triggered by L2 input. However, unlike FT/FA, it contends that end-state representations are not necessarily native-like. Target-divergent structures are attributed to the impossibility for acquiring uninterpretable features (features internal to the computational system such as agreement and case features with clitics) which are not instantiated in the L1 due to the unavailability of full access to UG after the critical period for language acquisition.

Finally, Sorace’s (2006) Interface Hypothesis argues for the unavoidable presence of L2 ‘residual optionality’ even at the stage of ultimate attainment. Contrary to the claims of the Interpretability Hypothesis, Sorace contends that purely syntactic, uninterpretable features are acquirable by adult L2 learners whereas syntactic



representations which are based on interpretable features and constrained by discourse factors, exhibit optionality.

All three theories allow for native-like end-state as well as for divergence under certain conditions. FT/FA predicts target divergence when an L1 property needs to be de-learned or the input is ambiguous; the Interpretability Hypothesis predicts target divergence when purely syntactic uninterpretable features have to be learned; the Interface Hypothesis predicts target divergence when interpretable features related to interface properties have to be learned.

In view of the syntax-discourse property investigated in this chapter, FT/FA predicts possible success at the end-state. The Interpretability Hypothesis predicts learnability problems only with uninterpretable features, but not with features associated with the interpretive domain where syntax interfaces with discourse. Finally, the Interface Hypothesis predicts permanent fossilization and learnability problems in interface conditions even at the stage of ultimate attainment.

### 6.3. Topicality marking in Bulgarian summarized

Topicalization refers to those cases when an entity previously introduced in the discourse (a discourse antecedent) is reintroduced within the same context. It was argued in section 4.4 that all definite and some indefinite (generic and specific) topics in Bulgarian are doubled by a co-referential clitic which occurs within the same clause as the doubled DP. The doubled topical object can either stay in its post-verbal argument position with the doubling clitic in verb-adjacent position, or it can be fronted to a sentence initial position. Post-verbal position of the doubled DP is not related to Clitic

Right Dislocation (CLRD) as there could be additional material following the object as shown in 54 (c).

(54) a. Dnes ja vidjax Maria.

today her-cl.ACC saw-1<sup>st</sup> p.sg. Maria

b. Maria dnes ja vidjax.

‘I saw Maria today.’

c. Vidjax ja Maria dnes.

In a similar study to the one presented in this chapter, Valenzuela (2005) argues that only specific topics are involved in clitic doubling constructions such as Clitic Left Dislocation (CLLD) in Spanish. Non-specific topics, on the other hand, can be included only in Contrastive Left Dislocation (CLD). In Spanish CLD, the non-specific topical objects are fronted but not doubled by a clitic and the connectedness requirement is satisfied by the presence of a null operator (Valenzuela, 2005).

Although Spanish and Bulgarian clitics appear to be very similar, I would argue that clitic doubling of topic objects in Bulgarian is contingent not only upon their specificity but also upon definiteness. The examples below illustrate two instances of a definite topic, which can be either specific or presupposed non-specific. In both contexts the definite topic can be successfully doubled by a co-referential clitic.

(55) A: Koga ŝte nagraždavat pobeditelja?

when FUT give award-3<sup>rd</sup> p.pl. winner-def.

‘When are they presenting the award to the winner?’

B: Pobeditelja ŝte go nagraždavat sled sâstezanieto.

winner-def. FUT him-cl.ACC give award after competition-def.

‘They will present the award to the winner after the competition’

(definite non-specific (presupposed))

(56) A: Pokazaxa li podeditelja po televizijata?

showde-3p.pl. Q winner-def. on TV

‘Did they show the winner on TV?’

B: Pobeditelja go pokazaxa vednaga sled sâstezanieto

winner-def. him-cl showed-3<sup>rd</sup> p.pl. right after competition-def.

‘They showed the winner right after the competition’

(definite specific)

As shown in chapter 4, indefinite specific topics can also be doubled by a co-referential object clitics as in the following example:

(57) Edna žena ja blâsna kola taja sutrin.

one woman her-cl.ACC hit -3<sup>rd</sup> p.sg.past car this morning

‘A woman was hit by a car this morning.’

Table 11 Specificity and definiteness requirements for clitic doubling of object topics in Bulgarian

|             | [+specific] | [-specific] |
|-------------|-------------|-------------|
| [+definite] | +           | +           |
| [-definite] | +           | -           |

The examples above show that both specific and non-specific definite objects as well as specific indefinite ones can participate in clitic doubling constructions. This leaves indefinite non-specific objects as the only topics that cannot be doubled by clitics. However, I am only testing specific topics in this experimental work. I believe that testing for knowledge of specificity as Valenzuela (2005) did, would have made the test too difficult and confusing to the participants as a semantic factor would have been added to the syntactic and the discourse ones.

## 6.4. The Experiment

### 6.4.1. Participants

The participants for this study were the 24 native speakers of English who also took part in the grammaticality judgment task described in chapter 5. For detailed information on the participants' profiles and the proficiency assessment task which was used to divide them into advanced and intermediate learners, refer to sections 5.4.1 and 5.4.2.

### 6.4.2. Methodology – context sentence evaluation task

The study included a context sentence evaluation task whereby a particular situation was described in English and then followed by a short dialogue. The dialogue consisted of a question and four answer options for which the participants had to provide appropriateness evaluation on a scale from 1 to 5 (5-perfectly acceptable, 1-totally unacceptable).

The experiment included 4 conditions in a 2x2 design: Topic x Focus<sup>7</sup> and Accusative x Dative.

Table 12 Experimental conditions

|                  |              |
|------------------|--------------|
| TOPIC/Accusative | TOPIC/Dative |
| FOCUS/Accusative | FOCUS/Dative |

While the sentences in the topic condition were aimed at directly testing the knowledge with regard to clitic doubling as an overt marker of topicality, the significance of the focus condition was to ascertain whether in responses to wh-questions the participants recognized the infelicitousness of clitic doubling with focal direct and indirect objects as opposed to its felicitousness with topical objects. Low evaluation of clitic doubling with focal objects would reinforce the presence of knowledge as to its correct pragmatic function, namely marking topicality. Thus this study tests knowledge of the syntax-discourse interface without mixing in knowledge of semantic properties as in Valenzuela (2005).

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<sup>7</sup> The test items in the focus condition presented cases of informational focus, i.e. new information as opposed to contrastive focus.

There were 10 short dialogues for each condition. Each of the dialogues was situated within a context described in English. Each dialogue consisted of a question followed by 4 answer options. In the Topic conditions, the question introduced the entity which was repeated in the answer as a topic. All topics were definite and specific, which made them eligible for clitic doubling. In the Focus conditions, a wh-question asked for an object which appeared in the answer as a new, focal element and therefore incompatible with clitic doubling. Two of the answer options were pragmatically felicitous and two were infelicitous. Although the pragmatic infelicity of some of the sentences considerably degraded them, they were all grammatical sentences if taken on their own and outside of the particular context.

The four options which were to be evaluated were as follows:

Option 1: [+Object fronting] [+Clitic doubling]

Option 2: [-Object fronting] [+Clitic doubling]

Option 3: [+Object fronting] [-Clitic doubling]

Option 4: [-Object fronting] [-Clitic doubling]

The first two options, which involved clitic doubling, are felicitous in the Topic conditions and were expected to receive higher evaluations in those conditions, whereas the latter two options are considered infelicitous in topic contexts and lower evaluations were expected for them. The opposite holds in the Focus conditions where doubling of a focal object as in options 1 and 2 is deemed infelicitous. Options 3 and 4 involve object fronting (with no doubling) and neutral SVO word order. Both are typical word orders for presenting focal objects in Bulgarian and are therefore pragmatically acceptable in the Focus conditions.

Below are 4 sample test items which illustrate each of the four conditions (see Appendix 1 for all test items).

TOPIC ACCUSATIVE CONDITION

A: Poluči                    li koleta    ot    Peter?

received-2<sup>nd</sup> p.sg.    Q    package from Peter

‘Did you receive the package from Peter’

B: a. Koleta go                    polučix                    minalata sedmica. (O1)

package him-cl.ACC received-1p.sg.    last week

‘I received that package last week’

b. Minalata sedmica go polučix koleta.    (Option 2)

c. #Koleta polučix minalata sedmica.    (Option 3)

d. #Minalata sedmica polučix koleta.    (Option 4)

TOPIC DATIVE CONDITION

A: Kaza                    li na Peter    za    našija plan?

told-2<sup>nd</sup> p.sg.    Q    to Peter    about our    plan

‘Did you tell Peter about our plan’

B: a. Na Peter mu                    kazax ošte minalata sedmica. (O1)

to Peter him-cl.DAT told    still last    week

‘I told Peter last week.’

b. Ošte minalata sedmica mu kazax na Peter.    (O2)

c. #Na Peter kazax ošte minalata sedmica.    (O3)

d. #Ošte minalata sedmica kazax na Peter.    (O4)

FOCUS ACCUSATIVE CONDITION

A: Kakvo zagubi dokato bjagaše тази сутрин?  
 what lost-2<sup>nd</sup> p.sg. while run-2<sup>nd</sup> p.sg this morning  
 ‘What did you lose when you were running this morning?’

- B: a. #Zagubix gi ključovete za kolata (O1)  
 lost-1p.sg. them-cl.ACC keys for car-def.  
 ‘I lost the car keys.’
- b. #Ključovete za kolata gi zagubix. (O2)
- c. Zagubix ključovete za kolata. (O3)
- d. Ključovete za kolata zagubix. (O4)

FOCUS DATIVE CONDITION

A: Na kogo napisa това дълго писмо?  
 to whom wrote-2<sup>nd</sup> p.sg. this long letter  
 ‘To whom did you write this long letter?’

- B: a.#Na Ivan mu go napisax. (O1)  
 to Ivan him-cl.DAT it-cl.ACC wrote-1p.sg.  
 ‘I wrote it to Ivan.’
- b.#Napisax mu go na Ivan. (O2)
- c. Na Ivan go napisax. (O3)
- d. Napisax go na Ivan. (O4)



The task was presented to the participants both in writing and in spoken language recorded by two native speakers. Intonation did not distinguish between the four options; only the presence or absence of clitics did. However, the recorded neutral intonation ensured that learners and native speakers were not imposing their own intonation on the test sentences, which would have been the case in a written only test. The test items of all four conditions as well as the answer options for each test item were randomized in order to ensure the absence of pattern awareness among the participants.

## 6.5 Results

### 6.5.1. Group results

#### 6.5.1.1. Topic Accusative Condition

Figure 1 shows the distribution of the evaluation means of the control group and the advanced group in the Topic Accusative Condition. An evaluation of 5 on the acceptability scale means that the sentence is perfectly acceptable whereas an evaluation of 1 means totally unacceptable. As expected, the control group gave the highest appropriateness evaluation (4.67) to Option 1 (fronting + doubling) followed by the other pragmatically felicitous option, which included doubling with no fronting (4.26). The evaluations of the infelicitous options, 3 (fronting with no doubling) and 4 (SVO word order), received evaluations of 2.13 and 2.98, respectively. It was interesting to observe that the evaluation means of the advanced group for the felicitous options was higher in absolute values than that of the control group (4.75 and 4.34, respectively), although those numbers are very close and by no means statistically different. The evaluation

means of the advanced group for the infelicitous options were higher than those of the control group (2.73 and 3.29).

In order to establish the statistical significance of the observed values a two-way repeated-measures ANOVA was performed with evaluation option as a within-subjects variable and group as a between-subjects variable. The results showed a significant main effect of evaluation option ( $F_{3,111}=44.857$ ,  $p<0.001$ ), a significant main effect of group ( $F_{2,37}=3.317$ ,  $p=0.047$ ) and significant interaction ( $F_{6,111}=25.791$ ,  $p<0.001$ ).

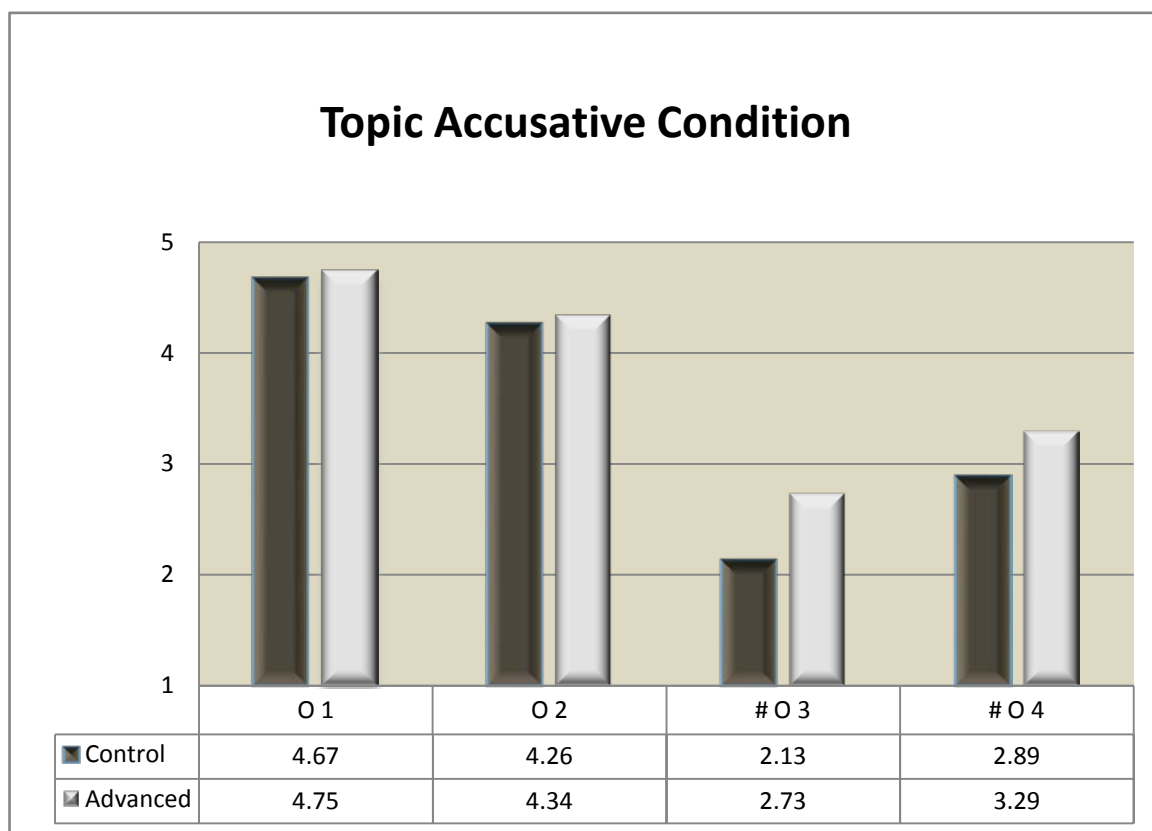


Figure 1 Topic Accusative Condition (Control vs Advanced)

The results of a one-way repeated measures ANOVA within each of the groups showed a significant main effect for both the control and the advanced group of evaluation options (control:  $F_{3,45}=77.945$ ,  $p<0.001$ ; advanced:  $F_{3,27}=38.464$ ,  $p=0.00$ ).

A post-hoc Tukey HSD comparison revealed statistically significant differences between the felicitous options (1 and 2) and the infelicitous options (3 and 4) for both the control and the advanced group. There was no statistically significant difference between the evaluations of the two felicitous options for either group. While there was no statistically significant difference between the evaluations of the infelicitous options for the advanced group, the control group evaluated the infelicitous Option 3 significantly lower than the other infelicitous option, which included neutral SVO word order. To a certain extent, although not relevant to the main issue investigated by this study, this was expected. The word order of Option 3 is used in Bulgarian most often for assigning focus on a fronted element, which is not the case in the context of the Topic Accusative condition and therefore the lower evaluations. The neutral SVO word order received an evaluation around 3, which was to some extent expected as a lot of the participants felt they had to give credit to the grammatical correctness of the sentence. Most important, however, is the fact that those evaluations were consistently lower than the evaluations of the felicitous options and the subtle distinction in the interpretative appropriateness of the sentences was recognized by the participants in both the control and the advanced group.

Tables 13 and 14 show the results of the post hoc Tukey HSD comparison and the points of statistical significance between the four options in the accusative condition of the context sentence evaluation task.

Table 13 Tukey HSD post hoc comparison: Topic Accusative Condition  
(Control group)

|            | Option 2 | # Option 3 | # Option 4 |
|------------|----------|------------|------------|
| Option 1   | n/s      | p < 0.01   | p < 0.01   |
| Option 2   |          | p < 0.01   | p < 0.01   |
| # Option 3 |          |            | p < 0.01   |

Table 14 Tukey HSD post hoc comparison: Topic Accusative Condition  
(Advanced group)

|            | Option 2 | # Option 3 | # Option 4 |
|------------|----------|------------|------------|
| Option 1   | n/s      | p < 0.01   | p < 0.01   |
| Option 2   |          | p < 0.01   | p < 0.01   |
| # Option 3 |          |            | n/s        |

A comparison between the ratings of the control group and the intermediate group reveals a dissimilarity which was not observed in the comparison of the control group with the advanced group (see Figure 2). The intermediate group valued the infelicitous SVO option as highly appropriate. It is, of course, similar to what their L1 uses in a similar context. The second highest evaluation was given to the other infelicitous option

(O3), which is also similar to one of the L1 options of marking topicality, namely a fronted object as in ‘Sushi, I like’.

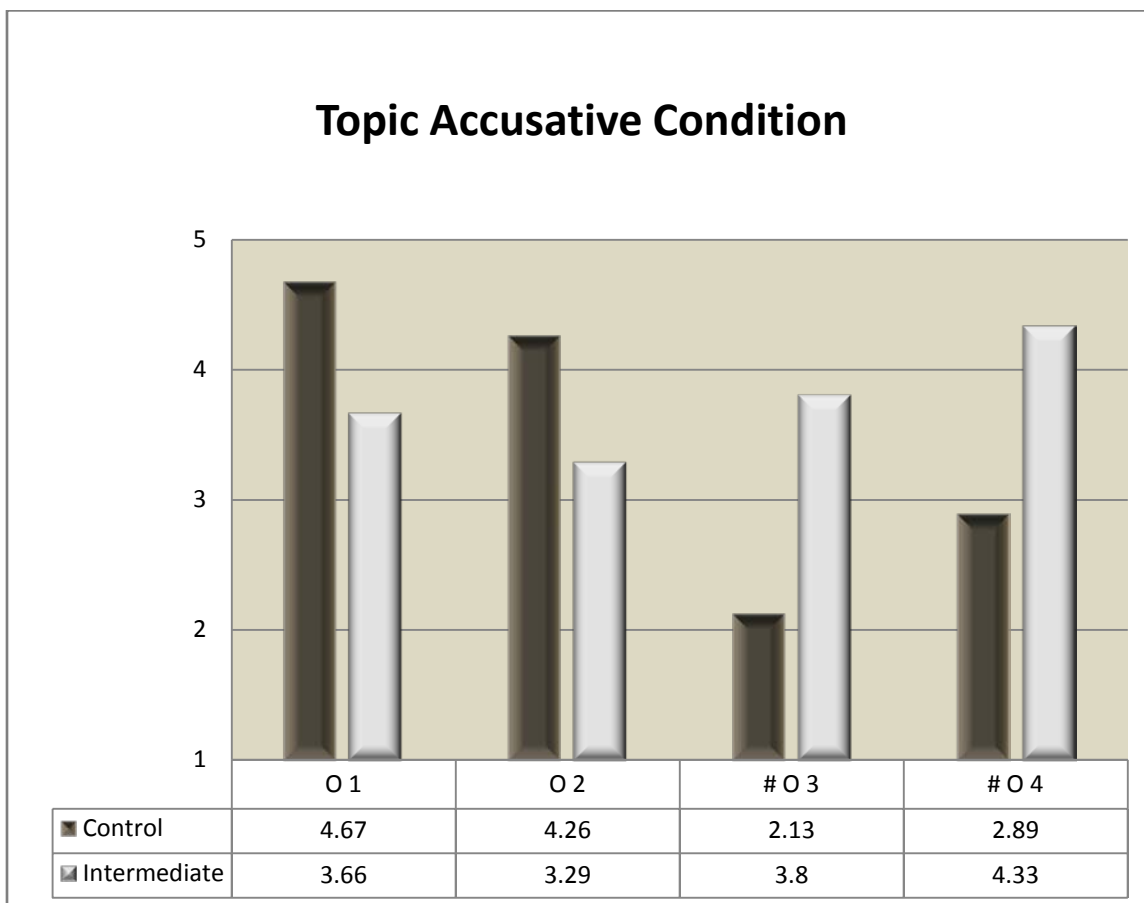


Figure 2 Topic Accusative Condition (Control vs Intermediate)

A one-way repeated-measures ANOVA showed a significant main effect of evaluation option for the intermediate group ( $F_{3,39}=5.309$ ,  $p=0.004$ ). The post hoc Tukey HSD comparison revealed the source of that main effect, which was found to be in the statistically significant difference between the infelicitous SVO option which had

received the highest mean evaluation (4.33) and the felicitous Option 2, with the lowest mean evaluation (3.29). What is of greater importance, however, is that in most of the cases there were no statistically significant differences (see Table 15) which is indicative of the lack of knowledge on the part of the intermediate L2 learners as a group as to the pragmatic requirement for clitic doubling in topic constructions. In the single instance when their evaluations reach statistical significance, it occurs in favor of one of the infelicitous options, which is the opposite of what is observed in the data of the control group.

Table 15 Tukey HSD post hoc comparison: Topic Accusative Condition  
(Intermediate group)

|            | Option 2 | # Option 3 | # Option 4 |
|------------|----------|------------|------------|
| Option 1   | n/s      | n/s        | n/s        |
| Option 2   |          | n/s        | p < 0.01   |
| # Option 3 |          |            | n/s        |

#### 6.5.1.2. Topic Dative Condition

Figure 3 shows the distribution of the evaluation means of the control group and the advanced group in the Topic Dative Condition. The most important observation with regard to those evaluations is that both groups give the highest scores to the felicitous Option 1 (4.61 and 4.69) as they did in the Topic Accusative Condition. Similarly, the

infelicitous options, 3 and 4, received the lowest scores (3.18 and 3.32 for Option 3, and 3.21 and 3.05 for Option 4).

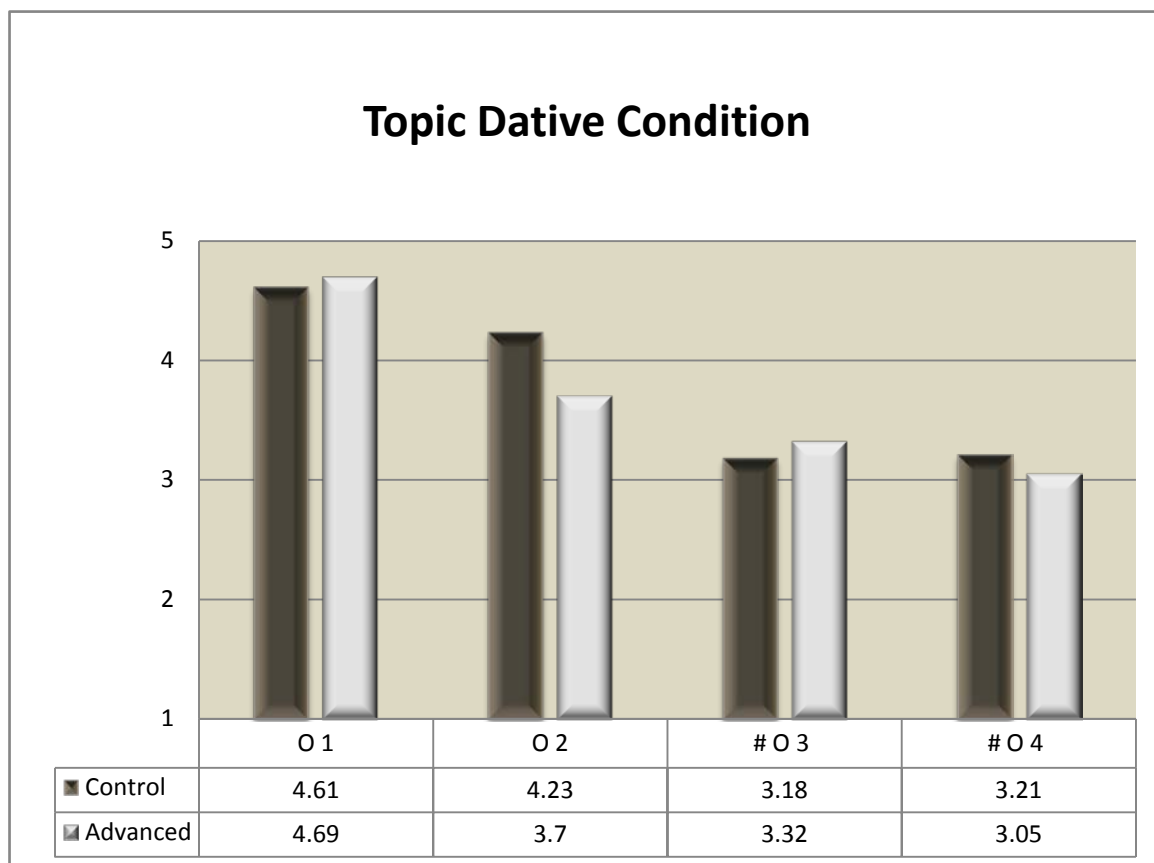


Figure 3 Topic Dative Condition (Control vs Advanced)

However, there are two main points in the above data which present a significant departure from what was observed in the Topic Accusative Condition.

First, the evaluation of the control group for the infelicitous Option 3 in the Topic Dative Condition is significantly higher than in the Topic Accusative Condition (3.18 vs

2.13). For some reason, which is obviously beyond the scope of this thesis, lack of clitic doubling with fronted topical indirect objects does not seem to degrade the felicity of the sentence to the same extent as the lack of clitic doubling with fronted topical direct object does. This ‘milder’ degree of infelicity appears to be also reflected in the evaluations of the advanced group when compared to their evaluations for the infelicitous Option 3 in the Topic Accusative Condition (3.32 vs 2.73).

Second, the evaluation of the advanced group for the felicitous Option 2 (clitic doubling with no fronting) in the Topic Dative Condition is much lower than in the Topic Accusative Condition (3.70 vs 4.34). A closer look at the individual results (see Table 30), however, shows that this is to a certain extent due to the very low evaluations (1.6 and 2.9) of two of the participants (A-6 and A-7).

In order to establish the statistical significance of the observed values across the three groups, a two-way repeated-measures ANOVA between all four evaluation options and three groups was performed. The results showed no significant main effect of group ( $F_{2,37}=0.590$ ,  $p=0.560$ ), but significant main effect of condition ( $F_{3,111}=19.021$ ,  $p<0.001$ ) and significant interaction ( $F_{6,111}=16.220$ ,  $p<0.001$ ).

The results of the one-way repeated measures ANOVAs within each of the groups showed a significant main effect of evaluation option for both the control and the advanced group (control:  $F_{3,45}=44.325$ ,  $p<0.001$ ; advanced:  $F_{3,27}=11.438$ ,  $p<0.001$ ). A post-hoc Tukey HSD comparison revealed a statistically significant difference between the felicitous options (O1 and O2) and the infelicitous options (O3 and O4) for the control group (see Table 16). There were no statistically significant differences between



the evaluations of the two felicitous options, on the one hand, and the two infelicitous options, on the other hand.

Table 16 Tukey HSD post hoc comparison: Topic Dative Condition  
(Control group)

|            | Option 2 | # Option 3 | # Option 4 |
|------------|----------|------------|------------|
| Option 1   | n/s      | $p < 0.01$ | $p < 0.01$ |
| Option 2   |          | $p < 0.01$ | $p < 0.01$ |
| # Option 3 |          |            | n/s        |

The only point of statistical significance in the evaluations of the advanced group was between the felicitous Option 1 and all other options, including the other felicitous option, O2 (see Table 17). In this respect their results differed from the results of the control group whose evaluations of the two felicitous options were not statistically significant.

The comparison between the results of the control group and the intermediate group in the Topic Dative Condition shows the same pattern as in the Topic Accusative Condition (see Figure 4). Once again, the intermediate group considers the infelicitous options, O3 and O4, highly appropriate. This is in line with the expectations for L1 transfer and preference for the two options that are similar to what is used in the L1 (English) in similar contexts.

Table 17 Tukey HSD post hoc comparison: Topic Dative Condition  
(Advanced group)

|            | Option 2 | # Option 3 | # Option 4 |
|------------|----------|------------|------------|
| Option 1   | p < 0.01 | p < 0.01   | p < 0.01   |
| Option 2   |          | n/s        | n/s        |
| # Option 3 |          |            | n/s        |

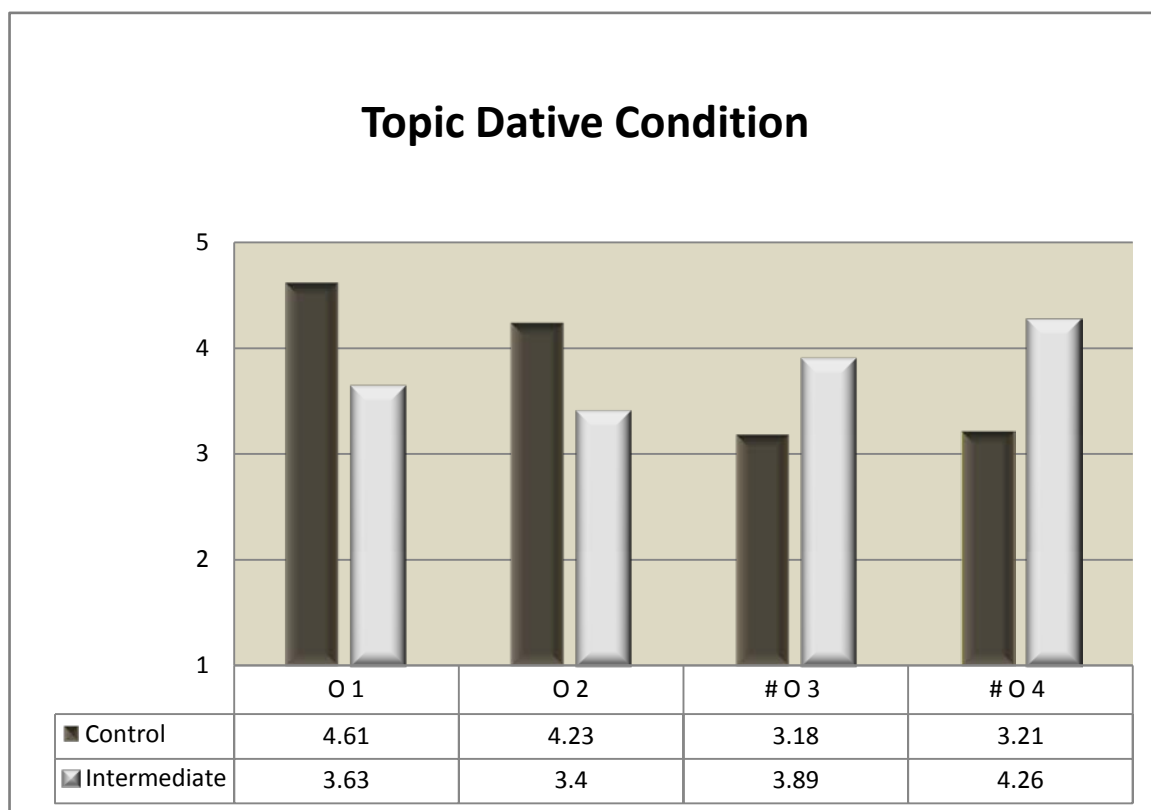


Figure 4 Topic Dative Condition (Control vs Intermediate)

A repeated-measures one-way ANOVA showed a significant main effect of evaluation option in the intermediate group ( $F_{3,39}=5.637$ ,  $p=0.003$ ). The following Tukey HSD post hoc comparison identified statistically significant differences between the infelicitous SVO option and the felicitous O1 and O2 (see Table 18). Those, however, were in the wrong direction as the L1-like SVO option received the highest evaluation among all four options.

Table 18 Tukey HSD post hoc comparison: Topic Dative Condition (Intermediate group)

|            | Option 2 | # Option 3 | # Option 4 |
|------------|----------|------------|------------|
| Option 1   | n/s      | n/s        | $p < 0.05$ |
| Option 2   |          | n/s        | $p < 0.01$ |
| # Option 3 |          |            | n/s        |

### 6.5.1.3. Focus Accusative Condition

The focus conditions reversed the felicity of the 4 answer options. Now, the clitic doubling options O1 (with fronting) and O2 (without fronting) were infelicitous since the introduction of new information as a response to a wh-question involves focal constructions which are not consistent with the pragmatic function of clitic doubling in Bulgarian, namely to mark topicality.

Figure 5 shows the mean ratings of the control and advanced groups in the Focus Accusative Condition.

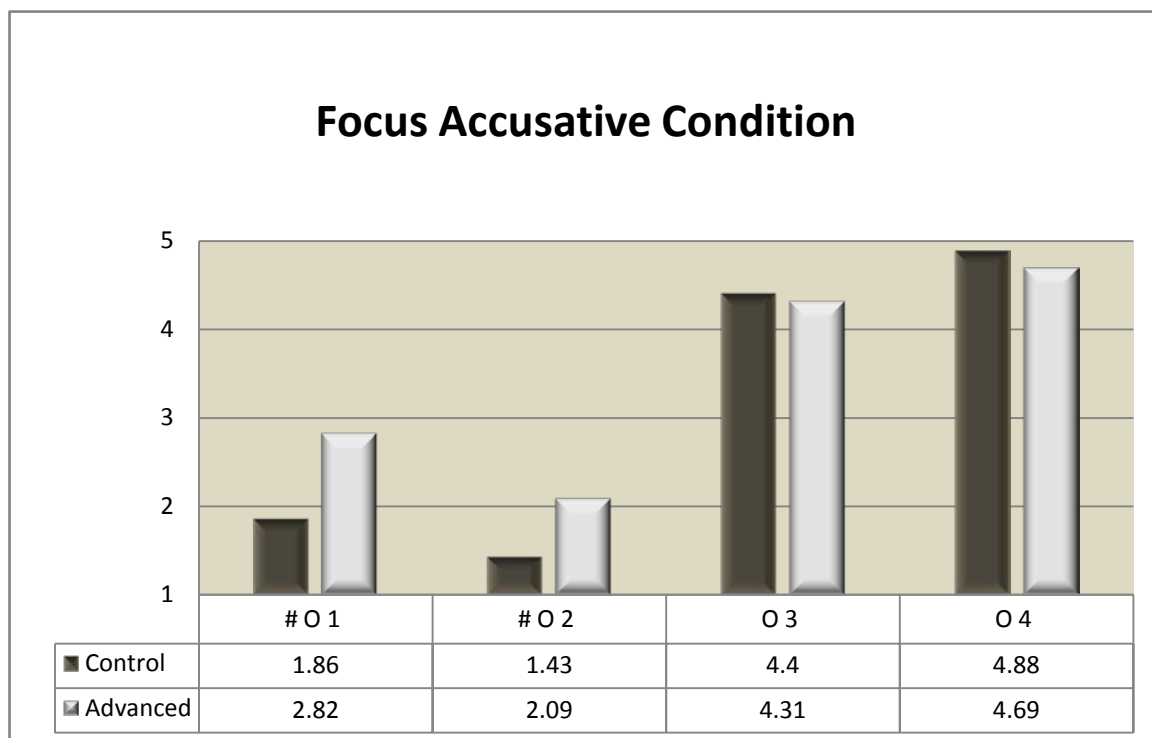


Figure 5 Focus Accusative Condition (Control vs Advanced)

Both the control and the advanced group gave very high ratings to the felicitous options, O3 and O4. On the other hand, the evaluations of the infelicitous, clitic-doubling options, O1 and O2 received significantly lower evaluations. Although the evaluations of the advanced group for the infelicitous options were consistently lower than the evaluations for the highly rated options 3 and 4 (see Table 31 for individual results), they were not as low as those of the control group (1.86 vs 2.82, 1.43 vs 2.09). This, however,

would be a moot point if those evaluations are shown to be statistically different from the felicitous options, which can be the best indicator of their ability to perceive discourse-conditioned differences.

A two-way repeated-measures ANOVA between all four evaluation options and three groups showed a significant main effect of group ( $F_{2,37}=20.146$ ,  $p<0.001$ ), a significant main effect of evaluation option ( $F_{3,111}=190.272$ ,  $p<0.001$ ) and significant interaction ( $F_{6,111}=19.052$ ,  $p<0.001$ ).

The one-way repeated-measures ANOVAs within each group revealed a significant main effect of evaluation options for both the control and the advanced group (control:  $F_{3,45}=438.885$ ),  $p<0.001$ ; advanced:  $F_{3,27}=44.053$ ,  $p<0.001$ ). The Tukey HSD post hoc comparison (see Tables 19 and 20) identified the points of statistical significance, the most important of which were found to be between the felicitous options, O3 and O4, and the infelicitous ones, O1 and O2. In addition, there were statistically significant differences between the two felicitous options in the evaluations of the control group as they preferred the SVO order for focal constructions better than the option of fronting with no doubling. The evaluations of the advanced group for the felicitous options were not statistically significant.

When compared with the evaluations of the control group, those of intermediate group were also very high (see Figure 6). However, the evaluation means of the intermediate group for the infelicitous options were much higher than those of the control group. The one-way repeated-measures ANOVA showed a significant main effect of the evaluation options of the intermediate group (intermediate:  $F_{3,39}=10.530$ ,  $p<0.001$ ).

Table 19 Tukey HSD post hoc comparison: Focus Accusative Condition  
(Control group)

|            | # Option 2 | Option 3 | Option 4 |
|------------|------------|----------|----------|
| # Option 1 | p < 0.01   | p < 0.01 | p < 0.01 |
| # Option 2 |            | p < 0.01 | p < 0.01 |
| Option 3   |            |          | p < 0.01 |

Table 20 Tukey HSD post hoc comparison: Focus Accusative Condition  
(Advanced group)

|            | # Option 2 | Option 3 | Option 4 |
|------------|------------|----------|----------|
| # Option 1 | p < 0.05   | p < 0.01 | p < 0.01 |
| # Option 2 |            | p < 0.01 | p < 0.01 |
| Option 3   |            |          | n/s      |

The following Tukey HSD comparison revealed the points of significant differences between the evaluation means (see Table 21). The rating of the felicitous Option 4 was significantly higher than the evaluations of both infelicitous options, O1 and O2. This ‘native-like’ behavior in the evaluation of the felicitous options should not

necessarily be taken as an indicator of knowledge on the part of the intermediate learners of the pragmatic conditions regulating the felicitous use of clitic doubling constructions.

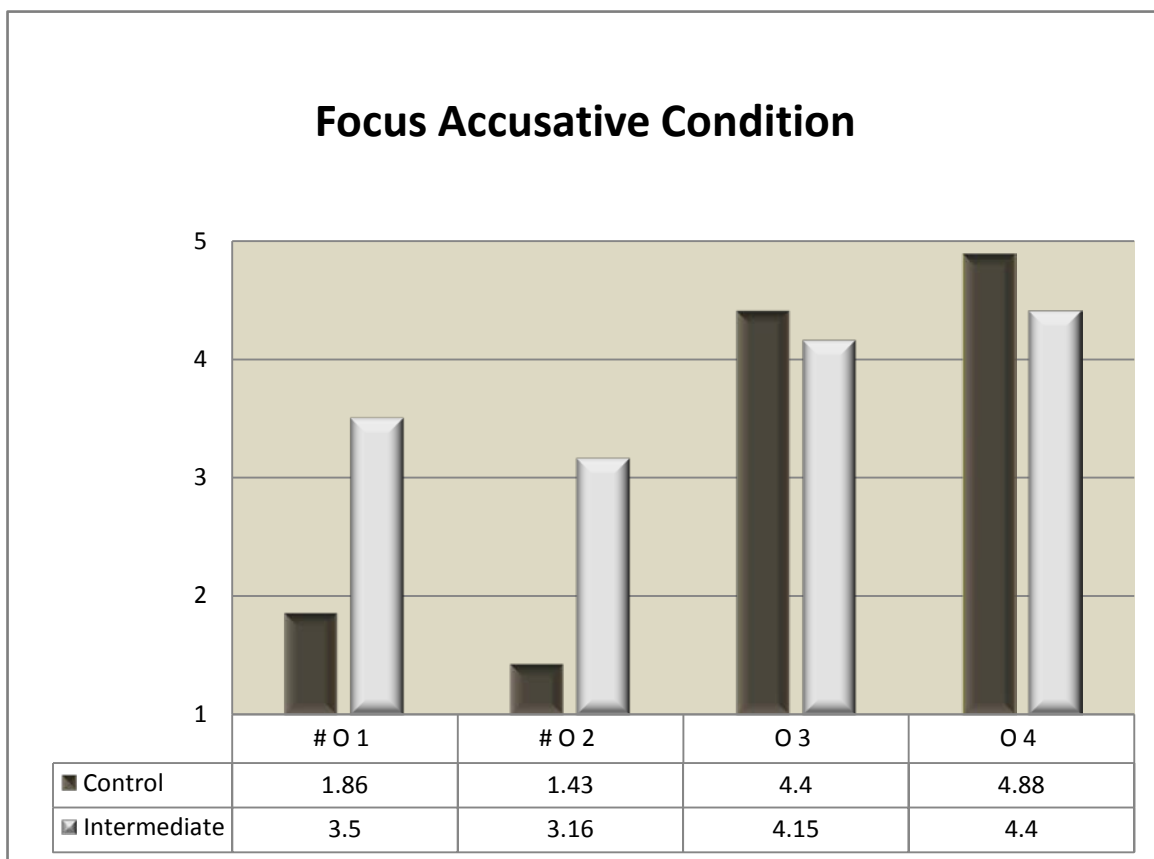


Figure 6 Focus Accusative Condition (Control vs Intermediate)

A closer look at the evaluations of the intermediate group in the topic conditions (see Figures 2 and 4) shows a distinct preference for the infelicitous no-doubling SVO option. In view of their strongly non-native-like performance in the topic conditions, it is most likely that the ‘native-like’ performance of the intermediate learners in the focus

conditions is due to their general preference for constructions without clitics and the L1-like SVO option rather than to any particular knowledge of the infelicity of clitic doubling with focal direct and indirect objects.

Table 21 Tukey HSD post hoc comparison: Focus Accusative Condition (Intermediate group)

|            | # Option 2 | Option 3 | Option 4 |
|------------|------------|----------|----------|
| # Option 1 | n/s        | n/s      | p < 0.01 |
| # Option 2 |            | p < 0.01 | p < 0.01 |
| Option 3   |            |          | n/s      |

#### 6.5.1.4. Focus Dative Condition

The results of the control and the advanced group in the Focus Dative Condition were very similar to their results in the Focus Accusative Condition (see Figure 7). Once again they gave the highest evaluations to the felicitous options O3 and O4, and significantly lower evaluations to the infelicitous options O1 and O2. The evaluations of the advanced group for the infelicitous options were again higher than those of the control group but, most importantly, significantly lower than the evaluations of the felicitous options.

A two-way repeated-measures ANOVA between all four evaluation options and three groups showed a significant main effect of group ( $F_{2,37}=23.080$ ,  $p<0.001$ ), a



significant main effect of evaluation option ( $F_{3,111}=344.482$ ,  $p<0.001$ ) and significant interaction ( $F_{6,111}=51.423$ ,  $p<0.001$ ).

The one-way repeated-measures ANOVAs revealed a significant main effect in the evaluations of both the control and the advanced group (control:  $F_{3,45}= 685.891$ ,  $p<0.001$ ; advanced:  $F_{3,27}=56.115$ ,  $p<0.001$ ). The Tukey HSD post hoc showed statistically significant difference between the felicitous and the infelicitous options (see Tables 22 and 23).

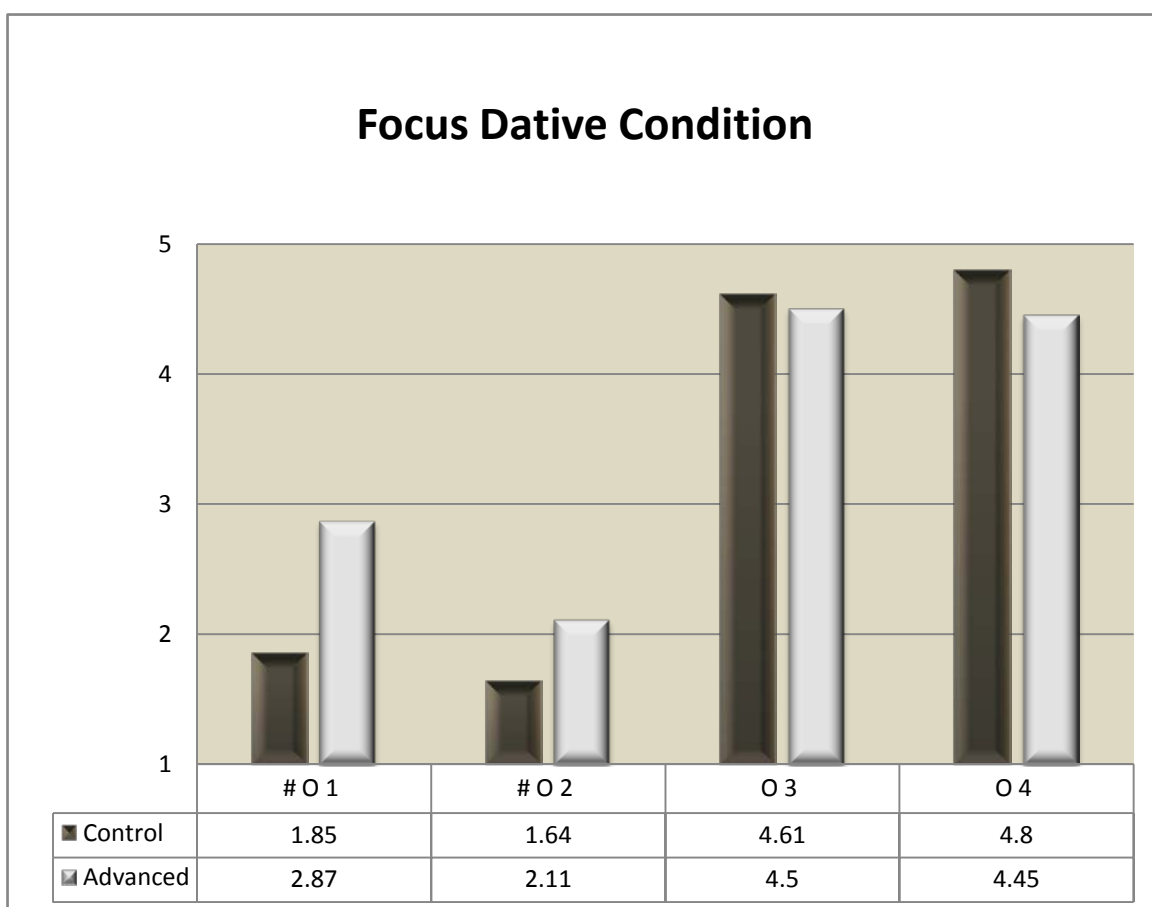


Figure 7 Focus Dative Condition (Control vs Advanced)

Table 22 Tukey HSD post hoc comparison: Focus Dative Condition  
(Control group)

|            | # Option 2 | Option 3 | Option 4 |
|------------|------------|----------|----------|
| # Option 1 | n/s        | p < 0.01 | p < 0.01 |
| # Option 2 |            | p < 0.01 | p < 0.01 |
| Option 3   |            |          | n/s      |

Table 23 Tukey HSD post hoc comparison: Focus Dative Condition  
(Advanced group)

|            | # Option 2 | Option 3 | Option 4 |
|------------|------------|----------|----------|
| # Option 1 | p < 0.05   | p < 0.01 | p < 0.01 |
| # Option 2 |            | p < 0.01 | p < 0.01 |
| Option 3   |            |          | n/s      |

Similarly to what was observed in the Focus Accusative Condition, the evaluations of the intermediate group showed preference for the felicitous non-doubling options O3 and O4 (see Figure 8). However, their evaluations of the infelicitous options were much higher than those of the control and the advanced group. The repeated-measures ANOVA showed a significant main effect of evaluation options in the results of

the intermediate group (intermediate:  $F_{3,39}=21.422$ ,  $p<0.001$ ). However, the Tukey HSD post hoc comparison revealed the lack of any significant difference between the two felicitous options and one of the infelicitous options (O1)(see Table 24).

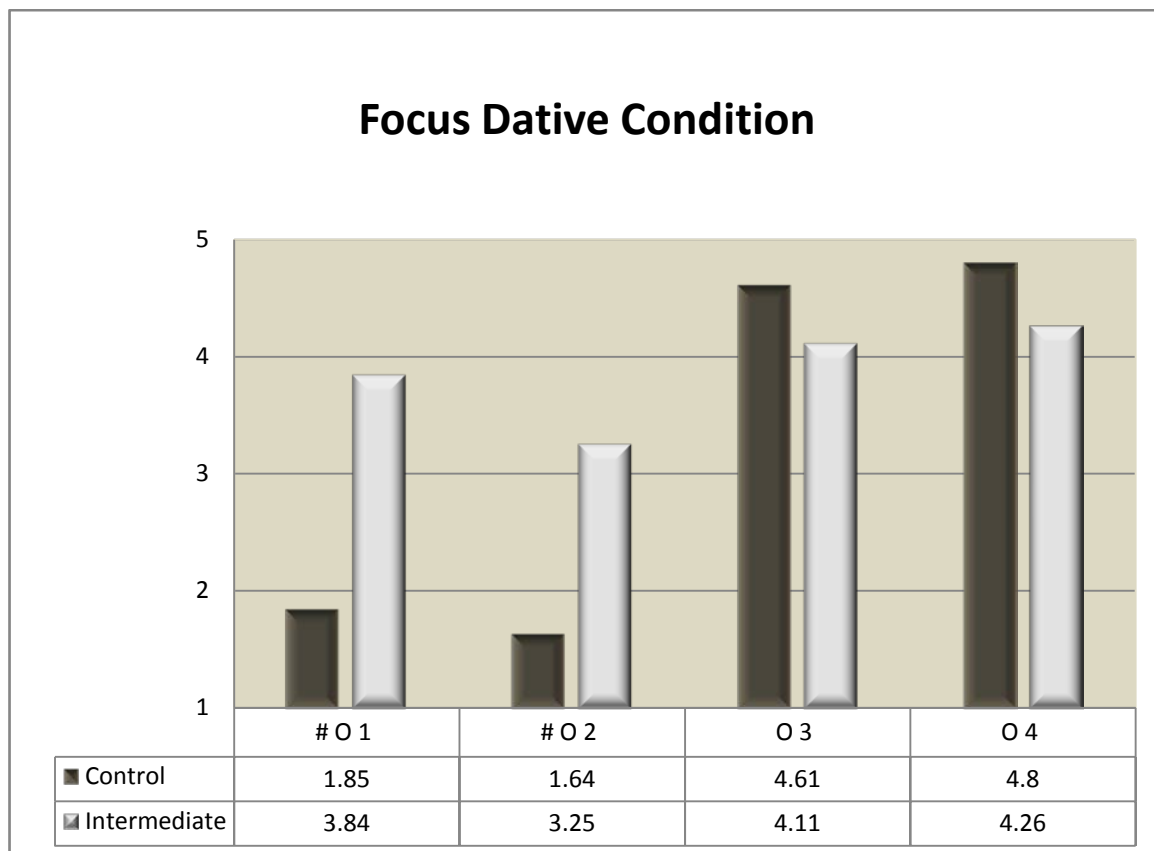


Figure 8 Focus Dative Condition (Control vs Intermediate)

Table 24 Tukey HSD post hoc comparison: Focus Dative Condition  
(Intermediate group)

|            | # Option 2 | Option 3 | Option 4 |
|------------|------------|----------|----------|
| # Option 1 | p < 0.01   | n/s      | n/s      |
| # Option 2 |            | p < 0.01 | p < 0.01 |
| Option 3   |            |          | n/s      |

The results in the Focus Dative Condition are in support of the claim that the intermediate L2 learners are not aware of the pragmatic significance of clitic doubling, or the lack thereof, and the only reason they give ‘native-like’, high evaluations to the felicitous non-doubling options in the focus conditions is their general preference for constructions with no clitics. The individual results of the L2 intermediate learners (see Tables 33, 34, 35, 36) reveal two main evaluation patterns – they either give high evaluations to all four options in all four conditions or give consistently higher evaluations to the options with no clitic doubling (O3 and O4), which simply happen to be felicitous in the focus conditions.

#### 6.5.2. Individual results

This section will present the individual results in all four conditions of the three groups participating in the study. A close look at the results reveals that the evaluations fall into 5 main patterns, which can be categorized as felicitous or infelicitous.

- Felicitous patterns:
  - I. the evaluations of the two felicitous options are higher and statistically different from the evaluations of both infelicitous options  
(marked with ^^ in the tables below)
  - II. the evaluation of one of the felicitous options is higher and statistically different from the evaluations of both infelicitous options  
(marked with ^ in the tables below)
- Infelicitous patterns:
  - I. the evaluation of one (or both) of the felicitous options is higher but NOT statistically different from the evaluation of one (or both) of the infelicitous options  
(marked with \* in the tables below)
  - II. the evaluation of one (or both) of the infelicitous options is higher but NOT statistically different from the evaluation of one (or both) of the felicitous options  
(marked with \*\* in the tables below)
  - III. the evaluation of one (or both) of the infelicitous options is higher AND statistically different from the evaluation of one (or both) of the felicitous options  
(marked with \*\*\* in the tables below)

### 6.5.2.1. Control Group<sup>8</sup>

The individual results of the control group in the topic conditions fall predominantly into the felicitous patters (see Tables 25 and 26) with the exception of one participant (C-3) in the Topic Accusative Condition and two participants (C-2 and C-13) in the Topic Dative Condition. C-3 gives very low evaluations of the felicitous Option 2 in both topic conditions and relatively high evaluation for the infelicitous Option 4. C-2 and C-13 give very high evaluations for the infelicitous Option 3 in the Topic Dative Condition. As it was observed earlier in this chapter, Option 3 (fronting with no clitic doubling) received much higher evaluations in the Topic Dative Condition than in the Topic Accusative Condition. However, for the majority of native participants the difference in the evaluations of Option 3 and the felicitous options 1 and 2 (or at least one of them) is statistically significant.

For 11 native participants (69%) in the Topic Accusative Condition and 8 (50%) in the Topic Dative Condition, the results fall into the pattern whereby both felicitous options are statistically significant from both infelicitous options. Four participants in the Topic Accusative Condition and 6 in the Topic Dative Condition evaluate only one of the felicitous options higher with statistical significance than the evaluations of both infelicitous options.

In both focus conditions, the participants in the control group invariably give evaluations of the felicitous options O3 and O4 that are statistically significant from the evaluations of both infelicitous options, O1 and O2.

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<sup>8</sup> A repeated-measures ANOVA was performed on the individual evaluations of each participant. Co-superscripted evaluation means represent homogeneous sets in a Tukey HSD post hoc comparison, which means that the differences between them are not statistically significant.

Table 25 Individual results - topic accusative condition (control group)

|            | [+front]<br>[+double] | [-front]<br>[+double] | #[+front]<br>[-double] | #[-front]<br>[-double] |
|------------|-----------------------|-----------------------|------------------------|------------------------|
| C-1^^      | 5.0 <sup>a</sup>      | 4.9 <sup>a</sup>      | 1.8 <sup>b</sup>       | 2.2 <sup>b</sup>       |
| C-2^       | 4.5 <sup>a</sup>      | 3.7 <sup>a,c</sup>    | 2.4 <sup>b</sup>       | 3.0 <sup>c</sup>       |
| C-3*       | 4.4 <sup>a</sup>      | 2.8 <sup>b</sup>      | 1.3 <sup>c</sup>       | 3.7 <sup>a,b</sup>     |
| C-4^       | 4.6 <sup>a</sup>      | 4.1 <sup>a,c</sup>    | 2.9 <sup>b</sup>       | 3.5 <sup>c</sup>       |
| C-5^^      | 5.0 <sup>a</sup>      | 4.9 <sup>a</sup>      | 2.0 <sup>b</sup>       | 2.7 <sup>b</sup>       |
| C-6^^      | 4.8 <sup>a</sup>      | 4.6 <sup>a</sup>      | 2.1 <sup>b</sup>       | 3.1 <sup>b</sup>       |
| C-7^^      | 5.0 <sup>a</sup>      | 5.0 <sup>a</sup>      | 1.3 <sup>b</sup>       | 2.6 <sup>c</sup>       |
| C-8^^      | 5.0 <sup>a</sup>      | 4.1 <sup>b</sup>      | 1.1 <sup>c</sup>       | 2.9 <sup>d</sup>       |
| C-9^^      | 4.5 <sup>a</sup>      | 4.6 <sup>a</sup>      | 2.3 <sup>b</sup>       | 3.3 <sup>b</sup>       |
| C-10^      | 4.4 <sup>a</sup>      | 4.3 <sup>a,c</sup>    | 2.9 <sup>b</sup>       | 3.2 <sup>b,c</sup>     |
| C-11^^     | 4.4 <sup>a</sup>      | 4.4 <sup>a</sup>      | 2.5 <sup>b</sup>       | 2.9 <sup>b</sup>       |
| C-12^^     | 4.7 <sup>a</sup>      | 4.1 <sup>a</sup>      | 2.6 <sup>b</sup>       | 2.7 <sup>b</sup>       |
| C-13^      | 4.6 <sup>a</sup>      | 3.9 <sup>b</sup>      | 3.1 <sup>b</sup>       | 3.4 <sup>b</sup>       |
| C-14^^     | 5.0 <sup>a</sup>      | 5.0 <sup>a</sup>      | 1.6 <sup>b</sup>       | 1.7 <sup>b</sup>       |
| C-15^^     | 4.4 <sup>a</sup>      | 4.0 <sup>a</sup>      | 2.6 <sup>b</sup>       | 2.9 <sup>b</sup>       |
| C-16^^     | 4.5 <sup>a</sup>      | 3.7 <sup>a</sup>      | 1.5 <sup>b</sup>       | 2.3 <sup>b</sup>       |
| Group mean | 4.67 <sup>a</sup>     | 4.26 <sup>a</sup>     | 2.13 <sup>b</sup>      | 2.89 <sup>c</sup>      |

Table 26 Individual results - topic dative condition (control group)

|            | [+front]<br>[+double] | [-front]<br>[+double] | #[+front]<br>[-double] | #[-front]<br>[-double] |
|------------|-----------------------|-----------------------|------------------------|------------------------|
| C-1^^      | 4.2 <sup>a</sup>      | 4.3 <sup>a</sup>      | 2.6 <sup>b</sup>       | 2.5 <sup>b</sup>       |
| C-2*       | 4.4 <sup>a</sup>      | 4.4 <sup>a</sup>      | 3.6 <sup>a</sup>       | 3.4 <sup>a</sup>       |
| C-3^       | 4.8 <sup>a</sup>      | 2.7 <sup>b</sup>      | 3.8 <sup>c</sup>       | 3.7 <sup>c</sup>       |
| C-4^       | 4.6 <sup>a</sup>      | 4.1 <sup>a,b</sup>    | 3.1 <sup>b</sup>       | 3.0 <sup>b</sup>       |
| C-5^^      | 4.7 <sup>a</sup>      | 4.6 <sup>a</sup>      | 2.4 <sup>b</sup>       | 2.8 <sup>b</sup>       |
| C-6^^      | 5.0 <sup>a</sup>      | 4.7 <sup>a</sup>      | 3.3 <sup>b</sup>       | 3.3 <sup>b</sup>       |
| C-7^^      | 5.0 <sup>a</sup>      | 5.0 <sup>a</sup>      | 3.1 <sup>b</sup>       | 2.9 <sup>b</sup>       |
| C-8^       | 4.5 <sup>a</sup>      | 4.0 <sup>a,b</sup>    | 3.4 <sup>b</sup>       | 3.2 <sup>b</sup>       |
| C-9^^      | 4.6 <sup>a</sup>      | 4.4 <sup>a</sup>      | 3.2 <sup>b</sup>       | 3.3 <sup>b</sup>       |
| C-10^^     | 4.7 <sup>a</sup>      | 4.6 <sup>a</sup>      | 3.3 <sup>b</sup>       | 3.0 <sup>b</sup>       |
| C-11^      | 4.5 <sup>a</sup>      | 4.0 <sup>a,b</sup>    | 3.3 <sup>b</sup>       | 3.5 <sup>b</sup>       |
| C-12^^     | 4.6 <sup>a</sup>      | 4.6 <sup>a</sup>      | 2.6 <sup>b</sup>       | 3.5 <sup>c</sup>       |
| C-13*      | 4.2 <sup>a</sup>      | 3.8 <sup>a</sup>      | 4.4 <sup>a</sup>       | 3.8 <sup>a</sup>       |
| C-14^^     | 4.8 <sup>a</sup>      | 4.4 <sup>a</sup>      | 3.5 <sup>b</sup>       | 3.4 <sup>b</sup>       |
| C-15^      | 4.5 <sup>a</sup>      | 4.1 <sup>a,b</sup>    | 2.7 <sup>b</sup>       | 3.2 <sup>b</sup>       |
| C-16^      | 4.8 <sup>a</sup>      | 4.0 <sup>a,b</sup>    | 2.6 <sup>b</sup>       | 2.9 <sup>b</sup>       |
| Group mean | 4.61 <sup>a</sup>     | 4.23 <sup>a</sup>     | 3.18 <sup>b</sup>      | 3.21 <sup>b</sup>      |



Table 27 Individual results - focus accusative condition (control group)

|            | #[+front]<br>[+double] | #[-front]<br>[+double] | [+front]<br>[-double] | [-front]<br>[-double] |
|------------|------------------------|------------------------|-----------------------|-----------------------|
| C-1^^      | 1.4 <sup>a</sup>       | 1.3 <sup>a</sup>       | 4.4 <sup>b</sup>      | 5.0 <sup>b</sup>      |
| C-2^^      | 1.2 <sup>a</sup>       | 1.1 <sup>a</sup>       | 4.3 <sup>b</sup>      | 5.0 <sup>b</sup>      |
| C-3^^      | 1.8 <sup>a</sup>       | 1.4 <sup>a</sup>       | 3.5 <sup>b</sup>      | 5.0 <sup>c</sup>      |
| C-4^^      | 2.1 <sup>a</sup>       | 2.2 <sup>a</sup>       | 4.1 <sup>b</sup>      | 5.0 <sup>c</sup>      |
| C-5^^      | 1.6 <sup>a</sup>       | 1.3 <sup>a</sup>       | 4.6 <sup>b</sup>      | 5.0 <sup>b</sup>      |
| C-6^^      | 1.4 <sup>a</sup>       | 1.0 <sup>a</sup>       | 5.0 <sup>b</sup>      | 4.8 <sup>b</sup>      |
| C-7^^      | 2.2 <sup>a</sup>       | 1.4 <sup>b</sup>       | 4.9 <sup>c</sup>      | 4.9 <sup>c</sup>      |
| C-8^^      | 2.7 <sup>a</sup>       | 1.2 <sup>b</sup>       | 3.9 <sup>c</sup>      | 5.0 <sup>d</sup>      |
| C-9^^      | 1.7 <sup>a</sup>       | 1.6 <sup>a</sup>       | 4.3 <sup>b</sup>      | 4.8 <sup>b</sup>      |
| C-10^^     | 1.5 <sup>a</sup>       | 1.3 <sup>a</sup>       | 4.4 <sup>b</sup>      | 4.7 <sup>b</sup>      |
| C-11^^     | 2.2 <sup>a</sup>       | 1.4 <sup>b</sup>       | 4.2 <sup>c</sup>      | 4.8 <sup>c</sup>      |
| C-12^^     | 2.3 <sup>a</sup>       | 1.6 <sup>b</sup>       | 4.4 <sup>c</sup>      | 5.0 <sup>c</sup>      |
| C-13^^     | 1.8 <sup>a</sup>       | 1.5 <sup>a</sup>       | 4.3 <sup>b</sup>      | 5.0 <sup>b</sup>      |
| C-14^^     | 1.6 <sup>a</sup>       | 1.0 <sup>a</sup>       | 4.8 <sup>b</sup>      | 4.7 <sup>b</sup>      |
| C-15^^     | 1.9 <sup>a</sup>       | 1.9 <sup>a</sup>       | 4.7 <sup>b</sup>      | 4.6 <sup>b</sup>      |
| C-16^^     | 2.2 <sup>a</sup>       | 1.6 <sup>a</sup>       | 4.6 <sup>b</sup>      | 4.8 <sup>b</sup>      |
| Group mean | 1.86 <sup>a</sup>      | 1.43 <sup>b</sup>      | 4.40 <sup>c</sup>     | 4.88 <sup>d</sup>     |

Table 28 Individual results - focus dative condition (control group)

|            | #[+front]<br>[+double] | #[-front]<br>[+double] | [+front]<br>[-double] | [-front]<br>[-double] |
|------------|------------------------|------------------------|-----------------------|-----------------------|
| C-1^^      | 2.3 <sup>a</sup>       | 1.9 <sup>a</sup>       | 4.6 <sup>b</sup>      | 5.0 <sup>b</sup>      |
| C-2^^      | 1.6 <sup>a</sup>       | 1.3 <sup>a</sup>       | 4.9 <sup>b</sup>      | 5.0 <sup>b</sup>      |
| C-3^^      | 1.6 <sup>a</sup>       | 1.4 <sup>a</sup>       | 4.0 <sup>b</sup>      | 5.0 <sup>c</sup>      |
| C-4^^      | 2.1 <sup>a</sup>       | 1.8 <sup>a</sup>       | 4.5 <sup>b</sup>      | 4.8 <sup>b</sup>      |
| C-5^^      | 2.0 <sup>a</sup>       | 1.9 <sup>a</sup>       | 4.8 <sup>b</sup>      | 4.4 <sup>b</sup>      |
| C-6^^      | 1.3 <sup>a</sup>       | 1.2 <sup>a</sup>       | 4.9 <sup>b</sup>      | 5.0 <sup>b</sup>      |
| C-7^^      | 2.3 <sup>a</sup>       | 1.9 <sup>a</sup>       | 5.0 <sup>b</sup>      | 5.0 <sup>b</sup>      |
| C-8^^      | 1.9 <sup>a</sup>       | 1.3 <sup>a</sup>       | 4.1 <sup>b</sup>      | 4.7 <sup>b</sup>      |
| C-9^^      | 1.8 <sup>a</sup>       | 1.8 <sup>a</sup>       | 4.4 <sup>b</sup>      | 5.0 <sup>b</sup>      |
| C-10^^     | 1.7 <sup>a</sup>       | 1.3 <sup>a</sup>       | 4.7 <sup>b</sup>      | 4.8 <sup>b</sup>      |
| C-11^^     | 1.9 <sup>a</sup>       | 1.6 <sup>a</sup>       | 4.4 <sup>b</sup>      | 4.8 <sup>b</sup>      |
| C-12^^     | 1.8 <sup>a</sup>       | 1.7 <sup>a</sup>       | 4.4 <sup>b</sup>      | 4.7 <sup>b</sup>      |
| C-13^^     | 1.8 <sup>a</sup>       | 2.1 <sup>a</sup>       | 4.8 <sup>b</sup>      | 4.5 <sup>b</sup>      |
| C-14^^     | 1.5 <sup>a</sup>       | 1.6 <sup>a</sup>       | 4.8 <sup>b</sup>      | 4.9 <sup>b</sup>      |
| C-15^^     | 1.8 <sup>a</sup>       | 2.0 <sup>a</sup>       | 4.9 <sup>b</sup>      | 4.6 <sup>b</sup>      |
| C-16^^     | 2.2 <sup>a</sup>       | 1.4 <sup>b</sup>       | 4.6 <sup>c</sup>      | 4.6 <sup>c</sup>      |
| Group mean | 1.85 <sup>a</sup>      | 1.64 <sup>a</sup>      | 4.61 <sup>b</sup>     | 4.80 <sup>b</sup>     |

Table 29 Individual results - topic accusative condition (advanced group)

|            | [+front]<br>[+double] | [-front]<br>[+double] | #[+front]<br>[-double] | #[-front]<br>[-double] |
|------------|-----------------------|-----------------------|------------------------|------------------------|
| A-1^^      | 5.0 <sup>a</sup>      | 4.8 <sup>a</sup>      | 3.5 <sup>b</sup>       | 3.5 <sup>b</sup>       |
| A-2^^      | 5.0 <sup>a</sup>      | 4.0 <sup>b</sup>      | 2.5 <sup>c</sup>       | 2.5 <sup>c</sup>       |
| A-3^^      | 4.6 <sup>a</sup>      | 4.2 <sup>a</sup>      | 1.9 <sup>b</sup>       | 3.3 <sup>c</sup>       |
| A-4^^      | 4.6 <sup>a</sup>      | 4.7 <sup>a</sup>      | 3.4 <sup>b</sup>       | 3.6 <sup>b</sup>       |
| A-5^^      | 4.9 <sup>a</sup>      | 4.2 <sup>a</sup>      | 1.0 <sup>b</sup>       | 2.3 <sup>c</sup>       |
| A-6^       | 4.7 <sup>a</sup>      | 4.3 <sup>a,b</sup>    | 3.2 <sup>c</sup>       | 3.3 <sup>b,c</sup>     |
| A-7*       | 4.5 <sup>a</sup>      | 3.9 <sup>a,b</sup>    | 2.9 <sup>b</sup>       | 4.0 <sup>a,b</sup>     |
| A-8^^      | 4.8 <sup>a</sup>      | 4.3 <sup>a</sup>      | 2.8 <sup>b</sup>       | 2.6 <sup>b</sup>       |
| A-9*       | 4.5 <sup>a</sup>      | 4.5 <sup>a</sup>      | 2.4 <sup>b</sup>       | 3.9 <sup>a</sup>       |
| A-10^      | 4.9 <sup>a</sup>      | 4.5 <sup>a,b</sup>    | 3.7 <sup>b</sup>       | 3.9 <sup>b</sup>       |
| Group mean | 4.75 <sup>a</sup>     | 4.34 <sup>a</sup>     | 2.73 <sup>b</sup>      | 3.29 <sup>b</sup>      |

Note: Co-superscripted evaluation means represent homogeneous sets in a Tukey HSD post hoc comparison, which means that the differences between them are not statistically significant.

Table 30 Individual results - topic dative condition (advanced group)

|            | [+front]<br>[+double] | [-front]<br>[+double] | #[+front]<br>[-double] | #[-front]<br>[-double] |
|------------|-----------------------|-----------------------|------------------------|------------------------|
| A-1^       | 4.8 <sup>a</sup>      | 4.4 <sup>a,b</sup>    | 3.3 <sup>b</sup>       | 3.2 <sup>b</sup>       |
| A-2^^      | 4.8 <sup>a</sup>      | 3.9 <sup>a</sup>      | 2.8 <sup>b</sup>       | 2.9 <sup>b</sup>       |
| A-3^       | 4.6 <sup>a</sup>      | 3.8 <sup>a,c</sup>    | 1.9 <sup>b</sup>       | 3.1 <sup>c</sup>       |
| A-4^       | 4.7 <sup>a</sup>      | 4.5 <sup>a,c</sup>    | 3.5 <sup>b</sup>       | 3.8 <sup>b,c</sup>     |
| A-5^^      | 4.9 <sup>a</sup>      | 4.2 <sup>a</sup>      | 2.1 <sup>b</sup>       | 2.3 <sup>b</sup>       |
| A-6*       | 4.7 <sup>a</sup>      | 1.6 <sup>b</sup>      | 4.2 <sup>a</sup>       | 3.0 <sup>c</sup>       |
| A-7*       | 4.5 <sup>a</sup>      | 2.9 <sup>b</sup>      | 3.1 <sup>a,b</sup>     | 2.8 <sup>b</sup>       |
| A-8^       | 4.7 <sup>a</sup>      | 4.4 <sup>a,b</sup>    | 3.8 <sup>b</sup>       | 2.7 <sup>c</sup>       |
| A-9**      | 4.3 <sup>a</sup>      | 3.4 <sup>a,b</sup>    | 4.4 <sup>a</sup>       | 2.8 <sup>b</sup>       |
| A-10*      | 4.9 <sup>a</sup>      | 3.9 <sup>b</sup>      | 4.1 <sup>a,b</sup>     | 3.9 <sup>b</sup>       |
| Group mean | 4.69 <sup>a</sup>     | 3.70 <sup>b</sup>     | 3.32 <sup>b</sup>      | 3.05 <sup>b</sup>      |

Note: Co-superscripted evaluation means represent homogeneous sets in a Tukey HSD post hoc comparison, which means that the differences between them are not statistically significant.

Table 31 Individual results - focus accusative condition (advanced group)

|            | #[+front]<br>[+double] | #[-front]<br>[+double] | [+front]<br>[-double] | [-front]<br>[-double] |
|------------|------------------------|------------------------|-----------------------|-----------------------|
| A-1^^      | 3.0 <sup>a</sup>       | 1.4 <sup>b</sup>       | 5.0 <sup>c</sup>      | 5.0 <sup>c</sup>      |
| A-2^^      | 2.6 <sup>a</sup>       | 2.1 <sup>a</sup>       | 4.1 <sup>b</sup>      | 4.5 <sup>b</sup>      |
| A-3^       | 3.3 <sup>a</sup>       | 2.4 <sup>a</sup>       | 2.8 <sup>a</sup>      | 4.8 <sup>c</sup>      |
| A-4^^      | 2.6 <sup>a</sup>       | 3.0 <sup>a</sup>       | 4.7 <sup>b</sup>      | 4.6 <sup>b</sup>      |
| A-5^^      | 2.4 <sup>a</sup>       | 1.9 <sup>a</sup>       | 4.8 <sup>b</sup>      | 4.4 <sup>b</sup>      |
| A-6^^      | 2.8 <sup>a</sup>       | 1.1 <sup>b</sup>       | 4.9 <sup>c</sup>      | 4.6 <sup>c</sup>      |
| A-7^       | 3.1 <sup>a</sup>       | 1.7 <sup>a</sup>       | 2.8 <sup>a</sup>      | 4.7 <sup>b</sup>      |
| A-8^^      | 2.4 <sup>a</sup>       | 1.7 <sup>a</sup>       | 4.8 <sup>b</sup>      | 4.7 <sup>b</sup>      |
| A-9^^      | 2.5 <sup>a</sup>       | 2.3 <sup>a</sup>       | 4.4 <sup>b</sup>      | 4.7 <sup>b</sup>      |
| A-10^^     | 3.5 <sup>a</sup>       | 3.3 <sup>a</sup>       | 4.8 <sup>b</sup>      | 4.9 <sup>b</sup>      |
| Group mean | 2.82 <sup>a</sup>      | 2.09 <sup>b</sup>      | 4.31 <sup>c</sup>     | 4.69 <sup>c</sup>     |

Note: Co-superscripted evaluation means represent homogeneous sets in a Tukey HSD post hoc comparison, which means that the differences between them are not statistically significant.

Table 32 Individual results - focus dative condition (advanced group)

|            | #[+front]<br>[+double] | #[-front]<br>[+double] | [+front]<br>[-double] | [-front]<br>[-double] |
|------------|------------------------|------------------------|-----------------------|-----------------------|
| A-1^^      | 3.0 <sup>a</sup>       | 2.4 <sup>a</sup>       | 4.7 <sup>b</sup>      | 4.8 <sup>b</sup>      |
| A-2^^      | 2.2 <sup>a</sup>       | 1.8 <sup>a</sup>       | 4.4 <sup>b</sup>      | 4.5 <sup>b</sup>      |
| A-3^       | 2.7 <sup>a</sup>       | 1.6 <sup>b</sup>       | 4.7 <sup>c</sup>      | 3.5 <sup>a</sup>      |
| A-4^^      | 3.2 <sup>a</sup>       | 2.7 <sup>a</sup>       | 4.8 <sup>b</sup>      | 4.3 <sup>b</sup>      |
| A-5^^      | 2.7 <sup>a</sup>       | 2.4 <sup>a</sup>       | 4.0 <sup>b</sup>      | 4.8 <sup>b</sup>      |
| A-6^^      | 1.9 <sup>a</sup>       | 1.1 <sup>a</sup>       | 5.0 <sup>b</sup>      | 4.6 <sup>b</sup>      |
| A-7^^      | 3.1 <sup>a</sup>       | 2.1 <sup>a</sup>       | 4.6 <sup>b</sup>      | 4.6 <sup>b</sup>      |
| A-8^^      | 2.5 <sup>a</sup>       | 2.3 <sup>a</sup>       | 4.8 <sup>b</sup>      | 4.1 <sup>b</sup>      |
| A-9*       | 3.7 <sup>a,c</sup>     | 1.6 <sup>b</sup>       | 3.2 <sup>a</sup>      | 4.5 <sup>c</sup>      |
| A-10^^     | 3.7 <sup>a</sup>       | 3.1 <sup>a</sup>       | 4.8 <sup>b</sup>      | 4.8 <sup>b</sup>      |
| Group mean | 2.87 <sup>a</sup>      | 2.11 <sup>b</sup>      | 4.50 <sup>c</sup>     | 4.45 <sup>c</sup>     |

Note: Co-superscripted evaluation means represent homogeneous sets in a Tukey HSD post hoc comparison, which means that the differences between them are not statistically significant.

Table 33 Individual results - topic accusative condition (intermediate group)

|                   | [+front]<br>[+double] | [-front]<br>[+double] | #[+front]<br>[-double] | #[-front]<br>[-double] |
|-------------------|-----------------------|-----------------------|------------------------|------------------------|
| I-1**             | 2.8 <sup>a</sup>      | 1.4 <sup>b</sup>      | 4.3 <sup>a</sup>       | 4.5 <sup>a</sup>       |
| I-2**             | 4.4 <sup>a</sup>      | 4.3 <sup>a</sup>      | 4.9 <sup>a</sup>       | 4.7 <sup>a</sup>       |
| I-3*              | 4.2 <sup>a</sup>      | 3.4 <sup>a</sup>      | 3.8 <sup>a</sup>       | 4.0 <sup>a</sup>       |
| I-4***            | 3.0 <sup>b</sup>      | 3.3 <sup>a</sup>      | 2.5 <sup>b</sup>       | 4.9 <sup>a</sup>       |
| I-5**             | 3.2 <sup>a</sup>      | 3.0 <sup>a</sup>      | 3.1 <sup>a</sup>       | 4.0 <sup>a</sup>       |
| I-6***            | 1.8 <sup>a</sup>      | 2.9 <sup>a,b</sup>    | 3.8 <sup>b</sup>       | 4.6 <sup>b</sup>       |
| I-7**             | 4.2 <sup>a</sup>      | 3.6 <sup>a</sup>      | 4.2 <sup>a</sup>       | 4.7 <sup>a</sup>       |
| I-8**             | 4.7 <sup>a</sup>      | 4.1 <sup>a</sup>      | 4.8 <sup>a</sup>       | 4.8 <sup>a</sup>       |
| I-9 <sup>^</sup>  | 4.7 <sup>a</sup>      | 4.1 <sup>a,c</sup>    | 2.8 <sup>b</sup>       | 3.3 <sup>b,c</sup>     |
| I-10*             | 4.0 <sup>a</sup>      | 3.2 <sup>a</sup>      | 3.7 <sup>a</sup>       | 4.2 <sup>a</sup>       |
| I-11 <sup>^</sup> | 4.7 <sup>a</sup>      | 3.6 <sup>b</sup>      | 2.7 <sup>b</sup>       | 3.5 <sup>b</sup>       |
| I-12**            | 4.1 <sup>a</sup>      | 3.9 <sup>a</sup>      | 4.7 <sup>a</sup>       | 4.7 <sup>a</sup>       |
| I-13***           | 2.4 <sup>a</sup>      | 2.4 <sup>a</sup>      | 4.3 <sup>b</sup>       | 4.7 <sup>b</sup>       |
| I-14**            | 3.2 <sup>a</sup>      | 3.1 <sup>b</sup>      | 4.4 <sup>a</sup>       | 4.4 <sup>a</sup>       |
| Group mean        | 3.66 <sup>a,b</sup>   | 3.31 <sup>b</sup>     | 3.86 <sup>a,b</sup>    | 4.36 <sup>a</sup>      |

Note: Co-superscripted evaluation means represent homogeneous sets in a Tukey HSD post hoc comparison, which means that the differences between them are not statistically significant.

Table 34 Individual results - topic dative condition (intermediate group)

|                   | [+front]<br>[+double] | [-front]<br>[+double] | #[+front]<br>[-double] | #[-front]<br>[-double] |
|-------------------|-----------------------|-----------------------|------------------------|------------------------|
| I-1***            | 3.0 <sup>a</sup>      | 2.6 <sup>a</sup>      | 3.3 <sup>a</sup>       | 4.4 <sup>b</sup>       |
| I-2*              | 4.7 <sup>a</sup>      | 4.0 <sup>a</sup>      | 4.7 <sup>a</sup>       | 4.6 <sup>a</sup>       |
| I-3*              | 3.8 <sup>a</sup>      | 3.0 <sup>a</sup>      | 3.6 <sup>a</sup>       | 3.2 <sup>a</sup>       |
| I-4**             | 3.5 <sup>a</sup>      | 1.4 <sup>b</sup>      | 3.2 <sup>a</sup>       | 4.7 <sup>a</sup>       |
| I-5**             | 4.0 <sup>a</sup>      | 3.2 <sup>a</sup>      | 3.7 <sup>a</sup>       | 4.2 <sup>a</sup>       |
| I-6***            | 1.7 <sup>a</sup>      | 2.5 <sup>b</sup>      | 3.6 <sup>b,c</sup>     | 4.6 <sup>c</sup>       |
| I-7**             | 4.5 <sup>a,c</sup>    | 1.5 <sup>b</sup>      | 3.4 <sup>a</sup>       | 4.7 <sup>c</sup>       |
| I-8**             | 4.1 <sup>a</sup>      | 4.7 <sup>a,b</sup>    | 4.9 <sup>b</sup>       | 5.0 <sup>b</sup>       |
| I-9*              | 4.5 <sup>a</sup>      | 4.0 <sup>a,b</sup>    | 3.9 <sup>a,b</sup>     | 3.1 <sup>b</sup>       |
| I-10**            | 4.2 <sup>a,b</sup>    | 3.5 <sup>a</sup>      | 3.8 <sup>a,b</sup>     | 4.7 <sup>b</sup>       |
| I-11 <sup>^</sup> | 4.4 <sup>a</sup>      | 4.1 <sup>a,b</sup>    | 3.1 <sup>c</sup>       | 3.2 <sup>b,c</sup>     |
| I-12**            | 2.9 <sup>a</sup>      | 3.2 <sup>a</sup>      | 3.4 <sup>a,b</sup>     | 4.3 <sup>b</sup>       |
| I-13**            | 3.3 <sup>a</sup>      | 3.0 <sup>a</sup>      | 4.5 <sup>b</sup>       | 4.7 <sup>b</sup>       |
| I-14**            | 4.2 <sup>a,b</sup>    | 3.4 <sup>a</sup>      | 4.1 <sup>a,b</sup>     | 4.6 <sup>b</sup>       |
| Group mean        | 3.79 <sup>a,b</sup>   | 3.15 <sup>b</sup>     | 3.80 <sup>a,b</sup>    | 4.29 <sup>a</sup>      |

Note: Co-superscripted evaluation means represent homogeneous sets in a Tukey HSD post hoc comparison, which means that the differences between them are not statistically significant.



Table 35 Individual results - focus accusative condition (intermediate group)

|            | #[+front]<br>[+double] | #[-front]<br>[+double] | [+front]<br>[-double] | [-front]<br>[-double] |
|------------|------------------------|------------------------|-----------------------|-----------------------|
| I-1^^      | 1.7 <sup>a</sup>       | 1.4 <sup>a</sup>       | 4.6 <sup>b</sup>      | 4.9 <sup>b</sup>      |
| I-2*       | 4.3 <sup>a,b</sup>     | 3.9 <sup>a</sup>       | 4.9 <sup>b</sup>      | 4.6 <sup>a,b</sup>    |
| I-3*       | 3.8 <sup>a,b</sup>     | 2.6 <sup>a</sup>       | 4.1 <sup>b</sup>      | 3.6 <sup>a,b</sup>    |
| I-4*       | 3.6 <sup>a</sup>       | 3.2 <sup>a</sup>       | 3.5 <sup>a</sup>      | 3.9 <sup>a</sup>      |
| I-5*       | 4.3 <sup>a,c</sup>     | 3.7 <sup>a</sup>       | 3.2 <sup>b</sup>      | 4.8 <sup>c</sup>      |
| I-6^^      | 2.7 <sup>a</sup>       | 1.7 <sup>a</sup>       | 4.6 <sup>b</sup>      | 4.2 <sup>b</sup>      |
| I-7*       | 3.8 <sup>a</sup>       | 3.8 <sup>a</sup>       | 3.9 <sup>a</sup>      | 4.2 <sup>a</sup>      |
| I-8*       | 4.4 <sup>a</sup>       | 3.8 <sup>a</sup>       | 4.4 <sup>a</sup>      | 4.7 <sup>a</sup>      |
| I-9^^      | 2.7 <sup>a</sup>       | 2.6 <sup>a</sup>       | 4.7 <sup>b</sup>      | 4.8 <sup>b</sup>      |
| I-10*      | 4.0 <sup>a</sup>       | 3.5 <sup>a</sup>       | 4.0 <sup>a</sup>      | 4.3 <sup>a</sup>      |
| I-11^^     | 2.0 <sup>a</sup>       | 2.5 <sup>a</sup>       | 4.3 <sup>b</sup>      | 4.5 <sup>b</sup>      |
| I-12*      | 4.2 <sup>a</sup>       | 4.1 <sup>a</sup>       | 3.9 <sup>a</sup>      | 4.2 <sup>a</sup>      |
| I-13*      | 3.3 <sup>a</sup>       | 3.8 <sup>a,b</sup>     | 4.4 <sup>b</sup>      | 4.5 <sup>b</sup>      |
| I-14*      | 4.2 <sup>a</sup>       | 3.6 <sup>a</sup>       | 3.6 <sup>a</sup>      | 4.4 <sup>a</sup>      |
| Group mean | 3.50 <sup>a,b</sup>    | 3.16 <sup>a</sup>      | 4.15 <sup>b,c</sup>   | 4.40 <sup>c</sup>     |

Note: Co-superscripted evaluation means represent homogeneous sets in a Tukey HSD post hoc comparison, which means that the differences between them are not statistically significant.

Table 36 Individual results - focus dative condition (intermediate group)

|            | #[+front]<br>[+double] | #[-front]<br>[+double] | [+front]<br>[-double] | [-front]<br>[-double] |
|------------|------------------------|------------------------|-----------------------|-----------------------|
| I-1*       | 4.0 <sup>a,b</sup>     | 3.5 <sup>a</sup>       | 4.5 <sup>b</sup>      | 4.4 <sup>b</sup>      |
| I-2*       | 4.7 <sup>a</sup>       | 4.0 <sup>a</sup>       | 4.7 <sup>a</sup>      | 4.6 <sup>a</sup>      |
| I-3**      | 3.8 <sup>a</sup>       | 3.0 <sup>a</sup>       | 3.6 <sup>a</sup>      | 3.2 <sup>a</sup>      |
| I-4*       | 4.5 <sup>a</sup>       | 3.4 <sup>a</sup>       | 4.5 <sup>a</sup>      | 4.2 <sup>a</sup>      |
| I-5*       | 4.0 <sup>a</sup>       | 3.2 <sup>a</sup>       | 3.7 <sup>a</sup>      | 4.2 <sup>a</sup>      |
| I-6*       | 3.6 <sup>a,b</sup>     | 2.6 <sup>a</sup>       | 4.3 <sup>b</sup>      | 4.0 <sup>b</sup>      |
| I-7*       | 3.9 <sup>a</sup>       | 2.4 <sup>b</sup>       | 3.9 <sup>a</sup>      | 4.0 <sup>a</sup>      |
| I-8*       | 3.9 <sup>a</sup>       | 3.9 <sup>a</sup>       | 3.8 <sup>a</sup>      | 4.1 <sup>a</sup>      |
| I-9^^      | 3.3 <sup>a</sup>       | 3.0 <sup>a</sup>       | 4.5 <sup>b</sup>      | 4.7 <sup>b</sup>      |
| I-10*      | 4.2 <sup>a,b</sup>     | 3.5 <sup>a</sup>       | 3.8 <sup>a,b</sup>    | 4.7 <sup>b</sup>      |
| I-11^^     | 3.1 <sup>a</sup>       | 3.0 <sup>a</sup>       | 4.2 <sup>b</sup>      | 4.2 <sup>b</sup>      |
| I-12^      | 2.9 <sup>a</sup>       | 3.2 <sup>a</sup>       | 3.4 <sup>a,b</sup>    | 4.3 <sup>b</sup>      |
| I-13^      | 3.6 <sup>a,c</sup>     | 3.4 <sup>a</sup>       | 4.6 <sup>b</sup>      | 4.4 <sup>b,c</sup>    |
| I-14*      | 4.2 <sup>a,b</sup>     | 3.4 <sup>a</sup>       | 4.1 <sup>a,b</sup>    | 4.6 <sup>b</sup>      |
| Group mean | 3.84 <sup>a</sup>      | 3.25 <sup>b</sup>      | 4.11 <sup>a,c</sup>   | 4.26 <sup>c</sup>     |

Note: Co-superscripted evaluation means represent homogeneous sets in a Tukey HSD post hoc comparison, which means that the differences between them are not statistically significant.

#### 6.5.2.2. Advanced group

With the exception of two advanced participants, A-7 and A-9, the results of the advanced group in the Topic Accusative Condition are native-like as most of them evaluate both felicitous options significantly higher than the infelicitous ones. In the Topic Dative Condition, the same participants, A-7 and A-9, perform within one of the infelicitous patterns. However, there are two participants, A-6 and A-10 who also give highest evaluation to one of the felicitous options (O1) but it does not reach statistical significance in comparison with one of the highly evaluated infelicitous options (O3).

In the focus conditions, all but one advanced learner (A-9 in the Topic Dative Condition) assign very high evaluations to the felicitous options (O3 and O4) as in almost all cases both of them differ significantly from the evaluations of the two infelicitous options.

#### 6.5.2.3. Intermediate group

The majority of the 14 intermediate learners exhibited strong non-native-like behavior in their evaluations in the topic conditions. In most cases they assigned the highest evaluation scores to the infelicitous Option 4, which was not surprising in view of the fact that SVO word order is what their L1 uses in similar contexts. However, for the most part, the difference between their evaluations does not attain statistical significance. This is indicative of their lack of knowledge as to the pragmatic requirement for clitic doubling in topical constructions, which makes them incapable of discriminating between the felicitous and the infelicitous options as they give relatively high evaluations to all of them.

In the focus conditions, the results of some of the intermediate participants converge with the results of the control group. As it was argued earlier in this chapter, this should not be taken as indication of any pragmatic awareness of the incompatibility between clitic doubling and focal constructions. It should rather be considered as a coincidental occurrence due to the intermediate L2 learners' preference for the L1-like clitic-free SVO constructions, which just happened to be felicitous in the focus conditions.

However, the results of two participants (I-9 and I-11) present a notable departure from the pattern observed among the intermediate learners. They assign native-like evaluations not only in the focus conditions but also in the topic conditions. The evaluations of I-11 fall into one of the native-like felicitous patterns in both topic conditions. I-9 also followed one of the felicitous patterns in the Topic Accusative Condition and gave highest evaluations of the felicitous options in the Topic Dative Condition, although the latter did not differ significantly from the infelicitous Option 3 (fronting with no doubling).

#### 6.6. Summary

The data of the context sentence evaluation task showed that contrary to the expectations of the Interface Hypothesis (Sorace, 2006) the advanced L2 learners of Bulgarian had acquired not only the purely syntactic properties of clitics and clitic doubling in Bulgarian, but they were also aware of the pragmatic significance of clitic doubling in marking topical direct and indirect objects. Most of the advanced learners evaluated the contextual appropriateness of sentences with and without clitic doubling in

a similar manner as the native speakers in both the topic and focus conditions. Their evaluations for the felicitous and the infelicitous options consistently displayed differences of statistical significance in favor of the felicitous options.

On the other hand, the intermediate L2 learners of Bulgarian (with the exception of two participants who provided native-like evaluations) diverged from the control group by either not displaying statistically significant differences between the evaluation options or giving significantly higher evaluations for the infelicitous SVO word order in the topic conditions. The above patterns are indicative of their inability to integrate syntactic properties with discourse requirements as well as a strong possibility for L1 transfer.

## CHAPTER 7

### DISCUSSION AND CONCLUSIONS

#### 7.1. Introduction

The purpose of this thesis was to expand the testing ground of the Interface Hypothesis (Sorace, 2006) by providing evidence for:

- 1) the acquisition of the pragmatic function of clitic doubling in Bulgarian,
- 2) a possible dissociation between the acquisition of purely syntactic properties and properties based on incorporating discourse knowledge.

#### 7.2. Summary of major findings

Below is a summary of the major findings of the two experimental studies in this thesis:

##### A. Grammaticality judgment task on syntactic properties of Bulgarian clitics

- All advanced learners provided correct grammaticality judgments on at least 80% of the test items for each of the 6 properties that were investigated.
- Three of the participants in the intermediate group responded in a similar way as the advanced learners by responding in a native-like manner on at least 80% of the test items for each clitic property.
- Most of the intermediate subjects did not perform well on at least some of the properties. The responses of many of them revealed strong tendencies to analyze object clitics as strong pronouns. This was expected if the L1 constituted the initial stages of acquisition.

- Most of the intermediate learners performed very accurately on the Tobler-Musafia property. For many of them, the correct post-verbal position of the clitic in Tobler-Musafia environments was most likely construed as an argument position. The correct grammaticality judgments were most likely the consequence of a non-targetlike mental representation of clitics as strong pronouns, which are required to occur post-verbally in the L1. Nevertheless, the inclusion of the Tobler-Musafia property was significant for testing the knowledge of the advanced learners on this specific property of Bulgarian object clitics. They were expected to be aware of the pre-verbal position of clitics in all other but Tobler-Musafia environments and it was important to test their sensitivity to the single environment which required clitics to occur after the verb.

B. Context sentence evaluation task on the pragmatic function of clitic doubling

- Eight out of 10 advanced learners gave evaluations of the felicitous options 1 and 2 in the topic accusative condition that were significantly higher than the evaluations for the infelicitous options 3 and 4. In this respect, they were indistinguishable from the native controls.
- Six out of 10 advanced learners gave evaluations of the felicitous options 1 and 2 in the topic dative condition that were significantly higher than the evaluations for the infelicitous options 3 and 4. However, a very important caveat needs to be issued with respect to the results in the topic dative condition. For reasons beyond the scope of this dissertation, lack of clitic doubling with topical indirect objects does not seem to degrade the felicity of the sentences to the same extent as the lack of clitic doubling with topical direct objects does. This was reflected in the results of the control group,

whose evaluations for option 3 (fronting with no clitic doubling) in the topic dative condition were significantly higher than the evaluations for the same infelicitous option in the topic accusative condition (mean 3.18 vs. 2.13, out of 5).

- Two of the intermediate participants also gave native-like evaluations in both the accusative and the dative topic conditions.
- Twelve out of 14 intermediate participants gave evaluations diverging from those observed in the control group and the majority of advanced speakers. There was either no statistically significant difference between the four options, or the infelicitous no-doubling options 3 and, especially 4, received significantly higher evaluations. The latter observation was indicative of L1 transfer as those are the options that are used in English in similar contexts.
- In the focus conditions, all advanced speakers performed in a native-like manner with respect to the evaluations given to the four answer options.
- The intermediate participants also gave mostly native-like responses in the focus conditions. In view of their performance in the topic conditions, where they often preferred the infelicitous options 3 and 4 with no clitic doubling, it could be concluded that their native-like evaluations were the result of their general preference for those options rather than any knowledge of the infelicity of clitic doubling with focal constructions. This is not surprising considering the fact that their L1 does not use clitics, let alone clitic-doubling, which makes them uncomfortable with clitic constructions at that stage in their L1 acquisition process.



### 7.3. Theoretical implications

The results of the experimental studies of this thesis present a challenge to some theoretical approaches to second language acquisition, namely the Interpretability Hypothesis (Tsimpli and Dimitrakopoulou, 2007) and the Interface Hypothesis (Sorace, 2005).

The Interpretability Hypothesis argues for unavoidable problems in the acquisition of functional categories which lean on uninterpretable features since they are not readily available via UG following the critical period of acquisition. Third-person object clitics, as argued by Tsimpli & Stavrakaki (1999), are a cluster of agreement and case features, which are uninterpretable at LF and, unless the functional category hosting them is projected in the L1, they are predicted to pose a considerable obstacle for L2 learners. The experimental results revealed native-like convergence with respect to the syntactic properties of object clitics by all advanced and some of the intermediate learners of Bulgarian. Most of the intermediate learners exhibited strong L1 transfer in attributing an L1-based analysis to clitics and treating them as strong pronouns, which was predicted by the proponents of the Interpretability Hypothesis. However, the immaculate target convergence of the advanced group was at odds with the expectations of that theory. In that case, the advocates of the Interpretability Hypothesis (or the Representational Deficit Hypothesis, for that matter) invoke a claim that learners misanalyze features. However, this claim is non-falsifiable and adds a considerable stipulative burden on their theory by making it virtually impossible to empirically test it. The more viable theoretical approach, which successfully accounts for both the clearly observable data facts such as strong L1 transfer as well as the ultimate native-like performance with regard to the specific

syntactic properties of clitics, is the Full Transfer/Full Access Hypothesis (Schwarz and Sprouse 1994, 1996). As predicted by that hypothesis, the L1 functional make-up constitutes the initial stage of L2 acquisition by accommodating the second language input. However, under the influence of the immense input demonstrating object clitics and with the full availability of UG, the learners were able to augment the array of functional categories with which they approach the L2 data with the one responsible for clitics.

The main objective of the thesis, however, was to investigate the acquisition of an L2 property which involves the integration of syntax with discourse. The Interface Hypothesis (Sorace, 2006) predicts native-like performance with respect to purely syntactic properties that are based on uninterpretable features which are internal to the computational system. Their acquisition, according to Sorace's hypothesis, is unproblematic whereas interface conditions (based on interpretable features such as [+/- focus], [+/-topic shift]) are invariably associated with learnability problems to the extent that adult L2 learners do not exhibit native-like knowledge of them even at the stage of ultimate attainment. The results of the experimental study on the acquisition of Bulgarian clitic doubling as an overt marker of topicality, indeed, revealed an asymmetry between the acquisition of syntactic properties and properties that are contingent upon the integration of syntactic structures with discourse requirements. However, that asymmetry is not along the line of learnability but antecedence. The appropriate L2 syntax is successfully acquired by L2 learners before the interface conditions that are based on syntactic properties. This delay in the acquisition of interface properties was reflected in the performance of the L2 learners in the two studies described in the previous two

chapters. Out of 13 participants who displayed native-like knowledge of the syntactic properties of Bulgarian clitics, 10 were also native-like in their treatment of topic-marking clitic doubling. Three of the subjects with native-like syntax, however, were still not native-like with respect to the interface property. Eleven of the subjects had acquired neither the syntax nor the pragmatics of Bulgarian clitics and their responses showed strong evidence of L1 transfer. As expected, none of the participants in the studies had learned the discourse property before acquiring the relevant syntax.

Acquisition outcomes from the two experiments presented in this dissertation can be combined in a contingency table (see Table 37). The table is based on individual results. It was calculated in the following way: an individual who had supplied correct answers for 8 out of 10 items (80% was taken as a cut-off point representing performance on 10 items that was sufficiently different from chance) on all 6 properties of the syntax test and distinguished between the felicitous and the infelicitous options on the pragmatics test in a native-like manner was considered a successful acquirer. Individuals were distributed in the four cells of a contingency table. A contingency estimation of the acquisition of syntax and acquisition of pragmatics reveals a significance at  $\chi^2=14.505$ ,  $p<0.001$ . This means that the two types of properties are actually related in the acquisition process. This result is in line with the findings of other studies (Rothman, 2008; Iverson et al., 2008), which show that acquisition of properties related to the interface between discourse and syntax is preceded by acquisition of the narrow syntax.

Table 37 Contingency of acquisition of syntax and acquisition of pragmatics

|               | [+syntax] | [-syntax] |
|---------------|-----------|-----------|
| [+pragmatics] | 10        | 0         |
| [-pragmatics] | 3         | 11        |

Note:  $\chi^2=14.505$ ,  $p<0.001$

Processing cost is most often viewed as a main contributor to the delay in the acquisition of interface properties. Structures which involve the integration of purely syntactic knowledge with knowledge from other domains, such as discourse, are more complex than structures which involve syntactic knowledge alone. Therefore, the realization of those complex structures requires additional processing effort, which makes them more costly processing-wise. Insufficient processing resources among L2 learners for an unfailingly successful coordination of syntax with the domain of discourse leads to a 'low-cost' and most 'economical' option, which is L1 transfer. Once again, the predictions of the Full Transfer/Full Access hypothesis for initial L1 transfer and eventual target convergence are corroborated by the pragmatics experiment, although that hypothesis makes no reference to the observed asymmetry between the acquisition of syntax and pragmatics.

7.4. Challenges faced during the experiments  
and areas for future research

One of the greatest challenges to the pragmatics experiment was to find appropriate contexts where the topical sentences which required clitic doubling would sound most natural. This was crucial to the experiment since all answer options involved perfectly grammatical sentences which in the right context would also be pragmatically felicitous (or pragmatically odd in the wrong context). Since topic-marking clitic doubling is exclusively related to spoken language, the inclusion of aural presentation of the test items in addition to the written form was critical to the success of the experiment. All the participants were instructed to listen carefully to the recorded dialogues and to evaluate the sentences as answers to a particular response rather than isolated utterances. However, the possibility for some subjects to have been heavily influenced by the grammaticality of the answer options and to have focused mainly on the written text, which conveys an immediate impression of grammatical correctness, cannot be excluded. This might have resulted in higher evaluations of some of the infelicitous options than expected.

A possible area of future research on L2 acquisition of interface conditions in Bulgarian (also suggested by Valenzuela (2005) for Spanish) is the distribution of overt and null objects regulated by definiteness. Bulgarian requires object drop with indefinite nouns as in:

- (59) A: Kupi                      li xljab?  
          bought-2<sup>nd</sup> p.sg. Q bread  
          ‘Did you buy bread?’

B: Kupix                    pro/(*\*go*)  
                                   bought-1<sup>st</sup> p.sg. pro/ it-cl.ACC  
                                   ‘I bought some.’

Furthermore, an elicited or spontaneous production task on clitic use can reveal if performance factors interfere with the underlying knowledge of clitic properties.

### 7.5. Conclusion

The purpose of this thesis was to provide an empirical test for the claims of the Interface Hypothesis (Sorace, 2006). The original version of that hypothesis (Sorace, 2003) argues for the possibility of successful L2 acquisition of properties related to the ‘narrow’ syntax whereas interface properties which involve the integration of more than one linguistic module or the interaction between a linguistic module and some external domain are associated with acquisition delays or permanent target-divergence. While the initial version of the Interface Hypothesis focuses on the acquisition asymmetry between ‘narrow’ syntax and interface conditions, the most recent formulation of the hypothesis establishes the boundary of that asymmetry between the internal interfaces (those which require coordination between the narrow syntax and other linguistic modules, e.g., semantics, morphology, phonology) and the external interfaces (whereby narrow syntax interacts with non-linguistic cognitive systems such as discourse).

The latest postulation of the Inteface Hypothesis is repeated below for the reader’s convenience.

Interface Hypothesis (Sorace, 2006):

- Non-interpretable features that are internal to the computational system of syntax proper and drive syntactic derivations are categorical in native grammars and are acquired successfully by adult L2 learners.
- Interpretable features that lean on syntactic options and belong to the interface between syntax and discourse may exhibit gradedness in native grammars and residual optionality in near-native grammars due to the influence of the L1 even at the most advanced competence stage. The attainment of ‘perfect’ L2 knowledge is restricted to properties related to LF representations but optionality and cross-linguistic effects remain possible at the interfaces where L2 use is constrained by discourse factors and processing deficiency.

As the reader can ascertain, this formulation makes a significant use of the word ‘may’ which detracts from its merit by weakening its predictive power. Furthermore, it makes the hypothesis virtually unfalsifiable. In order to validate a certain hypothesis, empirical tests need to be conducted and the results compared to the predictions of the given hypothesis. Therefore a firmer stance as regards the acquisition outcomes with external interface conditions needs to be taken, which will be either corroborated or refuted by experimental data. In its present form, the Interface Hypothesis will be able to accommodate any kinds of results as they will invariably fall into either the ‘may’ or the ‘may not’ condition. In evaluating the results of the context sentence evaluation task as described in the previous chapter, I adopted an interpretation of the Interface Hypothesis which contends for permanent L2 fossilization with regard to external interfaces. These

stronger claims of the Interface Hypothesis are not borne out by the pragmatics experiment in this thesis as learnability of interface properties by advanced L2 learners is shown to be possible. Even if interfaces are problematic at the earlier stages of acquisition, their properties are ultimately learnable and at the end-state they are acquired and used in a native-like manner. Therefore, to generalize about the impossibility for ultimate attainment of interface properties and to completely exclude learnability as an option might be premature and a lot more research, exploring as many interface conditions as possible, needs to be done in order to validate the Interface Hypothesis as a legitimate constraint which permanently hinders native-like performance at the end-state.

In addition, the learnability dichotomy which the Interface Hypothesis establishes between internal and external interfaces seems to be unsupported by a number of studies which show successful acquisition outcomes with external interfaces and problems with supposedly easier to acquire internal interfaces (e.g., Rothman, 2009). In this respect, studies which show persistent difficulties in the acquisition of inflectional morphology, for example gender as in McCarthy (2007), also present a problem for the Interface Hypothesis. Therefore, an internal/external interface asymmetry might not be a viable predictive demarcation line and to view some interfaces as inherently problematic and others as inherently unproblematic may not be the right approach. What is beyond debate at this point is that acquisition of properties which involve coordination of more than one linguistic module or the integration of narrow syntax with other cognitive domains is challenging and often subject to acquisition delays. However, as White (2009) points out, the future course of research on the interfaces should focus on accounting for those difficulties by scrutinizing as many properties as possible across various interfaces rather



than assigning inherent learnability to internal interfaces and inherent unlearnability to external interfaces. A primary objective in that respect will be to establish the nature of any observed target divergence as regards interface conditions and to determine whether it is based on representational differences between the interlanguage and the native grammar, or it is caused by processing and performance factors.

APPENDIX A  
PROFICIENCY ASSESSMENT CLOZE TEST

Имало едно време едно хубаво, малко момиченце. Баба му, която много го обичала, му ушила малка червена шапчица. Тази шапчица толкова му прилягала, че всички започнали да го наричат Червената шапчица. Един ден майката на Червената шапчица й казала, че баба й е болна, затова трябвало да отиде да й занесе храна. Червената шапчица взела кошничка с питка и гърненце с масло и тръгнала към къщата на баба си. По пътя в гората Червената шапчица срещнала вълка. Той искал да я изяде, но не посмял, защото наблизко имало дървари. Затова я заговорил и попитал къде отива. Като разбрал, хукнал по преките пътеки, за да стигне пръв до къщата на бабата. Когато стигнал до къщичката, вълкът си преправил гласа и излъгал бабичката, че той е Червената шапчица. Бабата го пушила вътре и той набързо я излапал и с пълен корем легнал в леглото й. Скоро до къщичката пристигнала и Червената шапчица. Тя много се учудила защо баба е толкова космата, защо има такива големи ръце, крака, очи, уши. Тя попитала: "Бабо, а защо имаш толкова големи зъби?" "За да те изям!", казал вълкът, хвърлил се върху нея и я глътнал цялата. Когато се нахранил, вълкът легнал отново и захъркал. Покрай къщичката минал довец. Той чул хъркането и решил да види как е бабата. Когато видял вълка, взел ножици и му разпорил корема. А оттам изкочили живи и здрави Червената шапчица и нейната мила баба. После всички задружно напълнили корема на вълка с камъни. След време той се събудил ожаднял и отишъл до кладенеца да пие вода, но коремът му така натезжал, че паднал в

кладенеца. Ловецът си направил кожух от кожата му, бабичката изяла питката и  
маслото, а Червената шапчица се върнала радостна при майка си.

Note: Words which appear in bold were omitted in the cloze test

## APPENDIX B

## TEST ITEMS FOR GRAMMATICALITY JUDGMENT TASK

1. PREVERBAL CLITIC PLACEMENT (NON-ARGUMENT POSITION)

## ACCUSATIVE CLITICS

Correct:

1. A: Kâde e Ivan?  
 where is Ivan  
 'Where is Ivan'  
 B: Sutrinta go vidjax da bjaga v parka  
 morning-def. him-cl.ACC saw-1<sup>st</sup> p.sg to run in park-def.  
 'I saw him running in the park this morning.'
2. A: Kakva e тази kola pred kâštata?  
 what is this car in front of house-def.  
 'What is this car in front of the house'  
 B: Tova e novata mi kola. Minalata sedmica ja kupix.  
 that is new my-cl. car last week her-cl.ACC bought-1<sup>st</sup> p.sg.  
 'That's my new car. I bought it last week.'
3. A: Kâde sa učebnicite ti po anglijski?  
 where are textbooks your-cl. in English  
 'Where are your English textbooks?'  
 B: Ivan gi izhvârli.  
 Ivan them-cl.ACC threw away-3<sup>rd</sup> p.sg.  
 'Ivan threw them away'
4. A: Zašto ne pomoli Peter za pomošt?  
 why not asked-2<sup>nd</sup> p.sg. Peter for help  
 'Why didn't you ask Peter for help'  
 B: Njakolko pâti go pomolix no toj beše zaet.  
 several times him-cl.ACC asked-1<sup>st</sup> p.sg. but he was busy  
 'I asked him several times, but he was busy.'
5. A: Kâde sa šokoladovite bonbon?  
 where are chocolate candy  
 'Where are the chocolates?'  
 B: Ivan gi izjade.

Ivan them-cl.ACC ate-3<sup>rd</sup> p.sg.  
 ‘Ivan ate them.’

Incorrect:

6. A: Koj izmi činiite?  
 who washed-3<sup>rd</sup> p.sg. dishes  
 ‘Who washed the dishes?’

B: \*Az izmix gi.  
 I washed-1<sup>st</sup> p.sg. them-cl.ACC  
 ‘I washed them’

7. A: Zašto plačeš?  
 why cry-2<sup>nd</sup> p.sg.  
 ‘Why are you crying?’

B: \*Zaštoto Ivan udari me  
 because Ivan hit-3<sup>rd</sup> p.sg me-cl.ACC  
 ‘Because Ivan hit me.’

8. A: Zdravejte gospodin Petrov?  
 hello Mr. Petrov  
 ‘Hello Mr.Petrov.’

B: \*Izvinete no otkâde poznavam vi?  
 excuse-2<sup>nd</sup> p.pl. but from where know-1<sup>st</sup> p.sg. you-cl.ACC  
 ‘Excuse me, but where do I know you from?’

9. A: Izprati li kartičkata kojato kupixme za roždenija den na Petja ?  
 sent-2<sup>nd</sup> p.sg. Q card which bought-1<sup>st</sup> p.pl for birthday of Petya  
 ‘Did you send the card which we bought for Petya’s birthday?’

B: \*Da, včera izpratix ja.  
 yes yesterday sent-1<sup>st</sup> p.sg her-cl.ACC  
 ‘Yes, I sent it yesterday.’

10. A: Kakvo napravixte sâs starija xladilnik?  
 what did-2<sup>nd</sup> p.pl with old fridge  
 ‘What did you do with the old fridge?’

B: \*Ivan prodade go.  
 Ivan sold-3<sup>rd</sup> p.sg. him-cl.ACC  
 ‘Ivan sold it.’

## DATIVE CLITICS

Correct:

11. A: Njakoj pomogna li na Marija?  
 someone helped-3<sup>rd</sup> p.sg. Q to Maria  
 ‘Did anyone help Maria?’  
 B: Petâr í pomogna.  
 Peter her-cl.DAT helped-3<sup>rd</sup> p.sg.  
 ‘Peter helped her.’
12. A: Koga za posledno pisa na Ivan i Marija?  
 when for last wrote-2<sup>nd</sup> p.sg. to Ivan and Maria  
 ‘When was the last time you wrote to Ivan and Maria?’  
 B: Predi edna sedmica im pisax.  
 before one week them-cl.DAT wrote-1<sup>st</sup> p.sg.  
 ‘I wrote them a week ago.’
13. A: Kak otide Petâr do letišteto?  
 how went-3<sup>rd</sup> p.sg. Peter to airport-def.  
 ‘How did Peter get to the airport?’  
 B: Ivan mu dade kolata.  
 Ivan him-cl.DAT gave-3<sup>rd</sup> p.sg. car-def.  
 ‘Ivan gave him the car.’
14. A: Kak se raboti s тази mašina?  
 how refl. work-3<sup>rd</sup> p.sg. with this machine  
 ‘How do you operate this machine?’  
 B: Včera ti pokazax no ti ne vnimavaše.  
 Yesterday you-cl.DAT showed-1<sup>st</sup> p.sg. but you not paid-2<sup>nd</sup> p.sg. attention  
 ‘I showed you yesterday but you didn’t pay attention.’
15. A: Koga za posledno se ču s Ivan?  
 when for last refl.-ACC heard-3<sup>rd</sup> p.sg. with Ivan  
 ‘When did you last hear from Ivan?’  
 B: Predi malko mi zvâna ot xotela.  
 before little me-cl.DAT called-3<sup>rd</sup> p.sg. from hotel-def.  
 ‘He called me from the hotel a few minutes ago.’

Incorrect:

16. A: Otkâde znaeš?  
 from where know-2<sup>nd</sup> p.sg.  
 ‘How do you know?’

- B: \*Ivan kaza mi.  
Ivan told-3<sup>rd</sup> p.sg. me-cl.DAT  
'Ivan told me.'
17. A: Kakvo izprati na decata?  
what sent-3<sup>rd</sup> p.sg. to children-def  
'What did you send to the children?'  
B: \*Po edna kniga izpratix im.  
each one book sent-1<sup>st</sup> p.sg them-cl.DAT  
'I sent a book for each of them.'
18. A: Kakvo kupi na Marija ot razprodažbata?  
what bought-2<sup>nd</sup> p.sg. to Maria from sale-def.  
'What did you buy Maria from the sale?'  
B: \*Ništo ne kupix í.  
nothing not bought-1<sup>st</sup> p.sg. her-cl.DAT  
'I didn't buy her anything.'
19. A: Petja ošte li se sârdi na Ivan?  
Petya still Q refl. angry to Ivan  
'Is Petya still angry with Ivan?'  
B: \*Ne, tja otdavna prosti mu.  
no she long ago forgave-3<sup>rd</sup> p.sg. him-cl.DAT  
'No, she forgave him long time ago.'
20. A: Petâr znae li kak da stigne do tuk?  
Peter know-3<sup>rd</sup> p.sg. Q how to reach to here  
'Does Peter know how to get here?'  
B: \*Da, Ivan objasni mu.  
yes Ivan explained-3<sup>rd</sup> p.sg. him-cl.DAT  
'Yes, Ivan explained to him.'

## 2. PREVERBAL (NON-WACKERNAGEL) POSITION

### Correct:

1. A: Kâde e mljakoto?  
where is milk-def  
'Where is the milk?'  
B: Petâr toku-što go izpi.  
Peter just him-cl.ACC drank-3<sup>rd</sup> p.sg.  
'Peter just drank it up.'

2. A: Njakoj pital li e Petja?  
 someone asked-part. Q is Petya  
 ‘Has anyone asked Petya?’  
 B: Ivan včera ja popita.  
 Ivan yesterday her-cl.ACC asked-3<sup>rd</sup> p.sg.  
 ‘Ivan asked her yesterday.’
3. A: Koga za posleden pāt ste se obaždali na Petār?  
 when for last time are refl. called-part. to Peter  
 ‘When was the last time you called Peter?’  
 B: Petja тази сутрин му се обadi.  
 Petya this morning him-cl.DAT refl.-ACC called-3<sup>rd</sup> p.sg.  
 ‘Petya called him this morning.’
4. A: Kakvo šte kupim na Marija za roždenija den?  
 what FUT buy to Maria for birthday-def.  
 ‘What are going to buy for Maria for her birthday?’  
 B: Az veče i kupix podarâk.  
 I already her-cl.ACC bought-1<sup>st</sup> p.sg. present  
 ‘I already bought a present for her.’
5. A: Iskaš li da gledame novija film na Al Pacino tozi uikend?  
 want-2<sup>nd</sup> p.sg. Q to watch new movie-def. of Al Pacino this weekend  
 ‘Do you want to watch the new Al Pacino movie this weekend?’  
 B: Az veče go gledax minalata sedmica.  
 I already him-cl.ACC watched-1<sup>st</sup> p.sg. last weekend  
 ‘I already watched it last weekend.’

Incorrect:

6. A: Čuval li si se skoro s Ivan?  
 heard-part. Q refl-DAT refl-ACC recently with Ivan  
 ‘Have you heard from Ivan recently?’  
 B: \*Ivan mi veče ne govori.  
 Ivan me-cl.ACC already not speak-3<sup>rd</sup> p.sg.  
 ‘Ivan doesn’t talk to me anymore.’
7. A: Njakoj viždal li e Marija ?  
 someone seen-part. Q is Maria  
 ‘Has anyone seen Maria?’  
 B: \*Az ja včera vidjax.  
 I her yesterday saw-1<sup>st</sup> p.sg.  
 ‘I saw her yesterday.’



8. A: Te otkâde znajat?  
they where from know-3<sup>rd</sup> p.pl.  
'How do they know?'
- B: \*Peter im dnes kaza.  
Peter them-cl.ACC today told-3<sup>rd</sup> p.sg.  
'Peter told them today.'
9. A: Njakoj obaždali se e тази sedmica?  
someone call-part. Q refl.ACC is this week  
'Has anyone called this week?'
- B: \*Ivan ni včera se obadi.  
Ivan us-cl.DAT yesterday refl.ACC called-3<sup>rd</sup> p.sg.  
'Ivan called us yesterday.'
10. A: Tova mljako ot koga e?  
this milk from when is  
'When is this milk from?'
- B: \*Marija go v petâk kupi.  
Maria it-cl.ACC on Friday bought-3<sup>rd</sup> p.sg.  
'Maria bought it on Friday.'

### 3. TOBLER-MUSAFIA EFFECT

#### Correct:

1. A: Napisa li pismo do kompanijata?  
write-2<sup>nd</sup> p.sg. Q letter to company-def.  
'Did you write a letter to the company?'
- B: Pisax im predi dva dena.  
wrote-1<sup>st</sup> p.sg. them-cl.ACC before two days  
'I wrote them two days ago.'
2. A: Viždali si Marija tija dni?  
see-part. Q be-2<sup>nd</sup> p.sg. Maria these days  
'Have you seen Maria these days?'
- B: Vidjax ja onzi den.  
saw-1<sup>st</sup> p.sg. her-cl.ACC that day  
'I saw her the other day.'
3. A: Kakvo ti podarixa za roždenija den?  
what you-cl.DAT give as a present for birthday-def.  
'What present did they give you for your birthday?'
- B: Podarixa mi nov kompjutâr.  
gave present-3<sup>rd</sup> p.pl. me-cl.DAT new computer  
'They gave me as a present a new computer.'

4. A: Poluči li pismoto?  
received-2<sup>nd</sup> p.sg. Q letter-def.  
'Did you receive the letter?'
- B: Polučix go тази сутрин.  
Received-1<sup>st</sup> p.sg. it-cl.ACC this morning  
'I received it this morning.'
5. A: Obadi li se na sestra si?  
called-2<sup>nd</sup> p.sg. Q refl.ACC to sister refl.DAT  
'Did you call your sister?'
- B: Obadix ì se преди два часа.  
called-1<sup>st</sup> p.sg. her-cl.DAT refl.ACC before two hours  
'I called her two hours ago.'

Incorrect:

6. A: Kakvo napravi s mljakoto?  
what did-3<sup>rd</sup> p.sg. with milk-def.  
'What did you do with the milk?'
- B: \*Go izpix ošte včera.  
it-cl.ACC drank-1<sup>st</sup> p.sg. still yesterday  
'I drank it up yesterday.'
7. A: Nameri li si ključovete?  
found-2<sup>nd</sup> p.sg. Q refl.DAT keys-def.  
'Did you find your keys?'
- B: \*Gi namerix тази сутрин.  
them-cl.ACC found-1<sup>st</sup> p.sg. this morning  
'I found them this morning.'
8. A: Kakvo kupi na Ivan?  
what bought-2<sup>nd</sup> p.sg. to Ivan  
'What did you buy for Ivan?'
- B: \*Mu kupix edna kniga.  
him-cl.DAT bought-1<sup>st</sup> p.sg. one book  
'I bought him a book.'
9. A: Kaza li na Petja za našija plan?  
told-2<sup>nd</sup> p.sg. Q to Petya about our-def plan  
'Did you tell Petya about our plan?'
- B: \*Ï kazax ošte minalata sedmica.  
her-cl.DAT told-1<sup>st</sup> p.sg. still last week  
'I told her last week.'

10. A: Kakvo vi kaza menidžâra?  
 what you-cl.DAT told-3<sup>rd</sup> p.sg. manager-def.  
 ‘What did the manager tell you?’  
 B: \*Ni kaza da ne bârzame.  
 us-cl.DAT told-3<sup>rd</sup> p.sg. to not hurry-1<sup>st</sup> p.pl.  
 ‘He told us not to hurry.’

#### 4. OBJECT CLITIC CLUSTERING

Correct:

1. A: Polučixte li koleta?  
 Received-2<sup>nd</sup> p.pl. Q package-def  
 ‘Did you receive the package?’  
 B: Da, dostavixa ni go тази сутрин.  
 yes delivered-3<sup>rd</sup> p.pl us-cl.DAT him-cl.ACC this morning  
 ‘Yes, we got it this morning.’
2. A: Kakvo stana s otkradnatite pari na Marija?  
 what happened-3<sup>rd</sup> p.sg. with stolen-def. money of Maria  
 ‘What happened with the money they stole from Maria?’  
 B: Vârnaxa í gi vednaga.  
 returned-3<sup>rd</sup> p.pl. her-cl.DAT them-cl.ACC immediately  
 ‘They returned it to her immediately.’
3. A: Napisa li pismoto do šefa si?  
 wrote-2<sup>nd</sup> p.sg. Q letter-def. to boss refl.DAT  
 ‘Did you write the letter to your boss.’  
 B: Napisax mu go otdavna.  
 wrote-1<sup>st</sup> p.sg. him-cl.DAT it-cl.ACC long ago  
 ‘I wrote it to him long time ago.’
4. A: Mnogo li plati za тази kola?  
 much Q paid-2<sup>nd</sup> p.sg. for this car  
 ‘Did you pay a lot for this car?’  
 B: Ne, prodaxa mi ja na dobra cena.  
 no sold-3<sup>rd</sup> p.pl. me-cl.DAT her-cl.ACC at good price  
 ‘No, they sold it to me at a good price.’
5. A: Kaza li istinata na Marija?  
 told-2<sup>nd</sup> p.sg. Q truth-def. to Maria  
 ‘Did you tell Maria the truth?’

B: Kazax í ja otdavna.  
told-1<sup>st</sup> p.sg. her-cl.DAT her-cl.ACC long ago  
'I told it to her long time ago.'

Incorrect:

6. A: Ivan znae li novinata?  
Ivan know-3<sup>rd</sup> p.sg. Q news-def.  
'Does Ivan know the news?'

B: \*Da, sâobštix ja mu тази сутрин.  
yes announced-1p.sg. her-cl.ACC him-cl.DAT this morning  
'Yes, I broke it to him this morning.'

7. A: Objasni li zadačite na Petâr?  
explained-2<sup>nd</sup> p.sg. Q math problems to Peter  
'Did you explain the math problems to Peter?'

B: \*Da, objasnix gi mu подробно.  
yes explained-1<sup>st</sup> p.sg. them-cl.ACC him-cl.DAT in detail  
'Yes, I explained them to him in detail.'

8. A: Koga izprati pismoto do Ivan?  
when sent-2<sup>nd</sup> p.sg. letter-def. to Ivan  
'When did you send the letter to Ivan?'

B: \*Izpratix go mu včera.  
sent-1<sup>st</sup> p.sg. it-cl.ACC him-cl.DAT yesterday  
'I sent it to him yesterday.'

9. A: Dade li parite na rabotnicite?  
gave-2<sup>nd</sup> p.sg. Q money-def. to workers-def.  
'Did you give the money to the workers?'

B: \*Dadox gi im ošte minalata sedmica.  
gave-1<sup>st</sup> p.sg. them-cl.ACC them-cl.DAT still last week  
'I gave it to them last week.'

10. A: Vârna li knjigata na Petja?  
returned-2<sup>nd</sup> p.sg. Q book-def. to Petya  
'Did you return the book to Petya?'

B: \*Vârna ja í predi edin mesec.  
returned-1<sup>st</sup> p.sg. her-cl.ACC her-cl.DAT before one month  
'I returned it to her a month ago.'

5. COORDINATIONCorrect:

1. A: Kupi li nešto na Marija?  
bought-2<sup>nd</sup> p.sg. Q something to Maria  
'Did you buy something to Maria?'
- B: Kupix na neja i na brat ì po edno CD.  
bought-1<sup>st</sup> p.sg. to her-pron. and to brother her-cl.poss. each one CD  
'I bought one CD to her and one to her brother.'
2. A: Poznaváš li gospodin Petrov?  
know-2<sup>nd</sup> p.sg. Q mister Petrov  
'Do you know Mr Petrov?'
- B: Poznavam nego i sinovete mu ot nad 10 godini.  
know-1<sup>st</sup> p.sg. him-pron. and sons his-cl.poss. from over 10 years  
'I have known him and his sons for more than 10 years.'
3. A: Pomoli li Ivan za pomošt?  
asked-2<sup>nd</sup> p.sg Q Ivan for help  
'Did you ask Ivan for help?'
- B: Pomolix nego i prijatelite mu no mi otkazaxa.  
asked-1<sup>st</sup> p.sg. him-pron. and friends his-cl.poss. but me-cl.DAT denied-3<sup>rd</sup> p.pl.  
'I asked him and his friend but they refused.'
4. A: Spasixa li bremennata žena?  
saved-3<sup>rd</sup> p.pl. Q pregnant-def woman  
'Did they save the pregnant woman?'
- B: Spasixa neja i deteto no mâžât ne ocelja.  
save-3<sup>rd</sup> p.pl her-pron and child-def. but man-def. not survived-3<sup>rd</sup> p.sg.  
'They saved her and the child but the man did not survive.'
5. A: Dade li nešto na kučeto za večerja?  
gave-3<sup>rd</sup> p.sg. Q something to dog-def. for dinner  
'Did you feed the dog this evening?'
- B: Dadox na nego i na kotkata po malko xljab.  
gave-1<sup>st</sup> p.sg. to him-pron. and to cat-def. each a little bread  
'I gave him and the cat some bread.'

Incorrect:

6. A: Da si viždal Ivan tazi sutrin?  
to be-2<sup>nd</sup> p.sg. seen-part. Ivan this morning  
'Have you seen Ivan this morning?'

- B: \*Vidjax go i brat mu v parka predi dva časa.  
saw-1<sup>st</sup> p.sg. him-cl.ACC and brother his-cl.poss in park-def. before two hours  
'I saw him and his brother in the park a couple of hours ago.'
7. A: Kaza li na Marija za partito v petâk?  
told-2<sup>nd</sup> p.sg. Q to Maria about party-def. on Friday  
'Did you tell Maria about the party on Friday?'  
B: \*Kazax í i na Petâr ošte minalata sedmica.  
told-1<sup>st</sup> p.sg. her-cl.ACC and to Peter still last week  
'I told Peter and her last week.'
8. A: Pisa li na Ivan?  
wrote-2<sup>nd</sup> p.sg. Q to Ivan  
'Did you write to Ivan?'  
B: \*Pisax mu i na Petja predi edna sedmica.  
wrote-1<sup>st</sup> p.sg. him-cl.DAT and to Petya before one week  
'I wrote him and Petya a week ago.'
9. A: Obadi li se na Petâr?  
called-2<sup>nd</sup> p.sg. Q refl. to Peter  
'Did you call Peter?'  
B: \*Obadix mu se i na Marija predi dva dena.  
called-1<sup>st</sup> p.sg. him-cl.DAT refl. and to Maria before two days  
'I call him and Maria two days ago.'
10. A: Pokani li Petja?  
invited-2<sup>nd</sup> p.sg. Q Petya  
'Did you invite Petya?'  
B: \*Pokanix ja i sestra í minalata sedmica.  
invited-1<sup>st</sup> p.sg. her-cl.ACC and sister her-cl.poss. last week  
'I invited her and her sister last week.'

## 6. OBLIGATORY CLITIC DOUBLING

### Correct:

1. A: Kak se spravjat decata s domašnite?  
how refl. manage children-def. with homework  
'How are the kids doing with their homework?'  
B: Na Petja í e mnogo trudno.  
to Petya her-cl.ACC is very difficult  
'Petya finds it very difficult.'
2. A: Vsički najadoxa li se?  
all ate-3<sup>rd</sup> p.pl. Q refl.

‘Is everybody full?’

B: Na Petâr ošte mu se jade.  
to Peter still him-cl.DAT refl. eat  
‘Peter wants to eat more.’

3. A: Koj iska da opita pârvi?  
who want-3<sup>rd</sup> p.sg. to try first  
‘Who wants to try first?’

B: Petâr go e sram zatova az šte sâm pârvi.  
Peter him-cl.ACC is shy that’s why I FUT be first  
‘Peter is shy, so I’ll be first.’

4. A: Kak se čuvstvat prijatelite im?  
how refl. feel-3<sup>rd</sup> p.pl. friends-def. their-cl.poss.  
‘How do their friends feel?’

B: Na Marija í žal edinstveno za decata.  
to Maria her-cl.DAT is sorry only for children-def  
‘Maria feels sorry only for the children.’

5. A: Nešto lipsva li ot čantata?  
something miss-3<sup>rd</sup> p.sg. Q from bag-def.  
‘Is anything missing from the bag?’

B: Parite gi njama.  
money them-cl.ACC is not there  
‘The money is not there.’

Incorrect:

6. A: Zašto sa ti tezi xapčeta?  
why are you-cl.DAT these pills  
‘Why do you need these pills?’

B: \*Petja boli glavata.  
Petja hurt-3<sup>rd</sup> p.sg. head-def.  
‘Petya has a headache.’

7. A: Zašto se otkazaxte ot pâtuvaneto?  
why refl. give up from trip  
‘Why did you give up on the trip?’

B: \*Petâr e strax.  
Peter is afraid  
‘Peter is afraid.’

8. A: Koi cvetja rešixte da kupite?  
which flowers decided-2<sup>nd</sup> p.pl. to buy  
‘Which flowers did you decide to buy?’

- B: \*Na Marija xaresvat červenite rozi.  
to Maria appeal red-def. roses  
'Maria likes the red roses.'
9. A: Vsički li se sâglasixa da otidem na kino?  
all Q refl. agree to go to movie theater  
'Did they all agree to go to the movies?'
- B: \*Na Ivan ne se xodi.  
to Ivan not refl. go  
'Ivan doesn't feel like going.'
10. A: Vsički sâbudixa li se?  
all wake up Q refl.  
'Did they all wake up?'
- B: \*Na Petja ošte se spi.  
to Petya still refl. sleep  
'Petya want to sleep more.'



## APPENDIX C

## TEST ITEMS FOR CONTEXT SENTENCE EVALUATION TASK

TOPIC ACCUSATIVE CONDITION

1. Mr. Jordanov, the manager of Doublestream Ltd., runs into the office looking for one of the company employees, Ivan. Ivan is nowhere to be seen but there are several other employees working in their cubicles. Mr. Jordanov asks them:

Mr.J.: Njakož viždali e Ivan dnes?  
'Has anyone seen Ivan today?'

Peter: Ivan go vidjax tazi sutrin [+ fronting] [+ doubling]  
Ivan him-cl.ACC saw-1<sup>st</sup> p.sg. this morning  
'I saw Ivan this morning.'

Ivan vidjax tazi sutrin. [+ fronting] [- doubling]

Tazi sutrin go vidjax Ivan. [- fronting] [+ doubling]

Tazi sutrin vidjax Ivan. [- fronting] [- doubling]

2. Prof. Georgieva is giving a lecture on early 20<sup>th</sup> century American Literature. Ivan is one of the students who are attending that lecture, but he cannot really focus on what prof. Georgieva is talking about because he is tired after a long night of partying. At one point in the lecture he asks:

Ivan: Može li da povtorite poslednoto izrečenie?  
'Can you repeat the last sentence?'

Prof. G.: Tova izrečenie go povtorix veče tri pâti.  
 this sentence it-cl.ACC repeated-1<sup>st</sup> p.sg. already three times  
 ‘I have already repeated that sentence three times.’

Tova izrečenie povtorix veče tri pâti.

Tri pâti veče go povtorix tova izrečenie.

Tri pâti veče povtorix tova izrečenie.

3. Ivan and Julia meet at a party organized by Maria and Peter, two old friends of

Ivan’s. Julia asks Ivan:

Julia: Ot kolko godini poznaváš Marija i Petâr?  
 ‘For how many years have you known Maria and Peter?’

Ivan: Marija i Petâr gi poznavam ot 10 godini.  
 Maria and Peter them-cl.ACC know-1<sup>st</sup> p.sg. from 10 years  
 ‘I have known Maria and Peter for 10 years.’

Marija i Petâr poznavam ot 10 godini.

Ot 10 godini gi poznavam Marija i Petâr.

Ot 10 godini poznavam Marija i Petâr.

4. Ivan and Maria meet at the public library. Ivan asks Maria to recommend some

books to him. Maria shows him a book and asks:

Maria: Čel li si njakoga тази книга?  
 ‘Have you ever read this book?’

Ivan: Tazi книга sâm ja čel tri pâti.  
 this book be-1<sup>st</sup> p.sg. her-cl.ACC read-part. three times  
 ‘I have read this book three times.’

Tazi kniga sâm čel tri pâti.

Tri pâti sâm ja čel tazi kniga.

Tri pâti sâm čel tazi kniga.

5. Peter sees Julia get out of a nice shiny car. She used to have a rusty old Ford but it looks like she bought a new car. Peter asks her:

Peter: Skoro li si kupi tazi kola?  
'Did you buy this car recently?'

Julia: Tazi kola ne sâm ja kupuvala, podarâk mi e.  
this car not be-1<sup>st</sup> p.sg. her-cl.ACC buy-part. present me-cl.DAT is  
'I didn't buy this car, it's a present for me.'

Tazi kola ne sâm kupuvala, podarâk mi e.

Ne sâm ja kupuvala tazi kola, podarâk mi e.

Ne sâm kupuvala tazi kola, podarâk mi e.

6. Ivan was expecting a package from Peter, which he thought had been lost. Eventually, he received the package and Maria asked him if he had done so.

Maria: Poluči li naj-posle koleta ot Petâr?  
'Did you finally get the package from Peter?'

Ivan: Koleta go polučix onzi den.  
package-def. him-cl.ACC received-1<sup>st</sup> p.sg. that day  
'I received the package the other day.'

Koleta polučix onzi den.

Onzi den go polučix koleta.

Onzi den polučix koleta.

7. Peter and Maria decided to go to the movie theater. They were trying to figure out which movie they wanted to see. They said:

Peter: Iskaš li da gledame novija film na Al Pacino?  
'Do you want to see the new Al Pacino movie?'

Maria: Tozi film go gledax ošte minalata sedmica.  
that movie him-cl.ACC saw-1<sup>st</sup> p.sg. still last week  
'I already saw that movie last week.'

Tozi film gledax ošte minalata sedmica.

Ošte minalata sedmica go gledax tozi film.

Ošte minalata sedmica gledax tozi film.

8. Peter had been trying to find somebody to help him move all his furniture into his new apartment. Unfortunately, none of his friends had been available these days and he complained to Petya about his bad luck.

Petya: Pomoli li Ivan da ti pomogne?  
'Did you ask Ivan to help you?'

Peter: Ivan go pomolix njakolko pâti, no toj e vse zaet.  
Ivan him-cl.ACC asked-1<sup>st</sup> p.sg. several times but he is always busy  
'I asked Ivan several times, but he is always busy.'

Ivan pomolix njakolko pâti, no toj e vse zaet.

Njakolko pâti go pomolix Ivan, no toj e vse zaet.

Njakolko pâti pomolix Ivan, no toj e vse zaet.

9. Ivan is in charge of organizing a trip to the Rila Mountains this coming weekend. Petya is helping him and she was supposed to call and ask some of their friends if they were interested in joining them.

Ivan: Popita li Marija dali šte dojde s nas tozi uikend?  
'Did you ask Maria if she is coming with us this weekend?'

Petya: Marija ja pitax večē dva pāti, no ošte ne e sigurna.  
Maria her-cl.ACC asked-1<sup>st</sup> p.sg. already two times but still not is sure  
'I already asked Maria twice, but she is still not sure.'

Marija pitax večē dva pāti, no ošte ne e sigurna.

Veče dva pāti ja pitax Marija, no ošte ne e sigurna.

Veče dva pāti pitax Marija, no ošte ne e sigurna.

10. Ivan's mom bought some whole milk a couple of days ago. She wanted to try a new cake, whose recipe was given to her by a friend. When she opened the fridge, she saw that the milk was not in there and she asked Ivan if he had seen it.

Mother : Da si viždal mljakoto koeto bjax ostavila v xladilnika onzi den?  
'Have you seen the milk I left in the fridge the other day?'

Ivan: Tova mljako go izpix ošte včera.  
that milk it-cl.ACC drank-1<sup>st</sup> p.sg. still yesterday  
'I already drank that milk yesterday.'

Tova mljako izpix ošte včera.

Ošte včera go izpix tova mljako.

Ošte včera izpix tova mljako.

TOPIC DATIVE CONDITION

1. Ivan and Peter are organizing a big party to celebrate the end of the semester.

Ivan is responsible for calling their classmates and giving them instructions how to get to Peter's place. They want to make sure that no one has been missed. Peter asks Ivan:

Peter: Obadi li se na Marija?  
'Did you call Maria?'

Ivan: Na Marija ì se obadix ošte minalata sedmica.  
to Maria her-cl.DAT refl.ACC called-1<sup>st</sup> p.sg. still last-def. week  
'I called Maria last week.'

Na Marija se obadix ošte minalata sedmica.

Ošte minalata sedmica ì se obadix na Marija.

Ošte minalata sedmica se obadix na Marija.

2. Maria is in the big Sofia Mall. She wants to buy some clothes for her husband,

Peter, who has gained some weight recently and his pants don't fit him anymore. Julia sees her and they talk about their purchases. Julia asks Maria:

Julia: Kakvo kupi na Petâr?  
'What did you buy for Peter?'

Maria: Na Petâr mu kupix dva pantalona.  
to Peter him-cl.DAT bought-1<sup>st</sup> p.sg. two pants  
'I bought Peter two pairs of pants.'

Na Petâr kupix dva pantalona.

Kupix mu dva pantalona na Petâr.

Kupix dva pantalona na Petâr.

3. Ivan went to the post-office where he sent a package to his son. There were two books for his grandchildren in it. When he came back home, his wife, Maria, asked him:

Maria: Izprati li nešto na decata?  
‘Did you send anything for the kids?’

Ivan: Na decata im                izpratix        po edna kniga.  
to kids    them-cl.DAT sent-1<sup>st</sup> p.sg. each one    book  
‘I sent a book to each kid.’

Na decata izpratix po edna kniga.

Izpratix im po edna kniga na decata.

Izpratix po edna kniga na decata.

4. Julia and Maria were talking about the Christmas presents they gave their husbands, Peter and Ivan. Julia asked Maria:

Julia: Kakvo podari na Ivan za Koleda?  
‘What was the present you gave Ivan for Christmas?’

Maria: Na Ivan mu                podarix                edin fotoaparat.  
to Ivan him-cl.DAT gave present-1<sup>st</sup> p.sg. one camera  
‘I gave him a camera as a present.’

Na Ivan podarix edin fotoaparat.

Podarix mu edin fotoaparat na Ivan.

Podarix edin fotoaparat na Ivan.

5. Maria is back from work and she wants to find out if her husband, Ivan, has fed their cat. She asks him:

Maria: Dade li nešto na kotkata тази večer?  
‘Did you feed (lit. ‘Did you give anything’) to the cat this evening’

Ivan: Na kotkata ì dadox malko mljako.  
to cat-def. her-cl.DAT gave-1<sup>st</sup> p.sg. some milk  
‘I gave some milk to the cat.’

Na kotkata dadox malko mljako.

Dadox í malko mljako na kotkata.

Dadox malko mljako na kotkata.

6. Ivan and Maria want to go away for a long weekend, but their car has broken down. Maria has the idea that they can borrow Peter’s car. It’s a delicate matter. Ivan is supposed to tell Peter about the plan.

Maria: Kaza li na Petâr za našija plan?  
‘Did you tell Peter about our plan?’

Ivan: Na Petâr mu kazax ošte minalata sedmica.  
to Peter him-cl.DAT told-1<sup>st</sup> p.sg. still last week  
‘I told Peter last week.’

Na Petâr kazax ošte minalata sedmica.

Ošte minalata sedmica mu kazax na Petâr.

Ošte minalata sedmica kazax na Petâr.



7. Ivan is an exchange student at the University of Iowa for a year. His friends Peter and Maria promised him that they would write emails to him at least once a week, so that he doesn't feel lonely and isolated. Maria asks Peter:

Maria: Pisa li na Ivan тази седмица?  
'Did you write to Ivan this week?'

Peter: Na Ivan mu pisax tri pâti тази седмица.  
to Ivan him-cl.DAT wrote-1<sup>st</sup> p.sg. three times this week  
'I wrote to Ivan three times this week.'

Na Ivan pisax tri pâti тази седмица.

Tazi седмица tri pâti mu pisax na Ivan.

Tazi седмица tri pâti pisax na Ivan.

8. Maria was invited to Peter's birthday party but the absent-minded person she is, she totally forgot about it. Peter took her absence too seriously and he didn't talk to her for a while in spite of her apologies. Petya asked Maria:

Petya: Izvini li se na Petâr за това че не доjde?  
'Did you apologize to Peter for not coming?'

Maria: Na Petâr mu se izvinix njakolko pâti,  
to Peter him-cl.DAT refl-ACC apologized-1<sup>st</sup> p.sg several times  
no toj ošte mi e sârdit.  
but he still me-cl.DAT is angry  
'I apologized to Peter several times but he is still angry with me.'

Na Petâr se izvinix njakolko pâti, no toj ošte mi e sârdit.

Njakolko pâti mu se izvinix na Petâr, no toj ošte mi e sârdit.

Njakolko pâti se izvinix na Petâr, no toj ošte mi e sârdit.

9. Peter had asked Petya to do him a favor, but her flat denial made him sad and disappointed. He complained about this to his best friend, Ivan. Ivan asked him:

Ivan: Pomagal li si njakoga na Petja?  
'Have you ever helped Petya?'

Peter: Na Petja sâm ì pomagal mnogo pâti, no tja na men - nikoga.  
to Petya be-1<sup>st</sup> p.sg. her-cl.DAT help-part. many times but she to me never  
'I have helped Petya many times, but she has never helped me.'

Na Petja sâm pomagal mnogo pâti, no tja na men - nikoga.

Mnogo pâti sâm ì pomagal na Petja, no tja na men - nikoga.

Mnogo pâti sâm pomagal na Petja, no tja na men - nikoga.

10. One night, while drunk, Peter said some really bad things to Maria who couldn't forgive him for some time. Maria was discussing the events of that night with her friend Petya, who asked her:

Petya: Prosti li na Petâr za tova koeto ti kaza?  
'Did you forgive Peter for what he told you?'

Maria: Na Petâr mu prostix otdavna, no ne beše lesno.  
to Peter him-cl.DAT forgave-1<sup>st</sup> p.sg. long time ago but not was easy  
'I forgave Peter long time ago but it wasn't easy.'

Na Petâr prostix otdavna, no ne beše lesno.

Otdavna mu prostix na Petâr, no ne beše lesno.

Otdavna prostix na Petâr, no ne beše lesno.

FOCUS ACCUSATIVE CONDITION

1. Somebody broke into Peter's house this morning and he thought that Maria, his neighbor, might have seen something suspicious on her way to work. He asked her:

Peter: Vidja li njakogo okolo mojata kâšta tazi sutrin kato izlizaše za rabota?  
'Did you see anyone near my house this morning when you left for work?'

Maria: Ivan go vidjax.  
Ivan him-cl.ACC saw-1<sup>st</sup> p.sg.  
'I saw Ivan.'

Ivan vidjax.

Vidjax go Ivan.

Vidjax Ivan.

2. Maria couldn't find her cell-phone, so she called her husband Ivan from her office and asked him to take a look in the purse which she had used the day before. After he had done so, she asked him:

Maria: Kakvo nameri v čantata?  
'What did you find in the purse?'

Ivan: Ključovete za kolata gi namerix.  
keys-def. for car-def. them-cl.ACC found-1<sup>st</sup> p.sg.  
'I found the car keys.'

Ključovete za kolata namerix.

Namerix gi ključovete za kolata.

Namerix ključovete za kolata.

3. Peter requires from his daughter Maria to read one book every week. At end of the week the father asked Maria:

Pater: Kakvo pročete тази седмица?  
‘What did you read this week?’

Maria: Tvojata ljubima kniga ja pročetox.  
your favorite book her-cl.ACC read-1<sup>st</sup> p.sg.  
‘I read your favorite book.’

Tvojata ljubima kniga pročetox.

Pročetox ja tvojata ljubima kniga.

Pročetox tvojata ljubima kniga.

4. Petya always forgets something when she leaves for work. This morning she once again returned home a couple of minutes after leaving. Her husband, Peter, asked her:

Peter: Kakvo zabravi tozi păt?  
‘What did you forget this time?’

Petya: Čadâra go zabravix.  
umbrella him-cl.ACC forgot-1<sup>st</sup> p.sg.  
‘I forgot the umbrella.’

Čadâra zabravix.

Zabravix go čadâra.

Zabravix čadâra.

5. On her way to work this morning, Petya saw Ivan upset and talking to their neighbor Peter about having lost something while he was jogging in the park. She was in a hurry and didn't have time to find out what made him so upset, but in the evening she asked him:

Petya: Kakvo zagubi dokato bjagaše tazi sutrin?  
 'What did you lose when you were running this morning?'

Ivan: Ključovete za apartamenta gi zagubix.  
 keys-def. for apartment-def. them-cl.ACC lost-1<sup>st</sup> p.sg.  
 'I lost the apartment keys.'

Ključovete za apartamenta zagubix.

Zagubix gi ključovete za apartamenta.

Zagubix ključovete za apartamenta.

6. Ivan and Petya's apartment was broken into this morning and everybody in the neighborhood was talking about that. Peter, who just found out about it, asked Maria:

Peter: Kakvo sa otkradnali ot apartamenta na Ivan?  
 'What was stolen from Ivan's apartment?'

Maria: Laptopa na Petja sa go otkradnali.  
 laptop-def. of Petya be-3<sup>rd</sup> p.pl him-cl.ACC stolen-part.  
 'They have stolen Petya's laptop.'

Laptopa na Petja sa otkradnali.

Otkradnali sa go laptopa na Petja.

Otkradnali sa laptopa na Petja.

7. Ivan and Peter are talking about the movies which they have seen recently. Ivan asks Peter:

Ivan: Koj film gleda snošti?  
‘What movie did you watch last night?’

Peter: ‘Matricata’ ja gledax.  
Matrix her-cl.ACC watched-1<sup>st</sup> p.sg.  
‘I watched the matrix.’

‘Matricata’ gledax.

Gledax ja ‘Matricata’.

Gledax ‘Matricata’.

8. This morning, Peter needed someone to help him move his new couch into his apartment. When his wife Petya came back home in the evening, she asked him:

Petya: Kogo pomoli za pomošt?  
‘Who did you ask for help?’

Peter: Sâseda Ivan go pomolix.  
neighbor-def. Ivan him-cl.ACC asked-1<sup>st</sup> p.sg.  
‘I asked my neighbor Ivan.’

Sâseda Ivan pomolix.

Pomolix go sâseda Ivan.

Pomolix sâseda Ivan.

9. Ivan secretly went to live in a mountain village for a month, as he wanted to be by himself and prepare for his qualifying exams. He was surprised to see his friend Petya find him there. He asked Petya:

Ivan: Kogo popita za pătja do seloto?  
‘Who did you ask about the road to the village?’

Petya: Bašta ti go popitax.  
father-def. yours-cl.poss. him-cl.ACC asked-1<sup>st</sup> p.sg.  
‘I asked your father.’

Bašta ti popitax.

Popitax go bašta ti.

Popitax bašta ti.

10. Peter’s mom wants to make sure that her son eats a proper breakfast and she always asks him about what he has had for breakfast:

Mother: Kakvo zakusva тази сутрин?  
‘What did you eat for breakfast this morning?’

Peter: Mljakoto ot xladilnika go izpix.  
milk-def. from fridge-def. it-cl.ACC drank-1<sup>st</sup> p.sg.  
‘I drank the milk from the fridge.’

Mljakoto ot xladilnika izpix.

Izpix go mljakoto ot xladilnika.

Izpix mljakoto ot xladilnika.

FOCUS DATIVE CONDITION

1. Petya and Peter had to call all their friends and tell them about the party at their place this weekend. Peter heard Petya talking on the phone this morning, giving instructions to someone about how to get to their house. He asked Petya:

Peter: Na kogo se obadi tazi sutrin?  
‘Who did you call this morning?’

Petya: Na Marija í se obadix.  
to Maria her-cl.DAT refl. called-1<sup>st</sup> p.sg.  
‘I called Maria’

Na Marija se obadix.

Obadix í se na Marija.

Obadix se na Marija.

2. Ivan was going through the shopping bags which Petya had put on the table. Petya had just come back from her weekly shopping tour. Ivan saw a very nice blue shirt and asked Petya:

Ivan: Na kogo kupi tazi riza?  
‘For whom did you buy this shirt?’

Petya: Na Petâr mu ja kupix.  
to Peter him-cl.DAT her-cl.ACC bought-1<sup>st</sup> p.sg.  
‘I bought it for Peter.’

Na Petâr ja kupix.

Kupix mu ja na Petâr.



Kupix ja na Petâr.

3. Maria wrote two letters, one to Petya and one to Ivan, and put them in a pink and a green envelope, respectively. She asked her husband Peter to write the addresses on the envelopes and to send them for her. After he did that, she wanted to make sure that he had sent the right letter to the right addressee, and she asked him:

Maria: Na kogo izprati pismoto v zelenija plik?  
‘To whom did you send the letter in the green envelope?’

Peter: Na Ivan mu go izpratix.  
to Ivan him-cl.DAT it-cl.ACC sent-1<sup>st</sup> p.sg.  
‘I sent it to Ivan.’

Na Ivan go izpratix

Izpratix mu go na Ivan.

Izpratix go na Ivan.

4. Maria gave Peter a whole bag of clothes as they didn’t fit either her or her husband. Peter was supposed to give them away to various neighbours. There was a special pair of white pants, which Maria liked so much that she wanted to know who got them. She asked Peter:

Maria: Na kogo dade belite pantaloni?  
‘To whom did you give the white pants?’

Peter: Na Ivan mu gi dadox.  
to Ivan him-cl.DAT them-cl.ACC gave-1<sup>st</sup> p.sg.  
‘I gave them to Ivan.’

Na Ivan gi dadox.

Dadox mu gi na Ivan.

Dadox gi na Ivan.

5. When he came back home, Peter saw that his picture album was on the kitchen table. It was obvious that his wife, Maria, had been showing them to some of her friends. This made Peter a little angry as he thought that some of those pictures were quite embarrassing. He asked Maria:

Peter: Na kogo pokaza snimkite?  
‘To whom did you show the pictures?’

Maria: Na Petja í gi pokazax.  
to Petya her-cl.DAT them-cl.ACC showed-1<sup>st</sup> p.sg.  
‘I showed them to Petya.’

Na Petja gi pokazax.

Pokazax í gi na Petja.

Pokazax gi na Petja.

6. Peter and Julia were planning a big surprise party for Petya’s birthday. Although they were not supposed to reveal the secret, Julia found out that Maria already knew about it. She was angry with Peter and asked him:

Julia: Na kogo kaza za našata iznenada?  
‘Who did you tell about our surprise?’

Peter: Na Marija í kazax.  
to Maria her-cl.DAT told-1<sup>st</sup> p.sg.

‘I told Maria’

Na Marija kazax.

Kazax í na Marija.

Kazax na Marija.

7. Peter noticed that there was a long letter lying on Maria’s desk. He was quite shocked to see that as Maria was well-known among her friends for her short, one-sentence emails. Peter asked her:

Peter: Na kogo napisax tolkova dâlgo pismo?  
‘To whom did you write such a long letter?’

Maria: Na Ivan mu go napisax.  
to Ivan him-cl.DAT it-cl.ACC wrote-1<sup>st</sup> p.sg.  
‘I wrote it to Ivan.’

Na Ivan go napisax.

Napisax mu go na Ivan.

Napisax go na Ivan.

8. Ivan didn’t show up at Petya and Peter’s wedding party. This upset them a lot as they always thought he was one of their best friends. Maria was also not very happy with his absence and she scolded him for having failed to show up and asked him if he had apologized to somebody.

Maria: Izvini li se na njakogo za tova če ne dojde na svatbata?  
‘Did you apologize to anybody for not coming to the wedding?’

Ivan: Na Petâr mu se izvinix.  
 to Peter him-cl. refl. apologized-1<sup>st</sup> p.sg.  
 ‘I apologized to Peter.’

Na Petâr se izvinix.

Izvinix mu se na Petâr.

Izvinix se na Petâr.

9. After checking her daughters’ homework assignments, Maria found out that they were both very well done. She knew that her husband, Peter, had helped one of the girls write her homework assignment but she didn’t know which one. She asked Peter:

Maria: Na kogo pomogna s domašnoto?  
 ‘Whom did you help with the homework?’

Peter: Na Petja í pomognax.  
 to Petya her-cl.DAT helped-1<sup>st</sup> p.sg.  
 ‘I helped Petya.’

Na Petja pomognax.

Pomognax í na Petja.

Pomognax na Petja.

10. Peter noticed that his neighbour Petya had bought a new car and her old Toyota was not in front of the house any more. He liked that old Toyota, at one point he had even wanted to buy it. He was curious to find out to whom Petya had sold her old car. He asked her:

Peter: Na kogo prodade starata kola?

‘To whom did you sell the old car?’

Petya: Na Ivan mu ja prodadox.  
to Ivan him-cl.DAT her-cl.ACC sold-1<sup>st</sup> p.sg.  
‘I sold it to Ivan.’

Na Ivan ja prodadox.

Prodadox mu ja na Ivan.

Prodadox ja na Ivan.

## REFERENCES

- Anagnostopoulou, Elena. 1994. Clitic Dependencies in Modern Greek. Ph.D. Dissertation, University of Salzburg.
- Anagnostopoulou, Elena. 2006. 'Clitic Doubling', *The Blackwell Companion to Syntax*, edited by M. Everaert and H. Riemsdijk, Vol.1.519-581. Oxford: Blackwell.
- Arnaudova, Olga. 2002. Clitic left dislocation and argument structure in Bulgarian. In *Annual Workshop on Formal Approaches to Slavic Linguistics 10*, edited by J. Toman, 23-46, Ann Arbor, MI: Michigan Slavic Publications.
- Belletti, Adriana, Eliza Bennati, and Antonella Sorace, 2007. Theoretical and developmental issues in the syntax of subjects: evidence from near-native Italian. *Natural Language and Linguistic Theory* 25.
- Bley-Vroman, Robert. 1989. 'What is the logical problem of foreign language learning?'. In *Linguistic Perspectives on Second Language Acquisition*, edited by S.Gass and J.Schachter, 41-68. Cambridge: Cambridge University Press.
- Bley-Vroman, Robert. 1990. The Logical Problem of Foreign Language Learning. *Linguistic analysis* 20 (1-2): 3-49.
- Bley-Vroman, Robert. 1997. Features and patterns in foreign language learning. Paper presented at the Second Language Research Forum, Michigan State University
- Boeckx, Cedric. 2003. *Islands and chains*. Amsterdam: John Benjamins.
- Borer, Hagit. 1984. *Parametric syntax*. Dordrecht: Foris.
- Bošković, Željko. 2001. On the nature of the syntax-phonology interface. Amsterdam: Elsevier.
- Bošković, Željko. 2002. Clitics as nonbranching elements and the linear correspondence axiom. *Linguistic inquiry* 33.2:329-40.
- Cardinaletti, Anna, and Michal Starke. 1999. 'The typology of structural deficiency: A case study of the three classes of pronouns'. In *Clitics in the Languages of Europe*, edited by Henk van Riemsdijk, 145-233. Berlin: Mouton de Gruyter.
- Chafe, Wallace L. 1976. "Givenness, contrastiveness, definiteness, subjects, topics, and point of view." In *Subject and Topic*, edited by C. Li, 25-55. New York: Academic Press.

- Chen, Dongdong. (1996). L2 Acquisition of English Psych Predicates by Native Speakers of Chinese and French. Unpublished Ph.D. dissertation. McGill University.
- Chomsky, Noam. 1965. Aspects of the theory of syntax. Cambridge, MA: MIT Press.
- Chomsky, Noam. 1986. Knowledge of language. New York: Praeger.
- Chomsky, Noam. 1995. The Minimalist Program. Cambridge: The MIT Press.
- Chomsky, Noam. 1993. The Theory of Principles and Parameters. In Syntax (Jacobs et al) HSK 9.
- Cinque, Guglielmo. 1990. Types of A'-Dependencies. Cambridge, MA: The MIT Press.
- Clahsen, Harald. 1988. 'Parameterized grammatical theory and language acquisition: a study of the acquisition of verb placement and inflection by children and adults'. In Linguistic Theory in Second Language Acquisition, edited by S. Flynn and W. O'Neil, 47-75. Dordrecht: Kluwer.
- Clahsen, Harald, and Pieter Muysken. 1986. Verb Inflections in German Child Language: Acquisition of Agreement Markings and the Functions They Encode. *Linguistics* 24 (1): 79-121.
- Clahsen, Harald, and Upyong Hong. 1995. Agreement and null subjects in German L2 development: new evidence from reaction-time experiments. *Second Language Research* 11 (1), 57-87.
- Cummins, Robert. 1983. The nature of Psychological Explanation, Cambridge, MA and London: England MIT Press.
- Dimitrova-Vulchanova, Mila, and Valentin Vulchanov. 2008. 'Clitic doubling in Old Bulgarian'. In Clitic Doubling in the Balkan Languages, edited by D.Kallulli and L. Tasmowski, 105-132. Amsterdam: John Benjamins.
- Donaldson, Bryan. 2009. The syntax-pragmatics interface in near-native French: Evidence from right dislocation. Paper presented at Mind-Context Divide Workshop, University of Iowa.
- duPlessis, Jean, Doreen Solin, Lisa Travis and Lydia White. 1987. UG or not UG, that is the question: a reply to Clahsen and Muysken. *Second Language Research* 3: 56-75.
- Dekydspotter, Laurent and Rex Sprouse. 2001. Mental Design and (Second) Language Epistemology: Adjectival Restrictions of wh-Quantifiers and Tense in English-French Interlanguage. *Second Language Research* 17 (1): 1-35.

- Dekydtspotter, Laurent, Rex Sprouse and Kimberly Swanson. 2001. Reflexes of Mental Architecture in Second-Language Acquisition: The Interpretation of combien Extractions in English-French Interlanguage. *Language acquisition* 9(3): 175-227.
- Ellis, Nick C., 2002. Frequency effects in language processing: a review with implications for theories of implicit and explicit language acquisition. *Studies in Second Language Acquisition* 24, 143–188.
- Epstein, Samuel, Suzanne Flynn, and Gita Martohardjono. 1996. Second language acquisition: theoretical and experimental issues in contemporary research. *Brain and Behavioral Sciences* 19: 677-758.
- Epstein, Samuel, Suzanne Flynn, and Gita Martohardjono. 1998. 'The strong continuity hypothesis: some evidence concerning functional categories in adult L2 acquisition'. In *The Generative Study of Second Language Acquisition*, edited by S.Flynn, G. Martohardjono and W. O'Neil, 61-77. Mahwah,NJ: Lawrence Erlbaum.
- Eubank, Lynn and Kevin Gregg. 1995. "Et in amygdala ego"?: UG, (S)LA, and neurobiology. *Studies in Second Language Acquisition*, 17, 35-57.
- Flynn, Suzanne . 1996. 'A parameter-setting approach to second language acquisition'. In *Handbook of Language Acquisition*, edited by W. Ritchie and T. Bhatia, 121-158. San Diego: Academic Press.
- Flynn, Suzanne, and Gita Martohardjono . 1994. 'Mapping from the initial state to the final state: the separation of universal principles and language-specific principles'. In *Syntactic Theory and First Language Acquisition : Cross-linguistic Perspectives*, Vol. 1: Head, Projections and Learnability, edited by B. Lust, M. Suñer and J. Whitman, 319-335. Hillsdale, NJ: Lawrence Erlbaum.
- Franks, Steven, and Catherine Rudin. 2005. Bulgarian Clitics as K° Heads. In *Formal Approaches to Slavic Linguistics: The South Carolina Meeting*, edited by S. Franks, F. Gladney and M.Tasseva-Kurktchieva, 106-118.
- Franks, Steven, and Tracy Holloway King. 2000. *A handbook of Slavic clitics*. New York: Oxford University Press.
- Goad, Heather, and Lydia White. 2006. Ultimate Attainment in Interlanguage Grammars: A Prosodic Approach. *Second Language Research* 22(3): 243-268.
- Goad, Heather, Lydia White and Jeffrey Steele. 2003. Missing Inflection in L2 Acquisition: Defective Syntax or L1-Constrained Prosodic Representations? *The Canadian journal of linguistics* 48(3-4): 243-263.



- Gregg, Kevin R. 1993. Taking Explanation Seriously; or, Let a Couple of Flowers Bloom. *Applied Linguistics* 14 (3): 276-294.
- Gregg, Kevin. 1996. 'The logical and developmental problems of second language acquisition'. In *Handbook of Second Language Acquisition*, edited by W. Ritchie and T. Bhatia, 49-81. San Diego: Academic Press.
- Guentchéva, Zlatka. 1994. *Thématisation de l'objet en bulgare*. Frankfurt: Peter Lang.
- Guentchéva, Zlatka. 1985. *Contributions à l'étude des catégories grammaticales de bulgare littéraire contemporain*. Vol.2. Thèse de doctorat d'Etat. Université de Paris 7.
- Guentchéva, Zlatka. 2008. 'Object clitic doubling constructions and topicality in Bulgarian'. In *Clitic Doubling in the Balkan Languages*, edited by D.Kallulli and L. Tasmowski, 203-233. Amsterdam: John Benjamins.
- Halpern, Aaron. 1995. *On the Placement and Morphology of Clitics*. Stanford: CSLI Publications.
- Hauge, Kjetil Rå. 1976/1999. The word order of predicate clitics in Bulgarian. *Journal of Slavic Linguistics* 7(1), 89-137 (Originally appeared as *Meddelelser*, 10. Oslo: Slavisk-baltisk institutt, Universitetet i Oslo).
- Hawkins, Roger. 2000. Persistent selective fossilization in second language acquisition and the optimal design of the language faculty. *Essex Research Reports in Linguistics* 34: 75-90.
- Hawkins, Roger. 2004. The Contribution of the theory of Universal Grammar to our understanding of the acquisition of French as a second language. *Journal of French Language Studies* 14(3), 233-255.
- Hawkins, Roger. 2005. Explaining Full and Partial Success in the Acquisition of Second Language Grammatical Properties. *Second Language* 4, 7-26.
- Hawkins, Roger. 2008. Can innate linguistic knowledge be eliminated from theories of SLA?. *Lingua* 118, 613-619.
- Hawkins, Roger and Cecilia Yuet-hung Chan. 1997. The Partial Availability of Universal Grammar in Second Language Acquisition: The 'Failed Functional Features Hypothesis'. *Second Language Research* 13 (3): 187-226.
- Hawkins, Roger, and Sarah Liszka. 2003. 'Locating the Source of Defective Past Tense Marking in Advanced L2 English Speakers'. In *The Lexicon-Syntax Interface in Second Language Acquisition*, edited by R. van Hout, F. Kuiken, R.J. Towell, 21-44. Amsterdam: John Benjamins.

- Hawkins, Roger, and Hajime Hattori. 2007. Interpretation of English Multiple wh-Questions by Japanese Speakers: A Missing Uninterpretable Feature Account. *Second Language Research* 22(3): 269-301.
- Haznedar, B. (2003). Missing Surface Inflection in Adult and Child L2 Acquisition. *Proceedings of the 6th Generative Approaches to Second Language Acquisition Conference: L2 Links*, edited by J.M. Liceras, H. Zobl, and H. Goodluck, 140-149. Somerville, MA: Cascadilla Press.
- Haznedar, Belma. 2006. Crosslinguistic interference in the bilingual acquisition of Turkish and English: the overuse of subjects in bilingual Turkish. Paper presented at GALANA 2, Montreal, 2006.
- Haznedar, Belma, and Bonnie Schwartz. 1997. Are there optional infinitives in child L2 acquisition?. In the *Proceedings of the 21<sup>st</sup> Annual Boston University Conference on Language Development*, edited by E. Hughes, M. Hughes, A. Greenhill, 257-268. Somerville, MA: Cascadilla Press.
- Hopp, Holger. "Syntactic and Interface Knowledge in Advanced and Near-Native Interlanguage Grammars." *Eurosla yearbook* 4(2004): 67-94.
- Inagaki, Shunji. 2001. Motion verbs with goal PPs in the L2 acquisition of English and Japanese. *Studies in Second Language Acquisition* 23, 153-170.
- Iatridou, Sabine. 1995. Clitics and island effects. In *Proceedings of PLC 19*, 11-30. Philadelphia: Penn Linguistics Club.
- Ionin, Tania, Heejeong Ko, and Kenneth Wexler. 2004. Article semantics in L2-acquisition: the role of specificity. *Language Acquisition* 12, 3-69.
- Izvorski, Roumyana, Tracy King, and Catherine Rudin. 1997. Against Li-Lowering in Bulgarian. *Lingua* 102, no. 2/3, 187-194.
- Iverson, Michael, Paula Kempchinsky, and Jason Rothman. 2008. Interface vulnerability and knowledge of the subjunctive/indicative distinction with negated epistemic predicates in L2 Spanish. *EUROSLA Yearbook* 8, 135-163.
- Jaeggli, Osvaldo A. 1982. *Topics in Romance Syntax*. Dordrecht: Foris.
- Jaeggli, Osvaldo A. 1986. Three Issues in the Theory of Clitics: Case, Doubled NPs, and Extraction. In Hagit Borer (ed.), *Syntax and Semantics 19: The Syntax of Pronominal Clitics*. New York: Academic Press. 15-42.

- Kallulli, Dalina. 2000. 'Direct object clitic doubling in Albanian and Greek'. In *Clitic Phenomena in European Languages*, edited by F. Beukema and M. den Dikken, 209-248. Amsterdam: John Benjamins.
- Kanno, Kazue. 1997. The acquisition of null and overt pronominals in Japanese by English speakers. *Second Language Research* 13, 265-287.
- Kayne, Richard. 1975. *French Syntax: The Transformational Cycle*. Cambridge, MA and London: MIT Press.
- Kayne, Richard S. 1991. Romance Clitics, Verb Movement, and PRO. *Linguistic inquiry* 22: 647-686.
- Kayne, Richard. 2002. 'Pronouns and their antecedents'. In *Derivation and explanation in the minimalist program*, edited by S.D. Epstein and T. D. Seely, 133-166. Oxford: Blackwell.
- Kiss, Katalin É. 1998. Identificational Focus versus Informational Focus. *Language* 74:245-273.
- Krapova, Iliyana, and Guglielmo Cinque. 2008. 'Clitic reduplication constructions in Bulgarian. In *Clitic Doubling in the Balkan Languages*, edited by D.Kallulli and L. Tasmowski, 257-287. Amsterdam: John Benjamins.
- Lardiere, Donna. "Case and Tense in the "Fossilized" Steady State." *Second Language Research* 14.1 (1998):1-26.
- Lardiere, Donna. (2000). *Mapping Features to Forms in Second Language Acquisition*. In *Second Language Acquisition and Linguistic Theory*, edited by J.Archibald. Oxford: Blackwell.
- Lardiere, Donna. "Attainment and Acquirability in Second Language Acquisition." *Second Language Research* 22.3 (2006):239-411.
- Leafgren, John R. 1992. *Object Reduplication and Topicality in Bulgarian*. PhD dissertation, University of Virginia.
- Leafgren, John R. 1997. Indefiniteness, Givenness, Topicality and Bulgarian Object Reduplication. *Balkanistica* 10, pp.296-311.
- Lieberman, Moti. 2009. Necessary interpretation at the syntax/pragmatics interface: L2 acquisition of scalar implicatures. Paper presented at Mind-Context Divide Workshop, University of Iowa.
- Longobardi, Giuseppe. 2001. How comparative is semantics? A unified parametric theory of bare nouns and proper names. *Natural Language Semantics* 9, 335-369.

- Lozano, Cristóbal. 2006. The development of the syntax-information structure interface: Greek learners of Spanish. In *The Acquisition of Syntax in Romance Languages*, edited by V. Torrens and L. Escobar, 371-399. Amsterdam: John Benjamins.
- Lopašov, Jurij A. 1978. *Mestoimennye povtory dopolnenija v balkanskix jazykax*. Leningrad: Nauka.
- Montalbetti, Mario. 1984. *After binding: on the interpretation of pronouns*. Unpublished Ph.D. Thesis, MIT.
- Montrul, Silvina. 2004. Subject and object expression in Spanish heritage speakers: a case of morpho-syntactic convergence. *Bilingualism: Language and Cognition* 7(2) 125-142.
- Montrul, Silvina and Roumyana Slabakova. 2003. Genericity and Aspect in L2 Acquisition. *Language acquisition* 11 (3): 165-196.
- Neeleman, Ad and Fred Weerman. 1997. L1 and L2 word order acquisition. *Language Acquisition* 6: 125-170.
- O'Grady, William. 2001. 'An emergentist approach to syntax'. In *The Oxford Handbook of Linguistic Analysis*, edited by H. Narrog & B. Heine. Oxford: Oxford University Press.
- O'Grady, William. 2008. The emergentist program. *Lingua* 118, 447-464.
- Pancheva, Roumyana. 2005. The rise and fall of second-position clitics. *Natural Language and Linguistic Theory*. 23(1), 103-167.
- Pérez-Leroux, Ana Teresa, and William Glass. 1997. OPC effects in the L2 acquisition of Spanish. In *Contemporary perspectives on the acquisition of Spanish, Vol. 1: Developing grammars*, Edited by A.T. Pérez-Leroux and W. Glass, 149-165. Somerville, MA: Cascadilla Press.
- Pérez-Leroux, Ana Teresa, and William Glass. 1999. Null anaphora in Spanish second language acquisition: probabilistic versus generative approaches. *Second Language Research* 15: 220-249.
- Prévost, Philippe, and Lydia White. 1999. Finiteness and Variability in SLA: More Evidence for Missing Surface Inflection. *Proceedings of the Annual Boston University Conference on Language Development* 23(2): 575-586.
- Prévost, Philippe, and Lydia White. 2000. Missing Surface Inflection or Impairment in Second Language Acquisition? Evidence from Tense and Agreement. *Second Language Research* 16(2), 103-133.

- Rizzi, Luigi. 1990. *Relativised Minimality*. Cambridge: The MIT Press.
- Robinson, Peter. 2001. Preface: Cognitive theory and second language instruction. In *Cognition and Second Language Instruction*, edited by P. Robinson. Cambridge: Cambridge University Press.
- Rothman, Jason. 2008. How pragmatically odd! Interface delays and pronominal subject distribution in L2 Spanish. *Studies in Hispanic and Lusophone Linguistics*, Vol.1, issue 2, 317-339.
- Rudin, Catherine. 1997. Agr-O and Bulgarian pronominal clitics. In *Formal Approaches to Slavic Linguistics: the Indiana Meeting 1996*, edited by M.Lindseth and S.Franks, 224-252. Ann Arbor: Michigan Slavic Publications.
- Schachter, Jacquelyn . 1988. Second language acquisition and its relationship to Universal Grammar. *Applied Linguistics* 9, 219-235.
- Schaefer, Jeannette. 2000. *The Acquisition of Direct Object Scrambling and Clitic Placement*. Amsterdam/ Philadelphia: John Benjamins.
- Schwartz, Bonnie D., and Rex Sprouse. 1994. 'Word order and nominative case in nonnative language acquisition: a longitudinal study of (L1 Turkish) German interlanguage'. In *Language Acquisition Studies in Generative Grammar*, edited by T. Hoekstra and B.D. Schwartz, 317-368. Amsterdam: John Benjamins.
- Schwartz, Bonnie D., and Rex Sprouse. 1996. L2 cognitive states and the full transfer/full access model. *Second Language Research* 12, 40-72.
- Serratrice, Ludovica, Antonella Sorace, and Sandra Paoli. 2004. Subjects and objects in Italian-English bilingual and monolingual acquisition. *Bilingualism: Language and Cognition* 7: 183-206.
- Sgall, Petr. 1975. 'Conditions of the use of sentences and the semantic representation of topic and focus'. In *Formal Semantics of natural language*, edited by Edward L. Keenan. Cambridge: Cambridge University Press, 297-312.
- Slabakova, Roumyana. 2006. Is there a critical period for semantics?. *Second Language Research* 22(3), 302-338.
- Slabakova, Roumyana. 2006. Learnability in the second language acquisition of semantics: a bidirectional study of a semantic parameter. *Second Language Research* 22(4), 498-523.
- Slabakova, Roumyana. 2001. *Telicity in the second language*. Amsterdam: John Benjamins.

- Smith, Neil and Ianthi M. Tsimpli. 1995. *The Mind of a Savant*. Oxford: Blackwell.
- Sorace, Antonella. 1999. Initial States, End-States and Residual Optionality in L2 Acquisition. *BUCLD Proceedings* 23, 666-674.
- Sorace, Antonella. 2000. Syntactic Optionality in Non-Native Grammars. *Second Language Research* 16, 93-102.
- Sorace, Antonella. 2003. Near-Nativeness. In *Handbook of Second Language Acquisition*, edited by M. Long and C. Doughty, 130-151. Blackwell.
- Sorace, Antonella. 2005. Syntactic optionality at interfaces. In *Syntax and Variation: Reconciling the Biological and the Social*, edited by L. Cornips and K. Corrigan, 46-111. Amsterdam: John Benjamins.
- Sorace, Antonella. 2006. Gradedness and optionality in mature and developing grammars. In *Gradience in Grammars: Generative Perspectives*, edited by G. Fanselow, C. Fery, M. Schlesewsky and R. Vogel, 106-123. Oxford: Oxford University Press.
- Sorace, Antonella, and Francesca Filiaci. 2006. Anaphora resolution in near-native speakers of Italian. *Second Language Research*: 339-368.
- Sportiche, Dominique. 1996. 'Clitic Constructions'. In *Phrase Structure and the Lexicon*, edited by J. Rooryck and L. Zaring, 213-276. Dordrecht: Kluwer.
- Sportiche, Dominique. 1998. Pronominal Clitic Dependencies. In *Language Typology: Clitics in the European Languages*, edited by H. van Riemsdijk. Berlin: Mouton de Gruyter.
- Strozer, Judith. 1976. *Clitics in Spanish*. Doctoral dissertation. University of California, Los Angeles.
- Suñer, Margarita. 1988. The role of agreement in clitic-doubled constructions. *Natural Language and Linguistic Theory* 6: 391-434.
- Tchizmarova, Ivelina. 2004. Expressivity and a Pragmatic Constraint on Object Reduplication in Bulgarian. *Balkanistica* 17, pp.79-134.
- Tomić, Olga M. 2004. The Balkan Sprachbund morpho-syntactic properties. In *Balkan Syntax and Semantics*, edited by O. Tomić, 1-55. Amsterdam: John Benjamins.
- Trahey, Martha, and Lydia White. 1993. Positive evidence and preemption in the second language classroom. *Studies in Second Language Acquisition* 15: 181-204.

- Tsimpli, Ianthi M. 2003. Clitics and Determiners in L2 Greek. *Proceedings of Generative Approaches to Second Language Acquisition*. Somerville, MA: Cascadilla Press.
- Tsimpli, Ianthi M., and Stavroula Stavrakaki. 1999. The Effects of a Morphosyntactic Deficit in the Determiner System: The Case of a Greek SLI Child. *Lingua* 108 (1): 31-85.
- Tsimpli, Ianthi M., and Antonella Sorace. 2006. Differentiating Interfaces: L2 Performance in Syntax-Semantics and Syntax-Discourse Phenomena. *Proceedings of the Annual Boston University Conference on Language Development* 30: 653-664.
- Tsimpli, Ianthi M., and Maria Mastropavlou. 2007. Feature Interpretability in L2 Acquisition and SLI: Greek Clitics and Determiners. *The role of Formal Features in Second Language Acquisition*, edited by H. Goodluck, J. Liceras and H. Zobl, 143-183. Routledge.
- Tsimpli, Ianthi M., and Maria Dimitrakopoulou. 2008. The Interpretability Hypothesis: evidence from wh-interrogatives in second language acquisition. *Second Language Research* 23: 215-242.
- Uriagereka, Juan. 1988. On Government. Ph.D. dissertation, University of Connecticut.
- Uriagereka, Juan. 1995. Some Aspects of the Syntax of Clitic Placement in Western Romance”, *Linguistic Inquiry*, 26, 79-123.
- Valenzuela, Elena. 2005. L2 ultimate attainment and the syntax-discourse interface: the acquisition of topic constructions in non-native Spanish and English. Ph.D. dissertation. McGill University.
- Wexler, Kenneth. 1998. Very early parameter setting and the unique checking constraint: A new explanation of the optional infinitive stage. *Lingua* 106: 23-79.
- White, Lydia, Elena Valenzuela, Martyna Kozłowska-MacGregor, and Yan-Kit Ingrid Leung. 2004. Gender agreement in nonnative Spanish: evidence against failed features. *Applied Psycholinguistics* 25: 105-133.
- White, Lydia. 1996. ‘Universal Grammar and second language acquisition: Current trends and new directions’. In *Handbook of Second Language Acquisition*, edited by W. Ritchie and T. Bhatia, 85-118. San Diego: Academic Press.
- White, Lydia. 2003. *Second language acquisition and Universal Grammar*. Cambridge: Cambridge University Press.

- White, Lydia. 2007. Grammatical theory, interfaces and second language acquisition. In *Handbook of Second Language Acquisition*, edited by W.Ritchie and T.Bhatia. Blackwell.
- White, Lydia. 2009. Language acquisition at the interfaces. Keynote address at the 2009 Mind-Context Divide Workshop, University of Iowa
- Zwicky, Arnold. 1977. *On Clitics*. Bloomington: Indiana University Linguistics Club.