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Infinitival Subordination in Spanish: A Study of Control, Raising and ECM Construction in Bilingual and Non-native Acquisition

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Infinitival subordination in Spanish:
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Thesis submitted to the
Faculty of Graduate and Postdoctoral Studies
In partial fulfillment of the requirements
For the PhD degree in Spanish

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University of Ottawa

Your file Votre référence
ISBN: 978-0-494-34140-7
Our file Notre référence
ISBN: 978-0-494-34140-7

ABSTRACT

This dissertation investigates the acquisition of infinitival clauses by child bilingual (L1 English/L1 Spanish) and adult non-native (L1 English/L2 Spanish) learners in Control, Raising and ECM configurations as shown in examples (i)-(iii).

(i) Juan$_i$ quiere [PROi ver a María]

John wants [PROi to see to Mary]

(ii) Juan obligó a María$_i$ a [PROi tomar una decisión]

Juan forced Mary$_i$ [PROi to decide]

(iii) Juan$_i$ parece [t$_i$ estar cansado]

John seems [t$_i$ to be tired]

(iiii) Juan vio a María [regar las plantas] (John saw Mary watering the plants)

John believes Mary [to be a friend]

The first part of this dissertation deals with the development of infinitival clauses in natural production data from bilingual children compared to monolingual (L1 English and L1 Spanish) children [ages 2;03-5;01], and the interaction of the relevant formal properties in bilingual grammars where Spanish and English do not match.

The second part of this dissertation also deals with interaction regarding their formal and structural properties where L1 and L2 grammars do not match. I study the acceptance and comprehension of infinitival clauses in experimental data from adults learning Spanish in an institutional setting. I statistically compare them to a control group of adult native speakers in order to determine the effect of the L1. I also divide the experimental group into two levels, intermediate and advanced, in order to study the effect of the level of language proficiency.

The main goal of this dissertation is to provide more insights on similarities and differences between the bilingual and non-native acquisition processes, particularly regarding transfer of formal properties associated with functional categories and projections related to Control, Raising and ECM constructions (i.e., Tense and the Complementizer system). Ultimately, this dissertation may contribute to a better understanding of the nature of bilingual and L2 grammars, and to the discussion regarding the similarities and differences between L1 and L2 acquisition by looking at factors that can be studied when more than one grammar is available.

ACKNOWLEDGEMENTS

"A journey of a thousand miles begins with a single step. (Lao Tzu)"

This dissertation may have constituted the first step of the journey, but taking the step was a journey in itself. During that time I was privileged to have the support of many people, whose collective efforts I would like to acknowledge here.

My biggest thanks goes to my advisor, Juana M. Liceras. I owe much of my present knowledge and experience to her efforts, and many of the central ideas and methods of this dissertation are the product of long and fruitful discussions with her. Thank you for your clarity of thought and your strive for perfection.

I would like to thank the members of the committee, José Camacho, Helmut Zobl, Joyce Bruhn de Garavito and Eta Schneiderman, for their intriguing comments and useful suggestions. I am also very grateful to the School of Graduate and Postdoctoral Studies for organizing the oral defense at such short notice, and specially to Christine Bourbonnais-Hendley for her efforts.

This dissertation would not have been possible without the tremendous amount of data collection and transcription of the twins' bilingual corpus undertaken by Deidre Butters, Esther Álvarez, Isabel Parrado, Marco Llamazares, Marieli Bausela, Melissa K. Grimes, Raquel Férnandez Fuertes, Shauna Flynn, Susana Muñiz, Tamara Vardomskaya and K. Todd Spradlin. A very special thanks goes to Alex Cuza and Raquel Fernández Fuertes for their invaluable help in recruiting and testing the adult informants.

To quote an anonymous fortune cookie saying, "your greatest fortune is in the number of friends you have". I am fortunate to have many good friends and colleagues that have been with me all the way. I would like to start by thanking the members of the

Language Acquisition Lab, Anahí Alba de la Fuente, Cristina Martínez Sanz, Cristina Senn, Diana Carter and Susana Alaiz, for their encouragement and their feedback. I would also like to thank Gerardo Barajas, Griselda Tetzicatl, Karla Zúñiga, and Susana Perales Haya for the great times, and everybody for being so amazingly wonderful.

I would like to add that, before coming to the University of Ottawa, I started studying linguistics at the Instituto Universitario Ortega y Gasset. Many thanks to Ken Hale, M. Victoria Escandell, Olga Fernández Soriano, Paloma Varela, and Violeta Demonte for introducing me to the world of theoretical and applied linguistics.

This research was financially supported by an Admission Scholarship from the Faculty of Graduate and Postdoctoral Studies, a Summer Graduate Scholarship in Humanities and Sciences from the Social Sciences and Humanities Research Council (SSHRC), and a research grant from the APTPUO Academic Development Fund of the University of Ottawa. Additionally, I was offered the opportunity to gain teaching and research experience at the Department of Modern Languages and Literatures and the Department of Linguistics of the Faculty of Arts.

In closing, I would like to dedicate this dissertation to several people. First and foremost, to my parents, José Luis Pérez Vera and Patricia Elizabeth Tattam, who gave me the opportunity they never had to pursue my studies at the doctoral level. To my sister, Ana Cristina, the other Spanish/English simultaneous bilingual in the family, whom I love dearly. And finally, to my ENMT specialist and surgeon, Dr. André Lamothe, and my radiation oncologist, Dr. Laval Grimard. Without their treatment, it is certain that this dissertation would never have been completed.

CONTENTS

LIST OF TABLES

ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
C	Complementizer
CGH	Competing Grammar Hypothesis
CHAT	Codes for the Human Analysis of Transcripts
CHILDES	Child Language Data Exchange System
CL	Clitic
CLAN	Computerized Language Analysis
CP	Complementizer Phrase
DO	Direct Object
DP	Determiner Phrase
EC	Exhaustive Control
ECM	Exceptional Case Marking
ECP	Empty Category Principle
EPP	Extended Projection Principle
FT/FA	Full Transfer/Full Access
G&B	Government and Binding
GJ	Grammaticality Judgment
I	Inflection
IL	Interlanguage
IO	Indirect Object
IP	Inflectional Phrase
L1	First language
L2	Second language
MDP	Minimal Distance Principle
MLC	Minimal Link Condition
MLU	Mean Length of Utterance (morphemes)
MLUw	Mean Length of Utterance (words)
MSP	Minimal Structure Principle
NP	Noun Phrase
OpC	Optional Control
P&P	Principles and Parameters
PC	Partial Control
SGEL	Sociedad General Española de Librería
SM	Shortest Move
T	Tense
TP	Tense Phrase
TVJ	Truth-value Judgment
UG	Universal Grammar
V	Verb
VP	Verb Phrase

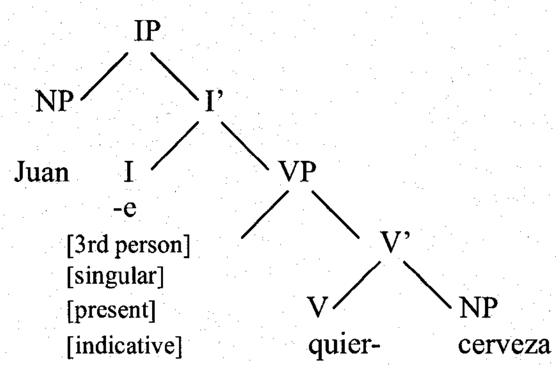
CHAPTER 1. INTRODUCTION

The aims of linguistics have been summarized in four questions by Chomsky, as observed in Cook and Newson (1996). Of these four questions, two are at the heart of this research. Firstly, what constitutes knowledge of language? And more importantly, how is this knowledge acquired? Chomsky's Generative theory of language has tried to answer these questions, and has put forth several specific proposals of considerable complexity over several decades. Models such as the Standard Theory (Chomsky, 1965), Government and Binding (G&B) (Chomsky, 1981), and the Minimalist Program (Chomsky, 1995) share the common objective of describing the knowledge of language which, according to the Principles and Parameters (P&P) theory, consists of principles universal to all languages and parameters that vary from one language to another. The study of language acquisition within the Generative framework adopts Chomsky's "nativist" approach in the sense that it considers language to be knowledge and not behaviour, as put forward in Skinner's behaviourist theory (Skinner, 1957). It adopts Chomsky's conceptualization of language acquisition in terms of initial and final states of the mind. Acquiring language means progressing from the initial state, from having no language, to the final state, to having full competence.

This research has been done within the Generative framework, and its general objective is to contribute to providing an answer to the question of how the knowledge of language is acquired. I believe that only by understanding the process of language acquisition can one develop better tools to teach language. This dissertation focuses on the similarities and differences between native and non-native acquisition as a first step in this direction. The linguistic area in question is syntax, defined as the system of rules that regulate how words may be combined to form phrases, which in turn combine to form sentences (Hernanz & Brucart, 1987). A fundamental principle of Generative syntax, as well as other approaches is that sentences are not just strings of words in linear sequence, but that they are structured into phrases, which connect together to make up a whole.

A simplex sentence breaks up into three minimal constituents: a Noun Phrase (NP), an Inflectional Phrase (IP) and a Verb Phrase (VP), as shown in (1)[1]. In the NP and the VP, the heads of the phrases are lexical categories, the noun "John" and the verb "like" respectively. In the IP, the head is a functional category, Inflection, which contains non-lexical information such as Person, Number, Tense or Mood.

(1) [$_{IP}$ [$_{NP}$ Juan [$_{VP}$ quiere [$_{NP}$ cerveza]]]]
"John wants beer."



A complex sentence is constituted by combining two simplex sentences, which are also known as clauses, as shown in (2a). This combination may take place by means of two recursive mechanisms: coordination and subordination (or sentence embedding).

[1] This formal representation of phrase structure in accordance with X-bar theory (Chomsky, 1981) is not used in current syntactic theory developed under later models of the theory of language such as the Minimalist Program (Chomsky, 1995, 2001). Within this model, there are no fixed structures to which all phrases must adjust. However, I choose to use it here because it offers a very descriptive presentation of the relationship between the constituents of a sentence.

Subordinate or embedded clauses are characterized by being dependent on the so-called main clause: in isolation, they are ungrammatical, as shown in (2b)[2].

(2a) [$_{IP}$ [$_{NP}$ Juan [$_{VP}$ dice [$_{CP}$ que [$_{IP}$ [$_{NP}$ (él) [$_{VP}$ quiere [$_{NP}$ cerveza]]]]]]]]
"John says that he wants beer."

(2b) *que quiere cerveza
"that he wants beer."

Although there are several types of embedded clauses, this dissertation concentrates on so-called verbal complements: embedded clauses that are subcategorized by the main verb. With regard to the inflection of the verb of the embedded clause, there are two types of verbal complements: finite complements and non-finite complements, as shown in (3) and (4).

(3a) Juan me dijo [$_{CP}$ [$_{C}$ que] estaba enfermo]
"John told me that he was sick."

(3b) María espera [$_{CP}$ [$_{C}$ que] Juan se cure pronto]
"Mary hopes that John gets well soon."

(4) Juan quiere [$_{IP}$ curarse pronto]
"John wants to get well soon."

In Spanish, if the subject of the main verb is different from the subject of the embedded verb, the main verb takes a finite complement. This type of complement contains a finite (or inflected) verb, which may be in the indicative mood as in (3a), or the subjunctive as in (3b). The embedded clause is a Complementizer Phrase (CP) headed by a functional category called a Complementizer (*que*), which serves as a nexus between both clauses. If the subject of the main verb and the embedded verb are the same, the main verb takes a non-finite complement. This type of complement contains a non-finite (or infinitival) verb,

[2] Example (2b) would be a possible sentence in Spanish with discourse value, as an answer to a *wh*-question such as *¿qué dice?* (what is he saying?); *que quiere cerveza* (that he wants beer).

as shown in (4). The embedded clause is an IP, since there are no Complementizers for non-finite complements in Spanish[3].

This dissertation investigates the acquisition of Spanish infinitival complements and their properties by child bilingual (English/Spanish) learners and adult non-native (L1 English / L2 Spanish) learners, in the syntactic configurations shown in (5) to (7).

(5a) María decidió [llamar a Juan]
Mary decide.3PS.PAST call.INF to John
"Mary decided to call John."

(5b) María obligó a Juan [a tomar una decisión]
Mary force.3PS.PAST to John to make.INF a decision
"Mary forced John to decide."

(6) María parece [estar contenta]
Mary seem.3PS.PRES be.INF happy
"Mary seems to be happy."

(7) Veo al jardinero [regar las plantas]
See.1PS.PRES to the gardener water.INF the plants
"I see the gardener watering the plants."

The main verbs in these constructions all take an infinitival clause, that is, an embedded clause with an infinitival verb. However, these infinitival clauses appear in different syntactic configurations: examples (5a) and (5b) appear in so-called Control configurations, example (6) appears in a Raising configuration, and example (7) appears in an Exceptional Case Marking (ECM) configuration[4]. I will describe in more detail the different syntactic properties of these configurations in Chapter II, but it is important to keep in mind that they

[3] Gerunds may also be part of so-called gerundive clauses in both Spanish and English (e.g., *estoy esperando el autobús/I am waiting for the bus*). These clauses combine with a number of main verbs to form structures that are known as periphrastic constructions. These constructions are not complex sentences, nor non-finite subordination. In fact, they are analysed as being constituted by two verbs that form a single sentence. Therefore, sentences such as **estoy que tú esperas el autobús*/**I am that you are waiting for the bus* are not possible. Certain infinitival clauses may also constitute periphrastic constructions in combination with certain main verbs, e.g., modals (*debes ir a la escuela/you must go to school*).

[4] The verbs *hacer* 'make' and *dejar* 'let' also alternate with infinitival clauses to form so-called causative constructions (e.g., *María le hizo salir/Mary made him leave)*. I will not be investigating these constructions in this study. For more details, see Chapter II.

are distinguished essentially by type of infinitival subject (a null category in Control and Raising constructions, an overt noun or pronoun in ECM constructions) and by the interpretive properties of the infinitival clause (the event denoted by the infinitival clause in Control constructions is interpreted as unrealized with respect to the event denoted by the main clause; the event denoted by the infinitival clause in Raising and ECM constructions is interpreted as taking place simultaneously with respect to the event denoted by the main clause, as proposed by Bošković (1997), Martin (1992, 1996, 2001), and Stowell (1982), among others).

1.1. Rationale

Why choose non-finite subordination as a research topic? As noted in Chomsky (1991), since infinitival morphology is underspecified for Tense and Agreement, non-finite subordination has rather different characteristics compared to finite subordination. A very important difference is that infinitival verbs do not license overt subjects. The interpretation of the null infinitival subject is to this day a topic of interest in syntactic theory within the Generative framework, particularly regarding infinitival clauses in Control configurations. Since Control has been observed to be at the syntax-semantics interface, the problems that arise when interpreting the subject of the infinitival clause in these configurations have been addressed from syntactic and semantic viewpoints. Whereas syntacticians (Hornstein, 1999, 2001, 2003; Landau, 2000, 2003; Manzini, 1983; Manzini & Roussou, 2000, among others) favour a syntactic account for most Control phenomena, and only admit the role of semantics in certain highly exceptional Control phenomena, semanticians (Bresnan, 1982; Culicover & Jackendoff, 2001; Jackendoff, 1972; Sag & Pollard, 1991, among others) maintain a bigger role for semantic factors across the board. In addition, the category of the null infinitival subject has led to debate among syntacticians. As I will explain in Chapter II, some argue that the category of the null infinitival subject in Control constructions is the same as that of Raising constructions; others argue that it is different. The issue of whether infinitival complements contain Complementizer positions also divided syntacticians at one time. In short, the analyses of Generative syntactic theory are far from being unanimously accepted when it comes to non-finite subordination, and acquisition data may validate one theoretical analysis over another.

Although theoretical studies have dealt extensively with non-finite subordination, acquisition studies have not been so abundant. Infinitival clauses as verbal complements have been studied mostly from the perspective of the development of these clauses (order of acquisition) in the grammars of English monolingual learners. Certain Control phenomena have been described as late-learned rules, that is, grammatical phenomena for which adult native speaker ability is not attained by children until they are six or older (Goodluck & Birch, 1987). Late-learned rules are important for language acquisition with regard to computational and processing complexity, and researchers in the field have tried to establish the characteristics of late-learned rules that slow down the acquisition of Control constructions compared to other types of complex sentences. Also, the development of the ability to produce and understand complex sentences (including finite and non-finite complements) by child learners has been considered to be one of the most interesting and important aspects of language acquisition, as a distinctive trait of human languages (Limber, 1973).

In addition, because of the nature of English infinitival morphology (unlike Spanish, Modern English does not have bound infinitival morphology), its acquisition presents a challenge to child learners, who go through a stage where they do not produce the infinitival marker *to* with infinitival complements (e.g., I want Ø go, I want him Ø go). The development of certain types of infinitival complements before others, and the initial use of bare infinitival forms in English has fuelled the debate between two views of child grammar that are contemplated in psycholinguistics within the Generative framework: the Continuity proposal (Pinker, 1984), according to which all the properties of adult grammar are present in child grammar from the start, and the Maturation proposal (Borer & Wexler, 1987), according to which the properties of adult grammar are not present at every stage of development in child grammar. With regard to infinitival marker *to* and infinitival complements, there are two possibilities. Children may not have access to syntactic representations with CPs or IPs (both of which have functional categories as heads), and hence their nontarget-like production data, or they may have access to these syntactic representations, but their production data does not reflect this.

With regard to native acquisition of finite and non-finite complements, my learnability proposal assumes the Continuity proposal and states that, although child grammar contains all the functional categories and syntactic representations of adult grammar, some complements are acquired later because they are marked. I am assuming Roberts' (1999, 2001) definition of markedness in terms of structural complexity: complements with more layers of structure are acquired later than complements with less structure. In Spanish as well as English, complements with Complementizers will be acquired before complements without Complementizers. This study focuses on infinitival complements, although I introduce finite complements that specifically alternate with certain main verbs in Spanish.

Since this study deals with native bilingual acquisition, I also address the issue of language interaction, which may take the form of transfer, acceleration or delay in the development of bilingual grammars. As explained in Paradis and Genesee (1996), bilingual learners are exposed to two linguistic systems, so it is conceivable that these systems interact over the course of acquisition. Due to this interaction, syntactic development in these learners could differ from monolingual learners. I look for interaction effects in areas where Spanish and English do not entirely match, such as the Complementizer system. I will describe the contrasts between these languages in more detail in Chapter II, but essentially I propose that the Spanish Complementizer system is a subset of the English Complementizer system: English has prepositional Complementizers such as *for* (as in *I arranged for him to meet us there*) as well as Complementizers such as *that,* but Spanish only has Complementizers such as *que* 'that'. Assuming that bilingual children start out with the most restricted option (Spanish) for reasons of economy, they should favor infinitival complements with prepositional Complementizers (such as *I want (for) you to play with me*) less than monolingual children. In order to verify my learnability proposals, I analyse the Spanish and English natural production data from child bilinguals and monolinguals.

With regard to non-native acquisition, infinitival clauses as verbal complements have been studied mostly from the perspective of interaction in the grammars of L2 English learners. They have been studied as opposed to finite complements and to gerundive clauses. Also, the acquisition of late-learned Control phenomena has been investigated in non-native learners to determine whether adult learners pattern with child learners regarding the delay in the acquisition of late-learned rules. As in the case of bilingual learners, non-native learners are exposed to two linguistic systems. However, they are different in the sense that they have already built up the grammar of their native language. There is also the question of whether non-native learners access the principles of their L2 grammar through their native language or not, which would essentially differentiate non-native from native acquisition.

Previous research has shown that the Complementizer system is a site for interaction in child non-native acquisition (Lakshmanan, 1993/1994), so assuming that this is also true for adult non-native acquisition, certain properties of the L1 Complementizer should be transferred to the L2 grammar. I look at a property of the Complementizer system for which there is positive evidence in English. More specifically, the fact that the English Complementizer system has prepositional Complementizers contributes to the productivity of nouns and pronouns before infinitival complements. As a result of the transfer of this property, non-native learners should overgeneralize nouns before infinitival complements in Spanish. My learnability proposal for the acquisition of the Spanish Complementizer system is made on the basis of the Competing Grammars Hypothesis (Zobl & Liceras, 2004). I propose that L1 English/L2 Spanish learners have two representations of the properties of prepositions in their interlanguage grammar. In representation (A), Spanish prepositions have the structural Case-assigning properties of English prepositional Complementizers (the Complementizer *for* assigns accusative Case to the infinitival subject in constructions such as *I wanted (for)* <u>*her*</u> *to be happy*, thus licensing the noun or pronoun in that position; as explained above, infinitival verbs do not license overt subjects because they lack Tense and Agreement), as well as inherent Case-assigning properties. In representation (B), Spanish prepositions only have inherent Case-assigning properties. In order to converge with native speakers, they must reanalyse prepositions as exclusively inherent Case assigners. In the process of going from (A) to (B), these representations compete in their interlanguage grammar.

In addition, so-called weak or clitic pronouns (such as direct object pronouns *lo/la/los/las* and indirect object pronouns *le/les*) have been found to present difficulties in non-native acquisition (Bruhn de Garavito & Montrul, 1996; Duffield, Prévost, & White, 1997; Duffield & White, 1999, among others). The basic difference between Spanish and English is that the former has full nouns and pronouns, which appear to the right of the main verb in complex sentences (e.g., María obligó a Juan a tomar una decisión), and clitic pronouns, which appear to the left (e.g., María lo obligó a tomar una decision). English has only full nouns and pronouns (e.g., Mary forced John to decide / Mary forced him to decide). If these structural differences between English and Spanish give rise to acquisition difficulties, non-native learners should have more problems choosing the antecedent for the subject of the infinitival clause if it is a clitic pronoun. In short, I look at interaction in two areas of grammar, one where Spanish and English grammars overlap (the Complementizer system), and one where they differ completely (the pronominal system). In order to verify my learnability proposal, I analyse the experimental data obtained from a grammaticality judgment task and a truth-value judgment task. For this purpose, I recruited a group of adults who where learning Spanish in Canada, in an institutional setting. They were divided into two levels of language proficiency, intermediate and advanced, by means of a test. I also recruited a control group composed of adult native speakers of Peninsular Spanish, who were living in Spain at the time of testing.

This dissertation makes several contributions to the field of theoretical and applied linguistics, particularly regarding syntactic theory and language acquisition. Firstly, it studies Spanish syntax from a contrastive perspective, and describes how non-finite subordination works in this language compared to English from the perspective of the latest trends of Generative theory. One of the goals of this study is to support certain syntactic theories concerning the distribution and interpretation of null infinitival subjects by providing empirical evidence from acquisition data.

Regarding empirical data, this dissertation contains analyses of Spanish and English data from child bilingual learners, as well as monolingual learners, from existing corpuses in the CHILDES database (McWhinney & Snow, 1985), as well as new corpuses (Fernández, Liceras, and Spradlin, 2002–2005). It looks at a minimum of 10,000 utterances and a maximum of 67,000 utterances per language, in order to provide a sizeable sample of items. In addition, it provides data from adult non-native learners of Spanish, using experimental methods tried and untried in previous research. As observed in Granfeldt (2003), comparing L1 bilingual and L2 data can contribute to the discussion regarding the similarities and differences between L1 and L2 acquisition, which is far from resolved. Also, comparing these two types of data has an advantage over comparing L1 monolingual and L2 data: since bilingual and L2 learners have access to two grammars, the influence of several factors on acquisition can be studied (also pointed out in Meisel (1991)). For the purposes of this study, it will allow me to determine if the same domains and properties are subject to crosslinguistic influence in L1 and L2 acquisition, and if the factors that determine the directionality of this linguistic interaction are the same in both types of acquisition.

Moreover, instead of focusing on constructions belonging to the same parameter[5], this dissertation deals with constructions that superficially seem to have the same syntactic

[5] As observed in Ayoun (2005), several parameters of Universal Grammar (UG) (please refer to Chapter III for a more detailed account of UG, principles and parameters) have been proposed in the literature. Parameters "represent the range of variation that can be found in natural languages" (p. 71), they subsume "a cluster of phonological, syntactic, lexical, or morphological properties or structures governed by an abstract principle" (p. 72), and they are "traditionally assumed to be binary in that they have two (mutually exclusive) values or settings" (p. 72). For instance, one of the most researched parameters, the pro-drop or null subject parameter (Belletti, 1982; Chomsky, 1981; Jaeggli, 1982; Jaeggli & Safir, 1989; Perlmutter, 1971; Rizzi 1982) distiguishes languages according to whether they allow null subjects in finite clauses or not

structure. It also applies concepts such as markedness and subset/superset[6] to the learnability proposals concerning their properties, concepts that were originally developed to define the relationship between the options of a parameter[7]. It also bases some of its learnability proposals on the latest acquisition trends such as the Competing Grammars Hypothesis, which focuses on the similarities between diachronic change and non-native acquisition.

In sum, this dissertation investigates the acquisition of the properties of infinitival clauses in Control, Raising and ECM configurations in Spanish by child (L1 Spanish/English) bilingual learners, and adult (L1 English/L2 Spanish) learners. It addresses the issues of development and interaction between English and Spanish

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(e.g., *we go to the movies every weekend* in English as opposed to Ø *vamos al cine todos los fines de semana* in Spanish), and according to other related syntactic and morphological properties:

(i) Subject-verb inversion: overt subjects may occupy a postverbal position in declarative sentences in null subject languages: Ha llamado tu hermana (your sister called) vs. *Called your sister.

(ii) *That–* trace sequences: the subject of an embedded clause may move across the Complementizer in null subject languages: ¿Quién crees que ha llamado? (who do you think called?) vs. *Who do you think that called?

(iii) Pleonastic pronouns: null expletive subjects appear in null subject languages, and expletive pronouns in non null subject languages: Ø Está lloviendo vs. It is raining.

[6] As observed in Wexler and Manzini (1987), the lack of negative data in child L1 acquisition (i.e., learners generally do not receive any direct information about ungrammaticality; for more details, see Chapter III) poses a problem with regard to learning values of parameters: "if the child overgeneralizes, that is, picks the value of a parameter that gives too large a language, then there is no way (given only positive data) to correct the overgeneralization, since all new (positive) data will be generated by the (overgeneral) grammar" (p. 43). For instance, with regard to the null subject parameter, Spanish represents the value of the parameter "that gives too large a language", in the sense that it allows both null and overt subjects (e.g., nosotros vamos al cine todos los fines de semana). English represents the more restricted value of the parameter in the sense that it only allows overt subjects. In order to solve this learnability problem, a markedness theory that allows values of parameters to be learned is suggested. More specifically, a markedness hierarchy is constructed in accordance with a developmental mechanism called the Subset/Superset principle (Berwick, 1985). According to this principle, where the language defined by one parametric option forms a subset of a language defined by another parametric option, children should initially entertain the narrowest hypothesis to account for the input data, and should only extend their grammars on the basis of evidence that cannot be accounted for.

[7] I should add that the Subset/Superset principle does not particularly apply to the null subject parameter, as evidenced by the fact that child learners go through the so-called "null subject stage" (Hyams, 1986, among many others): children allow null subjects as well as overt subjects in finite clauses regardless of the target language (in both null and non null subject languages). There are several possible explanations: for instance, it has been suggested that children initially misset the parameter to a value that applies in a language different from the target (Hyams (1986) observes that child learners of English allow null subjects along with overt subjects, similarly to Spanish, which disappear when they start using modals and expletives. Alternatively, the null subject stage has been described as a non-adult stage where the triggers to set the relevant parameters to the correct value have not yet been activated, being subject to maturation. Also, it has been argued that non null subject languages are not really subsets of pro-drop languages, but actually intersecting sets. That is, a grammar that does not allow null subjects also contains other elements that are not present in null subject grammars (e.g., expletive pronouns), as noted in Verrips (1994).

grammars, and it includes two types of data: natural production data for child bilinguals, and experimental data from adult non-native learners.

1.2. Organization

This dissertation is organized as follows.

Chapter II deals with the analyses of infinitival clauses in Control, Raising and ECM configurations that have been proposed in the framework of Generative syntax, and the differences between Spanish and English regarding these constructions. I look at the main research topics that have been investigated in the literature of syntactic theory: the distribution (i.e., positions where infinitival clauses are licensed, and types of infinitival subjects), and the interpretation (i.e., the choice of antecedent for the infinitival subject, depending on its syntactic category) of infinitival clauses in these configurations.

Chapter III deals with the native acquisition of infinitival clauses in Control, Raising and ECM configurations, specifically regarding the development of these clauses, as well as their interaction in Spanish and English. For this purpose, I analyse natural production data from Spanish/English child bilingual learners and compare it to that of Spanish and English monolingual learners. This part of the study focuses on the distribution of infinitival clauses in these configurations.

Chapter IV deals with non-native acquisition of infinitival clauses in Control and ECM configurations, specifically regarding the interaction of these clauses in Spanish and English where these grammars do not match. For this purpose, I analyse experimental data from L1 English/L2 Spanish learners and L1 Spanish speakers. This part of the study focuses on the distribution and interpretation of infinitival clauses in these configurations.

Chapter V concludes this dissertation by summarizing the general conclusions derived from the data analyses, particularly regarding the similarities and differences between native bilingual and non-native acquisition. I also discuss open questions with respect to the acquisition of subordination in general, and propose several topics for further research.

CHAPTER 2. A CROSSLINGUISTIC ACCOUNT OF SPANISH AND ENGLISH INFINITIVAL COMPLEMENTS

In this chapter, some of the most relevant analyses of infinitival clauses in Control, Raising and ECM configurations will be reviewed. Among other issues, these analyses crucially focus on the distribution of infinitival clauses, that is, the positions in which infinitival clauses are licensed and the types of infinitival subjects allowed in these configurations. They focus as well on the interpretation of such infinitival clauses, that is, the choice of antecedent for the subject of the infinitival clause. I will examine these syntactic properties (i.e., distribution and interpretation) in Spanish infinitival clauses compared to English infinitival clauses in these configurations, with the aim of identifying learnability difficulties and anticipating possible sources of crosslinguistic influence. I will also briefly overview infinitival inflection and infinitival clauses in English diachrony, with the aim of drawing parallels between non-native acquisition and diachronic change.

2.1. The distribution of infinitival clauses

According to Adger (2003), Generative syntactic analyses (following Chomsky, 1981, 1995, 2001) have traditionally tried to account for the distribution and interpretation of infinitival clauses using the c-selectional features of lexical items. These features are associated with Θ-roles in the lexical representation of words.

Infinitival clauses may complement two- or three-place predicate verbs. In the case of two-place predicate verbs such as the ones in (8) for English and (9) for Spanish, the embedded verb assigns a Theme Θ-role to the object of the embedded infinitival clause, and the main verb assigns an Agent Θ-role to its subject. Since the embedded verb also assigns an Agent Θ-role, there must be an argument in the infinitival clause to receive it.

Therefore, in the syntactic configurations of (8) and (9), a null element (PRO) is posited as the subject of the infinitival clause to receive this Θ-role.

(8) (yo$_i$) Intenté [PRO$_i$ conseguir entradas para la función]

(9) I$_i$ tried [PRO$_i$ to get tickets for the show]

PRO is said to be controlled by the subject of the main clause (implicit *yo* in (8) and explicit *I* in (9)), that is, it enters a relationship of referential dependence with this argument. Hence the term "Control" constructions used to name these syntactic configurations.

Since the subject position of infinitival clauses in Control constructions is occupied by the null element PRO, overt DPs are not allowed, as shown in (10).

(10a) *Intenté [JUAN conseguir entradas para la función]

(10b) *I tried [JOHN to get tickets for the show]

In contrast, DPs are licensed with infinitival clauses in other syntactic configurations, as shown in (11).

(11a) Veo [AL CICLISTA subir la cuesta]
"I see the bicycle rider going up the hill"

(11b) We believe [JOHN to be telling the truth]

In these configurations, PRO is disallowed, as shown in (12).

(12a) *(yo$_i$) Veo [PRO$_i$ subir la cuesta]
"*I see going up the hill"

(12b) *We$_i$ believe [PRO$_i$ to be telling the truth]

The configurations in (11) are called Exceptional Case Marking (ECM) constructions. The term "exceptional" refers to the fact that the main verb appears to be assigning Case to an argument outside the main clause, which in turn is both the object of the main verb and the subject of the embedded verb[8]. The idea is that there is a "restructuring" of the barrier between main and embedded verb. The barrier becomes weak, resulting in the main verb trespassing on the domain of the embedded verb. Since the subject of the embedded verb is in an object position relative to the main verb, it receives accusative Case (as in *we believe HIM to be telling the truth*)[9].

In some syntactic configurations, infinitival clauses may license either PRO or a DP, as shown in (13).

(13a) I_i want [PRO_i to get tickets for the show]

(13b) I want [(for) JOHN/HIM to get tickets for the show]

These syntactic configurations have been termed Optional Control (OpC) constructions because the infinitival clause may appear either in a Control construction as in (13a), or in a particular type of ECM configuration where a null prepositional Complementizer assigns accusative Case to the DP as in (13b).

As opposed to English, Spanish does not have OpC constructions, as shown by the ungrammaticality of (14b).

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[8] As mentioned in the previous chapter, this study does not investigate causative constructions such as *María lo hizo salir/Mary made him leave*. As observed in Torrego (1998), the main verb and the infinitival verb in ECM constructions appear in different clauses. The DP that appears overtly marked accusative (*al ciclista*) is the subject of an infinitival clause; its Case is licensed by a verb outside its clause. Causative constructions have also received this analysis in the literature, that is, the so-called "complex-predicate analysis". According to this analysis, the main causative verb and the infinitival verb take the subject of the infinitival verb as a common argument. However, since causative constructions show certain restrictions regarding the position of the DP object (i.e., *María lo hizo salir* is grammatical, **María hizo a Juan salir* with the DP in a pre-infinitival position is not grammatical, at least in Peninsular Spanish), they have also received the so-called "small-clause analysis", where the causative verb takes the embedded predicate as its argument (similarly to periphrastic constructions). There appears to be no consensus in the literature as to their structure.

[9] In constructions with perception verbs, the DP may appear in a pre-infinitival position as shown in (11a) above, or in a post-infinitival position as in *vi subir la cuesta al ciclista*. Therefore, constructions with perception verbs have also been analysed as verbal periphrases where the main and embedded verbs appear in the same clause. However, this analysis does not account for the fact that *vi al ciclista subir la cuesta* is also possible. There is an analysis that suggests that the infinitival verb in these constructions actually takes a null subject whose antecedent is the object of the main verb, as shown in (i)-(ii).

(i) Vi PRO_i subir la cuesta <u>al ciclista</u>$_i$

(ii) Vi <u>al ciclista</u>$_i$ PRO_i subir la cuesta

There are certain objections to this analysis. For instance, it is argued that the main verb selects only one argument (i.e., *ver <u>al ciclista</u>*, o *ver que <u>el ciclista</u> sube*), not two. For a complete review, see Hernanz (1999).

(14a) (yo$_i$) Quiero [PRO$_i$ comprar entradas para la función]
"I want to buy tickets for the show."

(14b) *(LO) Quiero [JUAN/ÉL conseguir entradas para la función]
"I want John to buy tickets for the show."

It appears that two-place predicate verbs with infinitival clauses in Spanish can take either a PRO or a DP subject, but they do not alternate between these two types of subjects. In fact, it would seem that overt infinitival subjects in Spanish are only allowed in the type of ECM constructions exemplified in (11a). However, in the section dealing with language contrasts between English and Spanish, I will show that this restriction applies only to infinitival subjects in preverbal positions, not postverbal positions.

In the case of three-place predicate verbs, the embedded verb is a two-place predicate in a Control configuration. It assigns an Agent Θ-role to null subject PRO and a Theme Θ-role to the object of the embedded clause. The object of the main clause, which receives a Theme Θ-role from the main verb, controls PRO. These syntactic configurations are attested in English and Spanish, as shown in (15).

(15a) Juan obligó [a Pedro$_i$ a [PRO$_i$ lavar el coche]]

(15b) John forced [Peter$_i$ [PRO$_i$ to wash the car]]

A possible alternate analysis involves Raising (i.e., moving) of the main object out of the embedded clause, as shown in (16a) for Spanish and (16b) for English. However, this is excluded by the Θ-criterion[10] because the argument already receives a Θ-role from the embedded verb *lavar* 'wash', and could not receive another from the main verb *obligar* 'force'.

(16a) *Juan obligó a Pedro$_i$ a [t_i lavar el coche]

(16b) *John forced Peter$_i$ [t_i to wash the car]

[10] According to the Θ-criterion, a single argumental DP may receive one and only one Θ-role.

In fact, syntactic configurations that show Raising seem to be restricted to instances where the main verb is a semi-copulative verb such as *seem* or *appear* as shown in (17a), or *parecer* 'seem/appear'as shown in (17b).

(17a) María$_i$ parece [t_i estar contenta]

(17b) Mary$_i$ seems [t_i to be happy]

The main idea is that the main subject raises out of the embedded clause to a position in order to receive Case, leaving a trace behind. Hence the term "Raising" for the constructions exemplified in (17).

Since these constructions seem to be identical to Control constructions with two-place predicate verbs in every respect, one could argue that it would be more economical to propose an analysis that accounted for both syntactic configurations. This is the rationale followed by the proponents of the Movement-inspired analyses (O'Neil, 1995; Hornstein, 1999, 2001; Manzini & Roussou, 2000). The controversy between Standard and Movement-inspired Analyses will be discussed in more detail in the following sections.

In sum, all the syntactic configurations discussed above have in common the presence of an infinitival clause. Basically, they are distinguished by type of infinitival subject, and can be divided into two main groups: configurations that take null infinitival subjects (i.e., Control and Raising configurations), and configurations that take overt infinitival subjects (i.e., ECM and OpC configurations). Control configurations are further differentiated from Raising configurations by the nature of the null category: PRO in Control constructions, a DP-trace in Raising constructions. ECM configurations are differentiated from OpC configurations by the nature of the Case-assigner. The overt DP receives accusative Case in both configurations. However, in ECM the Case-assigner is the main verb; in OpC configurations, it is a preposition. OpC configurations exist in English, but not in Spanish.

2.1.1. The syntactic properties of infinitival clauses in Control and Raising constructions

I have established that Control, Raising and ECM constructions are differentiated by type of infinitival subject, and I have identified the Case assigners that license overt infinitival subjects in ECM and OpC constructions. I have yet to establish the properties that determine which kind of null subject is licensed by an infinitival clause (i.e., PRO as opposed to *t* (trace)). Since the Case assigner for null infinitival subjects is the infinitive, determining how infinitives are specified for certain features is crucial to understanding their particular Case-assigning properties, and thus what type of subject they license.

Together with gerunds and participles, infinitives are characteristically non-inflected (or non-finite) verbal forms (Chomsky, 1970) in Spanish as well as English. Morphologically, they consist of a verbal root plus a thematic vowel (*–a–* or *–e–*) and an infinitival affix *–r* in Spanish, as shown in (18).

(18) Infinitive *beber* 'to drink': beb– (verbal root) + *–e–* (thematic vowel) + affix *–r*

Es bueno *beber* hasta dos litros de agua al día
Is good drink.INF up to two litres of water a day
"It is a good idea to drink up to two litres of water a day."

Within the Government and Binding framework (Chomsky, 1981), the non-finite verbal affix *–r* is analysed as the functional head of IP. The infinitival particle *to* in English is similarly analysed as a non-finite verbal form marker belonging to I(nflection)[11]. Although

[11] Infinitival *to* and prepositional *to* are distinguished by several properties (Radford, 2004). Most importantly for the purposes of this study, infinitival *to* requires strictly verbal complements with bare forms. In contrast, prepositional *to* can take other types of complements (such as nouns), as shown in (i) as opposed to (ii).

(i) I managed to arrive on time / *I managed to arrival on time

(ii) Yesterday afternoon I went to the library

In fact, true prepositions in English only allow verbal complements with the gerund (non-finite inflection *–ing*), and never bare forms, as shown in (iii) as opposed to (iiii).

(iii) Mary called Susan before leaving for work / *before to leave for work the infinitive receives an identical analysis in both languages, an important difference is that Modern English has no bound infinitival morphology[12], whereas Spanish has bound infinitival morphology.

According to Chomsky (1981), non-finite inflection such as infinitival affixes or markers lacks Agreement and Tense properties, in contrast with finite inflectional affixes in Spanish or auxiliaries in English. Therefore, infinitives cannot assign nominative Case, and do not license overt NP subjects[13]. NP subjects of infinitival clauses would violate the Case filter, according to which lexical NPs must have abstract Case assigned under Government. Namely, the functional categories Tense and Agreement, which are present in finite verbs, must assign Case to overt NPs. In order to fulfil the Extended Projection Principle (EPP), according to which all clauses must have subjects, a lexically and phonetically null category is generally posited as the subject of infinitival clauses. In the case of infinitival clauses in Control constructions, this null category is PRO, as shown in (19) and (20). In the case of infinitival clauses in Raising constructions, this null category is an NP-trace ($_{NP}$t), as shown in (21).

(iiii) I want to leave right now / *I want to leaving right now

[12] As described in Miller (2002), Old English had the inflectional affix *–an* (also called the plain infinitive) and the dative declined infinitive *–enne* with proclitic *to*, as well as an undeclined infinitive with *to*.

(i) Ic hi(ne)...|...wriþan þohte
I him bind.INF thought (Beowulf 963f. Miller, 2002: p. 190)
"I thought [...] to bind him."

(ii) Oðres ne gymeð to gebidanne
others not care to wait.for.INF.DAT
"He is not intent on waiting for another" (Beowulf 2451f. Miller, 2002: p. 190)

[13] In contrast with English, Spanish infinitives allow lexical NP subjects in postverbal positions:

(i) ¿Hacerlo yo? (me do it?)
(ii) Falté a clase sin saberlo el profesor (I skipped class without the teacher noticing)
(iii) Estando Juan en casa, estamos más tranquilos (John being at home, we feel safer)

According to Fernández Lagunilla (1987), the position of the DP subject is governed by the verb, which assigns nominative Case as proposed by Piera (1987). When the postverbal subject is a pronoun that functions as an anaphor, this author proposes that the subject of the infinitive is PRO, and the pronoun is assigned nominative Case when it correferential with a c-commanding subject. Férnandez Lagunilla and Anula (1994) propose that these types of infinitival constructions are adjuncts when they appear in complex sentences, based on the absence of any Control relationship between the matrix clause and the embedded clause. In this dissertation, I deal with infinitival clauses in constructions where they only take subjects in preverbal positions. As mentioned previously, overt subjects are only allowed in these positions if there is an external Case assigner, as is the case of ECM or OpC constructions.

(19a) María decidió [$_{CP}$ [$_{C}$Ø] [$_{TP}$PRO [$_{T}$-r] [$_{VP}$ [$_{V}$llama-] a Juan]]]

(19b) Mary decided [$_{CP}$ [$_{C}$Ø [$_{TP}$PRO [$_{T}$to] call John]]]

(20a) María obligó a Juan a [$_{CP}$ [$_{C}$Ø] [$_{TP}$PRO [$_{T}$-r] [$_{VP}$ [$_{V}$toma-] una decisión]]]

(20b) Mary forced John [$_{CP}$ [$_{C}$Ø] [$_{TP}$PRO [$_{T}$to] [$_{VP}$ [$_{V}$make] a decision]]]

(21a) [$_{TP}$ María$_{i}$ [$_{T}$ [$_{VP}$ [$_{V}$ parece] [$_{TP}$ [$_{T}$ –r] [$_{VP}$ $_{NP}$t$_{i}$ [$_{V}$ esta-] contenta]]]]

(21b) [$_{TP}$ Mary$_{i}$ [$_{T}$ [$_{VP}$ [$_{V}$ seems] [$_{TP}$ [$_{T}$ to] [$_{VP}$ $_{NP}$t$_{i}$ [$_{V}$ be] happy]]]]

As opposed to Control constructions, the absence of any Case assigner in Raising constructions forces the lexical NP to raise from an embedded VP-internal position to the main clause, where it is assigned Case by the main verb, thus leaving behind an NP-t as the subject of the infinitival clause.

Chomsky (1981) also distinguishes Control from Raising constructions according to clause structure. As shown in (19)-(20) as opposed to (21), the infinitival subject is introduced by a null Complementizer in Control constructions, but there is no C(omplementizer)-position in Raising constructions.

Besides distinguishing Control and Raising constructions according to clause structure, Stowell (1982) proposes that some main verbs give rise to an interpretive difference with regard to Mood. More specifically, depending on the meaning of the governing verb, certain infinitival clauses may be understood as being unrealized with respect to the main clause. In Control constructions, the event denoted in the infinitival clause is not interpreted as necessarily taking place at the same time as the action event in the main clause. In Raising constructions, both events are interpreted as necessarily taking place at the same time. Infinitival clauses in Control constructions are thus said to denote *irrealis* mood, and infinitival clauses in Raising constructions are said to denote *realis* mood. From a syntactic perspective, Stowell (1982) analyses infinitival clauses with C-positions such as those in Control constructions as having a tense operator, which results in the *irrealis* interpretation of the infinitival clause. Since infinitival clauses in Raising constructions do not have C-positions, they lack this tense operator, which results in the *realis* interpretation of the infinitival clause.

This interpretive difference with regard to Mood is illustrated in (22a) and (22b) for Spanish and English. In these Control constructions, the event denoted by the infinitival clause (*leave the building*) has not happened yet with respect to the main verb. This event may take place in a hypothetical future.

(22a) Susana quiere salir del edificio.

(22b) Susan wants to leave the building.

In contrast, in Raising constructions such as (23a) for Spanish and (23b) for English, the event denoted by the infinitival clause (*be tired*) and the main verb take place simultaneously. It cannot be otherwise, since semi-copulative verbs are stative.

(23a) Susana parece estar cansada.

(23b) Susan appears to be tired.

The categorization of infinitival affixes and markers changes in the Minimalist Program (Chomsky, 1993, 1995, 2001). Non-finite infinitival inflection does not have Agreement properties, but does have certain Tense properties. More specifically, infinitival affixes and markers proposed to have non-finite Tense, and are able to check Case by virtue of their non-finite Tense properties.

Chomsky and Lasnik (1993) assume that non-finite Tense can only check null Case. As opposed to Chomsky (1981), they also assume that PRO has Case: null Case. These authors propose the Null Case Hypothesis, according to which non-finite inflection checks structural (null) Case via Spec(ifier)-Head agreement[14]. Since PRO is the only element that can receive null Case, it follows that overt DPs are not licensed as infinitival subjects. This proposal presents an important problem: it implies that the only possible infinitival subject is PRO. However, as explained above, the category of the null infinitival subject may be PRO or a DP-trace.

In order to account for the distribution of null infinitival subjects, and inspired by Stowell's (1982) analysis, Martin (1992, 1996, 2001) suggests that non-finite infinitival inflection can only check null Case in syntactic configurations where the infinitival clause denotes *irrealis* (that is, syntactic configurations where the infinitival clause is future-oriented, and roughly corresponds to modal elements such as *should* or *would* in English, or the subjunctive in Spanish). Therefore, non-infinitival inflection can only check null Case in Control constructions, and PRO is only licensed as infinitival subject in these configurations. In contrast, it does not check any Case in Raising constructions, and PRO is not licensed as an infinitival subject in these configurations.

The null Case Hypothesis has been subsequently modified in more recent versions of Minimalism in order to account for the distribution of null infinitival subjects. As explained in Radford (2004), infinitival affixes or markers are proposed to have abstract Tense properties, that is, unspecified Tense values that must be determined from the context provided by the main clause. If the Tense value of the infinitival clause is independent from that of the main clause (i.e., if the infinitival clause can be interpreted as future-oriented with respect to the main verb), null Case can be valued on a goal (i.e., PRO)

[14] As shown in (i), PRO moves from a VP-internal position to Specifier of T, in order to have its Case features checked by a Head with matching Case features, that is, non-finite inflection on T.

(i) Mary forced John $[_{TP}$ PRO$_i$ (Spec) $[_{T'}$ $[_T$ to make$_i$ $[_{VP}$ t$_i$ $[_{V'}$ $[_V$ a decision$]]]]]$

with matching phi-features (i.e., Person and Number) by a probe carrying non-finite Tense (i.e., infinitival V), as shown in the Control construction of (24)[15].

(24) Mary forced John [PRO to make a decision]

TP

T'

PRO to make VP

[3-pers] [~~3-pers~~]

[Sg-num] [~~Sg-num~~]

[~~Null-Case~~] [Nf-Tns]

[~~EPP~~] (based on Radford, 2004)

In contrast, if the tense value of the infinitival clause is not independent from that of the main clause, there is no Case to be valued, and PRO is not licensed.

Authors such as Wurmbrand (2001) do not accept the distinction of infinitival clauses in Control and Raising constructions according to interpretive differences with regard to Mood. She claims that infinitival inflection does not have Tense. However, infinitival clauses may receive an *irrealis* interpretation if they involve a future modal (similar to *woll* in German), or a *realis* interpretation if they lack the future modal. According to this author, infinitival clauses in Control constructions are not always future-oriented, and therefore do not always allow an *irrealis* interpretation. As shown in (25)-(26), the infinitival clause in (25a) is not future-oriented, and therefore the construction in (25b) is ungrammatical, as opposed to the infinitival clause in (26a).

(25a) John tried to call Bill.
(25b) *John tried yesterday to call Bill today. Restructuring [-Tense, -Modal]

[15] In Chomsky (2001), Case assignment is reformulated in terms of the attractors, specifically phi-features on Tense (i.e., Person and Number). In finite clauses such as *that*-clauses, nominative Case is valued on a VP-internal goal (i.e., a lexical DP in the position of Specifier of VP) by a probe carrying finite Tense (i.e, finite V) with matching phi-features. Phi-features include agreement features on nouns, pronouns and verbs such Gender, Person and Number, but traditionally have also included categorical features (+/–N and +/–V), binding features (+/–anaphoric, +/–pronominal), (structural) Case features (Accusative and Nominative), and grammatical features (such as +/–*wh*) according to Kerstens (1993).

(26a) John decided to call Bill.
(26b) John decided yesterday to call Bill today. Non-restructuring [-Tense, +Modal]

Wurmbrand (2001) analyses constructions such as (25a) similarly to restructuring infinitives[16] in the sense that they involve truncated infinitival clauses (i.e., they lack TP or CP layers), as shown in (27). They denote bare events or actions, and therefore lack any kind of propositional or force properties (such as Tense or Complementizers). They do not license PRO as a subject and therefore do not give rise to Control.

(27) [$_{TP}$John [$_{vP}$ [$_{VP}$ [$_{V}$ tried [$_{VP}$to call Bill]]]]]

This author adds that Negation and Clitic Climbing can be used to test for the presence of CP layers in an embedded clause. This is based on the following assumptions. On the one hand, negation attaches to inflection and therefore must occur within a TP clause. It follows that negation cannot precede elements involving CP material (e.g., finite embedded clauses with Complementizer *that*). On the other hand, Clitic Climbing in Romance languages, which involves a clitic pronoun raising out of the clause in which it is interpreted, is not possible out of clauses with CP material[17]. Therefore it proves lack of clause boundness and is an indication of restructuring.

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[16] Restructuring is defined as "an optional rule according to which the embedded infinitive and the matrix verb are reanalysed as one complex verb. Thus, restructuring transforms a bi-clausal structure into a mono-clausal one." (Wurmbrand, 2001: p. 6). According to this author, examples of restructuring predicates in English and Spanish are infinitives selected by modal verbs, motion verbs (*come, go, return*), aspectual verbs (*begin, continue, finish*) and causative verbs (*let, make*). According to Wurmbrand (2001), restructuring with infinitives was first observed for Dutch and German by Evers (1975), and for Italian and Spanish by Aissen and Perlmutter (1976) and Rizzi (1976). These authors note that certain infinitives lack clausal properties. Aissen and Perlmutter (1976) propose that these infinitives undergo a process of *clause union* with the matrix clause. Rizzi (1976) proposes that these infinitives undergo a process of *restructuring* as defined at the beginning of this footnote.

[17] According to Kayne's (1989) analysis, Clitic Climbing is derived via head movement through C. Specifically, the clitic moves to I, and subsequently moves to C. From this clause-initial position, it can cliticize to the matrix verb. He also observes that Clitic Climbing is not possible if the embedded clause is finite, as shown in (i). Its ungrammaticality is attributed to the fact that C contains an overt Complementizer.

(i) *María lo quiere que Juan compre.
Mary it-cl. want-3ps.pres that.COMP. John buy-inf.
"Mary wants John to buy it."

Zagona (2002) observes that Control constructions allow Clitic Climbing as shown in (28), but not in Raising constructions as shown in (29)[18].

(28a) María quiere comprarlo
Mary want.3PS.PAST buy.INF.it.CL
(28b) María lo quiere comprar
Mary it.CL want.3PS.PAST buy.INF
"Mary wants to buy it."

(29a) *María parece estarlo
Mary seem.3PS.PRES be.INF.it.CL
(29b) *María lo parece estar
Mary it.CL seem.3PS.PRES be.INF
"Mary seems to be it."

If Wurmbrand's (2001) proposal to distinguish Control from non-Control configurations according to clause structure (i.e., restructuring vs. non-restructuring predicates) is correct, Clitic Climbing can be used as a test for Spanish infinitival clauses. Constructions that allow Clitic Climbing will be analysed as restructuring predicates that do not license PRO, as an infinitival subject and therefore do not give rise to Control, as shown in (30).

(30) $[_{TP}$María $[_{vP}$ $[_{VP}$ $[_{V}$ quiere $[_{VP}$comprarlo$]]]]]$

This proposal is not without problems. Martin (2001) argues that a sentence such as *"John tried to call Bill"* implies some type of temporal ordering between whatever it is that John tries and the call itself, and not simultaneity, although it appears that some verbs allow a clearer differentiation between the time frames of the events than others. As to Clitic-Climbing, it could be argued that it constitutes a test for CP material but not necessarily for restructuring, which involves the absence of either a CP or TP. Even if some Spanish infinitival clauses allow restructuring, and therefore lack CP material, this does not imply that there is no TP.

[18] According to Luján (1980), Clitic Promotion (i.e, Clitic Climbing) is related to the Mood specification of the complement. Only complements that denote *irrealis* (e.g., embedded clauses with subjunctives) allow Clitic Climbing, which explains the contrasting properties of Control and Raising constructions in this respect.

In fact, Bošković (1997) provides empirical evidence supporting the TP status of infinitival clauses in Control constructions. For instance, infinitival clauses that appear in these constructions can be focused in pseudo-cleft sentences, as shown in (31).

(31a) What Mary wanted was [PRO to call John]

(31b) Lo que María quería era [PRO llamar a Juan]

According to this author, if these infinitival clauses were CPs, they would be ruled out by the Empty Category Principle (ECP)[19], because null Complementizers are not governed. This analysis also accounts for the possibility of gapping with Control constructions, as shown in (32).

(32a) Susan wanted to call John and Peter to find Mary.

(32b) Susana quería llamar a Juan y Pedro encontrar a María.

As opposed to Control constructions, Raising constructions do not allow focusing in pseudo-cleft sentences or gapping, as shown in (33) and (34) respectively.

(33a) *What Mary seems [PRO is to be tired]

(33b) *Lo que María parece [PRO es estar cansada]

(34a) *Mary seems to be tired and Peter happy.

(34b) *María parece estar cansada y Pedro contento.

Bošković (1997) proposes that Control and Raising constructions are not distinguished by clause structure; that is, main verbs in Control constructions also select TPs. According to this author, Control constructions are analysed as shown in (35) and (36), for English and for Spanish.

[19] The ECP states that traces must be properly governed. α governs properly β iff:

(i) α governs β and is a lexical head;

(ii) or α- antecedent governs β.

α-antecedent governs β iff:

(i) α binds β;

(ii) no more than one bounding node dominates β but not α;

(iii) there is no filled C governing β.

(35a) María decidió [$_{\text{TP}}$PRO [$_{\text{T}}$-r] [$_{\text{VP}}$ [$_{\text{V}}$llama-] a Juan]]
(35b) Mary decided [$_{\text{TP}}$PRO [$_{\text{T}}$to] call John]]

(36a) María obligó a Juan a [$_{\text{TP}}$PRO [$_{\text{T}}$-r] [$_{\text{VP}}$ [$_{\text{V}}$toma-] una decisión]]
(36b) Mary forced John [$_{\text{TP}}$PRO [$_{\text{T}}$to] [$_{\text{VP}}$ [$_{\text{V}}$make] a decision]]

The selection of a TP or a CP depends on the selectional properties of the higher predicate (i.e., the main verb). Unless a C-position is required by lexical or structural properties (e.g., an overt Complementizer), TP complements are the default option in accordance with a principle of economy of representation called the Minimal Structure Principle (MSP)[20].

Nevertheless, Bošković (1997) agrees with Martin (1992, 1996) in distinguishing infinitival clauses in Control and Raising constructions by their interpretive properties with regard to Mood. In Control constructions, null Case is checked via Spec-head agreement with PRO in SpecTP. In Raising constructions, null Case cannot be checked, and therefore PRO is not licensed. Since the VP-internal DP in these constructions cannot receive Case, it raises to a position where it is assigned Case by the main verb, as shown in previous examples and repeated in (37) for clarity.

(37a) [$_{\text{TP}}$ María$_i$ [$_{\text{T}}$ [$_{\text{VP}}$ [$_{\text{V}}$ parece] [$_{\text{TP}}$ [$_{\text{T}}$ –r] [$_{\text{VP}}$ t$_i$ [$_{\text{V}}$ esta-] contenta]]]]
(37b) [$_{\text{TP}}$ Mary$_i$ [$_{\text{T}}$ [$_{\text{VP}}$ [$_{\text{V}}$ seems] [$_{\text{TP}}$ [$_{\text{T}}$ to] [$_{\text{VP}}$ t$_i$ [$_{\text{V}}$ be] happy]]]]

In sum, infinitival clauses in Control and Raising constructions are distinguished by the selectional properties of the main verb as well as their interpretive properties, or only by their interpretive properties. More specifically, Chomsky (1981, 1995, 2001) and Stowell (1982) propose that main verbs in Control constructions take CP complements, whereas

[20] The MSP states that "provided that lexical requirements of relevant items are satisfied, if two representations have the same lexical structure and serve the same function, then the representation that has fewer projections is to be chosen as the syntactic representation serving that function" (Bošković, 1997: p. 25).

main verbs in Raising constructions take TP complements. Infinitival clauses in Control constructions denote *irrealis*, similarly to English modals *should* or *would*, or to the Spanish subjunctive, and license PRO as their subject. In contrast, English and Spanish infinitival clauses in Raising constructions denote *realis*, similarly to English finite verbs or the Spanish indicative, and do not license PRO. Martin (1992, 1996, 2001) and Bošković (1997) distinguish Control and Raising constructions only by their interpretive properties. Bošković (1997) proposes that main verbs in Control and Raising constructions take TP complements as the default option for reasons of economy.

Wurmbrand (2001) distinguishes infinitival clauses according to the restructuring properties of the main verb. Non-restructuring verbs may take TP or CP clauses, and restructuring verbs can only take VP clauses. Infinitival clauses that complement non-restructuring verbs denote *irrealis,* indicating that PRO is licensed as infinitival subject. Infinitival clauses that complement restructuring verbs denote *realis,* indicating that PRO is not licensed. The former would give rise to Control, but not the latter. This author adds that certain main verbs, which traditionally have been proposed to appear in Control constructions when they take an infinitival clause, are actually restructuring verbs.

2.1.2. The syntactic properties of infinitival clauses in OpC and ECM constructions

I have established the Case assigning properties of Spanish and English infinitival inflection, which basically licenses null subjects (i.e., PRO and DP-traces) in Control and Raising constructions. As far as I can determine, Spanish and English do not differ with regard to the Case assigning properties of their infinitival inflection. I will look at the Case assigners that license overt infinitival subjects in Optional Control (OpC) and Exceptional Case Marking (ECM) constructions.

As mentioned previously, infinitival clauses license lexical DP subjects in two syntactic configurations: Exceptional Case Marking (or true ECM) constructions, and Optional Control constructions. The term "optional" refers to the fact that infinitival clauses in these constructions may appear in two different syntactic configurations (San Martín, 2004), as shown in (38) as opposed to (39)[21].

(38) I_i wanted [PRO_i to see a specialist]

(39) I_i wanted [(for) John/him_j to see a specialist]

If the subject of the main verb is also the antecedent of the infinitival clause, this gives rise to a Control construction such as (38). The infinitive licenses null subject PRO, which corefers with the main subject. If the subject of the main verb and the antecedent of the infinitival clause are different, this gives rise to a type of ECM construction such as (39) (i.e., an Optional Control (OpC) construction). The overt subject DP is licensed by a prepositional Complementizer that is not obligatorily spelled out. The clausal structure of the infinitival clause is shown in (40).

(40) I wanted [$_{CP}$ [$_{C}$Ø] [$_{TP}$John/him [$_{T}$to] [$_{VP}$ [$_{V}$see] a specialist]]]

According to Bošković (1997), the infinitival clause is headed by the phonologically null counterpart of the Complementizer *for*[22]. The overt DP infinitival subject is Case-checked under Spec-head agreement with the infinitival T as well as by C. More specifically, it is

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[21] Optional Control constructions, that is, predicates that optionally take *for-to* infinitives as shown above in examples (38)-(39), have long been considered to show non-obligatory Control as defined by Williams (1980) (but not as defined by Hornstein (1999, 2001)). Landau (2000, 2003) argues that Optional Control constructions in fact show a type of obligatory Control, namely partial Control as exemplified in (i). In recent literature, the term "optional Control" is sometimes used synonymously to "partial Control" (Alboiu, 2004).

(i) The $director_i$ wanted [PRO_i+ to meet immediately]

In this dissertation, I always use Optional Control in reference to the possibility of taking *for-to* infinitives, and it should not be confused with non-obligatory Control as defined by Hornstein (1999, 2001). Please consult the *Interpretation of infinitival clauses* section in this chapter for further clarification on non-obligatory Control and partial Control.

[22] According to Watanabe (1993), the *for-to* complex in *for-to* infinitival clauses is generated under T. The DP subject is Case-checked under Spec-head agreement with the infinitival T and then *for* undergoes movement to C. Bošković (1997) assumes that the null counterpart of *for* behaves in the same way. The existence of Complementizer *for* was first proposed by Bresnan (1972), according to Kayne (1981).

Case-checked in SpecTP with the *for-to* prior to the raising of *for* to C, as shown clearly by *him* (**he wanted he see a specialist* would be ungrammatical). *For* then assigns accusative Case to the DP subject. In fact, it would appear that OpC constructions are a subset of *for-to* infinitival constructions such as *I will arrange for him to see a specialist.* In contrast with OpC constructions, the prepositional Complementizer in *for-to* infinitival clauses is always spelled out.

In English, the verb *want* seems to be the only one that appears in OpC constructions[23]. In Spanish, the verb *querer* 'want' allows an infinitival clause only if the main subject is also the antecedent of the infinitival subject, as shown in (41). Otherwise, it appears obligatorily with a finite *that*-clause, as shown in (42b).

(41) Quiero [PRO ver a un especialista]
Want.1PS.PRES see.INF a specialist
"I want to see a specialist."

(42a) *Quiero [para Juan ver un especialista]
Want.1PS.PRES for.PREP John see.INF a specialist

(42b) Quiero [que Juan vea un especialista]
Want.1PS.PRES that.COMP John see.3PS.PRES.SUBJ a specialist
"I want John to see a specialist".

The sentence in (42a) is ungrammatical because the DP infinitival subject is not licensed in SpecTP. The preposition *para* 'for' in Spanish cannot check it for structural Case (i.e., accusative), and infinitival inflection cannot assign nominative Case. Therefore, when the main subject is not the antecedent of the infinitival subject, the only grammatical option is (42b). Finite inflection assigns nominative Case, and the DP subject is licensed.

[23] The verb *like* also seems to alternate in OpC constructions, as shown in (i) and (ii).
(i) I would like to leave.
(ii) I would like you to leave.
However, this alternation does not always work (*I like to cook/*I like you to cook*). In addition, it can alternate with gerundive clauses and infinitival clauses (*I like looking at myself in the mirror/I like to look at myself in the mirror*), as opposed to the verb *want* (**I want reading the book/I want to read the book*).

Prepositions in English usually assign inherent and not structural Case. However, the Case-assigning properties of the preposition *for* underwent diachronic change. According to Miller (2002), in Old English, the infinitival marker *to* started appearing with the Case-assigning preposition *to* in dative + infinitive constructions with overt infinitival subjects. As shown in (43), the ambiguity between the infinitival marker and preposition triggered the appearance of the *for to* infinitive[24].

(43) It is good to us for to be here.
"It is good for us to be here."
(WBibl EV; Miller, 2002: p. 204)

In Middle English, as morphological dative Case was lost, the preposition *for* was reanalysed as a Case assigner for overt infinitival subjects. The preposition *for* eventually replaced the preposition *to*, as shown in (44), giving rise to *for-to* infinitival constructions in Modern English.

(44) it is easier for a camel to pass (through a needle's eye) (Miller, 2002: p. 205)

Thus preposition *for* came to be a Complementizer assigning structural Case (i.e., accusative) to overt infinitival subjects. In contrast with English, Spanish does not have prepositions that can assign structural Case. As observed by Fernández Lagunilla (1987), Spanish prepositions only assign inherent Case. Therefore, Spanish does not have prepositional Complementizers, and OpC constructions are not possible.

[24] The *for-to* infinitive has disappeared in Modern English, with the exception of certain dialectal varieties. Examples of *for-to* dialects are Belfast English (Henry, 1992), Ottawa Valley English (Carroll, 1983; Henry, 1992), and Ozark English (Chomsky, 1981; Chomsky & Lasnik, 1977; Koster & May, 1982; Henry, 1992). In these dialects, the Complementizer *for* can appear directly before the infinitival marker *to,* as was the case in Old English:

(i) I want for to meet them. (Henry, 1992: p. 279)
(ii) I want very much for him to get accepted. (only Belfast English; Henry, 1992: p. 284)
(iii) I tried for him to go home. (only Ozark English; Henry, 1992: p. 283)
(iiii) I persuaded John for to go home. (Henry, 1992: p. 283)
(v) John seems for to be better. (Henry, 1992: p. 285)
(vi) I believe them for to have done it. (Henry, 1992: p. 285)

In short, one of the main syntactic differences between Spanish and English regards their Complementizer systems. English has prepositional Complementizers that appear in infinitival clauses (i.e., *for*), as well as Complementizers that appear in finite clauses (i.e., *that, if* and *whether* as observed in Castillo (2003)). In Spanish, prepositions only assign inherent Case, and the only Complementizers available are those that appear with finite clauses (such as *que* 'that')[25]. The absence of Complementizers that license overt infinitival subjects contributes to the lack of productivity of overt subjects before infinitival clauses in this language compared to English.

Another important difference is that, in Spanish, some main verbs such as *querer* 'want' alternate with infinitival and finite clauses, depending on whether the infinitival subject corefers with the main subject or not. This is also the case with Control constructions where the infinitival subject corefers with the main object. In these constructions, the main verb can alternate with infinitival and finite clauses, as shown in (45) and (46).

(45) María obligó a Juan a tomar una decisión
Mary force.3PS.PAST to John to make.INF a decision.
"Mary forced John to decide."

(46) María obligó a Juan a que tomara una decisión
Mary force.3PS.PAST to John to that.COMP make.3PS.PRES.SUBJ a decision.
"Mary forced John to decide."

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[25] Other Romance languages such as French and Italian have prepositional Complementizers, Kayne (1981) proposes that the preposition *de / di* can behave as Complementizer in these languages, and appear in Control contexts where the object is interpreted as the controller:

(i) Je lui ai dit qu'il parte. (I told him that he should go) // Je lui ai dit de partir. (I told him to go)
(Kayne, 1981: p. 34)

In Standard Spanish, the preposition *de* does not show this behaviour. However, in Peninsular Spanish it is not unusual to hear this preposition in Control contexts similar to French and Italian, in informal situations or even in the media. The following examples have been taken from the Internet:

(ii) Le dije que lo hiciéramos juntos / ??Le dije de hacerlo juntos. (I told him we could do it together)
(iii) La dijo que regresara a su casa y le escribiera / ?? la dijo de regresar a su casa y escribirle.
(She went to see him but he told her to go back home and write to him)
(iiii) Se dijo ayer que cenáramos pescaíto /??Se dijo ayer de cenar pescaíto.
(It was proposed yesterday that we should have fried fish for dinner)

As opposed to Modern English, Spanish has finite embedded clauses that denote *irrealis*, namely *that*– clauses that contain a verb in the subjunctive, and thus the alternation with infinitival and finite clauses described above is possible[26]. The availability of finite inflection such as the subjunctive contributes to the lack of productivity of infinitival subordination in contexts where the embedded clause denotes *irrealis* in this language compared to English.

With regard to ECM constructions, they are analysed as lacking a C-position, as shown in (47), which allows the main verb to assign Case to an argument outside its clause. This argument raises from a VP-internal position to SpecTP in order to be Case-checked by the main verb. It occupies the subject position of the infinitival clause, and at the same time it is object of the main verb, from which it receives accusative Case. In Spanish, this object is morphologically Case-marked with the preposition *a*[27].

(47a) [$_{T}$ [$_{VP}$ [$_{V}$ Veo] [$_{TP}$ al jardinero$_{i}$ [$_{T}$ -r] [$_{VP}$ t$_{i}$ [$_{V}$ rega-] las plantas]]]]

"I see the gardener watering the plants"

(47b) [$_{TP}$ I [$_{T}$ [$_{VP}$ [$_{V}$ believe] [$_{TP}$ John$_{i}$ [$_{T}$ to] [$_{VP}$ t$_{i}$ [$_{V}$ be] intelligent]]]]]]

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[26] In Old English, infinitival clauses containing infinitival marker *to* competed with finite *that*-clauses with the subjunctive when the main verb belonged to the following semantic classes: intention, conatives, desideratives and their negative counterparts (*refuse, fear, avoid*), command and permission.

(i) He gewilnode Þaet he haefde lof & herenesse
he desired that he have glory & praise (Gregory's Dialogues 8.117.30C; Miller 2002: p. 191)

(ii) He gewilnode to haebbenne Þaet lof & herunge
he desired to have that glory & praise
"He desired to have the glory and praise" (ibid. later manuscript H; Miller 2002: p.191)

At the same time dative objects in the main clause were reanalysed as infinitival subjects, the infinitive entirely took over the domain of the subjunctive.

[27] In Spanish, all [+human] objects are preceded obligatorily by the so-called personal preposition *a*, regardless of the syntactic category of the object or the syntactic context in which it appears.

(i) Ayer vi a mi hermana. (Direct object)
(Yesterday I saw my sister)

(ii) He enviado un paquete a mi hermana. (Indirect object)
(I sent a package to my sister)

These infinitival clauses denote *realis.* In fact, the main verb in these constructions can alternate with infinitival and finite *that–* clauses in English and Spanish, as shown in (48) and (49). In Spanish, the verb in the finite clause appears in the indicative.

(48) Veo que el jardinero está regando las plantas.
see.1PS.PRES that.COMP. the gardener is.3PS.PRES.IND watering the plants
"I see that the gardener is watering the plants."

(49) I believe that John is intelligent.

Spanish and English do not differ with regard to the Case-assigning properties of the main verb in ECM constructions. However, these languages show lexical differences with regard to the verbs that appear in this configuration. In English, opinion verbs such as *believe* and *consider* give rise to ECM configurations, as opposed to Spanish where only perception verbs such as *ver* 'see' and *oír* 'hear' give rise to ECM configurations, according to Hernanz and Brucart (1987) and Hernanz (1999). The Spanish counterparts of *believe* and *consider* do not give rise to ECM configurations, as shown by the ungrammaticality of (50) and (51).

(50) *Creo a Juan ser muy inteligente.
Believe.1PS.PRES to John be.INF very intelligent
"I believe John to be very intelligent."

(51) *Considero a Juan ser muy inteligente.
Consider.1PS.PRES to John be.INF very intelligent
"I consider John to be very intelligent."

The main verbs *creer* 'believe' and *considerar* 'consider' only license finite *that–* clauses with the verb in the indicative, as shown in (52) and (53).

(52) Creo que Juan es muy inteligente.
Believe.1PS.PRES that.COMP John is very intelligent
"I believe that John is very intelligent."

(53) Considero que Juan es muy inteligente.
Consider.1PS.PRES that.COMP John is very intelligent
"I consider that John is very intelligent."

With regard to the other syntactic configurations described previously, main verbs do not necessarily appear in the same syntactic configurations in English and Spanish. More specifically, command/influence verbs usually give rise to Control constructions where the main object is the controller of the infinitival subject in both languages. However, not all the command/influence verbs that appear in these configurations in English do so in Spanish. For example, the counterpart of *persuade* in Spanish does not give rise to Control configurations, as shown by the ungrammaticality of (54).

(54) *María convenció a Juan de aceptar la oferta.
Mary persuade.3PS.PRES to John of accept.INF the offer
"Mary persuaded John to accept the offer."

The main verb *convencer* 'persuade' only licenses finite *that–* clauses with the verb in the subjunctive, as shown in (55).

(55) María convenció a Juan de que aceptara la oferta
Mary persuade.3PS.PAST to John of that.COMP accept.3PS.SUBJ the offer
"Mary persuaded John to accept the offer."

In addition to the lexical differences described above, Control configurations where the main object is the controller of the infinitival subject show structural differences concerning the Case and the Case-marking of the DP. As mentioned above for ECM constructions in Spanish, the object DP is obligatorily Case-marked by the preposition *a*. Depending on the selectional properties of the main verb, it may receive accusative Case as in (56) or dative Case as in (57). If the object DP receives accusative Case, it may not be replaced by an indirect object pronoun (e.g., **María <u>se</u> lo obligó*), as opposed to when it receives dative Case (e.g., *María se lo prohibió*).

(56) María	obligó	a Susana	a manejar	el coche.
Mary	force.3PS.PAST	to Susan.ACC	to drive.INF	the car

"Mary forced Susan to drive the car."

(57) María	prohibió	a Susana	manejar	el coche.
Mary	forbid.3PS.PAST	to Susan.DAT.	drive.INF	the car

"Mary did not allow Susan to drive the car."

As shown by the English equivalents for the Spanish examples in (56) and (57), the object DP in English is not morphologically Case-marked; it receives accusative Case from the verb.

Alternatively, in Object Control constructions where the DP lacks phonetic realization, the controller would be a direct object clitic as in (58), or an indirect object clitic as in (59). Object clitics appear obligatorily before the main verb.

(58) María	la	obligó	a manejar	el coche.
Mary	her.CL	force.3PS.PAST	to drive.INF	the car

"Mary forced her to drive the car."

(59) María	le	prohibió	manejar	el coche.
Mary	her.CL	forbid.3PS.PAST	drive.INF	the car

"Mary did not allow her to drive the car."

As shown by the English equivalents for the Spanish examples in (58) and (59), if the DP lacks phonetic realization in English, the controller is a direct object pronoun that appears in the same position as the DP; that is, after the main verb and before the infinitive.

Regarding Control constructions where the main subject is the controller of the infinitival subject, and also Raising constructions, main verbs that appear in these syntactic configurations in English do so in Spanish as well. The differences between these languages regard the syntactic category of the controller. More specifically, in Control constructions where the main verbs belongs to the pseudo-impersonal or psych classes, the controller may be an indirect object DP that is Case-marked with the preposition *a,* as shown in (60) as opposed to (61).

(60) María decidió llamar a Juan
Mary decide.3PS.PAST call.INF to John
"Mary decided to call John"

(61) A Pedro le gusta jugar al baloncesto
To Peter him.CL. like.3PS.PRES play.INF at basketball
"Peter likes to play basketball."

Alternatively, in cases where the DP lacks phonetic realization, the controller would be the indirect object clitic that doubles the DP, as shown in (62).

(62) Le gusta jugar al baloncesto
Him.CL. like.3PS.PRES play.INF at basketball
"He likes to play basketball."

In sum, regarding configurations where overt infinitival subjects are licensed, Spanish and English differ with regard to the availability of Case assigners. More specifically, the English Complementizer system has prepositional Complementizers which license overt infinitival subject, as well as other types of Complementizers such as *that.* The Spanish Complementizer system is a subset of the former, as it lacks prepositional Complementizers. Therefore, Optional Control constructions do not exist in Spanish, and overt preverbal infinitival subjects are less productive in Spanish than in English. Regarding Control, Raising and ECM configurations in general, Spanish and English show structural as well as lexical differences. As opposed to English, Spanish has finite inflection that denotes *irrealis* (i.e., the subjunctive), and thus finite clauses are either the only grammatical option, or an alternative to subordination with infinitival clauses. Therefore, infinitival subordination is less productive in Spanish than English. Morphologically, object DPs in Spanish are always Case-marked with the preposition *a*, and receive either accusative or dative Case in Control configurations, and accusative Case in ECM configurations. In English, object DPs are not morphologically Case-marked, and receive structural (i.e., accusative) Case. In Spanish, if the DP lacks phonetic realization, the pronoun may be either a direct object or indirect object clitic; unlike DPs, object clitics are in a preverbal position in the main clause. In English, it will be an object pronoun, which appears in a postverbal position in the main clause.

2.2. The interpretation of infinitival clauses

At this point, I have established that infinitival clauses can take either a null or an overt subject. As discussed previously, overt infinitival subjects in OpC and ECM constructions are either pronouns or referential expressions. Their interpretation follows the principles of Binding Theory: pronouns are free in their minimal domain, and referential expressions are free everywhere.

In traditional Generative analyses, infinitival clauses in Control and Raising constructions have been proposed to take two different types of null subjects. Therefore, they have been proposed to differ regarding the principles that regulate their interpretation. In Raising contexts, the infinitival subject is analysed as a DP-trace. This trace is a non-pronominal anaphor, bound in its minimal domain by the DP in the main clause. The DP and the trace form a chain, in accordance with Binding Theory. In Control contexts, the subject of the infinitival clause is PRO (i.e., the controlled element), a type of anaphor that enters a relation of referential dependence (i.e., Control) with an antecedent DP (i.e., the controller) in the main clause. If there is more than one possible antecedent, the controller is usually interpreted to be the closest DP to the infinitival clause in accordance with

Rosenbaum's (1968) Minimal Distance Principle (MDP)[28]. If there is no antecedent DP in the main clause, PRO receives an arbitrary interpretation.

The interpretation of infinitival clauses in Control constructions presents the interesting problem of whether it is a purely syntactic or semantic phenomenon (or a combination of both). Proponents of a purely syntactic account within the Generative framework tend to follow or adapt Rosenbaum's (1968) proposal. Proponents of a purely semantic account explain choice of controller in terms of a hierarchy of grammatical functions (i.e., indirect object, direct object, subject) (Bresnan, 1982) or in terms of the thematic relation of the possible controllers (Chierchia, 1983, 1984; Jackendoff, 1972; Ružička, 1983).

One of the main arguments against purely syntactic accounts is that the MDP does not explain the interpretation of infinitival clauses with main verbs such as *promise* (Culicover and Jackendoff, 2001, among others), as shown in (63) as opposed to (64).

(63) John$_i$ persuaded Mary$_j$ [PRO$_{*i/j}$ to come]

(64) John$_i$ promised Mary$_j$ [PRO$_{i/*j}$ to come]

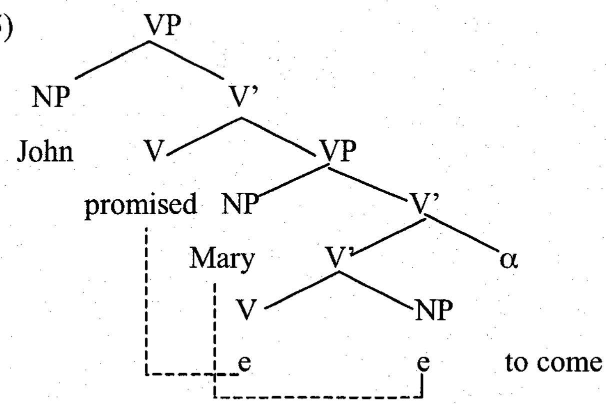
Verbs such as *persuade* and *promise* appear in Control configurations. The main clause contains two possible antecedents: the main subject (*John*) and the main object (*Mary*). The closest antecedent in terms of the MDP is the object. Therefore, the infinitival subject

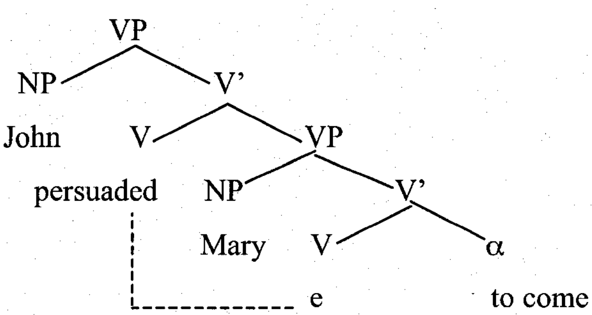
[28] Infinitival clauses in Control constructions select as antecedent the NP "closest" to the infinitival complement in terms of number of nodes crossed. Rosenbaum (1968) proposes a general principle that governs the application of the transformation that deletes the subject of complement constructions, including infinitival complement constructions such as "I (NP$_i$) love (I=NP$_j$) to play piano". According to this principle, the NP$_j$ can be erased by the identity erasure transformation iff there is a "sentence Sα (a complement sentence) such that (1) NP$_j$ is dominated by Sα; (2) NP$_i$ neither dominates nor is dominated by Sα; and (3) for any NP$_K$ which neither dominates nor is dominated by Sα, the distance between NP$_j$ and NP$_K$ is greater than the distance between NP$_j$ and NP$_i$ (where the distance between two nodes is defined in terms of the number of branches in the path connecting them)." (Rosenbaum, 1968: p. 17). In G&B, the term "closest" is reformulated in terms of c-command: the MDP designates the controller picking the closest c-commanding potential antecedent (Manzini, 1983).

should be controlled by the main object in both cases. However, in the sentence with *promise,* the controller is the main subject instead.

In order to account for the "special" interpretation properties of infinitival clauses with *promise*-type verbs from a syntactic perspective, Larson (1991) analyses *promise* as a double object verb in D-structure, and *persuade* as a single object verb, as shown in (65).

(65)





In *promise*-type constructions, the main object is actually an indirect object that raises from a VP internal position to the object position of the main verb. In D-structure, the closest antecedent in MDP terms is the main subject. In *persuade*-type constructions, the main object is generated directly in the object position of the main verb, and is also the closest antecedent in D-structure. Larson (1991) thus concludes that Control constructions with *promise*-type verbs show more derivations than Control constructions with other three-predicate verbs, which makes them structurally more complex. To support his proposal, he points out that *promise*-type verbs can also appear in small clauses with double objects, as opposed to *persuade*-type verbs (e.g., *Mary promised John the book* vs. **Mary persuaded John the book*). Spanish does not have double object constructions, but the same applies to *prometer* 'promise' and *convencer* 'persuade/convince': the former can take two objects, the latter cannot (e.g., *María se lo prometió* vs. **María se lo convenció*).

Independently of the ongoing syntax/semantic account controversy, accounting for the interpretation of infinitival clauses in Control constructions has divided syntacticians that work within the Minimalist framework into two groups: the proponents of the Movement Analysis (e.g., Hornstein, 1999, 2001; Manzini & Roussou, 2000; O'Neil, 1995) and the proponents of the Standard Analysis (e.g., Landau, 2000, 2003).

2.2.1. The Movement Analyses

In order to account for empirical data such as the impossibility of expletives in Control constructions as opposed to Raising constructions (e.g., **There tried to be a man there* vs. *There seemed to be a man there*), these constructions are said to have different thematic properties. More specifically, as observed in Hornstein (2002), the subject of Raising constructions is understood as holding a single thematic function, whereas it is understood as holding two thematic functions in Control constructions.

Based on the assumption that movement between Θ -positions is possible, Hornstein (1999, 2001) proposes that Control "is the overt manifestation of movement via multiple Θ-positions[29] (...)" (Hornstein, 2003: p. 25). More specifically, Hornstein (1999, 2001) is proposing that Control constructions are formed by movement, similarly to Raising constructions. The main difference between Control constructions and Raising constructions would be that the latter involve a single chain and therefore have only one Θ-

[29]Hornstein (1999, 2001) assumes that Θ-roles function like features in licensing movement.

role, and the former involve multiple chains and multiple Θ-roles as shown in (66) as opposed to (67) for English and Spanish.

(66a) $[_{TP}$ Mary$_i$ $[_{TP}$ seems to $[_{VP}$ <Mary$_i$> be tired]]]]
(66b) $[_{TP}$ María$_i$ $[_{TP}$ parece $[_{VP}$ <María$_i$> estar cansada]]]]

(67a) $[_{TP}$ Mary$_i$ $[_{VP}$ <Mary$_i$> tried to $[_{VP}$ <Mary$_i$> call John]]]]
(67b) $[_{TP}$ María$_i$ $[_{VP}$ < María$_i$ > intentó $[_{VP}$ < María$_i$ > llamar a Juan]]]]

(based on Boeckx and Hornstein, 2004, Hornstein, 2003)

As shown here, Control and Raising are analysed as two distinct cases of A-movement. The subject of the infinitival clause in both types of constructions moves from a VP-internal position to Spec of TP motivated by Case concerns. In Raising constructions, it moves to a matrix non-Θ position; in Control constructions, it moves to a matrix Θ-position via another Θ-position. As a result, the infinitival subject in both Control and Raising constructions is a DP-trace, the residue of movement at LF which is coindexed with the antecedent DP in the matrix clause.

Hornstein's (1999, 2001) Movement analysis is motivated by theory-internal reasons, such as the elimination of D-structure as a level of representation in the Minimalist program. More specifically, the distinction between Control and Raising constructions in the Government and Binding framework, which "relies on the thematic requirements d-structure places on derivations (…)" (Hornstein, 2003: p. 11)[30], is argued to be meaningless in the Minimalist Program framework. In can also be argued that the Movement analysis is

[30]As noted in Hornstein (2002), according to G&B, words and morphemes are lexically inserted into the available Θ-positions in D-structure, after which transformations may apply. Since Θ-positions are filled by lexical insertion in Control configurations, movement cannot relate Θ-positions in these configurations as shown in (i); that is to say, the embedded subject may not move to the main subject position because this position is a Θ-position already filled by lexical insertion at D-structure.

(i) *John$_1$ tried [t$_1$ to like Mary] (Hornstein, 2003: p. 9)

Consequently, D-structure thematic requirements make movement between Θ-positions impossible and thus prohibit movement in Control relations, since they involve multiple Θ-roles. In contrast, the main subject position in Raising configuration is a non-Θ-position, and therefore cannot be filled by lexical insertion in D-structure. It must be filled at some later phase of the derivation by movement.

conceptually attractive because, as noted by Hornstein (1999, 2001), it allows the elimination of the Control module, needed only to account for the distribution and interpretation of PRO[31], as well as the last vestiges of D-structure from the grammar.

It is important to note that Hornstein's (1999, 2001) Movement analysis applies only to a subset of Control constructions, namely those that show so-called Obligatory Control[32]. Hornstein (1999) characterizes obligatory Control by a series of properties:

- The subject of the infinitival clause must have a local c-commanding antecedent in these constructions, as shown by the ungrammaticality of (68) as opposed to (69).

  (68) John_i expects e_i to shave himself.
  (69) *John_i's friends expect e_i to shave himself.

- Sloppy interpretation under ellipsis is allowed in these constructions; that is, they have more than one reading. For instance, (70) can be interpreted as "Bill expects John to win" or "Bill expects to win too".

  (70) John expects to win and Bill does too.

- *De se* interpretation is required in these constructions; that is, "John" believes *of himself* that he will win in (70).

[31]According to G&B, traces are derived from movement and are regulated by the ECP; PRO is base-generated and regulated by the Control module.

[32] In the early literature (Jackendoff, 1972; Rosenbaum, 1968), obligatory Equi or Control involves cases where the subject of the infinitival clause is identical (in the relevant sense) to the antecedent NP. According to this definition, constructions such as (i) are analysed as showing obligatory Control, whereas constructions such as (ii) are analysed as showing non-obligatory Control. Williams (1980) subsequently distinguishes between predication (or obligatory) Control, and non-predication (or non-obligatory) Control. In predication Control, lexical NPs cannot appear in the position of PRO, the antecedent must c-command PRO, it is unique and it is required, as shown in (i). In non-predication control, lexical NPs may alternate with PRO, the antecedent need not c-command PRO, it need not be unique and it is not required, as shown in (ii)-(iiii). The Spanish counterparts of all these constructions would show non-obligatory Control.

(i) John tried to win / *John tried for Harry to win // Juan intentó ganar / Juan intentó que Enrique ganara

(ii) John hoped to win / John hoped for Harry to win // Juan esperaba ganar / Juan esperaba que Enrique ganara
(Culicover & Jackendoff, 2001: p. 495)

(iii) John wanted (Harry) to shave. // Juan quería que Enrique se afeitara.

(iiii) To behave in public would help Bill // Comportarse en público ayudaría a Guillermo

- Split antecedents are not allowed in these constructions, as shown in (71).

(71) *John$_i$ told Mary$_j$ e_{i+j} to wash themselves/each other.

On the other hand, constructions showing non-obligatory Control have opposite properties: their infinitival subject does not require a local c-commanding antecedent, sloppy interpretation under ellipsis and *de se* interpretation are not allowed, and split antecedents are allowed.

Hornstein (1999) proposes that obligatory and non-obligatory Control reflect the differences between structures with locally bound anaphors and pronouns. Namely, in constructions that show obligatory Control, the subject of the infinitival clause is an anaphoric expression, and therefore susceptible to form a chain with an antecedent DP. In constructions that show non-obligatory Control, it is a pronominal expression. The Control constructions (whether the controller is the subject or the object of the main clause) that are the subject of this study all show obligatory Control as defined by Hornstein (1999, 2001).

Since PRO has been discarded as the subject of the infinitival clause, an alternative account of the interpretation of the infinitival clause in Control constructions is needed. Hornstein (1999, 2001) proposes an updated version of the Minimal Distance Principle (MDP): the MDP designates the closest c-commanding potential antecedent as the controller[33]. In Control constructions such as (72), the MDP selects the subject, whereas in Control constructions such as (73) it selects the object.

(72a) Mary$_i$ tried e_i to call John.
(72b) María$_i$ intentó e_i llamar a Juan.

[33] *a* is the controller of EC iff *a* c-commands EC, and for all *b* different from *a* that c-command EC, *b* c-commands *a*. (Hornstein, 2001: p. 42)

(73a) Bill forced Mary$_i$ e_i to call John.

(73b) Guillermo obligó a María$_i$ e_i a llamar a Juan.

Control by the main subject is not possible in English or Spanish constructions such as (73), not only because the object is the closest c-command antecedent, but also because it would violate Shortest Move (SM)[34], as shown in the derivation of (74).

(74) *Bill$_i$ forced Mary [e_i to call John]

[$_{TP2}$ Bill [$_T$ past [$_{VP3}$ Bill v+forced [$_{VP2}$ Mary forced [$_{TP1}$ Bill [to [$_{VP1}$ Bill call John]]]]]]]

(based on Hornstein, 2001: p. 45)

If *Bill* is the controller, it must have been merged with *call* and raised to SpecTP1[35], the site of *e*. *Mary* has the object-of-*call* Θ-role, as indicated by its merger in SpecVP2. The external Θ-feature of "v+*forced*" must be checked. If *Bill* is raised to SpecVP3 as shown here, it has to cross *Mary* in SpecVP2. This violates SM, making a subject Control interpretation impossible.

Manzini and Roussou's (2000) account of the interpretation of infinitival clauses in Control constructions (i.e., those which show obligatory Control as defined by Hornstein (1999, 2001)) is very similar to Hornstein's (1999, 2001), as their analysis of Control also dispenses with PRO as the infinitival subject. These authors assume that Θ-roles can be construed as features, and propose that DPs are merged at argument positions. From these

[34] The definition of Shortest Movement in Chomsky (1995) is the following: "if *a* and *b* are in the same minimal domain, they are equidistant from *c*". (Chomsky, 1995: p. 184). More clearly, shorter movements (in terms of c-command) are preferred, as shown by the contrast of the following sentences: *whom$_1$ did John persuade t_1 [to visit whom$_2$]* and **whom$_2$ did John persuade whom$_1$ [to visit t_2]*. In the latter sentence, the moved element skips a position it could have reached by a shorter move, which causes the derivation to crash. In consequence, the Shortest Movement Condition requires keeping links minimal (Chomsky, 1995: p. 182).

[35] The Minimalist Program (Chomsky, 1995, 2001) contemplates three main operations, Merge, Agree and Move. In more recent versions, Merge refers to the base-generation of constituents, and Agree refers to the property of valuing uninterpretable features on constituents (e.g., finite Tense has Nominative as an uninterpretable feature; Tense can look into the VP and value this feature). Move refers to the combination of Merge + Agree, triggered by the need to value uninterpretable features on a constituent. Unlike earlier versions, recent versions abandon trace theory of movement in favour of copy theory of movement (i.e., when a constituent raises, it leaves behind a copy of itself instead of a trace).

positions they attract Θ-roles, as displaced features. In Raising constructions, they attract the Θ-role of the infinitival clause; in Control constructions, they attract two Θ-roles. In short, Manzini and Roussou (2000) also analyse Control as a case of A-movement, on the basis that A-movement can be redefined as Copy and Merge of a single feature instead of a whole DP.

As to the interpretation of infinitival clauses in Control constructions, Manzini and Roussou (2000) agree that the closest c-commanding potential antecedent is designated as the controller, either the main subject or object. They add that this property follows from the Minimal Link Condition (MLC) and Last Resort redefined in Scopal terms[36]. More specifically, MLC+Last Resort determine that the attractor will automatically attract all the potential attractees down to the domain of the next attractor. Again, this predicts that the main object is will be interpreted as the controller in constructions such as (73), repeated here: *Bill forced Mary to call John/Guillermo obligó a María a llamar a Juan.* A subject Control interpretation is impossible because the attractor *Bill/Guillermo* would have to attract a predicate from the domain of the next attractor, *Mary/María.*

In sum, both Movement analyses overviewed above argue that Control and Raising are two cases of A-movement, distinguished only by their thematic properties and not by the categorial nature of the subject of the infinitival clauses (i.e., PRO is dispensed with as the subject of infinitival clauses in Control constructions). Their interpretation follows the stipulations in the grammar that apply to movement (i.e., the MLC or SM), without the need to propose an independent module (i.e., the Control module) to account for it.

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[36] According to the MLC as stated in Chomsky (1995), movement (which is triggered by feature checking according to the Last Resort Principle) is only possible within a local domain. Manzini and Roussou (2000) state that "a feature F attracts all and only the features F_A that are in its scope." (p. 418)

2.2.2. The Standard Analyses

As observed in Landau (2003), the majority of the theories of Control developed within the Generative framework accept the assumptions of the so-called "Standard view" of Control (e.g., Chomsky, 1981, 1995, 2001; Manzini, 1983). More specifically, in contrast with Movement-inspired accounts such as Hornstein's (1999, 2001) and Manzini and Roussou's (2000), these theories assume that:

- The subject of infinitival clauses in Control constructions is distinct from that of infinitival clauses in Raising constructions.
- Control involves two argument chains, Raising only one argument chain.
- A component of the grammar different from the MLC regulates the interpretation of Control constructions.

These assumptions are still valid in a theory of Control developed within a Minimalist framework such as Landau's (2000, 2003), assuming that they do not commit to a particular view of the infinitival subject (i.e., it may be PRO or a different category altogether) or the mechanism that regulates choice of controller (i.e., it may be the Control module or a different component of the grammar).

Landau's (2000, 2003) theory of Control is particularly important for its fine-tuning of the interpretation of Control. His typology of Control not only distinguishes between obligatory and non-obligatory Control[37], but it also subdivides obligatory Control into two types: exhaustive Control (EC) and partial Control (PC). In the former, the subject of the infinitival clause (i.e., PRO) must be identical to the controller. In the latter, PRO must

[37] Landau (2000, 2003) assumes the following definitions of obligatory and non-obligatory Control: in the former, the controller and the infinitive must be clausemates; in the latter, the infinitive does not require a clausemate controller. This author rejects the traditional view of obligatory vs. non-obligatory Control, which distinguishes sentences such as "John tried to win" from "John wanted to win" on the basis of the possibility of a *for*-complement in the latter. He concludes that all complement infinitives fall under obligatory Control. Again, all the Control constructions that are the subject of this study all show obligatory Control as defined by Landau (2000, 2003).

include the controller, but the reference of PRO need not be exhausted by the reference of the controller. PC interpretation can be observed when the speaker has a group in mind as shown in (75), where it is understood that PRO refers to *Mary* and the person or persons she is meeting at six.

(75) Mary$_1$ preferred [PRO$_{1+}$ to meet at six]

According to Landau (2000, 2003), EC and PC are distinguished by the presence of tense contrasts in the infinitival clause. In constructions showing PC, the event of the infinitival clause does not necessarily occur in the same time frame as the event of the main clause, as shown in (76).

(76) Yesterday, John wanted to solve the problem tomorrow. (Landau, 2000: p. 6)

However, constructions showing EC do not allow tense contrasts between the infinitival clause and the main clause, as shown in (77).

(77) *Yesterday, John managed to solve the problem tomorrow. (Landau, 2000: p. 6)

Landau (2000, 2003) analyses obligatory Control as an instance of Agree. The probe (or attractor) is the functional head in the main clause that agrees with the controller: T for subject, small *v* for object. The goal (or attractee) is PRO. The derivations for EC and PC are shown in (78) and (79).

(78) EC: [...[$_{FP}$ [F [$_{VP}$ DP [$_{v'}$ V [$_{CP}$ C [$_{TP}$ PRO [$_{T'}$ T-Agr [$_{VP}$ t$_{PRO}$ ...]]]]]]]]

(79) PC: [...[$_{FP}$ [F [$_{VP}$ DP [$_{v'}$ V [$_{CP}$ T-Agr + C [$_{TP}$ PRO [$_{T'}$ t$_{T\text{-}Agr}$ [$_{VP}$ t$_{PRO}$ ...]]]]]]]]

(Landau, 2000: p. 66–67)

In (78), PRO raises to SpecTP, where Agree matches its phi-features with those of T-agr. The infinitival clause is untensed, so T-agr remains in its position. The matrix head F agrees with the controller, inheriting the semantic number of DP, and with PRO. Thus the EC effect is obtained: by matching the features of F and DP and PRO through Agree. In

(79), Agree also matches PRO and T-agr's phi-features. Since the infinitival clause is tensed, T-Agr raises to SpecCP. The matrix head F is thus blocked from agreeing directly with the embedded PRO. PRO must agree first with the embedded T-Agr, and then T-agr+PRO agrees with F, and thus the PC effect is obtained.

EC and PC are also distinguished by the semantic class of the main verbs that give rise to these types of Control. Landau (2000, 2003) observes that main verbs that give rise EC are implicative (e.g., *manage*), aspectual (e.g., *begin*) or modal (e.g., *need*), whereas those that give rise to PC are factive (e.g., *regret*), propositional (e.g., *claim*), desiderative (e.g., *want*) or interrogative (e.g., *ask*). It is important to note that PC is not a rare phenomenon: infinitival clauses that alternate with factive, propositional, desiderative or interrogative verbs may receive either a PC or an EC reading; it is implicative, aspectual and modal verbs that force an EC reading. However, the PC reading can only be established unambiguously when a singular controller co-occurs with an embedded collective plural as in (75).

Since EC and PC are types of obligatory Control, they do share some properties. As observed in Landau (2000):

- They cannot receive an arbitrary interpretation, as shown in (80).

  (80a) *John wanted [PRO_{arb} to find the bathroom]

  (80b) *John managed [PRO_{arb} to find the bathroom]

- They do not allow long-distance Control. As shown in (81), Control is impossible across a potential controller (i.e., John).

  (81a) *$Mary_i$ heard that John wanted [PRO_i to find the bathroom]

  (81b) *$Mary_i$ heard that John managed [PRO_i to find the bathroom]

There are other properties they do not share. For instance, PC allows sloppy reading under ellipsis, but EC does not. More specifically, the sentence in (82) may receive two different readings: either "Bill wanted John to find the bathroom", or "Bill wanted to find the bathroom too". In contrast, the sentence in (83) only allows one reading: "Bill managed to find the bathroom too".

(82) John wanted to find the bathroom and Bill did too.

(83) John managed to find the bathroom and Bill did too.

In sum, Landau (2000, 2003) shows that two types of obligatory Control can be distinguished according to syntactic and semantic criteria: EC and PC[38]. In the former, the controlled element and the controller are identical. In the latter, the controlled element includes the controller. He claims that the distinction according to semantic class holds across languages, although they do differ with regard to the type of complements that are selected by certain verbs in these semantic classes[39]. In Landau's (2000, 2003) Standard analysis, PC is related to Mood specification: infinitival clauses that show tense contrasts with respect to the main clause (i.e., those that denote *irrealis*) allow PC interpretation; infinitival clauses that do no show tense contrasts with respect to the main clause (i.e., those that denote *realis*) force an EC interpretation. Therefore, PC is a product of the interaction between the syntactic properties of the infinitival clause and the lexical properties of the

[38]Landau (2003) contends that Movement analyses such as Hornstein's (1999, 2001) or Manzini and Roussou's (2000) do not account for PC because they do not distinguish infinitival clauses according to tense contrasts, apart from the fact that the existence of PC implies that not all cases of obligatory Control are reducible to Raising. Hornstein (1999) does not adopt any proposal with regard to tense contrasts, although he does mention Martin's (1996) distinction between *irrealis* infinitival complements in Control and *realis* infinitival complements in Raising to account for the ungrammaticality of derivations such as "*John expects to seem that he is smart" (p. 86). Hornstein (2003) assumes that infinitival complements in obligatory Control constructions denote *irrealis*, and affirms that a movement approach can include PC if it is treated "as a result of an optionally applicable meaning postulate licensed by certain matrix verbs when taking Control complements...(namely) non-finite [+Tense] complements (...) (p. 42). This meaning postulate would be a lexical property tied to specific lexical predicates and would not interact with the syntax.

[39] For instance, English factive verbs normally take finite complements, and only a few take non-finite complements. In other languages like German, Spanish and Italian, non-finite complements with factive verbs are more common.

main verb. In Hornstein's (1999, 2001, 2003) Movement analysis, PC is related only to the lexical properties of the main verb.

2.3. Summary

In this chapter, I have reviewed several accounts of the distribution and interpretation of infinitival clauses in Control, Raising and ECM configurations. According to these accounts, embedded infinitival clauses are licensed with two- and three-place predicate main verbs. In OpC and ECM configurations, they take overt subjects. In Control and Raising configurations, they take null subjects.

With regard to the nature of the null subject, Standard-view inspired theories assume that the category of the null subject is different in Control and Raising constructions, and account for this contrast in terms of the selectional properties (i.e., clausal type) or the interpretive properties (i.e., Mood specification) of the infinitival clause. Movement-inspired theories propose that the category of the null subject is the same in obligatory Control constructions and Raising constructions.

With regard to the interpretation of the null subject, Standard-view inspired theories proposed that is it regulated by different principles of grammar in Control and Raising constructions. In Movement-inspired theories, it is regulated by the principles of grammar that apply to movement (e.g., the MLC or SM) in both obligatory Control and Raising constructions.

English and Spanish do not seem to differ greatly regarding infinitival clauses in Raising constructions and Control constructions where the controller is the main subject. I will study their development in child natural data, but not in the adult experimental data, as the main objective of the experimental study is to investigate interaction in the domain of infinitival clauses where these two languages differ. However, English and Spanish show contrasts with respect to Control constructions where the controller is the main object, Optional Control constructions and ECM constructions: more specifically, (a) Optional Control is not possible in Spanish as opposed to English due to the lack of prepositional Complementizers in this language; (b) finite clauses denoting *irrealis* are available in Spanish as opposed to English, making infinitival subordination less productive in this language; (c) objects are morphologically marked for Case (i.e., accusative or dative) in Spanish as opposed to English, and appear in different positions depending on their syntactic category (i.e., DPs vs. clitics).

In the following chapters, and as part of my learnability proposal for Control, Raising and ECM constructions, I will derive possible learnability difficulties from these crosslinguistic differences. As mentioned in the previous chapter, I will recast the acquisition of these constructions on the basis of markedness theory, according to which more structurally complex constructions (such as CPs) are marked and therefore acquired later than less structurally complex constructions (such as TPs). Assuming that authors such as Bošković (1997) are correct, constructions which lack a C-position (such as subject Control constructions) should be acquired before those with a C-position. I will also recast the acquisition of the properties of the Complementizer in terms of a subset/superset relationship, with the Spanish Complementizer system as the subset of the English Complementizer system. I will propose that bilingual children initially choose the more restricted option (Spanish), and I will ascertain whether L2 learners also choose this option, or whether they initially apply the option of their L1. I will also address one of the aspects of the Standard vs. Movement analyses (partial vs. exhaustive Control), and try to provide evidence from L2 data in favour of one account or the other. In sum, I will formulate predictions and hypotheses with regard to the development of Object Control, Optional Control and ECM constructions in child natural data, and their interaction in English and Spanish in adult experimental data as well as child natural data.

CHAPTER 3. NATIVE ACQUISITION OF INFINITIVAL COMPLEMENTS IN SPANISH AND ENGLISH

In this chapter, an overview of the recent theories of native (monolingual and bilingual) acquisition are presented, as well as several studies of the development of complex syntax, focusing on the production and interpretation of infinitival clauses in Control, Raising and ECM configurations. This is followed by an analysis of natural production data from Spanish/English child bilingual learners, with the objective of investigating the development of infinitival clauses in Control, Raising and ECM configurations in bilingual acquisition compared to monolingual acquisition, and their interaction in Spanish and English.

3.1. Learnability in native (L1 monolingual and bilingual) acquisition

The Principles and Parameters (P&P) approach to L1 acquisition (Chomsky, 1981, 1982, 1986, 1995, 2001) assumes that the human brain is endowed with a cognitive system that allows us to acquire and use a language: the Language Faculty. In other words, child learners are equipped from birth with an organized set of principles that constrain possible grammars[40] and thus underlie all natural languages: Universal Grammar (UG)[41]. To explain variation across languages, it is proposed that some principles of UG known as parameters have limited number of different options (settings or values).

Exposure to linguistic data from a specific language triggers the acquisition of linguistic competence in the L1: it enables the child learner to determine the precise form

[40] Grammars within the Generative framework are defined as formal representations of a speaker's knowledge of a language which generate sentences of said language.
[41] UG is defined by Chomsky (1980) as "the set of properties, conditions, or whatever that constitute the 'initial state' of the language learner, hence the basis on which knowledge of the language develops (p. 69)". This definition remains current in subsequent linguistic theories such as Government and Binding (Chomsky, 1981) or Minimalism (Chomsky, 1995, 2001), although the formalization of UG has changed over time.

the grammar must take, to build a language-specific lexicon and to set the parameters to the values appropiate for that language. UG accounts for the so-called learnability (or logical) problem in L1 acquisition, that is, the child learner's ability to construct "the right grammar for a language in response to experience of a particular sort" (O'Grady, 1997: p. 245) in spite of the so-called poverty of the stimulus. The idea is that child learners come to know certain properties of the grammar that are underdetermined in the input (the utterances the child learner is exposed to) because these properties are not learned, they are part of the child learner's knowledge previous to the acquisition of the language. As explained in O'Grady (1997), the learnability problem (or logical problem of language acquisition) is one of the main research themes of the study of syntactic development in L1 acquisition. The other is the so-called developmental problem of language acquisition, which refers to "the times at which particular constructions are acquired, the errors that are made at intermediate stages, and the path that is followed on the way to acquiring the final linguistic system." (p. 245).

UG-based theories of L1 acquisition assume that child learners start by classifying the words they encounter in the input in terms of the syntactic categories given by UG[42]. According to Pinker (1984), this is accomplished by means of semantic bootstrapping[43] and distributional learning (that is, using the morphological and/or positional properties of

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[42] The P+P model distinguishes between lexical categories (such as noun, verb or adjective) and functional categories (such as Determiner, Complementizer or Tense).

[43] The semantic bootstrapping (Grimshaw, 1981; Pinker, 1984) procedure consists of making use of semantic information to draw inferences about syntax. More specifically, once child learners have derived the meanings of sentences and words from observation, they can project structures from their innate knowledge of the rules that map semantic structures onto syntactic structures. Another view is that child learners classify the words they encounter in the input by means of syntactic bootstrapping (Landau & Gleitman, 1985), that is, child learners who understand the mapping rules from semantics onto syntax can use syntactic structures to deduce the meanings. According to Gleitman (1990), "The difference between semantic bootstrapping and syntactic bootstrapping, then, is that the former procedure deduces the structures from the word meanings antecedently acquired from the observation of events, while the latter procedure deduces the word meanings from the semantically relevant syntactic structures associated with a verb in input utterances." (p. 28)

previously categorized words). Categorized words are subsequently organized into hierarchically structured, binary-branching representations that are also part of UG.

Much of the research on syntactic development in L1 acquisition has focused on the issue of whether all syntactic categories are present at all stages, particularly functional categories. The morphological exponents of these categories and the operations associated with them are not attested in child speech at every stage of development, which has given rise to several accounts of the relation between child grammar and adult grammar, each one taking either a Continuity perspective or a Maturation perspective[44].

Accounts from the Continuity perspective such as the Strong Continuity proposals claim that child and adult syntactic representations are identical at all stages of development. Early child grammar contains all the functional categories present in adult grammar, and omissions of functional categories are not necessarily due to deficits in the underlying syntactic representations (Hyams, 1992, 1994; Valian, 1992, among others). In the view of Valian (1992), these omissions are due to processing limitations. In the view of Hyams (1992, 1994), they may be due to a misset parameter, a pragmatic deficit, or an underspecification of features occurring in child grammars.

In contrast, Weak Continuity proposals (Clahsen, Eisenbeiss, & Vainikka, 1994; Clahsen, Kursawe, & Penke, 1996; Vainikka, 1993/1994, among others) claim that child and adult syntactic representations may not be identical at certain stages of development. While functional categories and features are available in the UG inventory, they claim that

[44] From a Continuity perspective (Pinker, 1984), child grammar is formed of the same UG principles and constructs as adult grammar. From a Maturation perspective, child grammar can show properties that are not present in adult grammar, as constructs may not be available at every stage of development. According to Borer and Wexler's (1987), these properties will never violate UG principles, as they are assumed to be operative at every stage.

early child grammars represent few or no functional categories and features. These are gradually developed to accommodate the input, from VP to IP to CP.

Some accounts from the Maturation perspective propose that early child grammars do not project functional categories at all, and that omissions of functional categories are due to deficits in the underlying syntactic representations (Radford, 1990). Other Maturation accounts contend that functional categories are not absent from early child grammars, but they only become available after a certain stage on the basis that the development of syntax is subject to maturation (Wexler, 1994).

Paradis and Genesee (1997) argue that the study of the development of functional categories in bilingual children can inform us about the development of these categories in all children because crosslinguistic data can crucially determine which perspective accounts better for early child grammar. An advantage of bilingual children with respect to monolingual children is that the acquisition of two languages, which may or may not have matching parametric settings, can be observed in the same population. However, in order to make generalizations about the development of functional categories in L1 acquisition based on the study of bilingual child data, it is important to address the issue of how similar monolingual and bilingual acquisition are.

Regarding this issue, I think it is important to start by specifying the type of bilingualism in question. Bilingual learners may be exposed to two languages simultaneously (simultaneous or near-simultaneous bilingualism) or sequentially (sequential or successive bilingualism) (Butler & Hakuta, 2004; Flynn, Foley, &

Vinnitskaya, 2005; Meisel, 2001, among others)[45]. Another crucial factor is the age at which these learners were exposed to both languages. Since the data analysed in this study comes from bilingual children who were exposed simultaneously to English and Spanish from birth, I will focus on simultaneous bilingualism.

As explained in Montrul (2006), research within the Generative framework into this type of bilingualism has concerned itself mostly with the linguistic development of young child learners (ages 0;00–3;00), and particularly with language differentiation by these learners. Positions in earlier research propose the Unitary Language System hypothesis[46], according to which bilingual child learners start with one linguistic system that later differentiates into two systems, usually between the ages of 2 and 3 (Swain, 1972; Taeschner, 1983; Volterra & Taeschner, 1978, among others). This hypothesis is based on the evidence provided by the presence of code-mixing in bilingual child speech, and I believe it implies that bilingual acquisition and monolingual acquisition are essentially different.

In contrast, positions in later research propose the separate language hypothesis, according to which bilingual learners have differentiated linguistic systems from the very beginning (De Houwer, 1990; Genesee, 1989; Hulk & Müller, 2000; Meisel, 1989, among others). As explained in Paradis and Genesee (1996), these positions challenge the validity of code-mixing as evidence for unity or for interdependence between linguistic systems.

[45] Meisel (2001), and Butler and Hakuta (2004) define *simultaneous bilingualism* as the acquisition of two native languages (L1+L1), from birth and in a natural context. My bilingual subjects are all simultaneous bilinguals. *Sequential bilingualism* is defined as the acquisition of a native language (L1), followed by the acquisition of a non-native language (L2), mostly but not necessarily in an institutional context. An example of a sequential bilingual would be Lakshmanan's (1993/1994) subject, Marta (I will describe this author's study in Chapter IV). Simultaneous bilingualism is also known as *L1 bilingualism* (De Houwer, 1990, 1995, 1998; Genesee, 2001; Lanza, 1993; Meisel 1989, 2001; Swain, 1972), and sequential bilingualism has also been termed *consecutive* or *successive bilingualism* (Albrecht, 2004; McLaughlin, 1978; Lindholm & Padilla, 1978).

[46] Umbrella term coined by Genesee (1989) for proposals that hypothesize the existence of an initial unitary linguistic system in bilingual child learners.

However, the question remains as to whether these systems interact over the course of acquisition, giving rising to either autonomous or interdependent[47] syntactic development in bilingual acquisition. It is possible that they do not interact at all, in which case the syntactic development of bilingual children would be very similar to that of monolingual children (this is also the position of Ezeizabarrena (1996)).

Simultaneous bilingual acquisition is similar to L1 monolingual acquisition in the sense that learners build linguistic systems to account for the input. Also, and in contrast with L2 learners, it has not been questioned that they have full access to UG, and that it is possible for them to attain full linguistic competence in both languages. However, the fact remains that bilingual child learners have access to two grammars, and therefore interaction between both linguistic systems is possible. This can cause syntactic development in these learners to differ from that of monolingual children[48]. Paradis and Genesee (1996) identify three possible manifestations of interdependence: transfer, acceleration and delay. Transfer is defined as "the incorporation of a grammatical property into one language from another" (p. 3). These authors claim that transfer is more likely to occur if the bilingual child learner has reached a more advanced level of syntactic complexity in one language or the other. Acceleration means that "a certain property emerges in the grammar earlier than would be the norm in monolingual acquisition" (p. 3). They claim that achieving a greater lèvel of syntactic complexity in one language would presumably accelerate the development of the

[47] Paradis and Genesee (1996) define interdependence as "the systemic influence of the grammar of one language or the grammar of the other language during acquisition, causing differences in a bilingual's patterns and rates of development in comparison with a monolingual's. (…) the notions of autonomy and interdependence presuppose the existence of two linguistic representations" (p. 3).

[48] These observations apply to balanced bilingualism. Non-balanced bilingual grammars may show characteristics that have been proposed to be idiosyncratic to L2 acquisition, such as incompleteness (i.e., lack of development due to transfer or fossilization). Also, in bilingual acquisition, attainment of full competence or lack thereof depends on sociolinguistic factors such as the status of the languages in question, or environmental factors such as access to input, age of exposure to the different grammars, and continuity of exposure, among others.

other language[49]. Finally, delay refers to "the overall rate of acquisition" (p. 4). It is possible that the burden of acquiring two languages slows down the acquisition process and causes bilingual child learners to fall behind monolinguals with regard to language development. Whereas some claim that it is delayed (particularly proponents of the Unitary Language System hypothesis such as Swain (1972) or Vihman (1982), among others), others claim that bilinguals are not cognitively or linguistically delayed, and show very similar linguistic development compared to monolinguals (e.g., proponents of separate language hypotheses such as Nicoladis, 1995; De Houwer, 1990, among others).

More recent proposals such as Hulk and Müller (2000) adopt Paradis and Genesee's (1996, 1997) account of child bilingual acquisition: the development of both languages is largely autonomous, without excluding the possibility of crosslinguistic influence in the form of transfer, acceleration and delay. They hypothesize that syntactic crosslinguistic influence occurs in bilingual children if a syntactic construction is compatible with two different underlying representations in one language and, at the same time, one of these representations is also possible in the other language. Also, such syntactic constructions must be at the interface between two modules of grammar[50]. In other words, transfer between two linguistic systems is facilitated by languages overlapping at surface level (ambiguous input) and involvement of interface levels between modules of grammar[51].

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[49] This view is indirectly supported in the work of authors such as Gawlitzek-Maiwald and Tracy (1996), who study the code-mixing items in the data of a German-English bilingual child. They find that these code-mixings consist of German functional elements in English utterances, which start after the emergence of functional categories in German and precede the emergence of functional categories in English. This evidence leads them to conclude that there is structural transfer from the (morphologically) stronger language (German) to the weaker language (English). In any case, it appears that acceleration is closely tied to transfer.

[50] According to Hulk and Müller (2000), crosslinguistic influence in bilingual children occurs "most particularly at the interface between pragmatics and syntax in the so-called C-domain, since this is an area that has been claimed to create problems in child monolingual acquisition also" (p. 228), and affects its associated grammatical properties such as verb second, topicalization and, most importantly to this study, complementizers.

[51] Hulk and Müller (2000) clearly state that both conditions must be met in order for crosslinguistic influence to take place. They study two grammatical phenomena, root infinitives and object drop (the results for the latter are reported from

In sum, the degree of similarity between bilingual and child monolingual acquisition varies according to whether one assumes a unitary language or a separate language hypothesis for bilingual acquisition. Theories based on the separate language hypothesis imply that, in principle, language development in bilingual children should not differ from language development in monolingual children. Since the two linguistic systems in these children are separate from the beginning, language development is also separate. However, as mentioned earlier, interaction between both linguistic systems is possible under certain conditions, and appears in form of transfer, acceleration and/or delay.

3.2. State of the art: native (L1) acquisition studies of infinitival clauses

As in monolingual acquisition, the study of bilingual acquisition seems to revolve around the same research themes: language development and the learnability problem. Since I am assuming that UG-based theories account for the learnability problem in both bilingual and monolingual children, my study deals with the process of acquisition of Spanish and English infinitival clauses in Control, Raising and ECM configurations, and their associated properties in child bilingual learners. In this respect, I address three issues. The first is the age at which these constructions are acquired, along with the nontarget-like constructions produced at intermediate stages of acquisition. The second is the order in which these constructions are acquired. And lastly, I look at whether these constructions and their properties are the source of crosslinguistic influence. For this purpose, I compare the data

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Müller, Hulk, and Jakubowicz (1999)) in bilingual learners of Germanic and Romance languages (two language pairs: Dutch/French, and German/Italian), exemplified in (i) and (ii).

(i) Thee drinken (tea drink)	(Niek, 2;07)	(Hulk & Müller, 2000: p. 235)
(V)a pas ranger (goes not arrange)	(Nathalie, 2;03)	(Hulk & Müller, 2000: p. 234)
(ii) Wie diese schliessen? (How these close?)		(Hulk & Müller, 2000: p. 232)
Partire immediatemente (Leave immediately)		(Hulk & Müller, 2000: p. 232)

Their study shows that crosslinguistic influence is observed for object drop, where both conditions are met: (1) an interface level between two modules of grammar is involved, and (2) both languages overlap at the surface level. In contrast, no crosslinguistic influence is observed for root infinitives, where only the former condition is met. Please refer to section 3.2.2 of this chapter for more details on root/optional infinitives.

of bilingual (L1 Spanish/English) and monolingual learners. But before I make my predictions and hypotheses, I will overview previous L1 acquisition studies within the Generative framework regarding infinitival clauses in Control, Raising and ECM configurations. As far as I can determine, the vast majority of these studies involve monolingual (L1 English) children only.

3.2.1. Control into infinitival clauses in L1 acquisition

Early L1 acquisition studies appear to focus mainly on the interpretation (i.e., choice of antecedent for the infinitival subject) of infinitival clauses in Control constructions, particularly in highly exceptional or marked[52] Control constructions. For instance, C. Chomsky (1969) investigates the acquisition of Control in infinitival clauses with the main verb *promise* such as (84), as opposed to Control constructions such as (85) in experimental child data (ages 5;00-10;00).

(84) Mary$_i$ promised John [to shovel$_i$ the driveway]

(85) Mary told John$_i$ [to shovel$_i$ the driveway] (C. Chomsky, 1969: p. 4)

Both Control constructions have an object in the main clause. However, as explained in the previous chapter, the antecedent of the infinitival clause that follows the verb *promise* is interpreted to be the subject of the main clause, in apparent violation of the Minimal Distance Principle (MDP). Only a small class of three-predicate verbs in English allow Control by the subject in spite of the presence of an object in the main clause (according to Sag and Pollard (1991), *promise* and *threaten* are the only verbs in English that show these properties; according to Hernanz (1999), the same applies to *prometer* 'promise' and

[52] The notion of markedness is used here from a developmental perspective, that is, Control constructions are marked or not depending on the time of acquisition. Certain Control phenomena that are observed to be late-learned (i.e., acquired after the age of 6;00) (Goodluck & Birch, 1987) can be considered to be marked from this point of view. Nevertheless, authors such as Hyams (1986, 1987) contend that not all constructions that are acquired late are necessarily marked, because the delay may be due to independent factors related with performance or maturation.

amenazar 'threaten' in Spanish). Therefore, C. Chomsky (1969) argues that children overgeneralize and interpret infinitival clauses that appear with these verbs as being controlled by the object of the main clause until a relatively late age[53].

Other late-learned Control constructions in English include: (a) purpose clauses with object gaps such as (86); (b) backward coreference clauses such as (87); and (c) tough-movement clauses such as (88).

(86) <u>Daisy</u>$_i$ chooses Pluto$_j$ [PRO$_i$ to read to t_j]

(87) [PRO$_i$ to kiss the duck] would make <u>the lion</u>$_i$ very happy

(88) <u>This paper</u>$_i$ is tough [PRO$_i$ to finish t_i]

These constructions also pose interpretation difficulties for young children. Again using experimental data, Goodluck and Behne (1992) show that young children do not understand constructions such as (86), giving fairly random responses until a fairly late age. Tavakolian (1981) and Goodluck (1987), among others show that young children interpret the infinitival clause as having a sentence-external referent in constructions such as (87). Cromer (1987) shows that constructions such as (88) develop late in children.

Later L1 acquisition studies deal with Control structures that are not necessarily exceptional, but show asymmetries in their development in child language. Using experimental data, longitudinal studies such as Hsu, Cairns and Fiengo (1985), McDaniel and Cairns (1990) and McDaniel, Cairns and Hsu (1991) study the acquisition of Control into complement and adjunct infinitival clauses in English such as (89) and (90).

(89) Grover tells <u>Big Bird</u>$_i$ [PRO$_i$ to jump the fence]

(90) <u>Grover</u>$_i$ kisses Big Bird [before PRO$_i$ jumping the fence]

[53] The analysis of Control constructions with the verb *promise,* as opposed to other types of Object Control constructions according to Larson (1991) is presented in Chapter II.

Their data shows that children between 4;00 and 5;00 allow arbitrary Control[54] interpretations in these constructions, that is, they interpret the infinitival clauses in (89) and (90) as having an external referent. After a few months they interpret complement infinitival clauses as having a sentence-internal referent (either the subject or the object of the main clause), but continue to interpret adjunct infinitival clauses as having an external referent. Finally, they also interpret adjunct infinitival clauses as having a sentence-internal referent.

McDaniel and Cairns (1990), and McDaniel, Cairns and Hsu (1991) propose that children's syntactic representations are initially limited to coordination because they lack the necessary semantic knowledge to analyse complements or adjuncts as embedded clauses. From a G&B perspective, since there is no c-commanding NP antecedent for the subject of these clauses, an arbitrary Control interpretation is possible in child grammar. As argued in McDaniel (2003), the acquisition of Control into complement and into adjunct infinitival clauses thus supports Continuity; children's grammars contain the Control Principle and PRO from the beginning, and know the requirements of X-bar theory, which determine where complements and adjuncts should be attached. The non target-like arbitrary Control interpretation is due to lack of lexical knowledge.

However, Wexler (1992) argues that the same data supports Maturation. More specifically, he proposes that initially PRO is not available, and that children treat complement and adjunct infinitival clauses as nominalizations as argued in Carlson (1990). Therefore, these clauses can receive non target-like arbitrary Control, as shown in (91) and (92).

[54] Wexler (1992) questions whether "arbitrary" is the correct way to describe children's interpretation of Control constructions such as (89) and (90), since this interpretation is non target-like. In addition, there is arbitrary Control in adult grammar for constructions such as [PRO to cut trees is harmful for the environment], which lack a sentence-internal antecedent that would give definite reference to the infinitival clause.

(91) [Grover tells Big Bird] [PRO_{arb} to jump the fence]

(92) [Grover kisses Big Bird] [before] [PRO_{arb} jumping the fence]

PRO matures at a certain stage of development, indicated by the appearance of non-arbitrary Control into complement infinitival clauses. Adjunct infinitival clauses are delayed with respect to complement infinitival clauses because children continue to represent them as nominalizations. Assuming that clauses with temporal prepositions such as *before* or *after* contain an empty temporal operator in accordance with Larson (1987)[55], Wexler (1992) proposes that children can only begin to represent adjunct infinitival clauses sententially when this operator becomes available.

As far as I have been able to determine, the Generative L1 acquisition literature does not deal with the interpretation of infinitival clauses in Raising or ECM constructions. In addition, I have not been able to find any experimental studies of the interpretation of Spanish infinitival clauses, not even in Control constructions. Since the interpretation of infinitival clauses cannot be studied in spontaneous data, I will leave this issue aside as far as L1 acquisition is concerned.

3.2.2. Infinitival clauses and the development of complex syntax in L1 acquisition

The transition from simple to complex syntax in English monolingual children has been proposed to take place between the ages of 2;00 and 3;00 (Brown, 1973). After the age of 2;00, the child learners start to combine words and produce sentences. In contrast with adults, many functional elements are usually absent from children's clauses until the age of 3;00 (e.g., inflection such as third person singular *–s* and past tense marker *–ed,* auxiliaries, the copula). As explained in Guasti (2002), mainly two hypotheses have been formulated to

[55] Larson (1987) proposes that clausal complements have an empty temporal operator, as shown in (i).
(i) Mary kissed John $[_{PP}$ $[_{P}$ before $[_{C''}$ O_i $[_{C'}$ $[_{S}$ $[_{NP}$ she $[_{VP}$ left $t_i]]]]]]]$

account for the data in English. From an Unconstrained Maturation perspective, the Small Clause hypothesis (Radford, 1990, among others) affirms that "early clauses encode only lexical-thematic information and that functional categories are subject to maturation" (Guasti, 2002: p. 119). These clauses are analysed as VPs. On the other hand, from a Continuity perspective, the Full Competence Hypothesis (Poeppel & Wexler, 1993) contends that children do not treat finite and infinitive verbs in the same way, that "the distribution of these verbs with respect to other clausal constituents indicates that children formally distinguish them in terms of verb movement" (Guasti, 2002: p. 119). More specifically, it has been observed in the data from V2 (Dutch, German) and non-V2 (French, English) that finite verbs (and not infinitival verbs) move to I or C in early grammars; therefore, children's representations of finite clauses must encode both lexical and functional information.

Child learners of non pro-drop languages with bound infinitival morphology (e.g., French, German, Dutch) have been reported to produce infinitive verbs instead of finite verbs in main clauses (i.e., so-called root or optional infinitives; Rizzi, 1993/1994; Wexler, 1994) until the age of 3;00, as exemplified in (93).

(93a) <u>Dormir</u> petit bébé (sleep little baby) (Daniel, 1;11) (Guasti, 2002: p. 109)

(93b) Ich <u>malen</u> (I paint) (Carlotta, 2;04) (Hulk & Müller, 2000: p. 237)

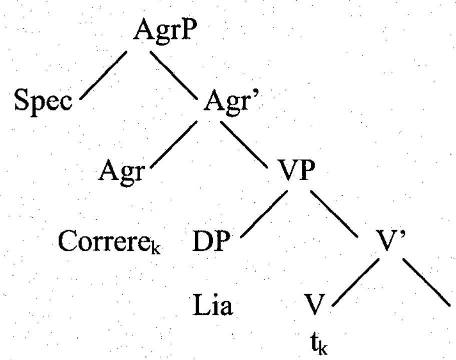
(93c) Hun <u>sove</u> (she sleep) (Jens, 2;00) (Guasti, 2000: p. 108)

In pro-drop languages such as Spanish or Italian, root infinitives are rare (Guasti, 1993/1994) and infinitives are used in a target-like way from the start[56]. With regard to

[56] Recent research has studied root infinitives in languages that are distinguished according to feature strength (i.e., Number in English and other Germanic languages; Person in Romance languages such as Catalan, Spanish and Italian; Tense in Japanese and Korean) (Hoekstra & Hyams, 1995; Hoekstra, Hyams, & Becker, 1997; Hyams, 1996). Root infinitives in Romance languages have been investigated in Aguirre (1995), Bel (1998), and Hoekstra and Hyams (1995), among others.

English, as it does not have bound infinitival morphology, child learners produce uninflected verbal forms in these configurations. These bare forms have been analysed as variants of root infinitives in other languages. As explained in Guasti (2002), there are two accounts for root infinitives. According to the Tense Omission Model (Wexler, 1994), child grammars have an optional tense stage where Tense is not projected for all clauses, giving rise to root infinitives, as shown in (94).

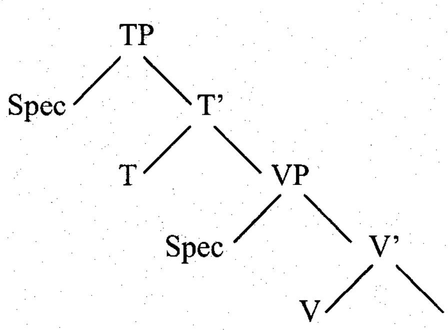
(94) Correre Lia
Run.INF Lia (Optional infinitival clause, no T)



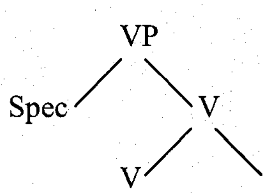
(Guasti, 2002: p. 138)

According to the Truncation Model (Rizzi, 1993/1994), clauses with root infinitives are truncated below TP as shown in (95). There are other truncation sites (e.g., VP as shown in (96)).

(95)



(96)



(Guasti, 2002: p. 142)

Both proposals are made within a UG-constrained Maturation perspective, because the feature Tense is present in the child's grammar, but at a certain stage of development it is sometimes not specified in the syntactic representation of main clauses[57].

In this transition from simple to complex syntax in child grammar, infinitival clauses (verbal complements as opposed to adjuncts) in English are among the first complex constructions to emerge (Limber, 1973). However, the functional element associated with these clauses (i.e., infinitival marker *to*) is reported to be initially missing from children's infinitival clauses (Bloom, Tackeff, & Lahey, 1984; Goro, 2003), as shown in (97). As is the case with main clauses in English, children produce bare forms with embedded clauses.

(97) I want open it. (Bloom, Tackeff, & Lahey, 1984: p. 396)

These studies investigate the development of infinitival marker *to* in infinitival clauses using natural data from children aged 2;00-3;02. Among the main verbs that take infinitival clauses, Bloom, Tackeff and Lahey (1984) focus on those that appear frequently in early child speech. *Want* and modal verbs are observed to be the most frequent, and non-modals such as *try* or *need* are less frequent and appear later. Verbs that give rise to Raising constructions (*seem, appear*) and verbs that give rise to ECM constructions (*believe, consider*) are not attested in the data. They find that in contexts where the main verb has no object (Subject Control constructions), the infinitival marker emerges when the Mean Length of Utterance (MLU) is about 2.5. With regard to contexts where the main clause has an object (Optional Control constructions in the case of *want,* Object Control constructions

[57] According to other accounts such as Hoekstra and Hyams (1995), child grammars are underspecified with respect to the feature Number, and therefore contain root infinitives, as well as null subjects and null determiners. As observed in Liceras, Valenzuela, and Díaz (1999), "The feature Number is crucial in the implementation of finiteness, which is understood as the morphosyntactic expression of a chain which provides the sentence with a specific temporal interpretation and is a property of both verbal and nominal domains" (p. 162).

in the case of *need*), they generally emerge when the MLU is about 3.5, and not before the infinitival marker is expressed in more than 75% of the constructions with modals. However, one of the subjects produces Optional Control constructions with a lower MLU and without the infinitival marker, as shown in (98).

(98) Want the man stand up. (Bloom, Tackeff, & Lahey, 1984: p. 400)

These contexts with an object in the main clause are observed to be less frequent than those with no object in the main clause, and are not used by all the subjects.

Goro (2003) additionally looks at the possibility of overgeneration of the infinitival marker in embedded clauses. More specifically, whether children add the infinitival marker in contexts where it is omitted in adult language, such as the complements of causative and perception verbs as shown in (99) and (100).

(99) I made John (*to) go to the store.

(100) I let John (*to) go to the store.

He finds that children do not overgenerate infinitival markers at all in these contexts. With regard to omission of the infinitival marker in embedded clauses, his findings are similar to those reported in Bloom, Tackeff and Lahey (1984). For instance, verbs such as *seem* or *believe* are not attested in the data, whereas verbs such as *want* or *need* are quite frequent. This means that there are no utterances with Raising or ECM constructions in the data, in contrast with Control constructions. Also, he finds many omissions of the infinitival marker in embedded clauses, as opposed to overgeneration.

Rates of omission are calculated separately for Control constructions with an object in the main clause (in this case, only Optional Control constructions with *want* are attested in the data) as exemplified in (101), and for those with no object in the main clause (Subject Control constructions) as exemplified in (102).

(101) I want it Ø be cold. (Abe, 2;10)

(102) Want Ø sit down. (Adam, 2;03)

Rates of omission are reported to be higher for the former (overall rate of omission = 91.2%) than the latter (overall rate of omission = 42.3%). However, it must be noted that the rate of omission varies considerably from subject to subject[58]. Rates of omission are observed to decrease with age, particularly after 3;00, but the asymmetry between omission in Optional Control constructions and Subject Control constructions remains. Omission of the infinitival marker is reported to disappear completely after the age of 3;02 for all subjects and all constructions.

On the basis of this asymmetry, Goro (2003) concludes that omission of the infinitival marker in these constructions is not uniform. He specifies that omissions in Subject Control constructions are optional, in contrast with the systematic avoidance of the infinitival marker in Optional Control constructions. He proposes that child grammar initially does not have ECM[59], so the overt infinitival subject in the latter is licensed by representing these constructions as small clauses without an IP. He does not account for omission of the infinitival marker in Subject Control constructions. In my opinion, this proposal is problematic because (a) constructions such as (101), which he analyses as ECM constructions, are in fact Optional Control constructions (see footnote 58), so the licensing of the overt infinitival subject would not be problematic on the grounds of the absence of

[58] Goro (2003) analyses the data from from two corpuses in CHILDES (MacWhinney & Snow, 1985): Adam and Sarah (Brown, 1973), and Abe (Kuczaj, 1976). Since he does not include the MLU of these children, there is no way of knowing if the varying rates of omission (e.g., Adam = 34.2%; Sarah = 93.9%; Abe = 4.1% in the case of Subject Control constructions) could be related to this factor. There is an additional problem regarding Optional/Object Control constructions: production rates of these constructions also vary considerably from subject to subject. For instance, Adam produces a total of 199 Control constructions with an object in the main clause, but Sarah only produces a total of 2, and Abe a total of 37. Again this could be related to the MLU of each subject for the age range in question (ages 2;03 to 3;02).

[59] Goro (2003) is assuming that Optional Control constructions with *want* are ECM constructions. However, as discussed in Chapter II, the Case-marking of the overt infinitival subject is different in these constructions compared to true ECM constructions with *believe* (c.f., Case-marking by means of a prepositional Complementizer and Case-marking by means of the main verb).

ECM, and (b) this proposal does not account for omission of the infinitival marker in Subject Control constructions such as (102).

In sum, the functional element that is initially missing in the infinitival clauses produced by child learners of English is the infinitival marker *to,* both in Subject and Optional Control configurations. It has been observed that infinitival clauses in Subject Control constructions appear before infinitival clauses in Optional Control constructions; infinitival clauses in Raising or ECM constructions have not been attested in the age range of 2;00 to 3;06. Rates of omission of infinitival marker *to* start declining in Subject Control constructions before doing so in Optional Control constructions.

The emergence of *to* in embedded clauses is clearly part of the greater issue of the development of functional categories in English child grammar. Assuming that certain parallels can be drawn between the development of inflection in main clauses (i.e., finite inflection) and in embedded clauses (i.e., non-finite inflection), I believe it is possible to account for the omission of the infinitival marker from a Continuity or a Maturation perspective. According to the Small Clause hypothesis, infinitival clauses initially would be bare VPs in all contexts. This would account for the missing inflection in these clauses[60], but it would not explain why infinitival clauses in Subject Control constructions (such as *I want to open it*) appear before infinitival clauses in Optional Control constructions (such as *I want him to open it*), or why the former become target-like before the latter.

According to a Strong Continuity Hypothesis such as the Full Competence Hypothesis, infinitival clauses would be CPs (in the case of Optional Control constructions), TPs or VPs (depending on the syntactic analysis assumed to be correct for

[60] Assuming that it is just a mapping issue, as proposed in the Missing Inflection Hypothesis (Haznedar & Schwarz, 1997), and not a competence issue, and that morphological completeness is not a requirement for the acquisition of syntax (as proposed in Borer (1998) for L1 acquisition, and Sprouse (1998) for L2 acquisition, as opposed to Vainikka and Young-Scholten (1998)).

Subject Control constructions) even at the earliest stage of acquisition. The missing inflection in these clauses could be explained invoking different factors (deficits in underlying syntactic representations, processing limitations, etc.), and the order of acquisition could be accounted in terms of markedness[61] from the perspective of structural complexity.

An intermediate position between both hypotheses would be analogous to Vainikka's (1993/1994) Weak Continuity proposal to account for the development of Case in English. She argues that constructions in early child grammar only involve a VP projection. Functional projections develop gradually at later stages: the IP projection becomes available before the CP projection. It would explain the instances of omission of the infinitival marker, but not the instances where it is included. However, one could adapt Wexler's (1994) Tense Omission proposal for embedded clauses, and argue that there is an optional tense stage where (non-finite) Tense is not projected for all clauses, giving rise to omission of the infinitival marker at times. This feature would be present in the child's grammar, but at a certain stage of development it would not be always specified in the syntactic representation of embedded clauses. It would also explain the order of acquisition on the grounds of their functional projections.

Regarding the syntactic analyses of Control constructions proposed in the theory, both Bošković's (1997) and Wurmbrand's (2001) claims would be supported by either a Strong or Weak Continuity proposal. Infinitival clauses in Subject Control constructions

[61] The notion of markedness in acquisition is highly complex and has several definitions. As explained previously, constructions have been proposed to be marked or not depending on the time of acquisition (the developmental perspective). However, authors such as Hyams (1986, 1987) contend that markedness is not necessarily related with time of acquisition, since the delay may be due to independent factors such as performance or maturation. Other notions of markedness adopt the perspective of structural complexity. For instance, according to Roberts (1999, 2001), constructions involving operations that create more structure in their syntactic representation are marked. Finally, Chomsky (2001) and Rivero (1997) define markedness in terms of whether these operations take place at the computational level or the phonological and the semantic/pragmatic interface levels, the latter being marked in comparison with the former.

with the verb *want* appear and become target-like sooner than infinitival clauses in Optional Control constructions, either as a result of being less marked in terms of structural complexity (they are analysed as TPs by Bošković (1997), and as VPs by Wurmbrand (2001)), or because both the VP and the IP projections become available before the CP projection. The L1 acquisition data regarding English infinitival clauses in principle supports both theoretical analyses, so other kinds of empirical evidence may be needed to validate one analysis over another.

For the purposes of the present study I will leave this issue aside. Nevertheless, it is important to note that this L1 acquisition data does not appear to provide any evidence for the existence of a null Complementizer in Subject Control constructions as initially proposed by Chomsky (1981) and Stowell (1982). In fact, it provides evidence in favor of analyses such as Bošković (1997), who distinguishes Subject Control constructions such as *Mary tried to run* from Raising constructions such as *Mary seemed happy* by their interpretive properties only (*irrealis* vs. *realis*), and not by their selectional properties (CP vs. TP). Indirectly, this paves the way for a Movement-based account of the interpretation of Control and Raising constructions such as Hornstein's (1999, 2001, 2003), where the infinitival clauses that appear in these configurations necessarily have the same clause structure (see examples (66) and (67) in Chapter II), as opposed to Standard-based accounts such as Landau's (2000, 2003) (see examples (78) and (79) in the same Chapter).

3.3. Predictions and hypotheses

As mentioned earlier, my study of the bilingual (L1 Spanish/L1 English) acquisition of infinitival clauses in Control, Raising and ECM configurations revolves around two main issues: development of the corresponding functional categories and their formal properties[62], and their interaction in Spanish and English. With regard to development, I focus on the emergence of infinitival clauses and infinitival morphology in these configurations in Spanish and English. With regard to interaction, I look for evidence that infinitival clauses in these configurations and their formal properties are the source of crosslinguistic influence in Spanish and English. More specifically, I look for evidence that bilingual learners are incorporating formal properties of these constructions into one language from another. I also compare the development of these constructions in bilingual learners to their development in monolingual (L1 Spanish and L1 English) learners, in order to determine whether the formal properties of these constructions emerge sooner or later in bilingual acquisition compared to monolingual acquisition.

3.3.1. Predictions on bilingual acquisition of infinitival clauses

With regard to the development of the functional categories and formal properties related with infinitival clauses in Control, Raising and ECM configurations, previous studies of L1 acquisition in English indicate that Subject Control constructions appear before Optional Control constructions, and that omission of the infinitival marker *to* ends earlier in Subject Control constructions than Optional Control. I have not found any comparable L1 acquisition studies in Spanish. Nevertheless, due to the nature of infinitival morphology in Spanish, I do not anticipate any omission of infinitival morphology in the data from the L1 Spanish children.

From a crosslinguistic perspective, Spanish and English differ greatly with regard to the formal properties of the relevant functional categories in two aspects. In the first place,

[62] The functional categories in question are non-finite Inflection and Complementizer, and the Mood/Tense features associated with non-finite inflection, *irrealis* (or [+Tense]) and *realis* (or [-Tense]). As explained in Chapter II, if the pre-infinitival subject is a null category, these formal features determine what type of null category is licensed. A [+Tense] specification licenses PRO and gives rise to a Control construction; a [-Tense] specification disallows PRO and gives rise to a Raising construction. If the pre-infinitival subject is overt, there are two possible Case-assigning elements that license the pre-infinitival subject. A Case-assigning main verb gives rise to an ECM construction; a Case-assigning prepositional Complementizer gives rise to an Optional Control construction.

as observed in Chapter II, Spanish lacks prepositional Complementizers, meaning that there are no Optional Control constructions in this language. In other words, the Complementizer system in Spanish is clearly a subset of the Complementizer system in English, since it only has one type of Complementizer (i.e., *that*), as opposed to English, which has a prepositional Complementizer and *that*. With regard to interaction, the Complementizer is a very likely candidate in bilingual acquisition, not only because of the subset/superset relationship between English and Spanish regarding this area of grammar, but also in accordance with Hulk and Müller (2000). As explained by these authors, the C-domain is at the interface between two modules of grammar (pragmatics and syntax). Also, there appears to be a certain overlap of the two Complementizer systems at surface level in the sense that (a) prepositions have inherent Case marking properties in both languages, and (b) prepositional Complementizer *for* is not obligatorily spelled-out in Optional Control constructions. In addition, Spanish has bound infinitival morphology (i.e., infinitival affix *–r*). Since L1 child learners are said to acquire bound morphology before or concurrently with free morphology (Vainikka & Young-Scholten, 1998; Zobl & Liceras, 1994), it is conceivable that L1 Spanish children acquire the properties of IP earlier than L1 English children.

For the purposes of this study I assume the separate language hypothesis, according to which bilingual learners of Spanish and English have separate linguistic systems from the beginning. This entails that language development in these learners does not differ from that in Spanish or English monolingual learners, except in cases of interaction between both languages. Therefore, I expect Spanish/English bilingual learners to show the same patterns of development as their monolingual counterparts, except where there is interaction between both languages. If Spanish/English bilingual learners incorporate the formal properties of the Complementizer into one language from another, and if they acquire the properties of IP sooner through bound infinitival morphology in Spanish, this should give rise to two instances of interaction, transfer and acceleration respectively, in accordance with Paradis and Genesee (1996). More specifically, I expect bilingual learners to omit the infinitival marker *to* to a lesser degree than English monolingual learners, and I also expect them to produce Optional Control constructions with *want* because these constructions are not possible in a grammar without structural Case-assigning prepositions.

3.3.2. Hypotheses on the bilingual acquisition of infinitival clauses

I derive the following hypotheses from the abovementioned general predictions.

(1) With regard to the emergence of infinitival clauses, if Spanish/English bilingual learners pattern with monolingual learners, they should acquire unmarked (structurally more simple) clauses before marked (structurally more complex) clauses. In English, they should produce Subject Control constructions before Optional Control constructions. In Spanish, infinitival clauses should be produced before finite clauses with *that.*

(2) With regard to the emergence of infinitival morphology, if functional projections are acquired earlier in Spanish/English bilingual grammar due to the presence of bound infinitival morphology in Spanish, there should be less omission of the infinitival marker in their English compared to monolingual learners.

(3) With regard to the Complementizer, if Spanish/English bilingual learners choose the subset (more restricted) Complementizer system (Spanish), and assuming that the Complementizer is indeed a site for language interaction, there should be less production of Optional Control constructions compared to monolingual learners.

3.4. Method

3.4.1. The data

In order to study the bilingual (L1 Spanish/L1 English) acquisition of infinitival clauses in Control, Raising and ECM configurations compared to monolingual (L1 Spanish and L1 English) acquisition, I use spontaneous production data from several Spanish/English bilingual children, monolingual English children and monolingual Spanish children, as shown in Table 1. Because of the large number of utterances found in the desired age ranges in the two English corpuses, I tried to compensate by studying data from more Spanish corpuses.

TABLE 1
Corpora – Spanish/English bilinguals and monolinguals

Ages	Language(s)	Source
1;03–2;06	Spanish/English	Deuchar and Quay (2000)
1;01–7;05	Spanish/English	Fernández, Liceras, and Spradlin (2002–2005)
1;08–3;03	Spanish/English	Pérez-Bazán (2002)
1;06–5;02	English	Brown (1973)
2;04–5;00	English	Kucjak (1976)
2;10–11;06	Spanish	Benedet, Cruz, Carrasco, and Snow
1;07–4;11	Spanish	Linaza
0;11–3;02	Spanish	Ojea and Llinàs-Grau
0;11–4;08	Spanish	Vila

All the corpora except Fernández, Liceras and Spradlin (2002–2005) were downloaded from the CHILDES database (MacWhinney & Snow, 1985). All the children's recordings had been transcribed into CHAT format for all corpora (McWhinney, 2000). On the basis of the previous L1 acquisition studies overviewed above (Bloom, Tackeff, & Lahey, 1984; Goro, 2003), I selected the transcription files belonging to two age ranges that represent different stages of acquisition: ages 2;03 to 2;11, and ages 3;00 to 5;02. Although these L1 acquisition studies included data from before age 2;03, and for many of the selected corpora there was transcribed data available, I decided to start at this age because the subjects from the Fernández, Liceras and Spradlin corpus are identical twin brothers. In this population, language development tends to lag behind their singleton counterparts (Dale, Simonoff, Bishop, Eley, et al., 1998; among others). I made an exception with the data from the Deuchar and Quay corpus, and included data from before age 2;03, but no data from before age 2;00. In any case, these two stages are justified in terms of the age and the MLU (Mean Length Utterance) differences (Tables 4, 5 and 6 below).

Table 2 provides an overview of the selected transcriptions for the Spanish/English bilingual children.

TABLE 2
Overview of the Relevant Transcriptions – Spanish/English bilingual data

Name	Age	Language	Number of transcriptions	Collector
Simon	2;03–4;09	English	66	Fernández, Liceras, Spradlin
Leo	2;03–4;09	English	66	Fernández, Liceras, Spradlin
Manuela	2;01–2;06	English	4	Deuchar, Quay
Simon	2;04–4;10	Spanish	33	Fernández, Liceras, Spradlin
Leo	2;04–4;10	Spanish	33	Fernández, Liceras, Spradlin
Manuela	2;00–2;06	Spanish	4	Deuchar, Quay
Alberto	2;04–3;00	Spanish/English	9	Pérez-Bazán
Antonio	2;11–3;01	Spanish/English	3	Pérez-Bazán
Carla	2;03–3;03	Spanish/English	17	Pérez-Bazán
John	2;04–3;03	Spanish/English	3	Pérez-Bazán
Sheila	2;08	Spanish/English	1	Pérez-Bazán
Tina	2;03–2;11	Spanish/English	3	Pérez-Bazán

Simon and Leo were living in Salamanca (Spain) at the time they were recorded. Their father is a native speaker of peninsular Spanish, and always spoke to them in Spanish. The mother is a native speaker of American English, and always spoke to them in English. They were further exposed to Spanish through the caretakers at the day care (3 hours a day on weekdays), and to English during visits to and from their maternal grandparents.

The English and Spanish sessions were recorded separately. The Spanish recordings (i.e., those with a Spanish interlocutor, such as the interviewer or the father) were made at intervals of 2-3 weeks until age 3;00 (with some interruptions during the summer holidays, some of which were spent in the United States), and then once a month. The English recordings (i.e., those with an English interlocutor, mostly their mother) were made sometimes more frequently, but the sessions are usually shorter and spread over consecutive days. Simon and Leo appear together in all sessions. The complete corpus comprises a total of 174 sessions, recorded on videotape and/or DVD. One hundred and sixteen sessions are in an English context, and 58 are in a Spanish context. At the time of this study, only a subset of the sessions had been transcribed.

Manuela was living in Brighton (U.K.) at the time she was recorded. Her father is a native speaker of Caribbean Spanish, and her mother is a native speaker of British English. Both parents spoke to her in Spanish, and she was exposed to English from the caretakers at the day care and her maternal grandmother. The Spanish and English sessions were also recorded separately. The main interlocutor in the Spanish sessions was the father, and in the English sessions it was the grandmother. The recordings were made weekly from ages 1;03 to 3;03. The complete corpus comprises a total of 220 sessions, recorded on video and audio. 95 sessions are in an English context, and 125 are in a Spanish context. The data in CHILDES represents only a small sample of the recordings, most of which have not been transcribed yet. Out of the available files on CHILDES, I excluded 7 English files and 5 Spanish files from before age 2;00.

Simon and Leo's longitudinal data covered both age ranges, but Manuela's data only covered the first age range (that is, she was not recorded after age 3;00). Therefore, I decided to add a third corpus to the study. Of all the bilingual corpora available on

CHILDES in the relevant languages, the only one that covered both desired age ranges was the Pérez-Bazán (2002) corpus. As described in Pérez-Bazán (2002), it comprises longitudinal data from several Spanish/English bilingual children living in monolingual English location in the United States at the time of the recordings: Carla, Alberto, John, Sheila and Antonio were living in Michigan, and Tina in Utah. In the cases of Carla and Tina, there was a one language at home policy (i.e., Spanish). In the case of the others, the parents spoke to them in their native language. The mothers of Carla, Tina and Antonio' mothers were native speakers of Peninsular Spanish. Sheila's mother was a native speaker of Mexican Spanish. The fathers of Carla and Tina were native speakers of American English. Although the fathers of Sheila and Antonio were speakers of non-Indoeuropean languages (i.e., Indonesian and Arabic respectively), their main language of interaction with the children was still English. John's mother was a native speaker of British English, and his father was a native speaker of Peninsular Spanish. Alberto's parents were both native speakers of American English, but the mother was of Phillipino descent and had a near-native level of Spanish. The children were further exposed to Spanish during visits to Spanish-speaking countries. Carla and Sheila were also visited regularly by Spanish-speaking relatives. In addition, Carla, Alberto, Tina and Antonio either had a Spanish-speaking babysitter or went to Spanish day care.

The children were recorded by the parents, without the presence of the researcher. No special requests to collect data in either Spanish-only or English-only conversation were imposed on the parents, so there are no separate English or Spanish sessions. Recording sessions were planned to take place every two weeks for 90 minutes, distributed in 30-minute periods (30 minutes alone with the mother; 30 minutes alone with the father; 30 minutes with both parents). The number of recorded hours varies from child to child (Carla

= 24; Alberto = 12; John = 6; Tina = 5; Sheila = 2; Antonio = 2). Most of the data was collected before age 3;00. In the case of Sheila and Tina, no data was collected after this age. At the time of this study, only a part of the corpus had been transcribed and uploaded to CHILDES (M. Pérez-Bazán, personal communication, February 26, 2007). Out of the available files on CHILDES, I excluded 6 Alberto files, 4 Carla files, 3 John files, 1 Sheila file and 1 Tina file from before age 2;03.

Tables 3 and 4 below provide an overview of the selected transcriptions for the Spanish and English monolingual children.

TABLE 3
Overview of the Relevant Transcriptions – Spanish monolingual data

Name	Age	Language	Number of transcriptions	Collector
Mª Carmen	3;04	Spanish	1	Benedet et al.
Raquel	3;06	Spanish	1	Benedet et al.
Clara	3;07	Spanish	1	Benedet et al.
Sergio	3;04 and 3;09	Spanish	2	Benedet et al.
Carlos	3;08	Spanish	1	Benedet et al.
Marta	4;00	Spanish	1	Benedet et al.
María (1)	4;02	Spanish	1	Benedet et al.
María (2)	4;03	Spanish	1	Benedet et al.
Ana Isabel	4;03	Spanish	1	Benedet et al.
Rocío	4;04	Spanish	1	Benedet et al.
Laura	4;11	Spanish	1	Benedet et al.
Pablo	4;00	Spanish	1	Benedet et al.
Gabriel	4;04	Spanish	1	Benedet et al.
Jorge	4;04	Spanish	1	Benedet et al.
Juan	2;03–4;11	Spanish	21	Linaza
Irene	2;03–3;02	Spanish	23	Ojea and Llinàs-Grau
Emilio	2;03–4;08	Spanish	17	Vila

TABLE 4
Overview of the Relevant Transcriptions – English monolingual data

Name	Age	Language	Number of transcriptions	Collector
Adam	2;03–5;02	English	55	Brown
Sarah	2;03–5;01	English	139	Brown
Abe	2;04–5;00	English	210	Kucjak

Adam and Sarah are two of the three children that feature in the Brown (1973) corpus. I excluded Eve (1;06–2;03) because her data does not cover both of the selected age ranges. Adam and Sarah are native speakers of American English. Adam was interviewed about once or twice a month, and Sarah three to four times a month. I analysed all the Adam and Sarah files that were available on CHILDES, as they covered the desired age ranges.

Abe is also a native speaker of American English. From age 2;04 to 4;01, he was recorded twice a week in two 30 minute sessions. After 4;01, he was recorded once a week. Since the files that were available on CHILDES also covered the desired age ranges, I included them all in my analysis.

Juan, Irene and Emilio are native speakers of Peninsular Spanish. Juan was living in Madrid at the time of the recordings. Irene was living in Asturias, a northern region of Spain. We selected Irene out of the three children that comprise the Ojea and Llinàs-Grau corpus (the others were Catalan native speakers). Emilio was living in Barcelona at the time of the recordings, so he was exposed to Catalan as well as Spanish regardless of the language of his family. The frequency of recordings for Juan was rather inconsistent, comprising anything from twice a month to once every three months. Irene was recorded twice a month, Emilio was recorded about once a month or every other month.

Out of the available files on CHILDES, I excluded 4 Juan files, 38 Irene files and 18 Emilio files from before age 2;03. Since Irene was not recorded after age 3;02, I decided to add cross-sectional data from age 3;00. I chose the Benedet, Cruz, Carrasco and Snow corpus. The children are all native speakers of Peninsular Spanish living in Madrid at the time of the recordings. Out of the 81 transcription files available on CHILDES, I selected 16 files from the age range 3;04–4;11.

3.4.2. Data analysis

Since all the data was in CHAT format, I was able to calculate the MLU (mean length of utterance) using the CLAN command *mlu* associated with the CHILDES database. The MLU was calculated on the number of words per utterance (MLUw). Many researchers use age and not the MLU as a determinant of state in development, usually considering age 2;00 to be the relevant period (e.g., Guasti, 1993/1994; Poeppel & Wexler, 1993; Radford, 1990) for the emergence of functional categories. I took this into account as well as the L1 acquisition studies mentioned previously when selecting the relevant age ranges for my study. At the same time, children show a certain amount of individual variation in the amount and complexity of their natural production, so I decided to use the MLU together with age in order to identify more accurately the children's stage of grammatical development, as recommended in Paradis and Genesee (1997). The total number of utterances and MLUw means for the bilingual and monolingual data are shown in Tables 5, 6 and 7 below.

TABLE 5
Total number of utterances and MLUw means – Spanish/English bilingual data

SUBJECTS	LANGUAGE	STAGE I (2;03–2;11)	STAGE II (3;00–5;02)
Simon	English	1,804 [1.831]	3,181 [4.150]
Leo	English	2,137 [2.015]	3,257 [4.391]
Manuela	English	497 [2.706]	–
TOTAL (EN)		**4,438 [2.184]**	**6,438 [4.271]**
Simon	Spanish	1,170 [1.903]	2,245 [3.741]
Leo	Spanish	1,507 [1.901]	2,236 [3.529]
Manuela	Spanish	865 [2.040]	–
TOTAL (SP)		**3,542 [1.948]**	**4,481 [3.635]**
Alberto	Spanish/English	442 [3.389]	11 [4.000]
Antonio	Spanish/English	176 [3.303]	127 [2.559]
Carla	Spanish/English	573 [3.435]	137 [4.985]
John	Spanish/English	460 [3.553]	255 [2.459]
Sheila	Spanish/English	103 [2.369]	–
Tina	Spanish/English	262 [3.269]	–
TOTAL (EN/SP)		**2,016 [3.220]**	**530 [3.501]**

*Total numbers of utterances are followed by the MLUw in brackets

With regard to the bilingual children, Table 5 shows that Manuela's MLUw for English is higher than for Spanish, so she appears to be at a more advanced stage of development in English than Spanish. In contrast, Simon and Leo show similar MLUw for English and Spanish in Stage I, and higher MLUw for English than for Spanish in Stage II. Compared to Manuela, Simon and Leo's MLUw for English are somewhat lower, but there are almost no differences for Spanish. As to the other subjects, since their English and Spanish sessions were recorded jointly, I was unable to calculate their separate MLUw for English and Spanish. Therefore, the figures in the table represent their combined MLUw, calculated on the total of their English and Spanish utterances. In addition, Alberto, Antonio and John only have one file for Stage II, so the figures for these subjects in this stage are actually the result of the analysis of a single file, and not means. Therefore, the progression between both stages for these subjects is not as evident as in the case of Simon and Leo.

TABLE 6
Total number of utterances and MLUw means – Spanish monolingual data

SUBJECTS	STAGE I (2;03–2;11)	STAGE II (3;00–5;02)
Mª Carmen	–	411 [4.786]
Raquel	–	185 [6.227]
Clara	–	339 [4.398]
Sergio	–	531 [3.469] 435 [4.693]
Carlos	–	236 [3.943]
Marta	–	120 [5.955]
María (1)	–	353 [7.997]
María (2)	–	562 [4.792]
Ana Isabel	–	228 [5.020]
Rocío	–	348 [5.618]
Laura	–	211 [6.720]
Pablo	–	284 [5.327]
Gabriel	–	599 [5.454]
Jorge	–	426 [4.138]
Juan	1,110 [2.453]	993 [3.764]
Irene	6,101 [3.778]	768 [3.444]
Emilio	2,666 [2.182]	2,100 [2.972]
TOTAL	**9,877 [2.804]**	**9,217 [4.929]**

With regard to the monolingual Spanish children, Table 6 shows that Emilio is at the least advanced stage of development, with the lowest MLUw for both Stages compared to the other subjects. He also happens to be the only subject who is living in a bilingual environment (Catalan/Spanish), even though his native language is Spanish. As for Juan, the CHILDES database manual points out that the marking of utterances in the original transcriptions (before they were reformatted to CHAT) were not consistent, so a count such as the MLU would not be appropriate in this case. As to the remaining subjects, the MLUw are not means but the result of the analysis of single files.

TABLE 7
Total number of utterances and MLUw means – English monolingual data

SUBJECTS	STAGE I (2;03–2;11)	STAGE II (3;00–5;02)
Adam	16,910 [2.509]	28,655 [4.145]
Sarah	7,819 [1.864]	23,307 [3.219]
Abe	7,820 [5.644]	14,763 [8.033]
TOTAL	**32,549 [3.339]**	**66,725 [5.132]**

With regard to the monolingual English children, Table 7 shows that Sarah is at the least advanced stage of development, with the lowest MLUw for both Stages compared to the other two subjects. Abe's MLUw for both Stages is unusually high, partly as a result of the transcriber's way of marking utterances. More specifically, CLAN recognizes utterances by searching for utterance enders such as full stops or question marks. If the transcriber chooses to include a string of possible utterances in one paragraph without any breaks, the program will consider the entire paragraph as one utterance. Therefore, no correlation between appearance of infinitival marker and MLU should be made on the basis of Abe's results.

In the data analysis, I extracted all the utterances containing infinitival clauses used in Control (subject and object), Raising and ECM contexts. I used two CLAN commands, *kwal* and *combo*[63], to search for the main verbs that appear in these configurations[64]. I looked for both bare and inflected forms. Out of all the main verbs I searched for, the following appeared in the data.

English verbs

Control: allow, ask, need, push, promise, tell, try, want
Raising: seem
ECM: believe

Spanish verbs

Control: querer, esperar
Raising: parecer
ECM: ver, oír

In the case of the English data, I classified them as to whether they appeared with or without an object NP in the main clause, as shown in (103).

(103) hey we want <u>mommy</u> to go in dere [: there]. (Simon, 4;04)

I want <u>him</u> to play with me. (Adam, 3;07)

I do n(o)t want to eat this. (Leo, 3;01)

I want to see him. (Sarah, 2;10)

I also classified them as to whether they appeared with or without an infinitival markers, as shown in (104).

(104) but I thought I need <u>to</u> pick up my finge(r) (Leo, 3;10)

I think you could reach it I really need someone <u>to</u> help me. (Abe, 3;04)

I want Ø see Sesame stweet [: street]. (Leo, 2;07)

d(o) you want me Ø take it? (Adam, 2;10)

[63] As specified in the CLAN manual available on CHILDES, KWAL outputs utterances that match certain words specified by the user. With COMBO, it is possible to compose Boolean search strings to match patterns of words, or groups of words in the data files. Here are two examples of two search commands for KWAL and for COMBO:

(i) kwal +s"need*" +t*CHI @

(ii) combo +s"want*^*to" +t*CHI @

[64] See Appendix I for full list of main verbs. The list of English main verbs was compiled on the basis of Sag and Pollard's (1991) list, and the list of Spanish main verbs on the basis of Hernanz's (1999) list.

In the case of the Spanish data, I classified the verbs as to whether they appeared with an infinitival clause or a (finite) finite embedded clause, as shown in (105).

(105) quiere comer este gato. (Leo, 2;11)
wants eat.INF. this cat
"He/she wants to eat this cat."

es que quiere ver mis juguetes. (Irene, 2;11)
it that wants see.INF. my toys
"he/she does wants to see my toys."

Tintín dise [: dice] que no quiere que lo haga. (Simon, 4;09)
Tintin says that not wants that.COMP. it do.3PS.PRES.SUBJ
"Tintin says that he does not want him/her to do it."

quién quiere que se lo eche? (Marta, 4;01)
who wants that.COMP. him/her.CL it pour.1PS.PRES.SUBJ
"who wants me to pour it for him/her?"

With regard to the number of tokens, I counted repetitions only once in the case of both emphatic and accidental repetitions. In the case of self-repairs, I only counted the last occurrence[65].

3.4.2.1. English data

No ECM constructions were attested in the English data. The verb *believe* was not found in ECM contexts, as shown in (106).

(106) can't believe he got a match. (Simon, 4;10)

you didn't believe me when I dropped little bitty piece of bread crust. (Abe, 2;10)

The verb *seem* appeared twice, and it was used in a Raising context once, as shown in (107).

(107)	it seems to be.	(Adam, 3;07)	Raising configuration
	this big seems alright.	(Abe, 3;04)	Small clause configuration

[65] Example of a repetition: <want more> [/] want more coffee? (Adam, 2;08) – counts as one token.
Example of a self-repair: I want [//] <don't want> [//] I don't want it on. (Sarah, 2;10) – counts as one token (last occurrence only).

The verbs *push* and *promise* were not found in Control contexts, as shown in (108). In addition, the verb *promise* was found only once in the data.

(108) yeah and then I push it then <a &wat> [//] the water might come out. (Leo, 3;09)

oh # you push it open. (Adam, 4;04)

she promised me I could have a birdie. (Sarah, 4;10)

The verbs *allow* and *ask* were used once in a Control configuration, as shown in (109).

(109) I ask L to go g for jaguar. (Simon, 4;10)

because this is allowed to hold pets too. (Abe, 4;03)

The verbs *want, need, try* and *tell* were all used in Control configurations, as well as other syntactic contexts. The verb *tell* appeared in Object Control constructions, as shown in (110).

(110) I told you to put it off (Leo, 4;02)

(A)n(d) her mommy told her not to catch matches. (Sarah, 3;10)

The verb *try* appeared in Subject Control constructions, as shown in (111).

(111) are you trying to take the man away? (Leo, 4;02)

I'm trying to tip this over can you tip it over? (Abe, 2;10)

let's try to catch dem [: them] again. (Adam, 3;07)

The verbs *want* and *need* were found in different types of Control configurations. Target-like Control constructions with *want* were first attested at the ages shown in (112).

(112) I want to see. (Simon, 2;07)

I want to close it. (Leo, 2;07)

I want to go here. (Manuela, 2;05)

want to ride truck. (Adam, 2;06)

I want to see him. (Sarah, 2;10)

I want to beat you up in the bed! (Abe, 2;05)

Target-like Optional Control constructions with *want* were first attested at the ages shown in (113).

(113) I do n(o)t want Ana to break this. (Simon, 3;02)

I want it to go with the top. (Leo, 3;02)

mummy I don't want Ernesto to see. (Sheila, 2;08)

you want mommy to have one? (Adam, 3;02)

because I want cha [: you] to. (Sarah, 3;05)

because I [/] I want it to snow and I sled. (Abe, 2;08)

As shown in (114) and (1115), the verb *want* also appears in Subject and Optional Control constructions with bare forms (i.e., no infinitival marker *to* on the embedded verb).

(114) I want tee [: see] tetme [: Sesame] tweet [: Street] please. (Simon, 2;07)

want see. (Leo, 2;05)

I want jump. (Manuela, 2;01)

want sit down. (Adam, 2;03)

I want put in (th)ere. (Sarah, 2;08)

oh # I want butter mine. (Abe, 2;05)

(115) want me open it? (Adam, 2;09)

I want dat [: that] write on. (Sarah, 2;10)

I want my Dad come with me # Stan tee+tee with me. (Abe, 2;05)

Lastly, subject and Object Control constructions with *need* were first attested at the ages shown in (116) and (117).

(116) I need to cut this one and this one eh@i? (Simon, 3;02)

we need to have lots then we can eat some more. (Leo, 3;02)

I need to [/] I need to put my buses up. (Alberto, 2;04)

I need to plug in it. (Adam, 3;01)

you need to draw? (Sarah, 4;10)

mommy # I (1)need (1)to go tee+tee and poo+poo. (Abe, 2;08)

(117) now I need something to ewase [: erase] it. (Leo, 4;04)

I need a place to put +… (Adam, 3;05)

I need somebody to come with me. (Abe, 2;11)

To conclude, the verbs *want, need* and *try* were the only ones that appeared in both the bilingual and monolingual data. It is important to point out that omission of the infinitival marker *to* occurs only in constructions with the verb *want* (it also happens to be the first main verb to be used productively with infinitival clauses), and only at Stage I.

3.4.2.2. Spanish data analysis

No ECM or Raising configurations were attested in the Spanish data. The verbs *ver* 'see' and *oír* 'hear' were not found in ECM contexts or with finite embedded clauses, as shown in (118).

(118) mira veyo [: veo] un [= una] manzana. (Leo, 3;00)
look see.1PS.PRES an apple
"look I see an apple."

tú no ves éste? (Manuela, 2;05)
you not see.2PS.PRES this one
"Don't you see this one?"

no lo veo. (Juan, 3;06)
no it see.1PS.PRES
"I don't see it."

no te oigo. (Emilio, 2;08)
no you hear.1PS.PRES
"I don't hear you."

The verb *parecer* 'seem' was found with finite embedded clauses, but not in Raising contexts, as shown in (119).

(119) mi [: me] parese [: parece] que hay siete. (Simon, 4;04)
me.cl. seem.3PS.PRES that.COMP. are seven
"It seems to me that there are seven."

parece que me he comi(d)o pieras. (Carlos, 4;08)
seem.3PS.PRES that.COMP. me.CL have eaten pears
"It seems that I have eaten up some pears."

The verb *esperar* 'hope' was also found once in the data with a finite embedded clause, as shown in (120). It was not found at all in subject Control contexts.

(120) a mí me apesta ## espero que no tenga lechuga.
for me me.CL stink.3PS.PRES hope.1PS.PRES that.COMP not have.3PS.SUBJ lettuce
"It stinks; I hope it doesn't have lettuce." (Jorge, 4;08)

Since none of the main verbs that may take object NPs or infinitival clauses were attested in the data, no Object Control constructions were found. Since the Benedet, Cruz, Carrasco and Snow corpus covered the widest age range (2;10 to 11;06), I did a search in the transcription files from after age 5;00. I found only two instances of object Control, shown in (121).

(121) Me volvió a obligarme a tirarme. (Virginia, 8;09)
me.CL again.3PS.PRES to.PREP force.INF me.CL to jump me.CL
"He/she forced me once again to jump."

Entonces el rey la obligó a casarse. (Virginia, 8;09)
Then the king her.CL force.3PS.PRES to.PREP marry.INF.REFL
"Then the king forced her to get married."

The verb *querer* 'want' was the only one found in subject Control contexts as well as with finite embedded clauses. It was first attested with infinitival clauses at the ages shown in (122)[66].

[66] Note that both bilinguals and monolinguals produce examples of Clitic Climbing with pronominal objects (in *la quiero tirar/quiero tirarla* and *lo quiero ver/quiero verlo*). The bilinguals produce target-like Clitic Climbing from the beginning,

(122) es que yo quiero ver mis cosas xxx. (Simon, 2;11)
it that I want.1PS.PRES see.INF my things
"I do want to see my things."

la quiero tirar. (Leo, 2;05)
it want.1PS.PRES throw.INF
"I want to throw it."

quiero dibujar [/] dibujar una manzana. (Carla, 2;04)
want.1PS.PRES draw.INF an apple
"I want to draw an apple."

quero [: quiero] dormir! (Tina, 2;05)
want.1PS.PRES sleep.INF
"I want to sleep!"

mono mono quere [:quiere] pilla de arroz . (Juan, 2;05)
monkey monkey want.3PS.PRES get.INF of rice
"The monkey wants to get some rice."

lo quiero ve(r). (Irene, 2;03)
it want.1PS.PRES see.INF
"I want to see it."

quiero dibujar. (Emilio, 2;04)
want.1PS.PRES draw.INF
"I want to draw."

It was first attested with finite embedded clauses at the ages shown in (123).

(123) pero yo quiero que lo lees [= leas]. (Simon, 4;09)
but I want.1PS.PRES that.COMP it read.2PS.PRES
"But I want you to read it."

+, quieres que está [= esté] caliente? (Leo, 2;10)
want.2PS.PRES that.COMP be.3PS.PRES hot
"Do you want it to be hot?"

yo quiero que te sientes en un banco.
I want.1PS.PRES that.COMP you.CL sit.2PS.SUBJ on a stool
"I want you to sit on a stool." (Carla, 3;02)

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in clear contrast with L2 Spanish learners (see section 4.6.3 of Chapter IV for a more detailed account of the L2 acquisition of clitic placement).

quién quiere que le de. (Juan, 4;07)
who want.3PS.PRES that.COMP him/her.CL give.1PS.SUBJ
"Who wants me to give some to him/her?"

po(r)que quería que empesara [: empezara] otra ves [:vez]. (Irene, 2;07)
because want.2PS.PRES that.COMP start.3PS.SUBJ again
"Because I wanted him/her/it to start again."

quién quiere que le echo [= eche]? (Marta, 4;01)
who want.3PS.PRES that.COMP him/her.cl. pour.1PS.PRES
"who wants me to pour it for him/her?"

To conclude, the only verbs that appeared in both the bilingual and monolingual data were *querer* 'want' and *parecer* 'seem', and only the former appeared with infinitival clauses. As expected, there was no omission of infinitival morphology in the Spanish monolingual or bilingual data.

3.5. Results and discussion

3.5.1. English data

Before looking at the production of Control constructions by bilingual and monolingual learners, it is important to look at the production of the main verbs that appear in these configurations. This allows me to determine if there are frequency differences among the main verbs that were attested in the data, which in turn will have an effect on the frequency of the different types of Control contexts.

Tables 8 and 9 show raw frequencies for main verbs for monolingual and bilingual learners respectively, independently of the Control configuration in which they appear. It appears that the verb *want* was by far the most frequent in the production of the bilingual and monolingual learners, for both stages of acquisition. Compared to the other bilinguals, Leo and Simon produce more utterances with this verb because there was more production data available. As to the monolinguals, although their production data is comparable, Sarah's production lags behind the other two. In this case, it appears to be an effect of her MLUw [Stage I = 1.864; Stage II = 3.219], which is always lower than Adam's [Stage I = 2.509; Stage II = 4.145] or Abe's [Stage I = 5.644; Stage II = 8.033], not of the amount of production data available.

TABLE 8
Number of items by main verbs – English bilingual data

STAGE I	WANT	NEED	TRY	ASK	TELL	**N = 85**
LEO	32	0	0	0	0	
SIMON	26	0	0	0	0	
MANUELA	5	0	0	0	0	
ALBERTO	2	2	0	0	0	
CARLA	2	0	0	0	0	
JOHN	13	2	0	0	0	
SHEILA	1	0	0	0	0	
TOTAL	**81**	**4**	**0**	**0**	**0**	
STAGE II	WANT	NEED	TRY	ASK	TELL	**N = 204**
LEO	101	6	4	0	1	
SIMON	79	11	0	1	0	
JOHN	1	0	0	0	0	
TOTAL	**181**	**17**	**4**	**1**	**1**	

TABLE 9
Number of items by main verbs – English monolingual data

STAGE I	WANT	NEED	TRY	ALLOW	TELL	**N = 927**
ADAM	236	0	0	0	0	
SARAH	89	0	0	0	0	
ABE	588	10	4	0	0	
TOTAL	**913**	**10**	4	**0**	**0**	
STAGE II	WANT	NEED	TRY	ALLOW	TELL	**N = 1844**
ADAM	623	32	52	0	0	
SARAH	283	1	25	0	3	
ABE	579	175	67	1	3	
TOTAL	**1485**	**208**	**144**	**1**	**6**	

Because of the differences in the raw number of utterances between bilingual and monolingual learners, and in order to determine whether the rates of production of each main verb were comparable, I calculated the percentages of Control constructions with each main verb over the total number of Control constructions for bilinguals and monolinguals, as shown in Table 10.

TABLE 10
Percentage of items by main verbs

English	STAGE I	STAGE II
	WANT	
Bilinguals	81 (95.29%)	181 (88.73%)
Monolinguals	913 (98.49%)	1485 (80.53%)
	NEED	
Bilinguals	4 (4.71%)	17 (8.33%)
Monolinguals	10 (1.08%)	208 (11.28%)
	TRY	
Bilinguals	0.00%	4 (1.96%)
Monolinguals	4 (0.43%)	144 (7.81%)
	ASK/ALLOW	
Bilinguals	0.00%	1 (0.49%)
Monolinguals	0.00%	1 (0.05%)
	TELL	
Bilinguals	0.00%	1 (0.49%)
Monolinguals	0.00%	6 (0.33%)
Bilinguals TOTAL	**N = 85**	**N = 204**
Monolinguals TOTAL	**N = 927**	**N = 1844**

Stage I: χ^2 = 7.8522606927816; **p** = 0.025
Stage II: χ^2= 15.3819130739277; **p** = 0.01

This table also shows that the rates of production for bilingual and monolingual learners are very similar for most verbs. Monolinguals produced more utterances with the verb *try* which appears in Subject Control contexts (e.g., don't try to hit me), and *need,* which appears in Object Control contexts (e.g., we need a thing to get this) than bilinguals in Stage II. The production rates for the verb *want,* which appears in Subject Control contexts (e.g., I want to see it) and Optional Control contexts (e.g., I don't want you to say that), are higher for bilinguals compared to monolinguals in Stage II.

I use a non-parametric test to determine whether the difference between bilinguals and monolinguals is statistically significant[67]. In this case, although the rates of production are similar, the chi square values indicate that the differences are significant for both stages ($p < 0.05$).

Since verbs that appear in Subject Control contexts were the most frequent in the data, this syntactic configuration was also the most frequent for bilingual and monolingual learners, and for both stages, as shown in Tables 11 and 12. Due to the particular frequency of *want*, Optional Control constructions were considerably more frequent than Object Control constructions, for both groups and stages.

TABLE 11
Number of items by type of construction – English bilingual data

STAGE I	SUBJECT CONTROL*	OBJECT CONTROL	OPTIONAL CONTROL	**N = 85**
LEO	32	0	0	
SIMON	26	0	0	
MANUELA	5	0	0	
ALBERTO	4	0	0	
CARLA	2	0	0	
JOHN	15	0	0	
SHEILA	0	0	1	
TOTAL	**84**	**0**	**1**	
STAGE II	SUBJECT CONTROL*	OBJECT CONTROL	OPTIONAL CONTROL	**N = 204**
LEO	105	2	5	
SIMON	83	1	7	
JOHN	1	0	0	
TOTAL	**189**	**3**	**12**	

*Subject and Optional Control items include target and nontarget-like (i.e., bare) forms.

[67] Chi square is typically used in L1 acquisition dealing with natural production data, as results are usually reported in raw numbers and bivariate tables. It is also used because, unlike parametric tests (like t-tests or analysis of variance), it accepts weaker, less accurate data.

TABLE 12
Number of items by type of construction – English monolingual data

STAGE I	SUBJECT CONTROL*	OBJECT CONTROL	OPTIONAL CONTROL*	**N = 927**
ADAM	144	0	92	
SARAH	86	0	3	
ABE	583	1	18	
TOTAL	**813**	**1**	**113**	
STAGE II	SUBJECT CONTROL*	OBJECT CONTROL	OPTIONAL CONTROL*	**N = 1844**
ADAM	534	12	161	
SARAH	259	3	50	
ABE	782	10	33	
TOTAL	**1575**	**25**	**244**	

*Subject and Optional Control items include target and nontarget-like (i.e., bare) forms.

Adam's production of Optional Control constructions is remarkably higher in both stages, in spite of the fact that his MLUw is lower than Abe's, or that the amount of available production data for these subjects is comparably similar. In Stage I, his production was entirely non target-like (i.e., *want* was followed by a DP and a bare form), as shown in (124). Also, over 90% of the items had the first person pronoun *me* as the object of the main clause.

(124) **Stage I**

Want me get it ? (Adam, 2;10)

Don't want me pull it ? (Adam, 2;10)

D(o) you want he talk ? (Adam, 2;11)

Do you want me eat with dat [: that] fork ? (Adam, 2;11)

In Stage II, Adam's production of non target-like items was 48.44%, amounting to almost half of the total number of Optional Control construction items. Target and non target-like items for this stage are shown in (125). Again, most of the nontarget-like items had the first person pronoun as the object of the main clause.

(125) **Stage II**

Do you want me zip it ?	(Adam, 3;00)
Do you want me turn the light on ?	(Adam, 3;01)
Do you want me put some water on that ?	(Adam, 3;01)
Do you want me comb ?	(Adam, 3;02)
I want him to play with me .	(Adam, 3;07)
I don't want it to fall apart .	(Adam, 3;08)
Mom # I don't want nobody to wear my glasses .	(Adam, 4;03)
I want you to build dis [: this] house .	(Adam, 4;05)
Mommy # don't you want yours to be prettier ?	(Adam, 4;10)

Since most of Adam's nontarget-like items had the object pronoun in the first person, it is very likely that these are cases of non-analysed chunks. This is supported by the fact that, when the object pronoun was in the third person, Adam used the accusative in target-like items (e.g., I want <u>him</u> to play with me) and the nominative in non-target like items (e.g., D(o) you want <u>he</u> talk ?). This alternation was not observed in the case of the first person object pronoun.

As to the bilinguals, in contrast with the monolinguals, and also with the results of previous acquisition studies (Bloom, Tackeff, & Lahey, 1984; Goro, 2003), no Optional Control constructions with bare forms were attested in their data. All bare forms appeared in Subject Control constructions with *want* (i.e., *want* followed by a bare form). As mentioned in the previous section, bare forms were only found in combination with *want* in both the bilingual and monolingual data. Although both groups continued producing bare forms in Stage II, where a comparatively greater variety of main verbs were attested, they continued producing them exclusively in Subject and, in the case of the monolinguals, Optional Control constructions with *want*.

In order to determine whether the rates of production of each type of construction were comparable, especially in the case of Optional Control constructions, I calculated the percentages of Subject, Object and Optional Control constructions over the total number of Control constructions for bilinguals and monolinguals, as shown in Table 13.

TABLE 13
Percentage of items by type of construction

English	**STAGE I**	**STAGE II**
	SUBJECT CONTROL	
Bilinguals	84 (98.82%)	189 (92.65%)
Monolinguals	813 (87.70%)	1575 (85.41%)
	OBJECT CONTROL	
Bilinguals	0.00%	3 (1.47%)
Monolinguals	1 (0.11%)	25 (1.36%)
	OPTIONAL CONTROL	
Bilinguals	1 (1.18%)	12 (5.88%)
Monolinguals	113 (12.19%)	244 (13.23%)
Bilinguals TOTAL	**N = 85**	**N = 204**
Monolinguals TOTAL	**N = 927**	**N = 1844**

Stage I: $\chi^2 = 9.56185657121664$; $p = 0.01$
Stage II: $\chi^2 = 9.07169288539711$; $p = 0.025$

Monolinguals produced a higher rate of Optional Control constructions in both stages compared to bilinguals. However, the difference between them for this type of construction is not significant [$\chi^2 = 3.37796319607465$; $p = 0.10$]. Nevertheless, although the differences in the rates of production for each type of construction are not significant, the chi square values that appear under Table 13 indicate the total differences between bilinguals and monolinguals are significant for both stages.

The rate of Subject Control constructions for bilinguals is higher in both stages compared to monolinguals, although it slightly decreases in Stage II. The Subject Control construction rates for monolinguals remains more or less constant throughout both stages, as well as the Optional Control construction rates, taking into consideration the bias from Adam's production of Control constructions with the verb *want*. Otherwise, the results of Table 13 clearly show that Subject Control constructions become productive earlier than Optional Control constructions for both bilinguals and monolinguals, as previously observed in earlier acquisition studies (Bloom, Tackeff, & Lahey, 1984; Goro, 2003).

Turning to the production of infinitival morphology, Tables 14 and 15 show raw frequencies of omission of the infinitival marker *to* for both stages of acquisition, and for bilingual and monolingual learners respectively.

TABLE 14
Number of bare vs. (non-finite) inflected items – English bilingual data

STAGE I	BARE	INFINITIVAL MARKER	**N = 85**
LEO	14	18	
SIMON	3	23	
MANUELA	2	3	
ALBERTO	0	4	
CARLA	0	2	
JOHN	3	12	
SHEILA	0	1	
TOTAL	**22**	**63**	
STAGE II	BARE	INFINITIVAL MARKER	**N = 204**
LEO	0	112	
SIMON	3	88	
JOHN	0	1	
TOTAL	**3**	**201**	

TABLE 15
Number of bare vs. (non-finite) inflected items – English monolingual data

STAGE I	BARE	INFINITIVAL MARKER	**N = 927**
ADAM	153	83	
SARAH	85	4	
ABE	17	585	
TOTAL	**255**	**672**	
STAGE II	BARE	INFINITIVAL MARKER	**N = 1844**
ADAM	81	626	
SARAH	108	204	
ABE	0	825	
TOTAL	**189**	**1655**	

Unsurprisingly, the rate of omission was higher in Stage I for both bilingual and monolingual learners. Among the bilinguals, Leo produced the highest number of bare forms (e.g., *want Ø sit down*, as opposed to *I want to sit down*) in Stage I; he produced none in Stage II. Among the monolinguals, Adam produced the highest amount of bare forms in Stage I. Of his total production of bare forms, 60.1% were in Optional Control contexts (e.g., do you want me Ø drink it). In Stage II, it was Sarah who produced the highest number of bare forms, 81.5% in Subject Control contexts (e.g., I want Ø put in there). This may be once more an effect of her being developmentally behind Adam and Abe, as shown by her MLUw.

In order to determine whether the rates of production of bare forms were comparable, I calculated the percentages of bare and inflected items over the total number of Control constructions for bilingual and monolingual learners, as shown in Table 16.

TABLE 16
Percentage of bare vs. (non-finite) inflected items

English	STAGE I	STAGE II
	BARE	
Bilinguals	22 (25.88%)	3 (3.53%)
Monolinguals	255 (27.51%)	189 (10.25%)
	INFINITIVAL MARKER	
Bilinguals	63 (74.12%)	201 (98.53%)
Monolinguals	672 (72.49%)	1655 (89.75%)
Bilinguals TOTAL	**N = 85**	**N = 204**
Monolinguals TOTAL	**N = 927**	**N = 1844**

Stage I: [$\chi^2 = 0.103517316218135$; $p = 1$]
Stage II: $\chi^2 = 16.6616888059734$; $p = 0.001$
(Non-significant differences appear in brackets)

The production rates of bare forms are similar in Stage I for both groups. In Stage II, the rate for monolinguals is definitely higher than for bilinguals. This is probably an effect of Adam's production of Optional Control constructions with bare forms, and Sarah's production of Subject Control constructions with bare forms. The chi square values confirm this, indicating that the differences between bilinguals and monolinguals are significant for Stage II, but not for Stage I. If Sarah's production is not included, the chi square values indicate that the differences are not significant for either stage (**Stage I:** [$\chi^2 = 0.879939263884782$; $p = 1$] and **Stage II:** [$\chi^2 = 0.4057566911$; $p = 1$]).

In sum, the most frequent main verb in the data is *want,* for both stages of acquisition. This verb alternates in Subject and Optional Control configurations, with bare and inflected forms. These syntactic configurations appear in the following order. Non target-like Subject Control constructions appear the earliest (first attested in the bilingual data at age 2;01, in the monolingual data at age 2;03[68]), followed by non target-like Optional Control constructions (first attested in the monolingual data at age 2;05). These

[68] There was no data available before that age for the English monolingual subjects. Any comparison between bilinguals and monolinguals in this sense is meaningless in the case of non target-like Subject Control constructions with *want.*

configurations are followed by target-like Subject Control constructions with *want* (first attested at age 2;05 in the bilingual and monolingual data) and target-like Optional Control constructions (first attested at age 2;08 in the bilingual and monolingual data). This acquisition order is essentially the same than that observed in previous acquisition studies (Bloom, Tackeff, and Lahey, 1984; Goro, 2003). However, bilingual learners differ with regard to monolingual learners in the following aspects: they do not appear to go through a bare form stage in the case of Optional Control constructions; their rates of omission of the infinitival marker and their rates of production of Optional Control constructions are lower for both stages, although the differences are not statistically significant. It would appear that the data does not provide evidence of transfer with regard to the properties of the Complementizer proposed in Hulk and Müller (2000), or evidence of acceleration with regard to infinitival morphology. These issues are discussed in section 3.5.3.

3.5.2. Spanish data

The only type of Control configuration found in the Spanish data were Subject Control constructions, even if it was still necessary to confirm whether there were frequency differences among the main verbs attested in the data, in order to determine their effect on the frequency of the different types of subordination contexts (i.e., finite vs. infinitival subordination). Tables 17 and 18 show raw frequencies for main verbs for bilingual and monolingual learners respectively, independently of the syntactic configuration in which they appear.

TABLE 17
Number of items by main verbs – Spanish bilingual data

STAGE I	QUERER	PARECER	CREER	N = 37
LEO	7	0	0	
SIMON	3	0	0	
CARLA	23	0	1	
TINA	3	0	0	
TOTAL	**36**	**0**	**1**	
STAGE II	QUERER	PARECER	CREER	N = 84
LEO	24	6	6	
SIMON	23	6	6	
CARLA	13	0	0	
TOTAL	**60**	**12**	**12**	

TABLE 18
Number of items by main verbs – Spanish monolingual data

STAGE I	QUERER	PARECER	ESPERAR	CREER	N = 62
EMILIO	16	0	0	0	
IRENE	41	3	0	0	
JUAN	1	0	0	1	
TOTAL	**58**	**3**	**0**	**1**	
STAGE II	QUERER	PARECER	ESPERAR	CREER	**N = 95**
EMILIO	2	0	0	0	
IRENE	2	2	0	0	
JUAN	10	0	0	0	
M. CARMEN	14	0	0	0	
RAQUEL	2	0	0	0	
SERGIO	4	0	0	0	
MARTA	10	0	0	0	
MARÍA (1)	6	0	0	0	
MARÍA (2)	3	0	0	0	
ANA ISABEL	7	0	0	0	
ROCIO	1	0	0	0	
PABLO	11	0	0	0	
GABRIEL	18	0	0	0	
JORGE	1	1	1	0	
TOTAL	**91**	**3**	**1**	**0**	

These tables show that the verb *querer* 'want' was clearly the most frequent in the production of the bilingual and monolingual learners, for both stages of acquisition. Compared to the other bilinguals, Carla produces more utterances with this verb in Stage I compared to the other subjects. Although there is more production data available for Simon and Leo, her MLUw mean [Stage I = 3.435] is higher compared to these subjects [Stage I: Simon = 1.903; Leo = 1.901], keeping in mind that Carla's MLUw combines both English and Spanish. And even though Tina's MLUw [Stage I = 3.269] was comparatively similar to Carla's, there was much less production data available for this subject. Carla's production of *querer* decreases in Stage II, probably due to the fact that there is not much production data after age 3;01 for this subject. As to the monolinguals, Emilio's and Irene's production also decreases in Stage II. In Irene's case, it also may be due to the fact that there is not much production data after age 3;02 for this subject. In Emilio's case, the causes are less clear, although his MLUw for this stage is the lowest among all the Spanish monolinguals.

In order to determine whether the rates of production of each main verb were comparable, I calculated the percentages of Control constructions with each main verb over the total number of Control constructions for bilinguals and monolinguals, as shown in Table 19.

TABLE 19
Percentage of items by main verbs

Spanish	STAGE I	STAGE II
	QUERER	
Bilinguals	36 (97.30%)	60 (71.43%)
Monolinguals	58 (93.55%)	91 (95.79%)
	PARECER	
Bilinguals	0.00%	12 (14.29%)
Monolinguals	3 (4.84%)	3 (3.16%)
	ESPERAR	
Bilinguals	0.00%	0.00%
Monolinguals	0.00%	1 (1.05%)
	CREER	
Bilinguals	1 (2.70%)	12 (14.29%)
Monolinguals	1 (1.61%)	0.00%
Bilinguals TOTAL	**N = 37**	**N = 84**
Monolinguals TOTAL	**N = 62**	**N = 95**

Stage I: [χ^2 = 1.96084605538964; p = 1]
Stage II: χ^2= 9.78212152898803; p = 0.01

This table shows that the rates of production for bilingual and monolingual learners are very similar in Stage I. Not surprisingly, the bilinguals' production rate for *querer* decreases in Stage II, as the production rates for *parecer* 'seem' and *creer* 'believe' increase. In contrast, the monolinguals' production rate for all verbs except *querer* remained constant in Stage II. The chi square values confirm this, indicating that the differences between bilinguals and monolinguals are significant for Stage II, but not for Stage I.

Tables 20 and 21 show raw frequencies for finite and infinitival subordination with the main verbs discussed above.

TABLE 20
Number of finite vs. non-finite (infinitival) items – Spanish bilingual data

STAGE I	FINITE (THAT*)	NON-FINITE (INFINITIVAL)	**N = 37**
LEO	1	6	
SIMON	0	3	
CARLA	1	23	
TINA	0	3	
TOTAL	**2**	**35**	
STAGE II	FINITE (THAT*)	NON-FINITE (INFINITIVAL)	**N = 84**
LEO	13	23	
SIMON	15	20	
CARLA	11	2	
TOTAL	**39**	**45**	

TABLE 21
Number of finite vs. non-finite (infinitival) items – Spanish monolingual data

STAGE I	FINITE (THAT*)	NON-FINITE (INFINITIVAL)	**N = 62**
EMILIO	0	16	
IRENE	10	34	
JUAN	1	1	
TOTAL	**11**	**51**	
STAGE II	FINITE (THAT*)	NON-FINITE (INFINITIVAL)	**N = 95**
EMILIO	0	2	
IRENE	3	1	
JUAN	1	9	
M. CARMEN	1	13	
RAQUEL	0	2	
SERGIO	0	4	
MARTA	3	7	
MARÍA (1)	2	4	
MARÍA (2)	1	2	
ANA ISABEL	0	7	
ROCIO	0	1	
PABLO	0	11	
GABRIEL	3	15	
JORGE	2	1	
TOTAL	**16**	**79**	

*Does not include all contexts with finite *that–* clauses, only those where the main verb may alternate with finite and non-finite clauses.

Although all the main verbs except *querer* were found exclusively in combination with *that–* clauses, this was offset by the frequency of *querer*. Not only was this verb found in combination with both *that–* and infinitival clauses, it was also found more frequently in contexts of non-finite subordination in the bilingual data [Stage I = 97.3%; Stage II = 75%], as well as the monolingual data [Stage I = 89.5%; Stage II = 86.8%]. Therefore, production of infinitival clauses was higher compared to finite clause for both groups and stages.

In order to determine whether the rates of production of infinitival clauses were comparable, I calculated the percentages for bilingual and monolingual learners, as shown in Table 22.

TABLE 22
Percentage of finite vs. non-finite (infinitival) items

Spanish	**STAGE I**	**STAGE II**
	FINITE (THAT*)	
Bilinguals	2 (5.41%)	39 (46.43%)
Monolinguals	11 (17.74%)	16 (16.84%)
	NON-FINITE (INFINITIVAL)	
Bilinguals	35 (94.59%)	45 (53.57%)
Monolinguals	51 (82.26%)	79 (83.16%)
Bilinguals TOTAL	**N = 37**	**N = 84**
Monolinguals TOTAL	**N = 62**	**N = 95**

Stage I: [χ^2 = 3.09152561009275; p = 0.10]
Stage II: χ^2= 18.3340216192975; p = 0.001

The production rates of infinitival clauses are higher for the bilingual group in Stage I, and decrease very noticeably in Stage II. In contrast, these rates remain constant for the monolingual group across both stages. This may be in part due to the effect of the production of main verbs other than *querer,* which increased in the bilingual data but not in the monolingual data. The chi square values confirm this, indicating that the differences between bilinguals and monolinguals are significant for Stage II, but not for Stage I.

In sum, similarly to English, the most frequent main verb in the data was *querer,* for both stages of acquisition. In Spanish, this verb alternates with finite clauses as well as infinitival clauses. Since it appeared more frequently with infinitival clauses in the data, the rates of production of infinitival subordination were higher than those for finite subordination. Infinitival clauses with this verb were first attested at similar ages in the bilingual and monolingual data (i.e., ages 2;04 and 2;03 respectively). The difference was somewhat higher for finite clauses (i.e, ages 2;07 and 2;10). The rates of production of infinitival clauses decreased very noticeably in the bilingual data, as opposed to the monolingual data, where they remained constant across both stages.

3.5.3. Discussion and conclusions

With regard to the development of infinitival clauses and infinitival morphology, the data from the English monolingual learners confirms the findings from previous L1 acquisition studies (Bloom, Tackeff and Lahey, 1984; Goro, 2003): Subject Control constructions (i.e., I want to go here, I need to plug in it) appear before Optional Control constructions (i.e., I want it to go with the top), and infinitival marker *to* is initially missing in Subject and Optional Control constructions with the main verb *want.* Raising and ECM constructions are either marginal or do not appear at all. The bilinguals' English data patterns with the English monolingual data with respect to the order of emergence of Control constructions. Regarding the omission of the infinitival marker, the differences between bilinguals and monolinguals are not significant in Stage I [χ^2 = 0.103517316218135; p = 1], but become significant in Stage II [χ^2= 16.6616888059734; p = 0.001]. This is be due to the fact that Sarah still produces high percentages of bare forms in Subject Control contexts (i.e., I want come out) in Stage II (81.5%), as opposed to the bilinguals. If her data are removed, the differences between bilinguals and monolinguals are also not significant for Stage II [χ^2 = 0.4057566911; p = 1].

As to the Spanish data, the monolingual learners do not omit infinitival morphology at any stage. This was expected as Spanish has bound infinitival morphology, which is acquired earlier or concurrently with free morphology (Vainikka & Young-Scholten, 1998, Zobl & Liceras, 1994). In the case of the bilinguals' Spanish data, it is clear that Spanish (bound) infinitival morphology is acquired before English (free) infinitival morphology, as they also do not omit infinitival morphology. Due to the lack of Optional Control constructions in Spanish, I compared the development of Subject Control constructions and finite clauses containing the Complementizer *that* with main verbs that alternated with both types of clauses (i.e., yo quiero que te sientes en un banco). Not unexpectedly, the Spanish monolingual and bilingual data confirms that infinitival subordination in Subject Control contexts becomes productive earlier than finite subordination with *that*– clauses.

In sum, I hypothesized that Spanish/English bilingual learners would acquire unmarked (structurally more simple) clauses before marked (structurally more complex) clauses. The results show that, in English, they pattern with the monolingual learners and produce Subject Control constructions before Optional Control constructions. In Spanish, infinitival clauses become productive before finite clauses with *that.* Therefore, the findings of the bilingual data confirm that more structurally complex structures such as CPs (i.e., Optional Control constructions in English, finite subordinate clauses with *that*) are more marked and are acquired after TPs (or VPs, if Wurmbrand's (2001) syntactic analysis is assumed instead of Bošković's (1997))[69].

[69] The notion of markedness as a function of structural complexity (Roberts, 1999, 2001), and its role in acquisition has been explored regarding other phenomena. For instance, Liceras, Fernández Fuertes and Pérez-Tattam (in press) investigate the development of null and overt pronominal subjects in Spanish/English bilingual data. The findings of this

With regard to the emergence of infinitival morphology, I hypothesized that Spanish/English bilingual learners would omit the infinitival marker in English to a lesser degree than their monolingual counterparts because bound infinitival morphology in Spanish would help them acquire the properties of functional projections earlier than their monolingual counterparts. Although the bilingual learners had lower rates for bare forms than the monolingual learners, these differences were not significant. Therefore, the data does not provide any evidence that the bilingual learners are acquiring the properties of TP before their English monolingual counterparts due to the presence of bound infinitival morphology in Spanish.

With regard to the Complementizer, I hypothesized that Spanish/English bilingual learners would produce Optional Control constructions to a lesser degree than their monolingual counterparts, if Spanish/English bilingual learners chose the subset (more restricted) Complementizer system (Spanish) than monolingual learners. Although the bilingual learners produced lower rates of Optional Control constructions than monolingual learners in both stages, as shown in Table 13, the differences for this construction were not statistically significant [χ^2= 3.37796319607465; p = 0.10]. Since the differences between both groups for all constructions as a whole were significant (Stage I: χ^2 = 9.56185657121664; p = 0.01; Stage II: χ^2= 9.07169288539711; p = 0.025), I conclude that bilingual learners do not show the same production of Subject, Object and Optional Control

study reveal that English subject pronouns are marked compared to Spanish verbal affixes, and are acquired later. This is based on a reformulation of minimalist accounts of the null subject parameter (Alexiadou & Anagnostopoulou, 1998; Speas, 1994) in terms of learnability. According to these accounts, the presence of Determiner (D) in Spanish versus its absence in English of this feature implies that English creates a specifier position to host the overt pronominal subject (we go), while Spanish simply merges the pronominal suffix with the verb (va-mos). Liceras, Fernández Fuertes and Pérez-Tattam (in press) reinterpret this formulation of the null subject parameter in accordance with Roberts' (1999, 2001) markedness proposal, and hypothesize that English represents the marked option of the parameter while Spanish represents the default or unmarked option.

constructions as the monolingual learners. However, this difference does not necessarily lie in the differences between the English and Spanish Complementizer systems.

In conclusion, the findings of the bilingual data with regard to the emergence of infinitival clauses and infinitival morphology provide evidence that the bilingual learners develop separate language systems for Spanish and English, as proposed in Paradis and Genesee (1996, 1997). They pattern with their Spanish and English monolingual counterparts with regard to development of infinitival clauses, and go through a bare form stage in English in the case of infinitival clauses in Subject Control constructions such as *I want to leave now* (but not in the case of infinitival clauses in Optional Control constructions such as *I want him to leave now*). My hypotheses regarding language interaction on the basis of Hulk and Müller's (2000) proposal (that the Complementizer would be a site for interaction because it is at the interface between syntax and pragmatics and because the Complementizer systems overlap at surface level) were not borne out. It is possible that the Complementizer systems in English and Spanish, similarly to root infinitives in Dutch/German and French/Italian, satisfy the first condition but not the second one. After all, there are many main verbs other than *want* where the Complementizer *for* is obligatorily spelled-out (*for-to* infinitivals such as *I arranged for Peter to phone me*), and thus provide positive evidence of the structural Case-assigning properties of prepositions in English. The fact that the Complementizer is not obligatorily spelled-out with *want* may initially constitute a learnability difficulty for bilinguals, who start producing Optional Control constructions after their monolingual counterparts. However, once they start, they evidence completely target-like production.

In this chapter, I have studied the development of the functional categories and formal properties associated with infinitival clauses in Control, Raising and ECM configurations in L1 bilingual acquisition, as well as the interaction between Spanish and English regarding these constructions. In the next chapter, I will investigate the effect of the interaction between these languages with regard to the acceptance and interpretation of infinitival clauses in these configurations in L2 acquisition. This will provide a means of comparison with the Spanish/English bilingual learners, in order to determine whether Control, Raising and ECM constructions and their related properties are the source of crosslinguistic influence in both types of acquisition (child and adult acquisition), and whether the factors that facilitate crosslinguistic influence are the same in both types of acquisition.

CHAPTER 4. NON-NATIVE ACQUISITION OF INFINITIVAL COMPLEMENTS IN SPANISH

In this chapter, an overview of the recent theories of non-native acquisition is presented, as well as several studies of infinitival clauses in Control, Raising and ECM configurations. This is followed by the description of an experimental study designed to investigate the acquisition of Spanish infinitival clauses in Control and ECM configurations by adult native speakers of English learning in an institutional setting. The experimental study, which consists of an offline grammaticality/acceptability judgment (GJ) task and a time-paced truth-value judgment (TVJ) task, deals with the acceptance and interpretation of infinitival clauses by L1 English/L2 Spanish learners compared to a control group of native speakers of Spanish. The objective is to determine whether there is interaction between L1 and L2 grammars when these do not match with regard to their formal and structural properties (i.e., effect of the L1), and whether this interaction decreases over time (i.e., effect of the level of language proficiency).

4.1. Learnability in non-native (L2) acquisition

Two of the main questions in L2 acquisition research are: (1) how the adult learner constructs the grammar of the L2, and (2) what is the role of the L1 in this process (Flynn, 1987). The Creative Construction theory (Corder, 1967; Dulay & Burt, 1974a, 1974b) proposes that L1 and L2 acquisition are not distinct processes: the same set of innate principles that determines L1 acquisition also determines L2 acquisition. Also, L2 acquisition patterns are determined by the structure of the language to be learned and by the creative constructive powers of the L2 learner, not by the L1.

Within the Generative framework, the language faculty described by UG has also been proposed to underlie L2 acquisition (Flynn, 1983, 1987; Liceras, 1986; White, 1985), although said language faculty is not necessarily identical in the adult and the child learner. In other words, UG principles and parameters are active in L2 acquisition, and thus constrain non-native or interlanguage (IL) grammar[70]. Therefore, L2 acquisition theories articulated within UG agree with the overall principle of Creative Construction proposal, according to which L2 acquisition derives from the same processes than L1 acquisition.

At the same time, IL grammars[71] differ in various ways from native grammars. More specifically, adult learners face the same task (building a linguistic system that accounts for the L2 input) and the same learnability problem than child learners, that is, the so-called "logical problem of L2 acquisition" (arriving at a complex stage in grammar in spite of the limitations of the input) (Bley-Vroman, 1989). However, adult learners do not necessarily achieve the same level of linguistic competence in their L2 as their native speaker counterparts, or compared to other non-native speakers. Unlike native speakers, they lack strong grammatical intuitions, and their IL grammars show phenomena such as fossilization, which are not attested in native grammars. The differences as well as the similarities between L2 and L1 acquisition are explained in terms of accessibility to UG in L2 acquisition, and the role of the L1 in this matter. Thus, L2 acquisition theories articulated within UG acknowledge the role of the L1 to a greater or lesser extent.

[70] Flynn (1983, 1987) states that all UG principles and parameters are available to L2 learners. Liceras (1986) suggests that this is subject to markedness theory and, in order to explain the variability (or permeability) that characterizes IL grammars, she adds that two options of the same parameter coexist in the grammars of L2 learners. This proposal is part of the basis for the Competing Grammars Hypothesis (Zobl & Liceras, 2004), which is explained in more detail below. With regard to how parameters are reset in L2 acquisition, White (1985) proposes that some parametric options are more difficult to reset than others, claiming that markedness as well as the L1 play a role in this process.

[71] As explained in Liceras (1996), this term was coined by Selinker (1972). He proposes along with other researchers (e.g., Adjémian, 1976; Corder, 1967; Nemser, 1971) that L2 learners, like native speakers, represent the language that they are acquiring by means of a complex linguistic system, even though IL does not show the same properties as L1.

With regard to the accessibility of UG in L2 acquisition, hypotheses vary as to whether L2 learners have no access, indirect (or partial) access or direct (or full) access (for a full review of these hypotheses see Liceras (1996) and White (2003)). Proponents of no access claim that, as opposed to L1 acquisition, L2 acquisition is not constrained by UG (Bley-Vroman, 1989; Clahsen & Muysken, 1986). Whereas the construction of the L1 grammar derives from the language faculty, it is proposed that the construction of the IL grammar is proposed to be determined by processes that are not necessarily specific to language (such as analogy according to Bley-Vroman (1989)). Therefore, L2 and L1 acquisition are different cognitive processes. In contrast, proponents of partial access claim that IL grammars are constrained by UG, since L2 learners are proposed to have access to UG through the L1 grammar. Some versions propose that only UG principles and L1-matching parametric values are available for L2 learners. If the L2 and L1 differ with regard to a parametric value, L2 learners will not be able to acquire this value (Schachter, 1989), implying that parameter (re)setting is not possible in L2 acquisition (Strozer, 1992). Other versions propose that parameters may be initially set via the L1 grammar, with the possibility of subsequent parameter resetting as the adult learner becomes more exposed to L2 input (e.g., White, 1985). Finally, proponents of full access claim that IL grammars are not only constrained by UG, but also that parameters are set independently of the parameter setting in the L1 grammar (e.g., Flynn, 1987; Epstein, Flynn, & Martohardjono, 1996).

The focus of current L2 acquisition research has shifted to other issues, such as the grammatical properties of IL or the differences[72] between parameter setting in L2 and L1 acquisition attested in L2 research (for a full review, see White (2003)). The different

[72] As explained in Zobl and Liceras (2004), L2 acquisition shows certain idiosyncrasies compared to L1 acquisition in this respect: (1) optionality; (2) gradualness of change; (3) incremental change; (4) lack of coherence in the changes; and (5) lack of convergence on the target languages.

hypotheses on parameter setting in L2 necessarily assume that the IL is constrained by UG, and are differentiated by their claims regarding the nature of the IL initial state[73]. More specifically, they vary as to whether they consider the L1 grammar to be the initial state in L2 acquisition, or UG.

The hypotheses that consider the L1 grammar to be the IL initial state differ as to how much of the L1 grammar constitutes this initial state. The Full Transfer/Full Access (FT/FA) Hypothesis (Schwartz & Sprouse, 1996) proposes that the entire L1 grammar (i.e., abstract properties, not specific lexical items) constitutes the initial stage in L2 acquisition. This is what is meant by "full transfer". At the same time, the L2 learner is not limited to the properties of the L1. If the parametric settings of the L2 and the L1 differ, the L2 learner may restructure the IL grammar in order to accommodate L2 input, and this process is UG-constrained. This is what is meant by "full access". Convergence at the endstate is not guaranteed, because the analyses of the input by L2 learners are not necessarily the same as those of native speakers.

In contrast, the Minimal Trees Hypothesis (Vainikka & Young-Scholten, 1998) proposes that only part of the L1 grammar constitutes the IL initial stage. Similarly to Vainikka's (1993/1994) Weak Continuity-based proposal for L1 acquisition, the initial stage in L2 acquisition is claimed to lack functional categories (assumed to be associated with parameters and thus the source of parametric variation), although they are available in the UG inventory. Functional categories and their associated projections (e.g., DP, IP, or

[73] As mentioned in Chapter III, the initial state in L1 acquisition is UG. According to White (2003), assumptions about the initial state in L2 acquisition were implicit in earlier L2 research. For instance, White's (1985) version of the partial access hypothesis "presupposes that at least a part of the L1 grammar (namely, the L1 parameter settings) determines how the learner initially approaches the L2 data" (p. 58).

CP) emerge gradually, triggered by the input[74]. Unlike the FT/FA Hypothesis, the Minimal Trees Hypothesis predicts that there is no transfer of L1 values in the domain of functional categories. Also, there should be convergence at the endstate, at least with regard to functional categories, since their development is triggered by L2 input.

Finally, the Valueless Features Hypothesis (Eubank, 1993/1994; 1994; 1996) claims that the L1 grammar largely determines the IL initial state. As opposed to the Minimal Trees Hypothesis, both lexical and functional categories are present in the earliest IL grammar. Although L1 functional categories are available, their feature values[75] are proposed to be "inert" (neither strong nor weak) in the initial state. Similarly to the Minimal Trees Hypothesis, there is no transfer of L1 feature strength, and there should be convergence at the endstate after the L2 feature strength is acquired.

Other hypotheses consider UG to be the IL initial state. The Initial Hypothesis of Syntax (Platzack, 1996) claims that the initial states in L1 and L2 acquisition are the same. They include all functional categories and features, set at the default value (weak) on the basis of economy considerations. L2 learners will initially assume weak values for formal features, independently of the corresponding values in the L1 grammar. As in the FT/FA Hypothesis, these values may be subsequently reset to accommodate the L2 input. There should be convergence at the endstate after resetting the L2 feature strength.

The Full Access (without Transfer) Hypothesis (Epstein, Flynn, & Martohardjono, 1996) does not deal explicitly with the initial state, but the authors reject the possibility that

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[74] On the basis of Zobl and Liceras' (1994) review of functional categories and acquisition orders, Vainikka and Young-Scholten (1998) propose that the emergence of functional categories in L1 and L2 acquisition is triggered by different properties of the input: bound morphology in L1 acquisition vs. free morphology in L2 acquisition.

[75] As explained in White (2003), "under current proposals, parametric differences between grammars are associated with properties of lexical items, particularly so-called functional categories. Functional categories have certain formal features associated with them (such as tense, number, person, gender and case). Functional categories and features form part of the UG inventory." (p. 10). Languages may differ as to: (1) whether a particular functional category is realized in the grammar; (2) as to the features associated with a particular functional category; or (3) as to the strength of the features.

it is formed by L1 grammar. They argue against no-access proposals, claiming that IL grammar is constrained by UG at all stages of acquisition. They also argue against partial-access proposals such as the Minimal Trees Hypothesis; similarly to the FT/FA Hypothesis, all functional categories are claimed to be present in the IL grammar from the beginning. The linguistic competence of L2 learners will be the same as that of native speakers at the endstate, and any differences will be due to performance factors.

The hypotheses on the differences between parameter setting in L1 and L2 acquisition overviewed above assume that the language faculty is not impaired in L2 acquisition, since IL grammar is UG-constrained. As explained above, they differ as to whether all UG properties are available at the initial state, but the IL grammar is assumed to include (eventually) all functional categories, features and feature values. In contrast, maturation-based hypotheses assume that the language faculty is not fully functioning in L2 acquisition. For instance, the No Parameter Resetting Hypothesis (Liceras, 1996, 2003; Tsimpli & Roussou, 1991; Smith & Tsimpli, 1995) claims that functional categories are contained in a submodule of UG that is subject to maturational constraints. This module is not accessible after the critical period, and therefore parameter resetting is not possible if L2 and L1 grammars have non-matching values[76]. In the same line of reasoning, the Failed Features Hypothesis (Hawkins & Chan, 1997) claims that the features of functional categories are not available in L2 acquisition. The L2 learner may exhibit native-like performance in advanced stages of acquisition (only to be achieved for those properties for

[76] More specifically, Liceras (1996, 2003) proposes that, although principles are accessible to L2 learners through UG, parameters are not fixed by activating a feature to which all the properties of a parameter are related. Since L2 learners do not have access to features that are not present in their L1, or at least they are not accessed as in L1 acquisition (in this sense, this author partially agrees with the positions of Schachter (1989) and Strozer (1992)), they fix parameters one property at a time.

which there is positive evidence[77]), but the underlying IL grammar will always remain non-native.

In sum, hypotheses on parameter setting in L2 acquisition differ as to whether the language faculty is impaired of not. If the language faculty is assumed to be impaired, non-matching formal features associated with functional categories cannot be activated and parameter resetting is not possible. If the language faculty is assumed to be fully operational, formal features associated with functional categories are activated in L2 acquisition, and parameter resetting is possible. In any case, the properties of parameters are not acquired in exactly the same way as in L1 acquisition. The different versions of this hypothesis differ as to whether they are accessible from the beginning or at later stages of acquisition. As explained in Zobl and Liceras (2004), these two hypotheses provide different accounts for the differences between parameter setting in L1 and L2 acquisition: the former attributes idiosyncrasies of L2 acquisition such as optionality or lack of convergence to the impairment of the language faculty; the latter explains them as a result of the restructuring required to move from one parameter option to the other.

In order to explain these idiosyncrasies, Zobl and Liceras (2004) do not focus on the differences between parameter setting in L1 and L2 acquisition, but the parallels between L2 acquisition and diachronic change. More specifically, they propose the Competing Grammars Hypothesis (CGH[78]) for L2 acquisition, which claims that if the L1 has a different parametric setting than the L2, learners internalize two incompatible grammatical representations to accommodate the L2 input in periods of parametric change. These

[77] As explained in White (2003), positive evidence refers to primary linguistic data that in some sense reveal properties of the underlying grammar, as opposed to negative evidence, or information about ungrammaticality, which is not (reliably) available.

[78] Kroch (1994) proposes the CGH to account for diachronic change. According to this proposal, speakers internalize competing analyses (i.e, grammatical representations) to account for ambiguous data. Both grammars may coexist in the minds of one or more generation of speakers until eventually one of them is favoured and the other is lost.

representations compete against each other in usage, giving rise to optionality. Zobl and Liceras (2004) explicitly argue against impairment of the language faculty as the source of optionality, since formal features associated with functional categories are accessible in L2 acquisition through the L1 grammar, as proposed by Schwartz and Sprouse (1996), among many others. Therefore, parameter resetting is possible, and is triggered by the input. The so-called "recessive grammar" (the grammatical representations that do not fit the L2 input) always remains accessible; thus the competence of the L2 learner is not identical to that of the native speaker, and convergence is not guaranteed.

4.2. State of the art: non-native (L2) acquisition studies of infinitival clauses

Much of the research appears to focus on the differences between L2 and L1 acquisition, although more recent proposals such as the CGH offer alternative frameworks for L2 acquisition research. The present L2 acquisition study does not deal with the development of infinitival clauses in Control, Raising and ECM constructions and their properties in the Spanish IL grammar. However, similarly to the bilingual study, its objective is to determine whether these constructions and their properties are the source of crosslinguistic influence. It will also serve to ascertain whether the factors that facilitate crosslinguistic influence are the same in both types of acquisition. For this purpose, I analyse the data of adult (L1 English/L2 Spanish) learners and compare it with that of native speakers of Spanish. But before I make my predictions and hypotheses, I will overview previous L2 acquisition studies within the Generative framework regarding infinitival clauses in Control and ECM configurations. As far as I can determine, most of these studies deal with English as a L2.

4.2.1. Control into infinitival clauses in L2 acquisition

Early L2 acquisition studies also focus on the interpretation of infinitival clauses in Control constructions. For instance, D'Anglejan and Tucker (1975) investigate the interpretation of infinitival clauses in the Control configurations originally studied by C. Chomsky (1969) –subject Control with *promise*-type verbs[79] as opposed to object Control with *persuade*-like verbs– in experimental data from adult (L1 French/L2 English) learners. They find that their subjects show the same developmental pattern as child native speakers of English regarding these constructions: they interpret subject Control verbs of the *promise*-type as if they were object Control verbs at early stages of acquisition. Following Brown (1973), they attribute this to the linguistic complexity[80] of these constructions. Apparently, they do not map equivalent constructions from their L1[81], even though they would provide the correct interpretation for the L2 constructions.

Other L2 acquisition studies deal with different Control structures that show asymmetries in their development in child language. Goodluck, Whalley and Gallucci (results commented in Goodluck and Birch (1987)) study the interpretation of adjunct infinitival clauses such as (126) in experimental data from adult (L1 French and L1 Chinese) learners of English as a L2.

(126) The girl$_i$ hugs the boy [after PRO$_i$ walking around]

They find that, unlike child native speakers of English, they never allow non-adult arbitrary Control interpretations (i.e., external referent for the infinitival clause) in these

[79] As explained in Chapters II and III, these verbs license a main clause object, but the antecedent of the infinitival clause is interpreted to be the subject of the main clause:

(i) Fred$_i$ promised Harry [PRO$_i$ to leave quickly] (D'Anglejan & Tucker, 1975: p. 294)

[80] The difference in structural complexity between Control constructions with *promise* and with *persuade* is supported Larson's (1991) analysis of the former as double object constructions (see section 2.2 of Chapter II).

[81] For example, compare the test sentence from footnote 79 to its French counterpart:

(i) Fred$_i$ promised Harry [PRO$_i$ to leave quickly]

(ii) Fred$_i$ a promis Harry [de PRO$_i$ partir sans tarder] constructions, and consequently show a higher percentage of target-like subject Control interpretation. Since these adults show a different developmental pattern than children, it can be argued that they are accessing the conditions that rule the interpretation of infinitival clauses in these configurations through their L1.

As far as I have been able to determine, the Generative L2 acquisition literature does not deal with interpretation in Raising or ECM constructions. In addition, I have not found any experimental studies dealing with the interpretation of Spanish infinitival clauses, not even in Control constructions. Therefore, I partly base my predictions and hypotheses on the interpretation of infinitival clauses in Control and ECM constructions in Spanish on the results of a pilot study (Pérez-Tattam, 2005).

For the pilot study, I designed a bidirectional experiment to investigate the interpretation of Complement Control constructions and Adjunct Control constructions in English and Spanish. On the basis of Goodluck, Whalley and Gallucci's findings, I assumed that the participants would have access to the conditions that rule the interpretation of infinitival clauses in these configurations through their L1, and would not allow non-adult arbitrary Control[82] as in (127), or subject Control as in (128) for infinitival clauses in complement positions.

(127a) *The chairman told the secretary [PRO$_{arb}$ to take notes]
(127b) *Amelia mandó a Marisa a Correos a [PRO$_{arb}$ recoger las cartas]
Amelia send.3PS.PAST to Marisa to the post office to pick.INF the letters
"Amelia sent Marisa to the post office to pick up the mail."

(128a) *The chairman$_i$ told the secretary [PRO$_i$ to take notes]
(128b) *Amelia$_i$ mandó a Marisa a Correos a [PRO$_i$ recoger las cartas]
Amelia send.3PS.PAST to Marisa to the post office to pick.INF the letters
"Amelia sent Marisa to the post office to pick up the mail."

[82] I assumed that child native speakers of Spanish show non-adult arbitrary Control at certain stages of acquisition, similarly to child native speakers of English. Nevertheless, to my knowledge, this has not been verified for Spanish in any experimental study of child L1 acquisition.

I also hypothesized that the participants would not allow non-adult arbitrary Control as in (129), or object Control as in (130) for infinitival clauses in adjunct positions.

(129a) *Bill thanked John [after PRO_{arb} returning from the trip]
(129b) *Guillermo dio las gracias a José [después de PRO_{arb} volver del viaje]
Guillermo give.3PS.PAST the thanks to Jose after of return.INF of the trip
"Guillermo thanked Jose after returning from his trip."

(130a) *Bill thanked $John_i$ [after PRO_i $returning_i$ from the trip]
(130b) *Guillermo dio las gracias a $José_i$ [después de PRO_i volver del viaje]
Guillermo give.3PS.PAST the thanks to Jose after of return.INF of the trip
"Guillermo thanked Jose after returning from his trip."

My study involved two experimental groups, consisting of ten adult L1 Spanish/L2 English learners and ten adult L1 English/L2 Spanish learners. There were also two control groups, consisting of five English native speakers, and five Spanish native speakers with a low or low-intermediate level of English. All the groups took a CLOZE test prior to completing the experiment in order to measure language proficiency. The English CLOZE test was based on a subsection of the CANTEST, an ESL proficiency test used at the University of Ottawa. The Spanish CLOZE test was based on a language proficiency test used at McGill University.

The experiment consisted of a truth-value judgment (TVJ), comprising a total of 24 sentences: eight complement Control sentences, eight adjunct control sentences, and eight distractor/fillers. These sentences were presented in context, at the end of which a question was asked requiring the participants to give an interpretation of the infinitival clause. The range of possible interpretations included subject Control, object Control, and the possibility to give a partial Control interpretation with "both". The possibility of refusing to give any interpretation was also provided with the "I don't know" option. The results were quantified as follows. If the answer corresponded to the expected interpretation of the control construction (object Control in complement control constructions, subject Control in adjunct control constructions), it received 2 points. If the answer did not correspond to the expected interpretation (subject Control in complement control constructions, object Control in adjunct Control constructions), it received 0 points. If the answer was "both", it received 1 point. "I don't know" answers were not taken into account.

My results were similar to Goodluck, Whalley and Gallucci's in the sense that our experimental groups did not allow non-adult arbitrary Control interpretations, indicating that they are transferring knowledge of their L1[83]. For complement Control constructions, both experimental groups favoured object Control and partial Control interpretations ([L2 English group = 82.5%; L1 English = 90.2%] and [L2 Spanish group = 75.8%; L1 Spanish = 77.7%]).

For adjunct control structures, both experimental groups favoured partial Control interpretations, with fewer instances of subject Control than expected ([L2 English = 66.9%; L1 English = 73.6%] and [L2 Spanish = 65.2%; L1 Spanish = 69.4%]). These results appear to confirm Landau's (2000, 2003) proposal that Control into adjuncts is subject to discourse factors, and not only locality and other syntactic factors as proposed by Hornstein (1999, 2001, 2003) and Manzini and Roussou (2000)[84].

[83] Both experimental groups obtained very good results on the CLOZE test, meaning that in terms of language proficiency they were quite advanced (L2 English group mean score = 79.6) or near-native (L2 Spanish group mean score = 88.5). Because of the high and native-like competence of my participants, the results may be due to L1 transfer or to having been exposed to enough input, similarly to 6-year old or older children who also end up acquiring adult-like interpretation of Control constructions. I took this into account for the present study: besides recruiting more participants in order to have a higher degree of freedom, I made sure to include participants with an intermediate level of language proficiency. Due to the complexity of the constructions and the vocabulary, I excluded the beginner level.

[84] Hornstein (1999, 2001, 2003) proposes that the MLC applies also to cases of subject Control into adjuncts assuming that so-called Sidewards Movement (Nunes, 1995) exists. Sidewards Movement is a complex operation where an expression is copied from a subtree and merged into another subtree. Hornstein (1999, 2001, 2003) analyses adjunct Control as involving Sidewards Movement, that is to say, adjuncts headed by *after* or *before* are adjoined to VP: [John T° [[John[saw Mary]] [after [John eating lunch]]]] (Hornstein, 2003: p. 31). Manzini and Roussou (2000) also propose that the MLC applies and explain subject Control in adjuncts as a by-product of parasitic gap-like patterns of predicate attraction, subject to Kayne's Connectedness Condition applied to Attract: 1) let *b* Attract *a*. Then *b* together with *a* and the g-projections of *a* must form a connected subtree. 2) *g* is a g-projection of *a*, or a projection of some *d* such that a g-projection of *a* is a complement of *d*. (Manzini and Roussou, 2000: p. 413). Therefore, both Hornstein (1999, 2001, 2003) and Manzini and Roussou (2000) are assuming that subject Control is the only possible interpretation for adjunct infinitival clauses. In contrast, and following Williams (1992), Landau (2000, 2003) proposes that Control into adjuncts is

With regard to directionality, the Analysis of Variance (ANOVA) showed that the difference between experimental and control groups was statistically significant for English complement Control constructions ($F = 5.718$, $P = 0.0326$), but not for Spanish complement Control constructions ($F = 0.063$, $P = 0.8060$). The differences were not significant either for English adjunct Control constructions ($F = 1.503$, $P = 0.2419$) or Spanish adjunct Control constructions ($F = 0.439$, $P = 0.5194$).

I believe that the ANOVA results for complement Control constructions may be a reflection of the structural differences between these languages. In Spanish, the object of the main clause may be a direct object as in (131) or an indirect object as in (132). Either way, they are morphologically Case-marked with the preposition *a*.

(131)	Julia	ayudó	al ciego	a cruzar	la calle
	Julia	helped	to the blind man.ACC	to cross.INF	the street

"Julia helped the blind man cross the street".

(Hernanz 1999: p. 2217)

(132)	No	le	conviene	a mi hermana	viajar	en invierno
	Not	her.CL	is convenient	to my sister.DAT	travel.INF	in winter

"It is not convenient for my sister to travel during the winter".

Main clause objects are not morphologically marked for Case in English, as shown in (133).

(133) Julia told the man to get lost.

The L1 Spanish/L2 English group presumably relies on this morphological marking when interpreting these Control structures in their English L2, but these markers are not present in English control structures. Therefore, the L1 Spanish/L2 English group has more difficulties than the L1 English/L2 Spanish group, who does not rely on these markers when interpreting Control constructions.

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sensitive to logophoricity, since adjunct infinitival clauses allow Control by implicit agents, and thus interpretation other that subject Control are possible for adjunct infinitival clauses.

4.2.2. Infinitival clauses and other types of embedded clauses in L2 acquisition

The experimental studies overviewed above tested the comprehension of Control constructions in order to determine whether adult L2 learners patterned with child L1 learners. Other studies have focused on the acceptance and production of infinitival clauses compared to other types of embedded clauses by L2 learners of English.

For instance, Mazurkewich (1988) studies the acquisition of infinitival clauses in Control constructions such as (134), as opposed to gerundive clauses as in (135) by L1 Inuktitut/ L2 English learners (ages 13;00-15;02). This author follows Chomsky (1981) and assumes that infinitival complements have CP status, whereas gerundive complements have IP status.

(134) Suzie and Bill need [$_{CP}$ to help their mother at home]

(135) Suzie enjoys [$_{TP}$ cooking for her family] (Mazurkewich, 1988: p. 143)

Based on the assumption that infinitival complements are unmarked with regard to gerundive complements[85], she predicts that complex sentences with infinitival clauses will be acquired before complex sentences with gerundive clauses. The results of the

[85] According to Mazurkewich (1988), the markedness of gerundive complements as opposed to infinitival complements is supported by empirical evidence from L1 acquisition. Limber (1973), who investigates the spontaneous production of complex sentences in children between the ages of 1;06 and 3;00, reports that they do not produce any gerundive clauses in complement positions, although they produce infinitival clauses (bare and inflected) in these positions. Some of the main verbs they produce alternate with infinitival and gerundive clauses (e.g., *like*), but even in these cases they prefer infinitival clauses. Pinker (1984) examines the production data of Eve and Adam in the Brown (1973) corpus and reports that gerundive clauses do not appear until a full year later than the point at which the *–ing* morpheme is supplied in obligatory contexts with 90% accuracy. Mazurkewich (1988) is using markedness mainly in terms of development or time of acquisition. She also claims that gerundive complements are marked with regard to infinitival complements because of their IP status: "Following Chomsky (1981), I assume that infinitives and tensed clauses are unmarked; they have the same clausal structure and can appear with a lexical or null complementizer. The gerund complement, on the other hand, is considered to be marked because it lacks a COMP position" (p. 129). As far as I can determine, neither Chomsky (1981) nor Stowell (1982) make any inferences on markedness based on clausal status. Stowell (1982) does not mention markedness theory at all, and Chomsky (1981) refers to markedness theory regarding the relationship between core and periphery grammar: "(…) it is reasonable to suppose that UG determines a set of core grammars and that what is actually represented in the mind of an individual even under the idealization to a homogeneous speech community would be a core grammar with a periphery of marked elements and constructions" (p. 8). Constructions with gerundive clauses are certainly not part of the periphery. And even if one accepts that there may be phenomena that are more marked with respect to other phenomena within core grammar (Liceras, 1986), it seems counterintuitive to propose that infinitival clauses are more marked than gerundive clauses on the basis of their clausal structure, as gerundive clauses seem to have a simpler clause structure than infinitival clauses in accordance with Chomsky's (1981) and Stowell's (1982) analyses.

experimental study show that these learners pattern with child native speakers of English and acquire infinitives before gerunds. More specifically, the Elicited production task results show that learners produce target-like sentences with verbs that obligatorily take infinitival clauses sooner (i.e., at a lower level of language proficiency) than with verbs that obligatorily take gerundive clauses. The Intuitive judgment task results show that beginner level learners overgeneralize gerundive clauses, but not advanced level learners. In contrast, learners at both levels of language proficiency overgeneralize infinitival clauses.

As reported in Epstein, Flynn, and Martohardjono (1996), Flynn, Foley, and Lardiere (1991)[86] investigate the acquisition of Control constructions with the main verbs *promise, remind* and *tell* by adult L1 Spanish / L2 English learners at an intermediate and advanced level. These verbs alternate with infinitival clauses and finite *that–* clauses. In Spanish the verb *prometer* 'promise' also alternates with infinitival clauses and finite *that–* clauses, as shown in (136).

(136a) John promises Henry [PRO to go to the store]
Juan promete a Enrique [PRO ir a la tienda]

(136b) John promises Henry [that he will go to the store]
Juan promete a Enrique [que *pro* irá a la tienda]
(Epstein, Flynn, & Martohardjono, 1996: p. 690)

However, the verbs *recordar* 'remind' and *decir* 'tell' do not license infinitival clauses, as shown in (137).

(137a) John reminds/tells Henry [PRO to go to the store]
*Juan recuerda/dice a Enrique [PRO ir a la tienda]

(137b) John reminds/tells Henry [that he will go to the store]
Juan recuerda/dice a Enrique [que *pro* vaya a la tienda]
(Epstein, Flynn, & Martohardjono, 1996: p. 690)

[86] According to a personal communication from one of the authors (Lardiere, November, 2003), this paper was unpublished at the time, and unfortunately no copies of the original could be provided.

The results of the Elicited imitation task show that these L2 learners are more accurate with infinitival clauses that with finite *that– clauses*. Epstein, Flynn, and Martohardjono (1996) interpret these results as suggesting that L2 acquisition is constrained by UG, rather than by the L1 alone, since these learners do not appear to instantiate L1 lexical properties in their L2. However, the lexical properties that are discussed in this study refer to the types of clauses that are subcategorized by three predicate verbs in Spanish as opposed to English, not to the abstract features related to the categories in the lexicon which are proposed to be at the core of parametric variability. Therefore, it is difficult to see the connection between no transfer of these properties and no transfer of parametric settings from the L1. In addition, the control group results (i.e., adult native speakers of English) are not reported, nor is there any indication that the experimental study included a control group. It would be interesting to confirm whether native speakers of English would also be more accurate with infinitival clauses. If that were the case, the results of the L2 learners could be related to non-linguistic factors such as length of the utterances or the limitations of short term memory.

Before moving on to the predictions and hypotheses, I would like to present some of the research that has been done in child L2 acquisition regarding the development of functional categories, particularly the IP and CP systems. Child L2 acquisition has been argued to be informative of both child L1 and adult L2 acquisition (Lakshmanan, 1995; Schwartz, 1992, 2003, 2004; Unsworth, 2005, among others), which are being compared in this study. Child L2 acquisition presumably shares properties with both child L1 and adult L2 acquisition[87]. Since an important goal of my research is to compare child L1 (bilingual)

[87] According to the comparative "split" morphology-syntax view of child L2 acquisition proposed in Schwartz (2004), language phenomena is divided in this type of acquisition. More specifically, morphological development is analogous to that in child L1 acquisition, and syntactic development to that in adult L2 acquisition.

and adult L2 acquisition regarding crosslinguistic influence and the initial state, child L2 acquisition provides another means of comparison. Unlike child L1 learners (bilingual or monolingual), the child L2 learner's initial state would not be UG, since they have the knowledge of another language as adult L2 learners do. Similarly to adults and child bilinguals, they have access to two grammars and therefore can transfer properties from one to the other. However, unlike child bilingual learners, child L2 learners show differing abilities to reach a native-like endstate; unlike adult L2 learners, they appear to be strongly linked to the age of acquisition of the L2[88]. Although the present study does not investigate this child L2 acquisition data, I believe it is important to mention in passing some of the research in this field that is relevant to the development of infinitival and other embedded clauses.

Lakshmanan (1993/1994) examines the development of functional categories in the grammar of a child L1 Spanish / L2 English learner (ages 4;06-5;01). Among the grammatical phenomena examined in the data, Lakshmanan (1993/1994) looks at the infinitival clauses of verbs such as *want.* She finds that her subject produces target-like infinitival clauses in Subject Control configurations, as shown in (138).

(138) I wanta see you tomorrow. (Marta, 4;06)

(Lakshmanan 1993/94: p. 83)

In contrast, the subject does not produce target-like infinitival clauses in ECM (i.e., Optional Control) configurations until the end, as shown in (139).

[88] As observed in Unsworth (2005), defining the difference between child and adult L2 acquisition "is intrinsically linked to the debate about whether there is a critical period in language acquisition. (…) Various ages have been put forward as the start of a decline in the ability to reach nativelike levels of L2 proficiency (…) (Although) a decline in nativelike attainment (in and of itself) does not constitute evidence for a critical period for language acquisition, (the fact remains that child) L2 learners are classified according to the point at which the L2 acquisition process begins." (p. 6).

(139) Because I don't want him to bother us. (Marta, 5;01)

(Lakshmanan 1993/94: p. 86)

Until then, the subject produces infinitival clauses with nominative instead of accusative pronouns, and the infinitival marker *to* precedes the pronoun, as shown in (140).

(140) [...] you want to I put here in this little paper ? (Marta, 4;09)

(Lakshmanan 1993/94: p. 84)

This suggests that the embedded clause is analysed as specifying [+Tense], and that the infinitival marker is analysed as a Complementizer, similarly to *that.* Marta is effectively transferring the properties of Spanish Complementizer *que* 'that' as a licensing mechanism for the overt subject of the embedded clause. At the same time, since the embedded verb is non-finite, and Complementizer *that* only combines with finite verbs, this factor presumably triggers the reanalysis of infinitival *to* as a Case-assigner.

This indicates that functional projections and non-thematic properties such as Inflection or Case are available from the very beginning in this child's L2 grammar. In addition, other studies provide evidence that CP is also present in the earliest states of child L2 grammars, as well as other functional categories (Haznedar, 1997; Lakshmanan & Selinker, 1994[89], among others). More specifically, Haznedar (1997) arrives at the same conclusions as Lakshmanan (1993/1994) in her study of the production data of a child L1 Turkish / L2 English learner: IP is present in the interlanguage grammar of this learner from his earliest utterances. Also, this author finds evidence for a CP-system, particularly

[89] On the basis of the availability of CP in child L2 grammars, Lakshmanan and Selinker (1994) claim that at whatever stage in L1 acquisition functional projections and non-thematic properties become available, they will be available in L2 acquisition as well.

through the presence of a number of embedded clauses that occur with *if* and *because,* and the verb *want* in infinitival contexts[90].

These findings are important for the present study because I am looking for evidence of transfer of the properties of the L1 Complementizer system in the L2 grammar of adult L1 English / L2 Spanish learners. Although the present study does not find evidence of transfer of the properties of the Complementizer in the production data of Spanish/English child bilingual learners, Lakshmanan's (1993/1994) study shows that the Complementizer is a candidate for transfer in child L2 acquisition. It is likely that it will be a candidate for transfer in adult L2 acquisition as well.

4.3. Predictions and hypotheses

As mentioned earlier, my study of L2 acquisition of Spanish infinitival clauses in Control and ECM configurations focuses on the interaction between L1 and L2 grammars in cases where there is a mismatch between the relevant formal and structural properties. One of my initial aims was also to predict the development of Control and ECM constructions in L2 acquisition on the basis of the development of infinitival clauses in English diachrony, using the CGH as a learnability theory. However, this was not feasible for the following reasons.

Lightfoot (1991) affirms that ECM constructions represent innovations in the history of English, since they begin to be attested in Middle English with the verbs *believe* and *consider*[91]. In contrast, infinitival clauses had already started replacing *that– clauses*

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[90] Haznedar (1997) assumes that the structure of infinitival clauses in Subject Control constructions with *want* is CP:
(i) I want [CP [IP PRO to go to new playground] (Erdem, 4;07) (Haznedar, 1997: p. 251)

[91] Lightfoot (1991) analyses the emergence of ECM as a result of the infinitival marker to becoming able to transmit the Case marking properties of the governing verb. This author associates it to the lack of dative Case in English and, on this basis, Montrul (1997) attributes the ungrammaticality of ECM constructions in Spanish and French to the availability of dative Case in these languages, indicated by overt morphological manifestations such as clitic pronouns (c.f.,**María cree Juan ser un buen amigo* and *Mary believes John to be a good friend* (Montrul 1997: p. 92)).

with the subjunctive in late Old English, making Control constructions the only option when the embedded clause denoted *irrealis*. This process did not take place in Spanish, where finite clauses with the subjunctive have remained productive. I had the idea that native English speakers would have to "unlearn" these constructions while acquiring Spanish, and advanced a proposal with regard to the development of Control and ECM constructions in the grammar of L1 English/L2 Spanish learners on the basis of Montrul (1997).

Montrul (1997) investigates the L2 acquisition of the Spanish dative Case system. For this purpose, this author compares interlanguage grammars with diachronic change by investigating inverse developments between the loss of dative Case in English and the acquisition of dative Case in Spanish by L1 English learners. She looks at whether dative pronouns such as clitic pronoun *le* trigger the acquisition of dative Case in Spanish, and the syntactic structures related to dative Case (i.e., ECM constructions, preposition stranding, double object constructions, and indirect passives) by means of a grammaticality judgment task. Montrul (1997) finds that the stages of diachronic change regarding dative Case observed in English are replicated in L2 acquisition of Spanish dative Case. Of the syntactic structures that were the focus of the experiment, preposition stranding and ECM constructions were unlearned (i.e., ceased to be generated in the learners' grammars) earlier than indirect passives and double object constructions[92]. This author concludes that L1 English/L2 Spanish learners are initially constrained by their L1, but move through a stage of optionality for these structures where two distinct grammars coexists. Since ECM

[92] Lightfoot (1991) proposes that, while the emergence of ECM constructions and the other syntactic structures is related to the loss of dative Case in English, ECM and preposition stranding (e.g., where are you going to?) are different from indirect passives (e.g., Mary was given a book) and double objects (e.g., Mary gave him the book) because the former involve a reanalysis operation of the preposition. Therefore, ECM and preposition stranding are syntactically more complex than indirect passives and double objects.

constructions constitute a later development in English compared to Control constructions, and are supposedly not possible in Spanish because of the existence of dative Case, I thought that maybe they would also be unlearned by L1 English/L2 Spanish learners before Control constructions.

This reasoning is flawed in the following ways. First and foremost, Montrul (1997) investigates the development of ECM compared to other grammatical phenomena that belong to the same parameter. To my knowledge, Control and ECM constructions are not parametrically related. Although the loss of dative Case in English contributed to the encroachment of infinitival clauses in the domain of the subjunctive, as far as I know it did not trigger the loss of the subjunctive.

In addition, Miller (2002) claims that ECM constructions with reflective verbs are attested in Late Old English with *to*-less infinitives, as shown in (141).

(141) he knewed him fro feren kumen
he knew him from afar come
"He knew him to come from far" (Gen and Exod 1935; Miller, 2002: p. 184)

Therefore, the Case-marking properties of the infinitival marker *to* played no role in the emergence of ECM itself, although it did trigger the emergence of ECM constructions with infinitival clauses containing this infinitival marker. This innovation contributed to the marginalization of ECM constructions with *to*-less infinitives, which were eventually eliminated. This is important for the present study because it shows that ECM is possible in languages that do have dative Case, such as Spanish or French, although there may be lexical differences regarding the main verbs that allow ECM constructions in these languages compared to English.

As a result, I decided to focus on L1 / L2 interaction. On the basis of the findings of Lakshmanan (1993/1994), among others, and the language contrasts between English and

Spanish regarding Control and ECM constructions, the properties of the Complementizer system again appeared to be the most likely candidate for transfer. In addition, the evidence of diachronic change in English regarding the Complementizer system allowed me to retain the CGH as a basis for my learnability proposal, but with a different perspective. I decided to approach L2 acquisition as if it reflected the process of diachronic change. More specifically, in contrast with Old English, the Complementizer system of Modern English contains prepositional Complementizers, as well as other types of Complementizers such as *that*. The Spanish Complementizer system is in fact a subset of the Modern English Complementizer system, and virtually identical to the Old English Complementizer system regarding prepositional Complementizers. In order to acquire the target Complementizer system, native speakers of English in a sense would have to revert to the characteristics of the Complementizer system of Old English, which involves reanalysing prepositions as exclusively inherent Case assigners. Unlike L1 bilingual learners, L1 English / L2 Spanish learners should have full access to functional categories and their associated formal features through their L1. The reanalysis process will be triggered by the need to accommodate the L2 input[93]. After a period of non-convergence where two representations of the Case-assigning properties of prepositions compete in their interlanguage grammar, L1 English / L2 Spanish learners will eventually converge with native speakers of Spanish, keeping in mind that the representation that does not fit the L2 input will always remain accessible. Therefore, differences between L1 and L2 speakers of Spanish will be due to competence

[93] One could argue that, since the Case-assigning properties of Spanish prepositions in Spanish are a subset of the Case-assigning properties of English prepositions, there is no positive evidence in the L2 input that Spanish prepositions cannot assign structural Case. This does not mean that convergence is impossible, but it poses an added learnability difficulty to the L2 learner because noticing "the absence of a construction in L2" (White, 1986: p. 314) (in this case, the absence of Optional Control constructions in Spanish) is more costly than having positive evidence. For a review of the subset/superset principle applied to resetting inclusive parameter values in L1 and L2 acquisition, see Towell and Hawkins (1994).

as well as performance factors. Evidence of transfer of the properties of the English Complementizer system to Spanish would support this competing grammars' proposal.

4.3.1. Predictions on the L2 acquisition of infinitival clauses in Control and ECM configurations

In Chapter II, I noted several language contrasts between English and Spanish. In English, certain main verbs alternate with infinitival clauses in two different syntactic configurations. If the subject of the main verb is also the antecedent of the infinitival subject, this gives rise to a Subject Control construction such as (142).

(142) Peter$_i$ wants to [PRO$_i$ use the phone]

If the subject of the main verb and the antecedent of the infinitival subject are different, this gives rise to a type of ECM construction known as Optional Control construction such as (143).

(143) Peter wants [(for) me [to use the phone]]

In this case, the pre-infinitival DP or pronoun is licensed by a prepositional Complementizer, which assigns accusative Case. Unlike other types of *for-to* constructions, this Complementizer is not necessarily spelled-out.

In Spanish, these main verbs alternate with infinitival clauses such as (144), and finite *that–* clauses such as (145).

(144) Pedro$_i$ quiere [PRO$_i$ usar el teléfono]
Pedro want.3PS.PRES use.INF the phone
"Pedro wants to use the phone."

(145) Pedro quiere [que usemos el teléfono]
Pedro want.3PS.PRES that.COMP use.1PP.PRES.SUBJ the phone
"Pedro wants us to use the phone."

Optional Control (OpC) constructions are not possible in Spanish due to the absence of prepositional Complementizers in this language. In contrast with English, which has prepositions that assign structural as well as inherent Case, Spanish prepositions only assign inherent Case. Due to the lack of this licensing mechanism, pre-infinitival DPs are less frequent in Spanish than English.

In addition, in Object Control constructions, main verbs may also alternate with infinitival clauses and *that*– clauses, as shown in (146) and (147) respectively.

(146) Obligamos a los políticos$_i$ [PRO$_i$ a tomar una decisión]
Force.1PP.PRES to the politicians to make.INF a decision
"We forced the politicians to decide."

(147) Obligamos a los políticos$_i$ a [que *pro*$_i$ tomaran una decisión]
Force.1PP.PRES to the politicians to that.COMP make.3PP.PRES.SUBJ a decision
"We forced the politicians to decide."

The infinitival and finite embedded clauses in these constructions both denote *irrealis.* The alternation is possible in Spanish because of the existence of the subjunctive. In contrast, English has no finite verbal forms denoting *irrealis*. Therefore, subordination with infinitival clauses is less frequent in Spanish than English.

Assuming that productivity leads to overgeneralization, and that the properties of the English Complementizer are transferred to Spanish, I predict that L2 learners will overgeneralize pre-infinitival DPs in Object Control constructions. That is to say, L2 learners will give higher scores than the native Spanish speakers to Object Control constructions with a pre-infinitival DP, regardless of whether the context is grammatical as in (148), or ungrammatical as in (149).

(148) Les obligamos <u>a los políticos</u> a tomar una decisión
Them.CL force.1PS.PAST to the politicians to make.INF a decision
"We forced the politicians to decide."

(149) *Les convencí <u>a mis primos</u> de comprar una casa
Them.CL convince.1PS.PAST to my cousins of buy.INF a house
"I convinced my cousins to buy a house."

This effect should not be observed in Object Control constructions with no pre-infinitival DPs, as shown in (150) and (151).

(150) Les obligamos a tomar una decisión a los políticos
Them.CL force.1PS.PAST to make.INF a decision to the politicians
"We forced the politicians to decide."

(151) *Les convencí de comprar una casa a mis primos
Them.CL convince.1PS.PAST of buy.INF a house to my cousins
"I convinced my cousins to buy a house."

Assuming that they also transfer the only available subordination strategy in English when the embedded clause denotes *irrealis,* I predict that L2 learners will overgeneralize subordination with infinitival clauses in Control and ECM constructions. That is to say, L2 learners will give higher scores than the native Spanish speakers to Control constructions as shown in the previous examples, even to Optional Control constructions such as (152) compared to ECM constructions such as (153).

(152) *El jefe quería a los empleados trabajar en el informe
The boss want.3PS.PAST to the employees work.INF on the report
"The boss wanted the employees to work on the report."

(153) Vi al jardinero regar las plantas
See.1PS.PAST to the gardener water.INF the plants
"I saw the gardener watering the plants."

In the experimental study, I test these predictions by means of a grammaticality/acceptability judgment (GJ) task[94].

Another important difference between Spanish and English concerns the nature and the position of the main object in Object Control and ECM constructions. In Spanish, the main object may be a DP, morphologically Case-marked with the preposition *"a"*, or a clitic pronoun, either a direct object clitic (masculine singular/plural *lo/los* or feminine singular/plural *la/las*) or an indirect object clitic (singular/plural *le/les*). Depending on the

[94] Please refer to Appendix IIb for a complete list of items, including experimental items, distractors and fillers.

syntactic category, it will occupy different positions, as shown in (154) and (155). In English, the main object may be a DP or a pronoun (*him/her*). As opposed to Spanish, its position does not vary according to its syntactic category.

(154a) Obligó a Julio a preguntar a todos los vecinos
Force.3PS.PAST to Julius.ACC to ask.INF all the neighbours
"He/she forced Julius to ask all the neighbours."

(154b) Lo/Le obligó a preguntar a todos los vecinos
Him.CL force.3PS.PAST to ask.INF all the neighbours
"He/she forced him to ask all the neighbours."

(155a) Vi al jardinero regar las plantas.
see-3PS.PAST the gardener.ACC water.INF the plants
"I saw the gardener watering the plants."

(155b) Lo/Le vi regar las plantas.
Him.CL see-3PS.PAST water.INF the plants
"I saw him watering the plants."

Assuming that the structural differences between English and Spanish are a factor that gives rise to learnability difficulties, as proposed on the basis of the results of the pilot study (Pérez-Tattam, 2005), I predict that L2 learners will be less accurate than the native Spanish speakers when the main object is a clitic pronoun in Object Control and ECM constructions, as shown respectively in (154b) and (155b). That is to say, they will give lower scores to these types of constructions

In addition, I also noted in Chapter II that Landau's (2000, 2003) theory of Control proposes that the exhaustive vs. partial Control (EC vs. PC) interpretation of infinitival clauses is not only subject to the lexical properties of the main verb, but also to whether the infinitival clause can show a tense contrast compared to the main clause. In Hornstein's (1999, 2001, 2003) Movement theory of Control, it is subject only to the lexical properties of the main verb. If Landau's (2000, 2003) proposal is correct, L2 speakers of Spanish will show different interpretation patterns according to whether the infinitival clause denotes *irrealis* or *realis.* That is to say, the scores should be lower for infinitival clauses that denote *irrealis* than for infinitival clauses that denote *realis.* If Hornstein's (1999, 2001, 2003) proposal is correct, no such interpretation patterns will emerge. In the experimental study, I test these predictions by means of a truth-value judgment (TVJ) task[95].

4.3.1. Hypotheses on the acceptance and interpretation of infinitival clauses in Control and ECM configurations

With regard to the acceptance of infinitival clauses in Control and ECM configurations, if productivity leads to overacceptance in grammaticality judgments, I hypothesize that:

(1) The L1 English/ L2 Spanish experimental group will accept pre-infinitival DPs in Object Control constructions such as (148) and (149) to a greater extent than the L1 Spanish control group (i.e., they will obtain mean scores closer to the 4–5 score range). This will apply even at an advanced level of language proficiency, and regardless of whether the context is grammatical as in (148) or ungrammatical as in (149).

(2) The L1 English/ L2 Spanish experimental group will accept infinitival clauses in Control constructions as shown in (148) to (151) to a greater extent than in ECM constructions such as (153). Their degree of acceptance will also be higher in comparison with the L1 Spanish control group. This will apply even at an advanced level of language proficiency, and even to ungrammatical constructions such as (151) and (152)[96].

[95] Please refer to Appendix IId for a complete list of items, including experimental items, distractors and fillers.

[96] The experimental design of the GJ task includes two types of ungrammatical Control constructions: Optional Control constructions and Object Control constructions where the main verb does not license an infinitival clause in Spanish, in contrast with the English equivalent. In the former, the ungrammaticality is due to syntactic reasons (i.e., the Case-assigning properties of prepositions in Spanish vs. English). In the latter, the ungrammaticality is due to lexical reasons. The ungrammaticality of ECM constructions is also due to lexical reasons.

With regard to the interpretation of infinitival clauses in Control and ECM configurations, I hypothesize that:

(1) The L1 English/ L2 Spanish experimental group will have more problems interpreting infinitival clauses in Object Control constructions and ECM constructions with clitic pronouns such as (154b) and (155b). More specifically, constructions with clitics give rise to more ambiguity than constructions with DPs such as (154a) and (155a), even at an advanced level of language proficiency (i.e., L2 learners will obtain mean scores closer to 0 in constructions with clitics compared to constructions with DPs). In contrast, the L1 Spanish control group will not show any more ambiguity for constructions with clitics than for constructions with DPs (i.e., they will obtain roughly the same mean scores with both types of constructions).

(2) Assuming that tense contrasts between infinitival clause and main clause are a factor in the interpretation of infinitival clauses in Control constructions, the L1 English/ L2 Spanish experimental group and the L1 Spanish control group will show a tendency to favour PC interpretations with infinitival clauses that denote *irrealis* (i.e., their mean scores will be close to 1). In contrast, they will favour EC interpretations with infinitival clauses that denote *realis* (i.e., their mean scores will be close to 2). Otherwise, no such interpretation pattern will be observed.

4.4. Experimental design

4.4.1. Experimental methodology

The rationale behind my choice of experimental tasks is the following. As far as I have been able to determine, the experimental method of choice to study the interpretation of Control constructions has been the comprehension (or act-out) task, both in the L1 literature (Chomsky, 1969; Cromer, 1987; Goodluck, 1981; Goodluck & Behne, 1992; Hsu, Cairns, & Fiengo, 1985; Sherman & Lust, 1993; Tavakolian, 1981) and the L2 literature (D'Anglejan & Tucker, 1975). The act-out task consists of asking the participants to play out their interpretation of the meaning of a series of sentences using a set of props provided (e.g., dolls, pictures...).

According to Goodluck (1996), this type of experiment has the advantage of providing a clear indication of the participants' interpretation, it removes experimenter bias by allowing subjects to volunteer their interpretations without presetting a range of interpretations to choose from, and it is less prone to response bias than tasks that have a fixed set of responses such as judgment tasks. However, McDaniel and Cairns (1990), observe that enactment strategies such as the act-out task have the disadvantage of showing only one interpretation of a sentence in the sense that the participant is more or less forced to choose a particular interpretation to enact, masking other possible but less preferred interpretations. As described in McDaniel and Cairns (1996), these authors use the grammaticality judgment task to study the interpretation of Control constructions by L1 child learners (McDaniel & Cairns, 1990; McDaniel, Cairns, & Hsu, 1991). Specifically, they ask participants to give judgments of reference of a series of sentences by consecutively presenting all possible antecedents using props such as dolls or pictures.

Broihier and Wexler (1995) and Goodluck and Birch (1987) investigate the L1 and L2 acquisition of Control constructions respectively using a truth-value judgment (TVJ) task. As defined in Gordon (1996), the TVJ task consists of eliciting from the participants "a bipolar judgment about whether a statement accurately describes a particular situation alluded to in some context or preamble" (p. 211), by answering a question pertaining to the context.

In contrast with grammaticality judgment tasks, it appeals to some notion of truth in the sense of a correspondence between what is said and the situation referred to, and not to the notion of a sentence being "right" or "wrong". At the same time, it offers the range of possible interpretations for a given sentence, as observed by Crain and Thornton (1998). For these reasons, I chose the TVJ task for the pilot study (Pérez-Tattam, 2005), as mentioned previously. I had very good results with this experimental design, so I decided to use it in the task that deals with the interpretation of infinitival clauses in Control and ECM configurations in the present study.

From what I have been able to determine, L2 studies of infinitival clauses (Flynn, Foley, and Lardiere, 1991; Mazurkewich, 1988) have focused on their production as opposed to other types of embedded clauses. The experimental methods used were Elicited production tasks and Elicited imitation tasks. Since my study deals only with subordination with infinitival clauses, these experimental methods were not applicable. The main reason was that the main verbs that appear in Object Control and ECM configurations alternate with finite embedded clauses, as explained previously (although an Elicited imitation task would have limited the participants' production of finite embedded clauses). In addition, I wanted an experimental that would tap into the participants' linguistic competence, independently of their production. Therefore, I decided that a grammaticality/acceptability judgment (GJ) task would be a more suitable experimental method.

There are different ways of eliciting judgments of grammaticality (McDaniel and Cairns, 1996). Since my set of test items contains both grammatical and ungrammatical items, I decided to present the sentences out of context and ask how they sounded. In order to obtain a mean score from a range of possible judgments, the options were not limited to "right" and "wrong".

4.4.2. Method

Prior to completing the experimental tasks, the experimental and the control groups were classified by level of language proficiency in Spanish. For this purpose, they were asked to complete the SGEL, a multiple choice task[97]. In order to determine their linguistic and educational background, they were also asked to complete a language assessment questionnaire, which was based on the one used at the Language Acquisition Lab of the Department of Modern Languages at University of Ottawa for previous L1 and L2 research projects.[98]

Participants were tested individually or in groups in one hour sessions over a two-month period. In certain cases, it was necessary to run the language proficiency test and the experimental tasks on separate sessions. All the materials were distributed in printed form. Each participant was given three separate booklets: the first one contained the language assessment questionnaire and the language proficiency test; the second and third booklets contained the experimental tasks and several instructions. After filling out the language

[97] SGEL: Sociedad General Española de Librería. Madrid.
[98] Please refer to Appendix IIa for an example of the language assessment questionnaire and the experimental tasks.

assessment questionnaire, they completed the language proficiency task by marking their answers on a separate sheet.

After the language proficiency task, the participants were asked to read the instructions for the GJ task before completing the test. The participants were asked to rate individually a number of sentences on a scale of 1 to 5 following these criteria: 1 = sounds very bad; 2 = sounds bad; 3 = can't decide if it sounds good or bad; 4 = sounds good; 5 = sounds very good. Tables containing these numbers were included after each sentence, and the participants had to mark the answer they thought most appropriate.

After the GJ task, the participants were asked to read the instructions for the TVJ task. They were told they were about to see PowerPoint presentation, where a number of sentences would be presented in context, and a question pertaining to these sentences would appear on screen for a limited time (30''). They were asked to answer the question by circling the option they thought most appropriate in the answer sheet. The questions were included in the answer sheet for clarity, but not the sentences.

With regard to design issues, Gordon (1996) recommends that the number of test and control items be equal, if possible. The GJ task contains 56 items, out of which 32 correspond to experimental items (57.14%) and 24 to distractor/fillers (42.86%). The TVJ task contains 40 items: 20 experimental items and 20 distractor/fillers. In order to avoid any unwanted effect from type of sentence or answer pattern, the items were distributed randomly. In addition, two versions of the GJ task were made, with the items appearing in opposite orders. Roughly half the participants completed each version. The sentences (and also the answers in the case of the TVJ task) were distributed randomly in both tasks. Also following Gordon (1996), the contexts of the TVJ task sentences were checked to make sure they did not violate any pragmatic constraints or felicity conditions. It was particularly important that the pragmatic conditions did not favour certain interpretations over others.

4.4.3. Participants

The experimental group consists of university students learning Spanish as an L2 in Canada, aged 18 to 29 years old. None of them are monolingual speakers of English, but I ensured that English was their dominant language via the language assessment questionnaire. A total of 30 participants were initially recruited, out of which two were excluded because they scored similarly to the control group on the language proficiency test (over 90%). This left a total of 28 participants, who were divided by level into two groups of 14 participants each.

The control group consists of adult native speakers of Peninsular Spanish, all of them living in Spain at the time of testing, aged 20 to 45. Most of them are university students. None of them are monolingual speakers of Spanish, but they have a low-intermediate level of English. A total of 43 participants were initially recruited, out of which two were excluded on account of their age (under 18 years old), and five because they scored below 90% on the language proficiency test (I was informed that one of them was dyslexic after the fact; as to the other four, I thought they may not have been paying all the attention they should to the test, which would account for their scores). This exclusion criterion is based on subtracting the standard deviation from the median for this group (Std. dev. = 3.456287; Median = 93; resulting score = 89.543713). A total of 36 participants were left.

4.4.4. Task 1: Grammaticality/acceptability judgments

The GJ task contains 32 experimental items and 24 distractor/fillers. The experimental items are distributed as follows: 16 Control constructions with an object controller such as

(156), 8 Optional Control (OpC) constructions such as (157), and 8 ECM constructions such as (158).

(156) Les obligamos a los políticos a tomar una decisión
Them.CL force.1PS.PAST to the politicians to make.INF a decision
"We forced the politicians to decide."

(157) *El jefe quería a los empleados trabajar en el informe
The boss want.3PS.PAST to the employees work.INF on the report
"The boss wanted the employees to work on the report."

(158) Vi al jardinero regar las plantas
See.1PS.PAST to the gardener water.INF the plants
"I saw the gardener watering the plants."

Needless to say, all OpC constructions are ungrammatical for syntactic reasons (i.e., lack of prepositional Complementizers in Spanish). As for the Object Control and ECM constructions, half the items are grammatical, and half ungrammatical. The ungrammaticality is due to lexical differences between English and Spanish (i.e., the main verbs do not give rise to Control or ECM constructions), as shown in (159) for Object Control constructions, and in (160) for ECM constructions.

(159) *Les convencí a mis primos de comprar una casa
Them.CL convince.1PS.PAST to my cousins of buy.INF a house
"I convinced my cousins to buy a house."

(160) *Creía a mi compañera ser muy inteligente
Believe.1PS.PAST to my friend be.INF very intelligent
"I believed my friend to be very intelligent."

The object controller in grammatical and ungrammatical Control constructions appears either before or after the infinitival clause, as shown in (161) and (162).

(161a) El médico les recomendó a los pacientes practicar algún deporte
The doctor them.CL. recommend.3PS.PAST to the patients practice.INF some sport
"The doctor advised the patients to do some sport."

(161b) El médico les recomendó practicar algún deporte a los pacientes
The doctor them.CL. recommend.3PS.PAST practice.INF some sport to the patients
"The doctor advised to do some sport to the patients."

(162a) *El policía	le	avisó	al conductor	de tener	cuidado.
The policeman	him.CL	warn.3PS.PAST	to the driver	of be.INF	careful

"The policeman warned the driver to be careful."

(162b) *El policía	le	avisó	de tener	cuidado	al conductor.
The policeman	him.CL	warn.3PS.PAST	of be.INF	careful	to the driver

"The policeman warned to be careful to the driver."

There are 12 distractors and 12 fillers. The distractors consist of Control constructions with a subject controller, either a nominative subject or an indirect object as shown in (163) and (164). All the distractors are grammatical.

(163) El profesor	quería	recibir	a los estudiantes	en la oficina
The teacher	want.3PS.PAST	meet.INF	to the students	in the office

"The teacher wanted to meet the students in his office."

(164) A mi hermana	le	da	miedo	viajar	en avión
To my sister.DAT	her.CL	give.3PS.PAST	fear	travel.INF	in plane

"My sister is afraid of flying."

The fillers consist of gerundive and participial periphrastic constructions, as shown in (165) and (166).

(165) Sigo	esperando	a mi novio	en el café
Continue.1PS.PRES	wait.GER	to my boyfriend	in the café

"I am still waiting for my boyfriend at the café."

(166) Llevo	recorridos	diez kilómetros	del maratón
Have.1PS.PRES	cover.PART	ten kilometres	of the marathon

"I have already covered ten kilometres of the marathon."

Half the items are grammatical, and half ungrammatical. As shown in (167), the ungrammaticality is achieved by splitting the periphrastic construction with a DP.

(167) *Sigo	a mi novio	esperando	en el café
Continue.1PS.PRES	to my boyfriend	wait.GER	in the café

"*I am still for my boyfriend waiting at the café."

In total, 24 items of the GJ task are grammatical, and 26 are ungrammatical. In the booklet, they are followed by a table with a scale of 1 to 5, as shown below.

01. Los padres prefieren a los hijos ser guapos.

1	2	3	4	5

02. Vi al jardinero regar las plantas.

1	2	3	4	5

The participants were asked to mark the answer they thought most appropriate with a cross. They were told to give a score to all the sentences, or the test would not be valid. They were also asked not to review or change their answers, and to follow the order in which the sentences appeared.

4.4.5. Task 2: Truth-value judgments

This task contains 20 experimental items and 20 distractor/fillers. The experimental items are distributed as follows: 8 Control constructions with a direct object controller as in (168), 8 Control constructions with an indirect object controller as in (169), and 4 ECM constructions as in (170). All items are grammatical.

(168) Animó a Elena a aprovechar el tiempo antes del examen
Encourage.3PS.PAST to Elena.DO to use.INF the time before the exam
"He/she encouraged Elena to make good use of his/her time before the exam."

(169) No permitió a María entrar bajo ningún concepto
Not allow.3PS.PAST to Mary.IO enter.INF under any concept
"He/she did not allow Mary to come in under any circumstance."

(170) Vio a Susana comprar un CD
See.3PS.PAST to Susan buy.INF a CD
"He/she saw Susan buying a CD."

Half the items have a DP before the infinitival clause, and the other half a clitic pronoun, as shown in (170) and (171).

(170) Recomendó a Marco retrasar el viaje.
Recommend.3PS.PAST to Marco delay.INF the journey
"He/she advised Marco to delay the journey."

(171) Le recomendó retrasar el viaje.
Him.CL recommend.3PS.PAST delay.INF the journey
"He/she advised him to delay the journey."

There are 10 distractors and 10 fillers. The distractors comprise adjunct Control constructions, as shown in (172) and (173). All distractors are grammatical.

(172) Después de ir al cine, Susana dio una sorpresa a Óscar.
After of go.INF to the movies Susan give.3PS.PAST a surprise to Oscar
"After going to the movies, Susan gave Oscar a surprise."

(173) Después de ir al cine, Susana le dio una sorpresa.
After of go.INF to the movies Susan him.CL give.3PS.PAST a surprise
"After going to the movies, Susan gave him a surprise."

The fillers comprise sentences with modal verbs, as shown in (174). All fillers are grammatical.

(174) Como Susana no tiene carnet, deberá llamar un taxi.
Since Susan not have.3PS.PRES license must.3PS.FUT call.INF a taxi
"Since Susan does not have her drivers' license, she will have to call a taxi."

The items in this task appear in context in the PowerPoint presentation, as shown here.

28.

Isabel estaba harta de que María estuviera al teléfono a todas horas. Un buen día, habló con ella muy seriamente y no permitió a María usarlo nunca más.

¿Quién o quiénes no lo usará(n) nunca más?

(Isabel was sick of Maria using the phone all the time. One day, she had a serious talk with her and did not let Maria use the phone anymore. Who will not use the phone anymore?)

The question requires an interpretation of the Control construction that appears at the end. The range of possible interpretations is included in the answer sheet, as shown below.

28. ¿Quién o quiénes no lo usará(n) nunca más?

a. Isabel		**b. María**		**c. Las dos**		**d. No sé**	

There are three possible controllers: the subject (i.e., *Isabel*) of the main clause, the object (i.e., *María*), or both the subject and the object ("*las dos*" (both) was specified in the instructions to mean "either one" or "both of them"). The possibility of refusing to give any interpretation to the Control construction was provided by the option *"No sé"* (I don't know). The participants were asked to circle the answer they thought most appropriate. They were told to answer all the questions, or the test would not be valid. They were also asked not to review or change their answers.

4.5. Results and discussion

4.5.1. Language proficiency test

The results of the language proficiency test for the experimental and control groups are shown below. The results of the t-test indicate that the difference between the means of these groups is significant.

	Control: L1 Spanish N=36	**Experimental: L2 Spanish N=28**
Mean	93.68421	61.35714
Median	94	61
Std. dev.	1.920872	12.89334

Paired t-test
Hypothesized Difference = 0

L1 Spanish, L2 Spanish

Mean Diff.	DF	T-value	P-value
31.679	27	14.513	<.0001

The results for experimental group divided by level are shown below. I decided *a priori* that the advanced level would include participants with results above the median, and the intermediate level would include participants with results below the median. The results of the t-test indicate that the difference between the means of these groups is significant.

	Intermediate level N=14	Advanced level N=14
Mean	51.07143	74.4375
Std. dev.	6.627034	11.06929

Paired t-test
Hypothesized Difference = 0

Intermediate, Advanced

Mean Diff.	DF	T-value	P-value
-20.571	13	-17.643	<.0001

The experimental group was divided in order to compare the results of the control group to the results of advanced and intermediate groups separately (i.e., effect of the level of language proficiency), as well as to the results of the experimental group as a whole (i.e., effect of the L1).

4.5.2. Grammaticality/acceptability judgment task

With regard to the GJ task, the mean scores were calculated for the experimental and control groups, and for the advanced and intermediate groups. As mentioned previously, the participants rated the sentences in this task on a scale of 1 to 5, following these criteria: 1 = sounds very bad; 2 = sounds bad; 3 = can't decide if it sounds good or bad; 4 = sounds good; 5 = sounds very good. The scores for Object Control, Optional Control (OpC) and ECM constructions were separated. Within the categories of Control and ECM constructions, the scores for grammatical items were separated from ungrammatical (*) items. Within the category of Object Control constructions, the scores for items with a pre-infinitival DP were separated from those with no pre-infinitival DP. The mean scores per type of construction are shown in Table 23.

TABLE 23
Grammaticality judgment task: mean scores for Control and ECM constructions

	Control group (L1 Spanish) N = 36	**Experimental group (L1 English / L2 Spanish)**		
		Intermediate N=14	*Advanced N=14*	*All levels N=28*
Control Pre-inf. DP	3.222	3.839	3.875	3.857
Control No pre-inf. DP	2.674	3.375	3.000	3.188
Control Total	**2.948**	**3.607**	**3.438**	**3.522**
**Control Pre-inf. DP*	2.465	3.536	3.429	3.482
**Control No pre-inf. DP*	1.972	3.196	2.393	2.795
***Control Total**	**2.219**	**3.366**	**2.911**	**3.138**
***Opt. Control Total**	**1.174**	**2.839**	**1.955**	**2.397**
ECM Total	**4.326**	**3.089**	**2.911**	**3.000**
***ECM Total**	**1.271**	**2.536**	**2.304**	**2.420**

As shown in this table, the experimental group invariably obtains higher mean scores with all types of constructions compared to the control group, with the exception of grammatical ECM constructions. Whereas the experimental group obtains a lower mean score with grammatical ECM constructions than grammatical Object Control constructions [Control = 3.522; ECM = 3.000], the control group obtains exactly the reverse result for these constructions [Control = 2.948; ECM = 4.326].

The advanced group patterns with the control group and obtains lower mean scores with OpC and ungrammatical ECM constructions compared to ungrammatical Object Control constructions, whereas the intermediate group obtains lower mean scores with ungrammatical ECM constructions [intermediate group = 2.536] than with OpC [intermediate group = 2.839] and ungrammatical Control constructions [intermediate group

= 3.366]. The advanced group obtains a considerably lower mean score with OpC constructions than the intermediate group [intermediate group = 2.839; advanced group = 1.955]. The mean scores for the other ungrammatical constructions (*Control and *ECM) do not decrease as much as those for OpC constructions from the intermediate to the advanced group.

The experimental and control groups obtain higher mean scores with Object Control constructions with pre-infinitival DPs compared to Object Control constructions with no pre-infinitival DPs, in grammatical and ungrammatical contexts. The mean scores practically do not vary from the intermediate to the advanced group for grammatical Object Control constructions [intermediate group = 3.839; control group = 3.875] or ungrammatical Object Control constructions [intermediate group = 3.536; advanced group = 3.429] with pre-infinitival DPs, in contrast with those for grammatical and ungrammatical Object Control constructions with no pre-infinitival DPs.

An analysis of variance (ANOVA) was done to make sure that these results could be generalized to the total population, and that the differences between the experimental and control groups were due to the effect of the L1 and/or the level of language proficiency[99]. The ANOVA results are summarized in Table 24.

[99] Please refer to Appendix IIb to consult the scores and means for each individual item.

TABLE 24
Grammaticality judgment task: ANOVAS for Control and ECM constructions

	F-value			P-value		
	L1	*Int. level*	*Adv. level*	*L1*	*Int. level*	*Adv. level*
Control Pre-inf. DP	8.695	6.342	5.211	0.0045	0.0152	0.0269
Control No pre-inf. DP	6.150	9.494	1.394	0.0159	0.0034	**[0.2436]
Control Total	**9.268**	**10.510**	**3.649**	**0.0034**	**0.0022**	****[0.0621]**
**Control Pre-inf. DP*	24.325	18.557	14.053	<0.0001	<0.0001	0.0005
**Control No pre-inf. DP*	20.573	34.955	4.740	<0.0001	<0.0001	0.0344
***Control Total**	**33.550**	**39.587**	**12.808**	**<0.0001**	**<0.0001**	**0.0008**
***Opt. Control Total**	**95.822**	**260.808**	**47.816**	**<0.0001**	**<0.0001**	**<0.0001**
ECM Total	**89.934**	**65.510**	**65.504**	**<0.0001**	**<0.0001**	**<0.0001**
***ECM Total**	**81.548**	**90.762**	**44.128**	**<0.0001**	**<0.0001**	**<0.0001**

**Non-significant differences are shown in brackets

As shown in this table, the ANOVA by L1 indicates that the differences between experimental and control groups are all significant [$p < 0.05$]. The differences are less significant with grammatical Object Control constructions [$p = 0.0034$], compared to the other types of constructions [$p < 0.0001$]. The ANOVA by level indicates that the differences between the advanced and control groups are not significant for the following types of constructions: grammatical Object Control constructions with no pre-infinitival DP [$p = 0.2436$], and grammatical Object Control constructions as a whole [$p = 0.0621$]. The differences are less significant for grammatical Object Control constructions with a pre-infinitival DP [p = 0.0269], and for ungrammatical Object Control constructions [p = 0.0008], than for other types of constructions [p < 0.0001].

In order to explain some of the means described previously, I calculated the percentages corresponding to the different scores given for each type of construction. The percentages are summarized in Tables 25 and 26[100].

TABLE 25
Grammaticality judgment task: percentages for scores by group

	Control group (L1 Spanish) N = 36			Experimental group (L1 English / L2 Spanish) N = 28		
	{5-4}	3	{2-1}	{5-4}	3	{2-1}
Control Total	39.6%	11.5%	49.0%	13.8%	25.9%	25.9%
***Control Total**	16.3%	9.7%	74.0%	14.3%	37.1%	37.1%
Opt. Control Total	0.7%	0.3%	99.0%	15.6%	61.2%	61.2%
ECM Total	88.2%	3.5%	8.3%	16.1%	42.9%	42.9%
***ECM Total**	0.7%	2.8%	96.5%	20.5%	58.9%	58.9%

As mentioned before, the control group obtains a higher mean score with grammatical ECM constructions than with grammatical Object Control constructions. As shown in this table, the control group shows little variability with grammatical ECM constructions, where most of the scores range between 4 and 5, as well as other types of constructions (OpC and *ECM). In contrast, the variability is higher with grammatical Object Control constructions, where a surprisingly high 49% of the scores range between 1 and 2. This result may be attributed to either of the following factors. It is possible that the native speakers prefer finite embedded clauses, such as (175), to less productive infinitival embedded clauses, such as (176).

[100] See Appendix IIc to consult the percentages for each individual item.

(175) Animó a Elena a que aprovechara el tiempo
Encourage.3PS.PAST to Elena to that.COMP use.3PS.SUBJ the time
"He/she encouraged Elena to make good use of his/her time."

(176) Animó a Elena a aprovechar el tiempo
Encourage.3PS.PAST to Elena to use.INF the time
"He/she encouraged Elena to make good use of his/her time

It is also possible that the native speakers are rejecting some Control constructions with a pre-infinitival DP, particularly those with direct object controllers such as (177), as opposed to those with indirect object controllers such as (178), because they are doubled by the clitic.

(177) Les obligamos a los políticos a tomar una decisión
Them.CL. force.1PS.PAST to the politicians to make.INF a decision
"We forced the politicians to decide."

(178) El médico les recomendó a los pacientes practicar algún deporte
The doctor them.CL. recommend.3PS.PAST to the patients practice.INF some sport
"The doctor advised the patients to do some sport."

Although clitic-doubling is favoured in Peninsular Spanish, it is only allowed unrestrictedly with indirect objects. Clitic-doubling of direct objects is subject to certain restrictions, particularly to dialectal variation (Fernández Soriano, 1999). In fact, according to the feedback received from native speakers, some thought that the pronoun was redundant in some sentences. However, the percentages per item are not entirely conclusive in this respect. For instance, 52.8% of the scores for the Control construction in (177), which has a direct object DP doubled by a clitic, range between 4 and 5, and 38.9% range between 1 and 2. As for the Control construction in (178), which has an indirect object DP doubled by a clitic, 63.9% of the scores range between 4 and 5, and 30.6% range between 1 and 2. In view of these results, I cannot affirm conclusively that the grammatical function of the object (direct vs. indirect object) is the determining factor here. In fact, I believe that a very important factor is the presence of a direct object in the infinitival clause[101]. More specifically, the infinitival clause in (177), which appears with command/influence verb *obligar,* contains a direct object (les obligamos a los políticos a tomar una decision). In contrast, in the item with command/influence verb *animar,* the infinitival clause did not contain an infinitival clause with a direct object (el jefe le animó al empleado a hablar con franqueza/the boss encouraged the employee to speak frankly). The percentages for this item were much lower compared to the Control constructions in (177) or (178): no more than 13.9% of the answers range between 4 and 5, and an overwhelming 77.8% range between 1 and 2.

Compared to the control group, the experimental group's grammaticality judgments are not as clear-cut, and they show high percentages of scores equal to 3 for all constructions. These percentages decrease in the advanced group compared to the intermediate group, as shown in Table 26.

[101] This restriction applies to direct objects in simplex sentences, as in *lo vi a Juan* / *I saw John* (the direct object clitic *lo* doubles the DP *a Juan*). Clitic-doubling of the object is only possible in certain dialects of Spanish such as Argentinian (Río de la Plata) Spanish (Barrenechea & Orecchia, 1977; Fernández Soriano, 1999). However, the issue of clitic-doubling in complex sentences is a different matter, particularly regarding verbs of command and influence such as *obligar* 'force', or *animar* 'encourage'. In Control constructions with these verbs, the main object is usually pronominalized with a direct object clitic, particularly in areas of southern Spain (Andalucia), the Canary Islands, and Latin America. However, the main object may also pronominalize with an indirect object in these cases, particularly in areas of central and eastern Spain (León, Aragón, Murcia). According to Fernández Ordóñez (1999), since the use of the dative in causative constructions with infinitival clauses (main verbs *hacer* 'make' and *dejar* 'let') was obligatory in Old Spanish, this rule may have been applied to command and influence verbs as well (also Davies, 1995; Echenique, 1981; Lapesa, 1964), favored by their semantic proximity to causative verbs. Similarly also to causative verbs, perception verbs in ECM constructions (main verbs *ver* 'see' and *oír* 'hear') have been observed to pronominalize differently according to whether the infinitival clause contains a direct object or not by Bello (1847), as shown in these examples:

(i) La oí cantar (a María) (I heard her sing)

(ii) Le oí cantar una canción (a María) (I heard her sing a song) (Fernández Ordóñez, 1999: p. 1328)

If this analysis is correct, and verbs of command and influence are being attributed some of the properties of causative verbs, it is plausible that the main object is being reanalysed as an indirect object by some of the participants, particularly those who speak *leísta* dialects (*leismo* is defined as replacing masculine DPs with indirect clitic pronoun *le,* independently of whether they are direct or indirect objects; all the main objects in the experimental items were masculine). For these speakers, clitic-doubling of the object in Control constructions with *obligar* and *animar* would not be a problem, as long as there was a direct object in the infinitival clause.

TABLE 26
Grammaticality judgment task: percentages for scores by level

	Control group (L1 Spanish) N = 36			Intermediate group (L1 English / L2 Spanish) N = 14			Advanced group (L1 English / L2 Spanish) N = 14		
	{5-4}	3	{2-1}	{5-4}	3	{2-1}	{5-4}	3	{2-1}
Control Total	39.6%	11.5%	49.0%	60.7%	18.8%	20.5%	59.8%	8.9%	31.3%
***Control Total**	16.3%	9.7%	74.0%	53.6%	18.8%	27.7%	43.8%	9.8%	46.4%
Opt. Control Total	0.7%	0.3%	99.0%	33.9%	19.6%	46.4%	12.5%	11.6%	75.9%
ECM Total	88.2%	3.5%	8.3%	41.1%	23.2%	35.7%	41.1%	8.9%	50.0%
***ECM Total**	0.7%	2.8%	96.5%	21.4%	26.8%	51.8%	19.6%	14.3%	66.1%

The percentages confirm my previous observations with regard to OpC constructions as opposed to other ungrammatical items (*Control and *ECM constructions). The scores for the latter, whose ungrammaticality is due to lexical factors, do not vary much by level. In contrast, the scores ranging between 1 and 2 for OpC constructions, whose ungrammaticality is due to syntactic factors, experience an important increase (from 46.4% in the intermediate group to 75.9% in the advanced group).

4.5.2.1. Hypothesis 1a

I hypothesized that the L2 Spanish experimental group would accept pre-infinitival DPs in Object Control constructions to a greater extent than the L1 Spanish control group, even at an advanced level of language proficiency, and independently of whether the context was grammatical or ungrammatical. The results confirm this prediction: the experimental group gives a higher mean score to Object Control constructions with pre-infinitival DPs compared to the control group, in grammatical contexts [experimental group

= 3.857; control group = 3.222] as well as ungrammatical contexts [experimental group = 3.482; control group = 2.465]. The difference between experimental and control groups is more robust with ungrammatical Object Control constructions [$F = 24.325$; $p < 0.0001$] than with grammatical Object Control constructions [$F = 8.695$; $p = 0.0045$]. In addition, the intermediate and advanced levels obtain very similar mean scores for these constructions, even in ungrammatical contexts [intermediate group = 3.536; advanced group = 3.429], as mentioned above.

The results clearly indicate that the experimental group is overaccepting Object Control constructions with pre-infinitival DPs, and I interpret this as an effect of the productivity of pre-infinitival DPs in English. Since this productivity is related to the existence of prepositional Complementizers in English, which are entirely absent from Spanish, it would seem that the data from the L2 Spanish experimental group shows evidence of transfer of properties of the L1 Complementizer. This clearly contrasts with the results of the analysis of the Spanish/English bilingual data, which provided no evidence that the Complementizer system was a site for transfer. Therefore, it is useful to compare different types of acquisition data in order to see the greater picture regarding crosslinguistic influence, and how it compares in child and adult learners.

4.5.2.2. Hypothesis 2a

I hypothesized that the L2 Spanish experimental group would accept infinitival clauses in Control constructions to a greater extent than in ECM constructions compared to the L1 Spanish control group, even at an advanced level of language proficiency, and even if the context was ungrammatical. The results do not quite confirm my predictions. Mean scores are higher in the experimental group than the control group for all ungrammatical contexts, including ungrammatical Object Control constructions [experimental group =

3.318; control group = 2.219], OpC constructions [experimental group = 2.397; control group = 1.174], and ungrammatical ECM constructions [experimental group = 2.420; control group = 1.217]. As mentioned previously, although the intermediate group obtains a lower mean score with ungrammatical ECM constructions than with OpC or ungrammatical Object Control constructions, the advanced group patterns with the control group, obtaining lower mean scores with OpC and ungrammatical ECM constructions compared to ungrammatical Object Control constructions. The differences between advanced and control group are less significant for ungrammatical Object Control constructions [$F = 12.808$; $p = 0.0008$] than for OpC [$F = 47.816$; $p < 0.0001$] or ungrammatical ECM [$F = 44.128$; $p < 0.0001$] constructions. In addition, although the differences between the experimental and control groups are significant for all ungrammatical contexts, the F-value for ungrammatical Control constructions [$F = 33.550$; $p < 0.0001$] is lower than for either OpC constructions [$F = 95.822$; $p < 0.0001$] or ungrammatical ECM constructions [$F = 81.548$; $p < 0.0001$].

The results clearly indicate that the advanced group is overaccepting subordination with infinitival clauses across the board, probably due to the frequency of infinitival subordination in English, and not in Control constructions as opposed to ECM constructions. Since embedded clauses in ECM configurations denote *realis*, this cannot be interpreted as evidence of transfer of subordination strategies from the L1 when the embedded clause denotes *irrealis.*

Although the results of the intermediate group conform to my predictions, there are alternative interpretations besides transfer of L1 subordination strategies. The intermediate group could be simply transferring prepositional Complementizers from their L1 when processing these constructions, as opposed to the advanced group, who seems to be aware that there are no prepositional Complementizers in Spanish. This could explain the differences between the mean scores obtained by the intermediate and advanced groups with OpC constructions, which are not observed in either ungrammatical Object Control or ungrammatical ECM constructions, as described previously.

In sum, with regard to the acceptance of infinitival clauses in Object Control and ECM configurations, I predicted that (1) L2 Spanish learners would overgeneralize pre-infinitival DPs in Object Control constructions, and (2) they would overgeneralize subordination with infinitival clauses in Control configurations as opposed to ECM configurations. The results confirm the first prediction, and the second prediction is confirmed only in the results of the intermediate group.

4.5.3. Truth-value judgment task

With regard to the TVJ task, the results were quantified as follows. If the answer corresponded to the expected interpretation of the construction, that is to say, if the participant interpreted that the subject or controller of the infinitival clause was the object of the main clause, it received 2 points. If the answer did not correspond to the expected interpretation (i.e., if the participant interpreted that the subject or controller of the infinitival clause was the subject of the main clause), it received 0 points. If the answer corresponded to a partial Control interpretation (i.e., the participant interpreted that the subject and/or the object of the main clause to be the controller or subject of the infinitival clause), it received 1 point. If the answer was "I don't know", it was not given any points. I did not obtain many "I don't know" answers for either the experimental group or the control group, and most of them were given by the intermediate level group. In this case, I believe that the time constraints that were part of this task were responsible.

In order to calculate the mean scores, Control constructions were separated from ECM constructions. Within these two categories, constructions with a DP were separated from constructions with a clitic pronoun. Within the category of Control constructions, those with a direct object controller were separated from those with an indirect object controller. I added the total number of scores for each construction, and divided it by the total number of answers (including "I don't know" answers). In addition, the results of the experimental group were divided by level of language proficiency. The mean scores per type of construction are shown in Table 27.

TABLE 27
Truth-value judgment task: mean scores for Control and ECM constructions

	Control group (L1 Spanish) N = 36	**Experimental group (L1 English / L2 Spanish)**		
		Intermediate N=14	*Advanced N=14*	*All levels N=28*
Control DO DP	1.894	1.774	1.857	1.815
Control DO CL	1.847	1.024	1.405	1.214
Control DO Total	**1.870**	**1.399**	**1.631**	**1.515**
Control IO DP	1.671	1.429	1.631	1.530
Control IO CL	1.616	1.226	1.780	1.503
Control IO Total	**1.644**	**1.327**	**1.705**	**1.516**
ECM DP	2.000	1.357	1.857	1.607
ECM CL	1.903	0.923	1.731	1.327
ECM Total	**1.951**	**1.143**	**1.804**	**1.473**

DO=direct object; IO=indirect object; DP=noun phrase; CL=clitic pronoun

As shown in the table above, the mean scores obtained by the experimental group for constructions with clitics are lower than those obtained for constructions with DPs, except for Control constructions with indirect object controllers [DP = 1.530; CL = 1.503]. Compared to the control group, this group obtains lower scores for all constructions, except for Control constructions with direct object DP controllers [experimental group = 1.815; control group = 1.894]. As to the control group, its mean scores practically do not differ according to the syntactic category of the antecedent. The advanced group obtains higher mean scores than the intermediate group for all constructions. Whereas the intermediate group obtains lower mean scores for constructions with clitics than for constructions with DPs, the advanced group only obtains these results for Control constructions with direct object controllers [DP = 1.857; CL = 1.214].

An analysis of variance was done to make sure that the results could be generalized to the total population, and that the differences between the experimental and control groups were due to the effect of the L1 and/or the level of language proficiency. The ANOVA results are summarized in Table 28.[102]

TABLE 28
Truth-value judgment task: ANOVAS for Control and ECM constructions

	F-value			**P-value**		
	L1	*Int. level*	*Adv. level*	*L1*	*Int. level*	*Adv. level*
Control DO DP	1.863	3.592	0.296	**[0.1772]	**[0.0641]	**[0.5892]
Control DO CL	34.863	60.892	15.211	<0.0001	<0.0001	0.0003
Control DO Total	**24.885**	**40.955**	**10.076**	**<0.0001**	**<0.0001**	**0.0026**
Control IO DP	6.313	12.531	0.782	0.0146	0.0009	**[0.3811]
Control IO CL	1.600	16.799	3.692	**[0.2106]	0.0002	**[0.0606]
Control IO Total	**4.274**	**21.549**	**1.384**	**0.0429**	**<0.0001**	****[0.2452]**
ECM DP	18.427	42.415	5.760	<0.0001	<0.0001	0.0203
ECM CL	18.914	46.166	2.546	<0.0001	<0.0001	**[0.1173]
ECM Total	**26.597**	**69.262**	**7.069**	**<0.0001**	**<0.0001**	**0.0107**

**Non-significant differences are shown in brackets

The differences are not significant for Control constructions with a direct object DP. Also, the intermediate group shows less significant differences for Control constructions with an indirect object DP [p = 0.0009], and with an indirect object clitic pronoun [p = 0.0002], compared to the other types of constructions [p < 0.0001]. The advanced group does not show significant differences for any of the Control constructions with indirect objects, or for ECM constructions with a clitic, and the differences for all the other types of constructions are less significant than those shown by the intermediate group.

[102] Please refer to Appendix IId to consult the scores and means for each individual item.

With regard to the scores for each type of construction, the percentages are summarized in Tables 29 and 30[103].

TABLE 29
Truth-value judgment task: percentages for scores by group

	Control group (L1 Spanish) N = 36			Experimental group (L1 English / L2 Spanish) N = 28		
	2	1	0	2	1	0
Control DP DO	89.4%	10.6%	0.0%	89.7%	3.7%	6.5%
Control CL DO	87.3%	9.9%	2.8%	57.7%	3.8%	38.5%
Control DO Total	**88.35%**	**10.25%**	**1.40%**	**73.70%**	**3.75%**	**22.50%**
Control DP IO	67.1%	32.9%	0.0%	61.5%	29.4%	9.2%
Control CL IO	61.3%	38.7%	0.0%	68.9%	10.7%	20.4%
Control IO Total	**64.20%**	**35.80%**	**0.00%**	**65.20%**	**20.05%**	**14.80%**
ECM DP	100.0%	0.0%	0.0%	78.6%	3.6%	17.9%
ECM CL	95.8%	1.4%	2.8%	64.6%	6.3%	29.2%
ECM Total	**97.90%**	**0.70%**	**1.40%**	**71.60%**	**4.95%**	**23.55%**

As shown in this table, the control group shows little variability with regard to ECM constructions: most of the answers score 2 points, that is, they interpret the main object as the subject of the infinitival clause. In contrast, Control constructions show more variability, with a certain percentage of answers scoring 1 point. This is due to the possibility of giving a partial Control interpretation to these constructions. The percentage of answers that score 1 point is higher for indirect objects than direct objects. The percentage of answers that score 0 points is higher in the experimental group than the

[103] See Appendix IIe to consult the percentages for each individual item.

control group; that is, the experimental group shows a greater tendency to mistakenly interpret the main subject as the controller. The percentage is higher for constructions with clitics, compared to constructions with DPs.

TABLE 30
Truth-value judgment task: percentages for scores by level

	Control group (L1 Spanish) N = 36			**Intermediate group (L1 English / L2 Spanish) N = 14**			**Advanced group (L1 English / L2 Spanish) N = 14**		
	2	1	0	2	1	0	2	1	0
Control DP DO	89.4%	10.6%	0.0%	84.9%	7.5%	7.5%	94.4%	0.0%	5.6%
Control CL DO	87.3%	9.9%	2.8%	47.1%	3.9%	49.0%	67.9%	3.8%	28.3%
Control DO Total	**88.35%**	**10.25%**	**1.40%**	**65.98%**	**5.73%**	**28.28%**	**81.18%**	**1.89%**	**16.93%**
Control DP IO	67.1%	32.9%	0.0%	55.6%	29.6%	14.8%	67.3%	29.1%	3.6%
Control CL IO	61.3%	38.7%	0.0%	51.0%	17.6%	31.4%	86.5%	3.8%	9.6%
Control IO Total	**64.20%**	**35.80%**	**0.00%**	**53.27%**	**23.64%**	**23.09%**	**76.91%**	**16.47%**	**6.63%**
ECM DP	100.0%	0.0%	0.0%	64.3%	7.1%	28.6%	92.9%	0.0%	7.1%
ECM CL	95.8%	1.4%	2.8%	43.5%	8.7%	47.8%	84.0%	4.0%	12.0%
ECM Total	**97.90%**	**0.70%**	**1.40%**	**53.88%**	**7.92%**	**38.20%**	**88.43%**	**2.00%**	**9.57%**

As shown in Table 30, the percentage of answers that score 0 decreases in the advanced group compared to the intermediate group. Nevertheless, this group also shows higher percentages for constructions with clitics than constructions with DPs.

4.5.3.1. Hypothesis 1b

I hypothesized that constructions with clitics would be more problematic, even at an advanced level of language proficiency. The results partially confirm this prediction: the experimental group obtains lower mean scores for Control constructions with direct object clitics than with DPs [DP = 1.815; CL = 1.214], and for ECM constructions with direct object clitics than with DPs [DP = 1.607; CL = 1.327], but not for Control constructions with indirect objects. The intermediate group does obtain lower mean scores for Control constructions with indirect objects [DP = 1.429; CL = 1.226], and the advanced group obtains lower scores only with Control constructions with direct objects [DP = 1.857; CL = 1.405]. The percentages for subject interpretation (i.e., interpreting the subject of the main clause as the subject of the infinitival clause) indicate that the experimental group made more mistakes with clitics [Control DO CL = 38.5%; Control IO CL = 20.4%; ECM CL = 29.2%] than with DPs [Control DO DP = 6.5%; Control IO DP = 9.2%; ECM DP = 17.9%].

There appears to be a learning hierarchy where the interpretation of Control constructions with direct object DPs come first, since there were no statistically significant differences between the experimental and control groups, not even between for the intermediate group [F = 3.592; p = 0.0641]. These are followed by Control constructions with indirect object DPs [F = 0.782; p = 0.3811], ECM constructions with clitics [F = 2.546; p = 0.1173], and Control constructions with indirect object clitics [F = 3.692; p = 0.0606]. For these constructions, the advanced group does not show significant differences. Therefore, it is clear that native-like interpretation with DPs is acquired before clitic pronouns. I interpret that this is due to the fact that clitics pose learnability difficulties in L2 acquisition[104]. In contrast with the experimental group, the control group does not show differences according to the syntactic category of the antecedent, as expected.

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[104] Recent L2 research has investigated the acquisition of clitics, focusing particularly on the difficulties posed by clitic placement. For instance, Bruhn de Garavito and Montrul (1996) investigate the acquisition of clitic placement in restructuring contexts in L2 French and Spanish by native speakers of Spanish and French by means of a grammaticality judgement task. They find that learners show problems related to clitic-climbing, which is allowed in Spanish (i.e., <u>lo</u> *quiero ver* (I want to see him)), but not in French (i.e., **je* <u>*le*</u> *veux voir* (I want to see him)).

The results of the control group also indicate that it favours a partial Control interpretation (i.e., the controller of the infinitival clause is interpreted as the subject and/or object of the main clause) for Control constructions with indirect objects [Control IO = 35.80%], compared to Control constructions with direct objects [Control IO = 10.25%] (since ECM configurations have overt subjects, they do not allow partial Control interpretation [ECM = 0.70%]). As for the experimental group, the results indicate that native-like interpretation of direct object DPs in Control constructions is acquired before indirect object DPs. Since the direct object vs. indirect object cue to the interpretation of infinitival clauses in Control constructions does not exist in English, this suggests that the acquisition of native-like interpretation in Control constructions with indirect objects poses an added difficulty compared to that of Control constructions with direct objects. The strategy of the experimental group, and particularly of the advanced group, is to favour object Control interpretation over partial Control interpretation, even with indirect objects [Control DO = 81.18%; Control IO = 76.91%].

In addition, the results of the experimental group for ECM constructions pattern with their results for Control constructions with direct objects, in the sense that they allow partial Control interpretation for both [Control DO = 3.75%; ECM = 4.95%]. This indicates that the experimental group is misanalysing ECM constructions, possibly due to the fact that they also take direct objects, giving rise to ambiguity.

Duffield, Prévost and White (1997) also investigate clitic placement in different contexts in L2 French by native speakers of Spanish and English by means of an online sentence matching task. They find that learners accept ungrammatical forms in causative contexts such as **Marie fait le sortir* (Mary made him leave). Duffield and White (1999) investigate clitic placement in different contexts (i.e., restructuring, causatives) in L2 Spanish by native speakers of English and French, and find that these learners are able to acquire knowledge of L2 clitic placement independently of the properties of the L1 (i.e., lack of clitics in English, differences regarding the position of clitics in Spanish), but they tend to reject Clitic Climbing even in contexts where it is obligatory in Spanish (i.e., causatives such as <u>*lo*</u> *hizo venir / hizo venir*<u>*lo*</u> (he/she made him come)).

4.5.3.2. Hypothesis 2b

I hypothesized that, if tense contrasts between infinitival clause and main clause are a factor in the interpretation of infinitival clauses in Control constructions, the experimental group would give PC as well as EC interpretations to infinitival clauses that denote *irrealis*, and EC interpretations to infinitival clauses that denote *realis*. Otherwise, no such interpretation pattern would be observed.

In order to determine which verbs give rise to tense contrasts, I verified whether they alternated with finite clauses in the subjunctive. All the verbs in the experimental items alternate with these types of clauses, and therefore all denote *irrealis*. However, the results of the control group show that the verb *obligar* 'force' does not receive partial Control interpretation with DPs, although it marginally receives this interpretation with clitics (5.7%), and the verb *permitir* 'allow' does not receive partial Control interpretation at all. In contrast, the verb *recomendar* 'recommend' only receives a partial Control interpretation with DPs, but receives either an object Control or a partial Control interpretation with clitics (object Control = 60.6%; partial Control = 39.4%). As to the experimental group, their strategy is to favour an object Control interpretation, except in the case of *recomendar* 'recommend' and *permitir* 'allow', where they obtain exactly the same results as the control group. Therefore, I was not able to confirm my hypothesis.

In sum, with regard to the interpretation of infinitival clauses in Object Control and ECM configurations, I predicted that (1) constructions with clitic pronouns would be more problematic than constructions with DPs for the experimental group, whereas the control group would not show differences according to the syntactic category of the object; and (2) if tense contrasts are a factor in the interpretation of infinitival clauses in Control configurations, the control group would give PC as well as EC interpretations to infinitival clauses that denote *irrealis,* and EC interpretations to infinitival clauses that denote *realis.* The results confirm the first prediction, but not the second prediction.

4.5.4. Conclusions

In conclusion, I found that the experimental group overgeneralized pre-infinitival DPs in Object Control constructions. Since the productivity of pre-infinitival DPs in English is related to the properties of the Complementizer in this language (i.e., the existence of prepositional Complementizers), I believe that the experimental group is transferring these properties to their L2, hence these results obtained by means of the grammaticality/acceptability judgment task.

I also found that the intermediate group overgeneralized subordination with infinitival clauses in Object Control constructions compared to ECM constructions, but not the advanced group. I believe that the experimental group initially transfers prepositional Complementizers for their L1; as they become more proficient in their L2, they realize that there are no such Complementizers in Spanish, and their results are considerably closer to those of the control group.

My findings confirm that the Complementizer system is a site for transfer in L2 acquisition, as proposed in earlier studies such as Lakshmanan (1993/1994). They also enable me to make a learnability proposal on the basis of the Competing Grammars Hypothesis (Zobl & Liceras, 2004). In order to acquire the target Complementizer system, L1 English/L2 Spanish learners must reanalyse prepositions as exclusively inherent Case assigners. In this process, there is a period of non-convergence during which two representations of the Case-assigning properties of prepositions compete in their interlanguage grammar, as shown by the initial transfer of prepositional Complementizers by the intermediate group. Eventually, there is convergence with the native speakers of

Spanish, even though the non-target representation remains partially accessible. This is supported by evidence of transfer of certain properties of the L1 Complementizer by the experimental group (i.e., overgeneralization of pre-infinitival DP). It is also supported by the fact that, although the difference between advanced and control groups is smaller than that between intermediate and control groups for Optional Control constructions, it is still statistically significant.

I also found that the experimental group was less accurate when the main object was a clitic pronoun in Object Control and ECM constructions. I believe that this is an effect of the structural differences between English and Spanish, which give rise to learnability difficulties as proposed in Pérez-Tattam (2005). In addition, the acquisition of the properties of clitic pronouns in L2 Spanish and other Romance languages has been found to be difficult in previous studies (Bruhn de Garavito & Montrul, 1996; Duffield, Prévost, & White, 1997; Duffield & White, 1999). Applied to the interpretation of infinitival clauses with clitic pronoun antecedents versus DPs, this difficulty may lie in the fact that clitic pronouns appear in non-argument positions (i.e., to the left of the verb), as opposed to full DPs or strong pronouns, as they occur in higher structural positions, within a functional phrase (Kayne, 1991; Roberts, 1997; Sportiche, 1995; Uriagereka, 1995). I do not rule out that processing may be a factor, since the control group was slightly less accurate with clitic pronouns as well.

In addition, it appears that the possibility of having partial Control interpretation in Spanish depends on factors other than the tense contrasts between infinitival and main clauses (*irrealis* vs. *realis*) proposed by Landau (2000, 2003). In general terms, the control group favoured a partial Control interpretation with verbs that take indirect objects compared to those that take direct objects. Nevertheless, the verbs within these groups showed a certain amount of variability, particularly the verbs from the indirect object group. They did not only differ as to the percentages of object and partial Control, but in the case of verbs such as *mandar* 'order' and *recomendar* 'recommend', they also differed depending on whether the controller was a DP or a clitic pronoun. The variability was too great to determine whether the possibility of receiving partial Control interpretation depends on the lexical properties of the main verb, as proposed by Hornstein (2003). In sum, although the results of the pilot study (Pérez-Tattam, 2005) were favorable to Landau's (2000, 2003) account of Control into adjuncts, I do not believe that the results of the truth-value judgement task are conclusive with regard to Hornstein's (2003) or Landau's (2000, 2003) account of partial vs. exhaustive Control.

In this chapter, I have studied the L2 acquisition of Spanish infinitival clauses in Control and ECM configurations by adult native speakers of English. I have focused on the interaction between Spanish and English regarding these constructions. As far as I can determine, Object Control and ECM constructions and some of their related properties are the source of crosslinguistic influence in adult L2 acquisition, but not in child bilingual acquisition. In L2 acquisition there is an influence of the L1 in transfer than does not appear in L1 bilingual acquisition. In the next chapter, I will present my general conclusions regarding the acquisition of the properties of Spanish infinitival clauses in Control and ECM configurations by child Spanish/English bilingual learners and adult L1 English/L2 Spanish learners.

CHAPTER 5. GENERAL CONCLUSIONS

This study of the acquisition of the properties of infinitival clauses in Control, Raising and ECM configurations by child Spanish/English bilingual learners and adult L1 English/L2 Spanish learners seeks to provide new insights into native acquisition and non-native acquisition, and the relationship between the two. In the following sections, I will present these insights and propose several topics for further research.

5.1. Conclusions regarding native and non-native acquisition

With regard to the development of language by child learners, this dissertation focuses on the development of complex syntax (infinitival and finite complements) and infinitival morphology in the English and Spanish grammars of bilingual and monolingual learners. The results show that both bilinguals and monolinguals develop complements with less structure (infinitival complements without Complementizers such as *quiero jugar / I want to play*) before complements with more structure (infinitival complements with Complementizers such as *I want it to snow* in English, and finite complements such as *quería que empezara otra vez* 'I wanted him/her to start again' in Spanish). I interpret that complements with more structure are developed later because they are marked with respect to complements with less structure, in accordance with Roberts' (1999, 2001) view of markedness.

Even though bilinguals are producing infinitival morphology in Spanish, both bilinguals and English monolinguals initially produce bare forms with complements (e.g., *I want Ø play;* English monolinguals additionally produce bare forms with complements in constructions such as *want me Ø open it*). Although Spanish infinitival morphology is produced in a target-like way earlier than English infinitival morphology, it does not necessarily help bilinguals to acquire the properties of functional projections earlier. That is, bilingual learners have lower rates of omission of the infinitival marker than English monolingual learners, but the differences between both groups are not statistically significant. My interpretation is that infinitival morphology alone may not be enough to trigger the projection of TP, particularly as infinitival morphology is underspecified for Tense and Agreement. It is possible that Carlson (1990) was correct in arguing that children interpret infinitival complements as nominalizations (see Chapter III). Nevertheless, I do not believe that the absence of morphology necessarily means absence of functional projections (see section 3.2.2 of Chapter III for some notes on the debate between the relationship between morphology and syntax, particularly regarding Continuity vs. Maturation accounts of the development of infinitival morphology in child L1 acquisition). As noted in Cook and Newson (1996), arguments in favour of the absence of functional projections in child grammar should not rely only on the absence of forms in child data (e.g., Radford's (1991) main evidence in favour of the Maturation proposal is the lack of inflectional elements in child data). Child data may contain other evidence of the projection of functional categories (such as evidence of verb-second movement in child German (Meisel & Müller, 1992)). Also, the delay between Spanish infinitival morphology and English infinitival morphology can be interpreted in terms of the nature of the morphology itself (bound infinitival morphology in Spanish vs. free infinitival morphology in English). My analysis of the Spanish/English bilingual data confirms the observations regarding the acquisition of bound as opposed to free morphology in acquisition research (Vainikka & Young-Scholten, 1998; Zobl & Liceras, 1994), with the advantage that I was able to study the development of both types of morphology in the same population.

The results of this study provide clear evidence that there are two separate language systems in the bilingual mind. Although they have two available grammars, there appears to be no transfer from Spanish to English with respect to infinitival morphology as explained previously. Also, there appears to be no transfer with respect to the Complementizer system either. That is, bilingual learners produce fewer infinitival complements with a prepositional Complementizer than English monolingual learners, but the differences between both groups are not statistically significant. I had hypothesized that bilingual learners would apply the Subset/Superset principle (Berwick, 1985; Towell and Hawkins, 1994, among others) to the Case-assigning properties of prepositions[105], and initially analyse English prepositions as assigning only inherent Case. This would in turn cause a delay in their development of infinitival complements with a prepositional Complementizer. If the results had borne out my hypothesis, it would have implied that directionality of transfer between languages can be predicted not only in terms of morphological complexity (Gawlitzek-Maiwald & Tracy, 1996), but also in terms of a default option represented by the subset language. Nevertheless, even though the bilingual data does not provide any evidence of transfer between the English and Spanish Complementizer systems, the L2 acquisition data does show that certain properties of the Complementizer may be transferred from one language to the other. In addition, the subset/superset relationship between the Case marking properties of Complementizers in different languages has not been explored in previous L1 or L2 acquisition research, to the

[105] As mentioned earlier in this dissertation, Spanish seems to be a subset of English in the sense that it only has one type of Complementizer (*que* 'that'), as opposed to English which has two types of Complementizers (*that* and prepositional Complementizer *for*). In other words, the Case-assigning properties of prepositions in Spanish are also a subset of those of prepositions in English: Spanish prepositions only assign inherent Case; English prepositions may assign inherent or structural (accusative) Case.

best of my knowledge. This dissertation does propose a new application of this principle to the acquisition of functional categories and their related properties.

With regard to interaction between languages, it is common to non-native acquisition and bilingual acquisition, since non-native learners have access to the grammar of their native language as well as that of their non-native language. My study focuses on a property of English that is closely related to the characteristics of the Complementizer system in this language, and for which there is positive evidence: the productivity of overt arguments before infinitival complements. The results of my analysis of the non-native data indicate that non-native learners indeed overgeneralize these arguments before infinitival complements in Spanish, particularly those with an intermediate level of Spanish. These intermediate learners also transfer properties of prepositions related to Case-assignment, in this case from English to Spanish. Therefore, I conclude that the Complementizer system is a site for transfer in adult L2 acquisition, as well as in child L2 acquisition (Lakshmanan, 1993/1994). I interpret that non-native learners of Spanish have two competing representations in their interlanguage grammar: one where prepositions have structural and inherent Case-assigning properties, and one where prepositions only have inherent Case-assigning properties. Unlike bilingual learners, they have already built the grammar for their native language, and they initially apply the option of their L1. The fact that overt arguments before infinitival complements are possible in Spanish is also a factor that must be taken into account, as there is no positive evidence that Spanish prepositions do not assign structural Case in complex sentences with infinitival complements.

My study also deals with the structural differences between Spanish and English regarding pronouns. As mentioned earlier in this dissertation, object pronouns in Spanish are clitics and therefore appear in non-argumental positions (to the left of the verb). In

English, object pronouns appear in argumental positions (to the right of the verb). The results indicate that non-native learners are indeed less accurate when the antecedent of an infinitival complement is a clitic pronoun, but only in the case of direct object clitic pronouns. I interpret that structural differences between Spanish and English regarding pronouns may play a partial role in the acquisition difficulties non-native learners encounter in the form of processing challenges, but no clear pattern emerges in the data. Looking at these results as well as the results with the Complementizer system, I venture the following interpretation partly on the basis of Hulk and Müller's (2000) proposal: transfer may facilitated in areas where the grammars overlap (e.g., the Spanish and English Complementizer systems), as opposed to where they differ (e.g., English vs. Spanish infinitival morphology, the English vs. the Spanish pronominal system).

Finally, with regard to Landau's (2000, 2003) account of partial Control as opposed to Hornstein's (2003), the results of the non-native data are far from clear, probably due to experimental design (all the main verbs in the truth-value judgment task allow tense contrasts between main and embedded clauses), as well as experimental methodology. I believe that the results of the truth-value judgment task (or other offline experimental methods for that matter) cannot discriminate between theoretical analyses such as Hornstein's (1999, 2001, and 2003) or Landau's (2000, 2003), which differ in very subtle "fine-grained" aspects. That said, I have applied the experimental methodology successfully in the pilot study (Pérez-Tattam, 2005), where I provide evidence in favour of Landau's (2000, 2003) account of Control into adjuncts, and I am still convinced that empirical evidence to support certain aspects of their theories can be found in acquisition data.

In short, my study of the acquisition of the properties of infinitival clauses in Control, Raising and ECM configurations by child Spanish/English bilingual learners and adult L1 English/L2 Spanish learners reveals similarities and differences between native bilingual and non-native acquisition regarding interaction between languages. Since both types of learners have access to two linguistic systems, interaction may occur in both types of acquisition, although they do not necessarily affect same areas of grammar. I have also been able to determine that non-native learners initially apply the option of their native language. Therefore, my data confirms that transfer in L2 acquisition is mediated by the L1.

5.2. Further research

The results summarized above have led me to consider several future research topics. As is the case with research in general, and experimental research in particular, some questions have been answered, others have been partially answered, and many new questions have been generated by the nature of the results or by methodological issues.

With regard to the child bilingual acquisition study, it would be interesting to study the adults' production of finite and infinitival complements in the interviews, to see whether there is a relationship between adult and children's production of certain main verbs. Comparing the rates of production of finite and infinitival complements by adults and by children would also help describe the development of complex constructions from the initial to the final stage. Also, I find that my conclusions for native acquisition are heavily based on the results for the verb *want/querer,* which was by far the most frequent item. This is a consequence of the limitations of natural production data, which only allow me to study finite and infinitival complements with the main verbs that they produce, even though there may be many other main verbs that license these types of complements. This can be remedied with experimental data, for instance with a comprehension task designed to include verbs and constructions that are not frequent in natural production data. I also believe that comparing the results from data obtained using similar methods would be a more straightforward option. Experimental data may even provide evidence of transfer for properties of the Complementizer system that cannot be studied in natural production data (such as overacceptance of pre-infinitival DPs in Control constructions). In addition, although the English monolingual data has been used extensively in acquisition literature, particularly the data from the Brown (1873) corpus, the variability encountered in the production of infinitival complements can raise doubts about the validity of the findings concerning monolingual English children. It would be advisable to analyse English monolingual data from other sources in order to further support the findings of this study.

With regard to the non-native acquisition study, there is the issue of cleaning up the experimental items in two ways. On the one hand, it would be necessary to eliminate the DP from the Object Control constructions with no pre-infinitival DP (such as *les obligamos a tomar una decision <u>a los politicos</u>*) in order to obtain clearer judgements from the native speakers, since it is not possible to convey in a non-oral task that the DP has been focalized. On the other hand, since the participants of the control group were all native speakers of Peninsular Spanish, it would advisable to adapt all sentences with masculine clitic pronouns to the characteristics of this dialect, and use the form *le* as direct object pronoun in the truth-value judgment task. However, I must say that, due to the nature of this task, I do not believe that using the form *lo* influenced the results; it is rather a question of consistency in the experimental design. As to the instances of clitic-doubling in the Object Control constructions with a pre-infinitival DP (such as *<u>les</u> obligamos <u>a los politicos</u> a tomar una decision*), there are two possibilities: the grammaticality judgment task could be redesigned in order to include test items with no clitic doubling (such as *obligamos a los politicos a tomar una decision* or *les obligamos a tomar una decision*). Alternatively, the infinitival clause following the main verb of command/influence *animar* could be reformulated to include a direct object (such as *el jefe le animó al empleado a aprovechar el tiempo*).

There is also the issue of the effect of the native language. It is not entirely accurate to attribute the differences between experimental and control groups to this effect, because I am only studying the influence of one native language, English. In order to support this interpretation of the results, I would have to include an experimental group with a native language that were similar to Spanish with respect to the Complementizer system and clitic pronouns (e.g., Italian, French…) as a means of comparison with the L1 English group. At this point, I can say that the differences between experimental and control groups can be attributed to language proficiency, and maybe to the effect of the L1, which would have to be confirmed with a subsequent experimental study involving adult L1 Italian or L1 French speakers learning Spanish as an L2 in an institutional setting.

For further research, since I have compared bilingual and adult non-native acquisition, I think it would be interesting to obtain child non-native acquisition data as a link between child L1 and adult L2 acquisition, in order to see if they apply a default option or if they have already built up their native grammar to the point that they can apply the option of their L1. I would also be interested in studying the development of infinitival complements in adult learners compared to child learners with regard to the interpretation of the null infinitival subject, not only from the perspective of a 'core-internal' view of markedness such as Roberts' (1999, 2001), but also from the perspective of Rivero's (1997) 'core-external' view, according to which none of the operations which belong to the core grammar are marked. This would imply including adjunct infinitival complements, as I did in the pilot study (Pérez-Tattam, 2005), and other late-learned phenomena. This study could contribute to our understanding of how the L1 grammar helps L2 learners acquire certain phenomena that are challenging in L1 acquisition.

As for the idea that empirical data may help discriminate between theoretical analyses, I believe it may be possible to do so by means of experimental data obtained through a processing experiment as suggested in Acuña (2005). With regard to empty categories, the issue could be tackled from a psycholinguistic perspective by measuring the speed with which the right antecedent is activated. Speed of activation of the antecedent of PRO gaps (e.g., Mary PRO tried to come) compared to other gaps such as *wh–* traces has been done in previous research by means of different experimental methodologies, such as cross-modal priming (Nicol, 1988), ERP (Evoked Response Potentials) (Demestre, Meltzer, García-Albea, & Vigil, 1999), or eye-tracking (Betancort, Carreiras, & Acuña, 2006). The more recent studies have found that PRO gaps activate their antecedents extremely fast[106]. As to Raising (e.g, Mary seemed PRO to be fine), a recent ERP experiment has found that it is harder to process than Control (Featherston, Gross, Munte, & Clahsen, 2000). They interpret this as evidence of a movement operation in Raising that does not exist in Control, which appears to provide evidence in favour of Standard analyses of Control vs. Raising such as Landau's (2000, 2003), as opposed to Movement analyses such as Hornstein's (1999, 2001, 2003). A possibility for a future processing experiment would be to include constructions containing other types of complements, and determine if constructions pattern together in accordance with the operations theoretically taking place in the different derivations.

[106] According to Acuña (2005), different experimental methodologies yield different results because ERP, eye-tracking and FMRI (Functional Magnetic Resonance Imaging) are particularly adequate to tap into syntactic processing, whereas priming and probe recognition are better suited for lexical processes.

I see my comparative study of non-finite subordination system in English and Spanish as a basis on which to undertake the study of the finite subordination system, particularly with regard to finite complements in the subjunctive. This topic of research is interesting for many reasons, not the least because it is one of the main stumbling blocks that L2 learners face in Spanish, regardless of their L1. It is also an area of grammar for which there is never absolute convergence for adult learners, even if Spanish is acquired in a natural setting[107], as I know from personal experience. It would be interesting to determine if this is a problem of competence, or simply a problem of performance due to problems in selecting the correct morphology. It would be interesting to see if it affects equally L2 Spanish learners with different L1s, particularly with languages that morphologically mark the subjunctive (such as French or Italian) as opposed to languages that lack this morphology (such as English). It would be interesting to see how L2 child learners fare in comparison to adult learners with regard to convergence, and their development compared to L1 learners.

In addition, there is the possibility of studying the acquisition of finite subordination vs. infinitival subordination from the perspective of diachrony. According to Davies (1996), the fact that certain main verbs alternate between finite and infinitival complements is explained in terms of a diachronic shift that is underway, but not yet completed. More specifically, it has been argued that Romance languages are undergoing a generalized diachronic shift from finite to infinitival complements, which has been found to be more pronounced in Spanish and Portuguese. Determining the trigger for this diachronic change

[107] For the purposes of the present study, I do not discuss the issue of whether instructed L2 learners make an appropriate comparison group for L1 acquisition because I do not believe that it is a significant factor with regard to non-finite subordination. It is my experience that L2 learners receive little or no formal instruction in this respect. However, it would be crucially important in a study of finite subordination, particularly concerning the selection of the subjunctive vs. the indicative.

would help determining if this is related parametrically to other grammatical phenomena. In this case, I would study the development of finite vs. infinitival subordination in non-native Spanish in relation with other grammatical phenomena, similar to Montrul's (1997) work on the acquisition of the Spanish dative Case system mentioned in the previous chapter.

My research for this dissertation has provided me with the opportunity of contrastively studying English and Spanish syntax from an entirely new perspective. Associating the characteristics of non-finite subordination in English and Spanish with the Case-assigning properties of prepositions in these languages is not new in the Generative framework, although it is not one of the most studied research topics. However, as far as I can determine, studying this association from an acquisition perspective is an original contribution of this dissertation, as is the idea of studying language interaction in the contrasts between the English and Spanish Complementizer systems. Non-finite subordination itself is not a topic that appears as such in prescriptive or pedagogical grammars, so it is safe to say that it is not found as such in Spanish L2 classroom textbooks. At most, there will be one or several sections devoted to periphrastic constructions, and subordination in general is presented from a semantic point of view, particularly regarding the semantic types of verbs that take finite complements with the subjunctive as opposed to the indicative. I believe that this study is contributing to a better understanding from a theoretical viewpoint of the process of acquisition of complex sentences, which will eventually find a practical application.

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APPENDIX I

Spanish main verbs:

(1) Subject controller:

- **Subject + V + direct object infinitival complement:** *anhelar, ansiar, decidir, deplorar, desear, detestar, esperar, lamentar, necesitar, pretender, querer, soportar, temer...*
- **Subject + V + prepositional infinitival complement:** *brindarse a, cansarse de, comprometerse a, confiar en, conformarse con, contar con, contentarse con, decidirse a, disponerse a, exponerse a, jactarse de, lamentarse de, negarse a, ocuparse de, olvidarse de, prestarse a, presumir de, renunciar a...*
- **Subject + (verb + adjective) + prepositional infinitival complement:** *ser/estar + aficionado, cansado, conforme, decidido, deseoso, dispuesto, expuesto, ocupado, partidario, reacio, seguro, temeroso...*

(2a) Direct object controller:

- **Direct object + V + prepositional infinitival complement:** *animar a, ayudar a, conminar a, empujar a, forzar a, impulsar a, incitar a, inducir a, instar a, invitar a, obligar a...*

(2b) Indirect object controller:

- **Dative + V + direct object infinitival complement:** *exigir, impedir, imponer, mandar, ofrecer, ordenar, pedir, permitir, prohibir, recomendar, reprochar, tolerar...*
- **Dative + V + subject infinitival complement:** *agradar, alegrar, aliviar, desagradar, divertir, encantar, entristecer, entusiasmar, gustar, impresionar, inquietar, irritar, maravillar, molestar, preocupar, repugnar, bastar, competer, convenir, costar, importar, incumbir, urgir...*
- **Dative + (verb + adjective) + subject infinitival complement:** *ser/estar + agradable, difícil, conveniente, duro, fácil, grato, imposible, posible...*

(3) Raising verbs: *parecer, semejar, resultar, poder.*

(4) Exceptional Case Marking verbs: *oír, ver, hacer.*

__English main verbs__:

(1) Subject controller:

- **Subject + V + prepositional infinitival complement (in SP):** *aim* (proponerse), *vow* (jurar), *try* (intentar), *choose* (decidir), *decline* (declinar), *decide* (decidir), *demand* (exigir), *promise* (prometer), *propose* (pensar), *swear* (jurar), *ache, hanker, long* (ansiar), *hope* (esperar)...

- **Subject + V + direct object infinitival complement (in SP):** *agree* (quedar en), *pledge* (comprometerse a), *refuse* (negarse a), *endeavor* (esforzarse por), *attempt* (tratar de), *threaten* (amenazar con); *undertake, commit* (comprometerse a); *offer* (ofrecerse a), *aspire* (aspirar a)...

(2) Object controller:

EN = SP

- **Direct object + V + prepositional infinitival complement (in SP):** *authorize* (autorizar para), *motivate* (motivar a); *move, prompt* (inducir a); *encourage* (animar a), *exhort* (exhortar a), *incite* (incitar a), *urge* (instar a); *compel, force* (obligar/forzar a), *hate* (odiar por)...

- **Dative + V + direct object infinitival complement (in SP):** *order, charge, command, instruct,* (ordenar/mandar); *advise* (aconsejar), *forbid* (prohibir); *enable, allow* (permitir)...

EN ≠ SP

Persuade, convince, talk into (convencer a alg. de que); *pressure, push* (presionar a alg. para que); *defy* (desafiar a alg. a que)...

Bid, ask (pedirle a alg. que), *enjoin* (encarecerle a alg. que), *beg* (suplicar a alg. que), *tell* (decirle a alg. que), *remind* (recordarle a alg. que)...

Want (querer que alg.), *desire* (desear que alg.), *need* (necesitar que alg.), *expect* (contar con que alg.), *prefer* (preferir que alg.)...

(3) Raising verbs: *appear, seem.*

(4) Exceptional Case Marking verbs (EN ≠ SP): *believe (creer), consider (considerar), know (saber, constar).*

APPENDIX IIa

- **LANGUAGE ASSESSMENT QUESTIONNAIRE**
- **GRAMMATICALITY JUDGMENT TASK**
- **TRUTH-VALUE JUDGMENT TASK***

*The contexts and sentences from the PowerPoint presentation have been included in the answer sheet for clarity.

CUESTIONARIO

Indique:

1. Nombre (real o ficticio):______________________
2. Sexo:______________________
3. Edad: ______________________
4. ¿Tiene problemas de visión o auditivos? ____________
5. Lengua nativa: ______________________
6. Lengua dominante de la madre: ______________
7. Lengua dominante del padre: ______________
8. Lengua(s) habladas en casa: ______________
9. Lengua(s) que habló durante los cinco primeros años de su vida:
   ____
10. Lengua(s) estudiadas en (no olvide incluir el español):
    - La escuela primaria: ______________
    - La escuela secundaria: ______________
    - La universidad: ______________
    - Otras instituciones: ______________
11. Lengua(s) que utiliza:
    - En casa: ______________
    - En la universidad:______________
    - En el trabajo: ______________
    - Cuando sueña: ______________
12. Lengua(s) en las que puede:
    - Hablar: ______________
    - Leer: ______________
    - Escribir: ______________
13. ¿Con qué lengua se siente Ud. más cómodo/a en este momento?
    ____
14. ¿Qué programa está cursando en la universidad?
    ____
15. Año de carrera: ______________
16. Contacto con el español fuera de la clase:
    a. <u>Contacto actual</u>:
       - Horas/semana aproximadas: __________
       - Contexto (e.g. amigos, familia, asociaciones...):
         ____
    b. <u>Contacto previo</u>:
       - ¿Ha estado en un país hispanohablante? SÍ [ ] NO [ ]

       Si su respuesta es afirmativa:
       - ¿Cuándo? ______________
       - ¿Por cuánto tiempo? ______________

EL APRENDIZAJE DE LAS ORACIONES COMPLEJAS

LEA ATENTAMENTE LAS INSTRUCCIONES

El objetivo de este estudio es analizar el proceso de aprendizaje de las oraciones complejas en español. Para ello se le presentarán una serie de frases y se le pedirá que las puntúe en una escala de 1 a 5:

1= suena muy mal
2= suena mal
3= no sé si suena bien o mal
4= suena bien
5= suena muy bien

Debe dar <u>solamente una respuesta</u> marcando una de las opciones.

POR EJEMPLO:

01. Yo prefieren ir al cine.

~~1~~	2	3	4	5

02. Ellos prefieren ir al cine

1	2	3	4	~~5~~

Procure dar una puntuación <u>a todas las frases</u>.

No repase ni modifique ninguna de sus puntuaciones (cuanto menos se lo piense, mejor).

No se preocupe si da la misma puntuación varias veces seguidas, es perfectamente normal.

Es fundamental que puntúe las frases en el orden en el que aparecen en el cuadernillo.

Para respetar la confidencialidad de sus datos, se le asignará un código. No podrá ser identificado a partir de sus respuestas, y toda su información personal (nombre, edad...) será destruida al término del estudio. Únicamente los investigadores principales tendrán acceso a sus datos y sólo se publicarán las estadísticas que se realicen a partir de los mismos.

Muchas gracias por su colaboración

NOMBRE:____

01. Los padres prefieren a los hijos ser guapos.

1	2	3	4	5

02. Vi al jardinero regar las plantas.

1	2	3	4	5

03. Le prohibí a mi amigo llamarme después de las 22.00.

1	2	3	4	5

04. Les obligamos a tomar una decisión a los políticos.

1	2	3	4	5

05. Los niños oyeron hablar en la otra habitación a sus padres.

1	2	3	4	5

06. Necesitamos a nuestros hermanos hacer más ejercicio.

1	2	3	4	5

07. Los niños les pidieron jugar con ellos a sus padres.

1	2	3	4	5

08. El profesor quería recibir a los estudiantes en la oficina.

1	2	3	4	5

09. A mis amigos les gustaría visitar el museo de Bellas Artes.

1	2	3	4	5

10. Los padres prefieren ver a los hijos más a menudo.

1	2	3	4	5

11. Llevo diez kilómetros del maratón recorridos.

1	2	3	4	5

12. Espero a mi novio encontrar su pasaporte.

1	2	3	4	5

13. El profesor consideraba esforzarse demasiado a los estudiantes.

1	2	3	4	5

14. El jefe quería trabajar en el informe a los empleados.

1	2	3	4	5

15. Les convencí de comprar una casa a mis primos.

1	2	3	4	5

16. El policía le avisó al conductor de tener cuidado.

1	2	3	4	5

17. A los turistas les preocupaba estar tan lejos del hotel.

1	2	3	4	5

18. Le recordamos explicar el ejercicio al profesor.

1	2	3	4	5

19. El profesor consideraba a los estudiantes esforzarse demasiado.

1	2	3	4	5

20. Sigo esperando a mi novio en el café.

1	2	3	4	5

21. Llevo recorridos diez kilómetros del maratón.

1	2	3	4	5

22. El jefe quería a los empleados trabajar en el informe.

1	2	3	4	5

23. A los padres les conviene pensar en el futuro.

1	2	3	4	5

24. Los estudiantes andaban hablando con el profesor por los pasillos.

1	2	3	4	5

25. El jefe consideraba necesario avisar a los empleados del peligro.

1	2	3	4	5

26. A mi hermana le da miedo viajar en avión.

1	2	3	4	5

27. Creía conocer bien a mi compañera.

1	2	3	4	5

28. Creía a mi compañera ser muy inteligente.

1	2	3	4	5

29. El policía le avisó de tener cuidado al conductor.

1	2	3	4	5

30. Necesitamos hacer más ejercicio a nuestros hermanos.

1	2	3	4	5

31. Los policías tienen al ladrón de bancos vigilado.

1	2	3	4	5

32. Sigo a mi novio esperando en el café.

1	2	3	4	5

33. El médico lleva a la enfermera buscando una hora por lo menos.

1	2	3	4	5

34. Vi regar las plantas al jardinero.

1	2	3	4	5

35. Espero dar a mi novio una grata sorpresa.

1	2	3	4	5

36. Los policías tienen vigilado al ladrón de bancos.

1	2	3	4	5

37. A mi novio le agrada pasear por el parque.

1	2	3	4	5

38. Creía ser muy inteligente a mi compañera.

1	2	3	4	5

39. El médico les recomendó a los pacientes practicar algún deporte.

1	2	3	4	5

40. Les convencí a mis primos de comprar una casa.

1	2	3	4	5

41. El jefe le animó a hablar con franqueza al empleado.

1	2	3	4	5

42. Los niños oyeron a sus padres hablar en la otra habitación.

1	2	3	4	5

43. Los políticos andan preocupados por los resultados de las encuestas.

1	2	3	4	5

44. Los estudiantes andaban con el profesor hablando por los pasillos.

1	2	3	4	5

45. Al profesor le irritaba dar demasiadas explicaciones.

1	2	3	4	5

46. Les obligamos a los políticos a tomar una decisión.

1	2	3	4	5

47. Le recordamos al profesor explicar el ejercicio.

1	2	3	4	5

48. Los niños les pidieron a sus padres jugar con ellos.

1	2	3	4	5

49. El médico les recomendó practicar algún deporte a los pacientes.

1	2	3	4	5

50. Los políticos andan por los resultados de las encuestas preocupados.

1	2	3	4	5

51. Espero encontrar su pasaporte a mi novio.

1	2	3	4	5

52. Le prohibí llamarme después de las 22.00 a mi amigo.

1	2	3	4	5

53. Los padres prefieren ser guapos a los hijos.

1	2	3	4	5

54. El jefe le animó al empleado a hablar con franqueza.

1	2	3	4	5

55. Necesitamos llamar a nuestros amigos por teléfono.

1	2	3	4	5

56. El médico lleva buscando a la enfermera una hora por lo menos.

1	2	3	4	5

EL APRENDIZAJE DE LAS ORACIONES COMPLEJAS

LEA ATENTAMENTE LAS INSTRUCCIONES

El objetivo de este estudio es analizar el proceso de aprendizaje de las oraciones complejas en español. Para ello se le presentarán una serie de historias, al final de las cuales se le hará una pregunta. Debe contestar de acuerdo con la información proporcionada en la historia.

POR EJEMPLO:

Cristina ha invitado a cenar a su amiga Sara, la cual ha traído unos aperitivos. Después de probarlos, Cristina felicita a Sara.

¿Quién o quiénes prueba(n) los aperitivos?

a. Cristina		**b. Sara**		**c. Las dos**		**d. No sé**

Debe dar solamente una respuesta marcando la opción "a", "b", "c" o "d" con un círculo.

La opción "Los dos" o "Las dos" puede incluir una o dos respuestas según el tipo de pregunta: "cualquiera de los dos" o "cualquiera de las dos" (en este ejemplo, "Cristina o Sara") y "ambos" o "ambas (en este ejemplo, "Cristina o Sara").

Procure responder a todas las preguntas.

No repase ni modifique ninguna de sus respuestas (cuanto menos se lo piense, mejor).

No se preocupe si da la misma respuesta varias veces seguidas, es perfectamente normal.

Es fundamental que responda a las preguntas en el orden en el que aparecen en el cuadernillo.

Para respetar la confidencialidad de sus datos, se le asignará un código. No podrá ser identificado a partir de sus respuestas, y toda su información personal (nombre, edad...) será destruida al término del estudio. Únicamente los investigadores principales tendrán acceso a sus datos y sólo se publicarán las estadísticas que se realicen a partir de los mismos.

Muchas gracias por su colaboración

NOMBRE:____

01. Teresa siguió a Susana por la calle principal hasta que entraron en una tienda de discos. Sin que se diera cuenta, le vio comprar un CD.

¿Quién o quiénes compró/compraron un CD?

a. Susana		**b. Teresa**		**c. Las dos**		**d. No sé**

02. Guillermo tenía el coche en el taller, pero por suerte pudo tomar prestado el coche de José. Devolvió las llaves a José después de volver del viaje.

¿Quién o quiénes volvió/volvieron del viaje?

a. José		**b. Guillermo**		**c. Los dos**		**d. No sé**

03. Este domingo Óscar y Susana vieron una película en el cine. Después de ir al cine, Susana dio una sorpresa a Óscar.

¿Quién o quiénes fue/fueron al cine?

a. Susana		**b. Óscar**		**c. Los dos**		**d. No sé**

04. A Silvia y a Susana les gusta fumarse un cigarrillo después de cenar. Pero como Silvia nunca fuma dentro de la casa, tiene que salir al balcón para fumar.

¿Quién o quiénes tiene(n) que salir al balcón a fumar?

a. Silvia		**b. Susana**		**c. Las dos**		**d. No sé**

05. Marta y Lola están preparando una presentación para su clase de español. Como Lola es muy cuidadosa, la forzó a revisar la bibliografía.

¿Quién o quiénes revisó/revisaron la bibliografía?

a. Lola		**b. Marta**		**c. Las dos**		**d. No sé**

06. Vanessa quería comprar tabaco, pero no tenía dinero. Vio que el monedero de Laura estaba encima de la mesa, así que le preguntó si le podía prestar algo antes de salir a la calle.

¿Quién o quiénes iba(n) a salir a la calle?

a. Vanessa		**b. Laura**		**c. Las dos**		**d. No sé**

07. A Silvia y a Susana les gusta fumarse un cigarrillo después de cenar. Pero como Susana nunca fuma dentro de la casa, tiene que salir al balcón para fumar.

¿Quién o quiénes tiene(n) que salir al balcón a fumar?

a. Silvia		**b. Susana**		**c. Las dos**		**d. No sé**

08. Susana y Silvia van a llegar tarde a la universidad. Como Silvia no tiene carnet, deberá llamar un taxi.

¿Quién o quiénes debe(n) llamar un taxi?

a. Susana		**b. Silvia**		**c. Las dos**		**d. No sé**

09. Pedro estaba tomándose un café cuando Luis y sus amigos entraron en el bar para tomar el aperitivo. De pronto oyó a Luis hablar mal de su novia.

¿Quién o quiénes habló/hablaron mal de su novia?

a. Luis		**b. Pedro**		**c. Los dos**		**d. No sé**

10. Amelia y Marisa llevan una semana esperando un paquete. Marisa está impaciente por saber qué ha pasado con el paquete, así que le mandó a preguntar en la oficina de Correos.

¿Quién o quiénes preguntó/preguntaron en la oficina de Correos?

a. Marisa		**b. Amelia**		**c. Las dos**		**d. No sé**

11. Andrés y Julio querían visitar a sus amigos en Barcelona, pero tenían que encontrar a alguien con quien dejar el perro. Como Andrés es muy tímido, obligó a Julio a preguntar a todos los vecinos.

¿Quién o quiénes preguntó/preguntaron a los vecinos?

a. Andrés		**b. Julio**		**c. Los dos**		**d. No sé**

12. Iván y Álvaro tienen todo lo que necesitan para la fiesta de cumpleaños, pero no han comprado suficientes bebidas. Iván sabe que Álvaro bebe poco, pero en todo caso le prohibió beber antes de la fiesta.

¿Quién o quiénes no beberá(n) antes de la fiesta?

a. Álvaro		**b. Iván**		**c. Los dos**		**d. No sé**

13. Juana sabe que Elena está muy preocupada por el examen. Como es muy optimista, la animó a aprovechar el tiempo antes del examen.

¿Quién o quiénes aprovechará(n) el tiempo antes del examen?

a. Juana		**b. Elena**		**c. Las dos**		**d. No sé**

14. Susana y Silvia van a llegar tarde a la universidad. Como Susana no tiene carnet, deberá llamar un taxi.

¿Quién o quiénes debe(n) llamar un taxi?

a. Susana		**b. Silvia**		**c. Las dos**		**d. No sé**

15. El otro día Juan se dio cuenta de que Felipe no había dicho nada en toda la reunión. Un poco preocupado, invitó a Felipe a dar su opinión.

¿Quién o quiénes puede que dé/den su opinión?

a. Juan		**b. Felipe**		**c. Los dos**		**d. No sé**

16. Silvia y Susana quieren viajar a Hawaii, pero no han comprado los pasajes todavía. Como Susana tiene más tiempo, deberá ir a la agencia de viajes.

¿Quién o quiénes deberá(n) ir a la agencia de viajes?

a. Silvia		**b. Susana**		**c. Las dos**		**d. No sé**

17. Teresa siguió a Susana por la calle principal hasta que entraron en una tienda de discos. Sin que se diera cuenta, vio a Susana comprar un CD.

¿Quién o quiénes compró/compraron un CD?

a. Susana		**b. Teresa**		**c. Las dos**		**d. No sé**

18. Vanessa quería comprar tabaco, pero no tenía dinero. Vio que el monedero de Laura estaba encima de la mesa, así que preguntó a Laura si le podía prestar algo antes de salir a la calle.

¿Quién o quiénes iba(n) a salir a la calle?

a. Vanessa		**b. Laura**		**c. Las dos**		**d. No sé**

19. Isabel estaba harta de que María estuviera al teléfono a todas horas. Un buen día, habló con ella muy seriamente y no le permitió usarlo nunca más.

¿Quién o quiénes no lo usará(n) nunca más?

a. Isabel		**b. María**		**c. Las dos**		**d. No sé**

20. Hay una epidemia de gripe en China. Aunque Marco dice que no tiene importancia, Julián no está muy convencido, así finalmente recomendó a Marco retrasar el viaje.

¿Quién o quiénes puede que retrase(n) el viaje?

a. Julián		**b. Marco**		**c. Los dos**		**d. No sé**

21. Pedro estaba tomándose un café cuando Luis y sus amigos entraron en el bar para tomar el aperitivo. De pronto le oyó hablar mal de su novia.

¿Quién o quiénes habló/hablaron mal de su novia?

a. Luis		**b. Pedro**		**c. Los dos**		**d. No sé**

22. Cristina ha invitado a sus amigas a cenar. Sara, su mejor amiga, ha traído los aperitivos. Después de probarlos, Cristina la felicitó calurosamente.

¿Quién o quiénes los probó/probaron?

a. Sara		**b. Cristina**		**c. Las dos**		**d. No sé**

23. Cuando Bruno y Antonio empezaron a hacer café, se dieron cuenta de que no les quedaba leche. Como Bruno nunca bebe café solo, tendrá que ir a comprar leche al supermercado.

¿Quién o quiénes tendrá(n) que ir a comprar leche al supermercado?

a. Bruno		**b. Antonio**		**c. Los dos**		**d. No sé**

24. Iván y Álvaro tienen todo lo que necesitan para la fiesta de cumpleaños, pero no han comprado suficientes bebidas. Iván sabe que Álvaro bebe poco, pero en todo caso prohibió a Álvaro beber antes de la fiesta.

¿Quién o quiénes no beberá(n) antes de la fiesta?

a. Iván		**b. Álvaro**		**c. Los dos**		**d. No sé**

25. Guillermo tenía el coche en el taller, pero por suerte pudo tomar prestado el coche de José. Le devolvió las llaves después de volver del viaje.

¿Quién o quiénes volvió/volvieron del viaje?

a. Guillermo		**b. José**		**c. Los dos**		**d. No sé**

26. Bruno quiere que Antonio vaya al médico. Como Antonio no tiene seguro médico, deberá pagar la consulta de su bolsillo.

¿Quién o quiénes deberá(n) pagar la consulta de su bolsillo?

a. Antonio		**b. Bruno**		**c. Los dos**		**d. No sé**

27. Cuando Bruno y Antonio empezaron a hacer café, se dieron cuenta de que no les quedaba leche. Como Antonio nunca bebe café solo, tendrá que ir a comprar leche al supermercado.

¿Quién o quiénes tendrá(n) que ir a comprar leche al supermercado?

a. Bruno		**b. Antonio**		**c. Los dos**		**d. No sé**

28. Isabel estaba harta de que María estuviera al teléfono a todas horas. Un buen día, habló con ella muy seriamente y no permitió a María usarlo nunca más.

¿Quién o quiénes no lo usará(n) nunca más?

a. María		**b. Isabel**		**c. Las dos**		**d. No sé**

29. Marta y Lola están preparando una presentación para su clase de español. Como Lola es muy cuidadosa, forzó a Marta a revisar la bibliografía.

¿Quién o quiénes revisó/revisaron la bibliografía?

a. Marta		**b. Lola**		**c. Las dos**		**d. No sé**

30. Silvia y Susana quieren viajar a Hawaii, pero no han comprado los pasajes todavía. Como Silvia tiene más tiempo, deberá ir a la agencia de viajes.

¿Quién o quiénes deberá(n) ir a la agencia de viajes?

a. Susana		**b. Silvia**		**c. Las dos**		**d. No sé**

31. El otro día Juan se dio cuenta de que Felipe no había dicho nada en toda la reunión. Un poco preocupado, lo invitó a dar su opinión.

¿Quién o quiénes puede que dé/den su opinión?

a. Felipe		**b. Juan**		**c. Los dos**		**d. No sé**

32. Cristina ha invitado a sus amigas a cenar. Sara, su mejor amiga, ha traído los aperitivos. Después de probarlos, Cristina felicitó a Sara calurosamente.

¿Quién o quiénes los probó/probaron?

a. Sara		**b. Cristina**		**c. Las dos**		**d. No sé**

33. Juana sabe que Elena está muy preocupada por el examen. Como es muy optimista, animó a Elena a aprovechar el tiempo antes del examen.

¿Quién o quiénes aprovechará(n) el tiempo antes del examen?

a. Juana		**b. Elena**		**c. Las dos**		**d. No sé**

34. Jaime e Isabel van a casarse muy pronto y están organizando la boda perfecta. Antes de salir de compras, Jaime la besó muy cariñosamente.

¿Quién o quiénes salió/salieron de compras?

a. Jaime		**b. Isabel**		**c. Los dos**		**d. No sé**

35. Andrés y Julio querían visitar a sus amigos en Barcelona, pero tenían que encontrar a alguien con quien dejar el perro. Como Andrés es muy tímido, lo obligó a preguntar a todos los vecinos.

¿Quién o quiénes preguntó/preguntaron a los vecinos?

a. Julio		**b. Andrés**		**c. Los dos**		**d. No sé**

36. Bruno quiere que Antonio vaya al médico. Como Bruno no tiene seguro médico, deberá pagar la consulta de su bolsillo.

¿Quién o quiénes deberá(n) pagar la consulta de su bolsillo?

a. Antonio		**b. Bruno**		**c. Los dos**		**d. No sé**

37. Hay una epidemia de gripe en China. Aunque Marco dice que no tiene importancia, Julián no está muy convencido, así finalmente le recomendó retrasar el viaje.

¿Quién o quiénes puede que retrase(n) el viaje?

a. Julián		**b. Marco**		**c. Los dos**		**d. No sé**

38. Jaime e Isabel van a casarse muy pronto y están organizando la boda perfecta. Antes de salir de compras, Jaime besó a Isabel muy cariñosamente.

¿Quién o quiénes salió/salieron de compras?

a. Jaime		**b. Isabel**		**c. Los dos**		**d. No sé**

39. Este domingo Óscar y Susana vieron una película en el cine. Después de ir al cine, Susana le dio una sorpresa.

¿Quién o quiénes fue/fueron al cine?

a. Óscar		**b. Susana**		**c. Los dos**		**d. No sé**

40. Amelia y Marisa llevan una semana esperando un paquete. Marisa está impaciente por saber qué ha pasado con el paquete, así que mandó a Amelia a preguntar en la oficina de Correos.

¿Quién o quiénes preguntó/preguntaron en la oficina de Correos?

a. Amelia		**b. Marisa**		**c. Las dos**		**d. No sé**

APPENDIX IIb

- **GRAMMATICALITY JUDGMENT TASK ITEM LIST**
- **SCORES AND MEANS FOR EACH ITEM**

EXPERIMENTAL ITEMS

Grammatical Control constructions with pre-infinitival DP

(1.1) Les obligamos a los políticos a tomar una decisión.

(1.2) El jefe le animó al empleado a hablar con franqueza.

(1.3) El médico les recomendó a los pacientes practicar algún deporte.

(1.4) Le prohibí a mi amigo llamarme después de las 22.00.

Grammatical Control constructions with no pre-infinitival DP

(2.1) Les obligamos a tomar una decisión a los políticos.

(2.2) El jefe le animó a hablar con franqueza al empleado.

(2.3) El médico les recomendó practicar algún deporte a los pacientes.

(2.4) Le prohibí llamarme después de las 22.00 a mi amigo.

Ungrammatical Control constructions with pre-infinitival DP

(3.1) Les convencí a mis primos de comprar una casa.

(3.2) El policía le avisó al conductor de tener cuidado.

(3.3) Los niños les pidieron a sus padres jugar con ellos.

(3.4) Le recordamos al profesor explicar el ejercicio.

Ungrammatical Control constructions with no pre-infinitival DP

(4.1) Les convencí de comprar una casa a mis primos.

(4.2) El policía le avisó de tener cuidado al conductor.

(4.3) Los niños les pidieron jugar con ellos a sus padres.

(4.4) Le recordamos explicar el ejercicio al profesor.

Optional Control constructions

(5.1) El jefe quería a los empleados trabajar en el informe.

(5.2) Necesitamos a nuestros hermanos hacer más ejercicio.

(5.3) Los padres prefieren a los hijos ser guapos.

(5.4) Espero a mi novio encontrar su pasaporte.

(6.1) El jefe quería trabajar en el informe a los empleados.

(6.2) Necesitamos hacer más ejercicio a nuestros hermanos.

(6.3) Los padres prefieren ser guapos a los hijos.

(6.4) Espero encontrar su pasaporte a mi novio.

Grammatical Exceptional Case Marking constructions

(7.1) Vi al jardinero regar las plantas

(7.2) Los niños oyeron a sus padres hablar en la otra habitación.

(7.3) Vi regar las plantas al jardinero.

(7.4) Los niños oyeron hablar en la otra habitación a sus padres.

Ungrammatical Exceptional Case Marking constructions

(8.1) Creía a mi compañera ser muy inteligente.

(8.2) El profesor consideraba a los estudiantes esforzarse demasiado.

(8.3) Creía ser muy inteligente a mi compañera.

(8.4) El profesor consideraba esforzarse demasiado a los estudiantes.

DISTRACTORS

(9.1) El profesor quería recibir a los estudiantes en la oficina.

(9.2) Necesitamos llamar a nuestros amigos por teléfono.

(9.3) Los padres prefieren ver a los hijos más a menudo.

(9.4) Espero dar a mi novio una grata sorpresa.

(9.5) Creía conocer bien a mi compañera.

(9.6) El jefe consideraba necesario avisar a los empleados del peligro.

(10.1) A mi hermana le da miedo viajar en avión.

(10.2) A mi novio le agrada pasear por el parque.

(10.3) Al profesor le irritaba dar demasiadas explicaciones.

(10.4) A los turistas les preocupaba estar tan lejos del hotel.

(10.5) A mis amigos les gustaría visitar el museo de Bellas Artes.

(10.6) A los padres les conviene pensar en el futuro.

FILLERS

(11.1) Los estudiantes andaban hablando con el profesor por los pasillos.

(11.2) El médico lleva buscando a la enfermera una hora por lo menos.

(11.3) Sigo esperando a mi novio en el café.

(11.4) Los policías tienen vigilado al ladrón de bancos.

(11.5) Los políticos andan por los resultados de las encuestas preocupados.

(11.6) Llevo recorridos diez kilómetros del maratón.

(12.1) Los estudiantes andaban con el profesor hablando por los pasillos.

(12.2) El médico lleva a la enfermera buscando una hora por lo menos.

(12.3) Sigo a mi novio esperando en el café.

(12.4) Los policías tienen al ladrón de bancos vigilado.

(12.5) Los políticos andan preocupados por los resultados de las encuestas.

(12.6) Llevo diez kilómetros del maratón recorridos.

GRAMMATICALITY JUDGMENT TASK: SCORES AND MEANS FOR EXPERIMENTAL GROUP (L1 ENGLISH/L2 SPANISH)

	INTERMEDIATE LEVEL														ADVANCED LEVEL																
	ES12	ES09	ES10	ES26	ES17	ES13	ES21	ES24	ES11	ES18	ES08	ES14	ES22	ES23	ES15	ES27	ES06	ES28	ES03	ES19	ES20	ES29	ES02	ES30	ES16	ES25	ES07	ES04	ES01	ES05	
Control pre-inf. DP																															
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1.3	5	1	4	3	4	4	5	1	5	4	2	2	4	5	4	4	1	1	5	4	5	5	5	5	5	5	5	5	4	5	3.90
1.4	5	3	4	5	5	4	5	4	5	5	4	4	4	5	4	4	1	5	5	5	5	5	5	5	5	5	5	5	4	3	4.43
																															3.88
Control no pre-inf. DP																															
2.1	5	4	2	4	3	5	5	4	2	5	2	4	4	2	1	4	1	1	4	5	4	4	4	4	4	2	1	5	3	4	3.40
2.2	2	5	3	4	4	2	1	3	5	3	3	3	3	4	3	3	1	1	5	3	3	3	5	5	5	4	1	5	4	3	3.30
2.3	5	2	5	2	4	4	4	4	2	5	2	4	3	4	4	1	1	1	3	5	2	5	2	2	5	4	2	4	4	5	3.33
2.4	5	5	3	4	2	2	4	1	1	3	2	4	4	3	4	4	1	1	2	4	2	2	2	2	3	4	2	3	3	3	2.83
																															3.22
*Control pre-inf. DP																															
3.1	4	1	4	2	4	3	5	3	5	5	2	3	3	5	4	4	1	1	5	4	4	2	5	5	4	5	5	5	4	5	3.73
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																															3.51
*Control no pre-inf. DP																															
4.1	5	4	4	2	1	4	5	2	1	4	2	4	3	4	5	4	1	3	2	5	3	5	2	5	4	4	2	3	3	4	3.33
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																															2.78
*Opt. Control																															
5.1	4	5	4	4	3	5	1	2	5	5	3	2	4	4	1	2	1	1	4	1	4	2	2	2	2	2	1	2	1	1	2.67
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6.1	4	3	3	5	3	5	1	3	1	3	4	4	2	2	2	3	1	4	3	1	3	1	4	3	1	1	1	2	1	1	2.50
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																															2.33
ECM																															
7.1	2	5	2	4	3	4	5	5	3	4	2	4	2	5	5	4	2	3	4	5	5	5	1	2	5	4	4	5	4	5	3.77
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																															3.03
*ECM																															
8.1	5	4	2	1	1	2	1	3	3	3	1	4	2	2	4	2	1	1	5	2	4	2	1	2	2	2	1	3	1	1	2.27
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8.3	2	2	1	4	2	2	1	2	4	2	2	4	3	2	2	4	1	1	4	1	2	2	2	1	1	2	1	2	1	3	2.10
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																															2.35

GRAMMATICALITY JUDGMENT TASK: SCORES AND MEANS FOR EXPERIMENTAL GROUP (L1 ENGLISH/L2 SPANISH)

INTERMEDIATE LEVEL															
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Control pre-inf. DP															
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1.4	5	3	4	5	5	4	5	4	5	5	4	4	4	5	4.429
															3.839
Control no pre-inf. DP															
2.1	5	4	2	4	3	5	5	4	2	5	2	4	4	2	3.643
2.2	2	5	3	4	4	2	1	3	5	3	3	3	3	4	3.214
2.3	5	2	5	2	4	4	4	4	2	5	2	4	3	4	3.571
2.4	5	5	3	4	2	2	4	1	1	3	2	4	4	3	3.071
															3.375
*Control pre-inf. DP															
3.1	4	1	4	2	4	3	5	3	5	5	2	3	3	5	3.5
3.2	4	2	3	5	1	2	5	4	4	4	4	3	3	4	3.429
3.3	5	1	5	4	4	3	5	4	4	4	4	2	4	3	3.714
3.4	5	1	5	3	4	5	3	2	4	2	2	4	4	5	3.5
															3.536
*Control no pre-inf. DP															
4.1	5	4	4	2	1	4	5	2	1	4	2	4	3	4	3.214
4.2	5	5	3	2	3	3	5	2	2	4	3	2	3	3	3.214
4.3	4	2	4	4	2	3	1	1	2	4	1	4	4	2	2.714
4.4	3	5	4	2	1	5	5	2	4	4	5	4	3	4	3.643
															3.196
*Opt. Control															
5.1	4	5	4	4	3	5	1	2	5	5	3	2	4	4	3.643
5.2	5	4	1	2	4	1	1	3	2	4	4	3	3	4	2.929
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6.1	4	3	3	5	3	5	1	3	1	3	4	4	2	2	3.071
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6.4	1	4	3	2	1	2	1	4	2	1	2	3	2	4	2,286
															2.839
ECM															
7.1	2	5	2	4	3	4	5	5	3	4	2	4	2	5	3.571
7.2	2	3	4	4	5	4	1	4	4	4	2	4	3	4	3.429
7.3	4	5	2	3	2	1	1	5	3	4	3	2	4	2	2.929
7.4	2	1	3	2	2	3	1	3	2	2	3	4	3	3	2.429
															3.089
*ECM															
8.1	5	4	2	1	1	2	1	3	3	3	1	4	2	2	2.429
8.2	2	1	3	1	3	3	3	3	2	1	2	4	4	2	2.429
8.3	2	2	1	4	2	2	1	2	4	2	2	4	3	2	2.357
8.4	2	5	3	3	3	1	4	3	4	3	1	2	3	4	2.929
															2.536

ADVANCED LEVEL																	
	ES15	ES27	ES06	ES28	ES03	ES19	ES20	ES29	ES02	ES30	ES16	ES25	ES07	ES04	ES01	ES05	
Control pre-inf. DP																	
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1.4	4	4	1	5	5	5	5	5	5	5	5	5	5	5	4	3	4.438
																	3.922
Control no pre-inf. DP																	
2.1	1	4	1	1	4	5	4	4	4	4	4	2	1	5	3	4	3.188
2.2	3	3	1	1	5	3	3	3	5	5	5	4	1	5	4	3	3.375
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2.4	4	4	1	1	2	4	2	2	2	2	3	4	2	3	3	3	2.625
																	3.078
*Control pre-inf. DP																	
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3.2	2	4	1	2	3	5	5	5	1	5	3	5	2	4	5	5	3.563
3.3	2	4	1	1	4	1	4	4	5	5	5	2	4	4	2	5	3.313
3.4	4	4	1	4	4	2	4	5	4	3	3	1	4	2	1	4	3.125
																	3.484
*Control no pre-inf. DP																	
4.1	5	4	1	3	2	5	3	5	2	5	4	4	2	3	3	4	3.438
4.2	5	4	1	1	4	2	2	2	3	4	2	2	1	4	3	3	2.688
4.3	1	1	1	1	2	2	3	2	1	1	1	1	1	1	2	2	1.438
4.4	2	2	1	3	4	2	2	4	1	3	2	1	1	2	1	3	2.125
																	2.422
*Opt. Control																	
5.1	1	2	1	1	4	1	4	2	2	2	2	2	1	2	1	1	1.813
5.2	5	3	1	1	3	2	2	2	2	2	1	2	1	2	1	1	1.938
5.3	2	4	1	2	5	5	5	4	2	2	2	1	2	2	1	1	2.563
5.4	1	2	3	1	3	1	3	4	1	2	1	2	1	2	2	1	1.875
6.1	2	3	1	4	3	1	3	1	4	3	1	1	1	2	1	1	2
6.2	4	1	1	1	2	1	3	2	1	1	1	1	1	3	1	4	1.75
6.3	2	1	2	1	4	2	1	1	1	1	1	1	1	2	1	1	1.438
6.4	4	3	1	1	1	3	1	1	2	1	1	2	1	1	2	1	1.625
																	1.875
ECM																	
7.1	5	4	2	3	4	5	5	5	1	2	5	4	4	5	4	5	3.938
7.2	5	4	2	5	4	5	5	2	5	1	3	5	5	5	3	5	4
7.3	1	2	2	1	2	1	3	4	1	1	1	2	1	2	1	4	1.813
7.4	4	1	2	1	2	1	4	2	3	1	1	2	2	3	2	4	2.188
																	2.984
*ECM																	
8.1	4	2	1	1	5	2	4	2	1	2	2	2	1	3	1	1	2.125
8.2	2	2	2	1	3	2	3	1	5	3	4	1	1	2	1	1	2.125
8.3	2	4	1	1	4	1	2	2	2	1	1	2	1	2	1	3	1.875
8.4	4	2	4	5	4	2	3	3	2	3	3	1	1	2	2	1	2.625
																	2.188

GRAMMATICALITY JUDGMENT TASK: SCORES AND MEANS FOR CONTROL GROUP (L1 SPANISH)

	SS03	SS04	SS05	SS07	SS08	SS09	SS11	SS12	SS13	SS14	SS15	SS16	SS17	SS18	SS19	SS20	SS21	SS23	SS24	SS25	SS26	SS27	SS29	SS30	SS31	SS32	SS33	SS34	SS35	SS36	SS37	SS38	SS39	SS40	SS41	SS42	
Control pre-inf. DP																																					
1.1	4	2	4	2	4	3	2	4	4	4	5	4	2	5	2	5	4	5	5	5	1	5	4	4	4	2	2	2	3	2	2	3	2	1	2	5	3.31
1.2	5	2	4	2	1	2	2	4	2	3	2	3	1	1	2	1	2	2	1	1	1	5	4	1	2	2	2	2	2	1	1	3	1	1	2	1	2.06
1.3	4	5	5	4	5	2	2	4	4	2	2	5	5	5	4	1	5	5	5	5	1	5	4	5	5	4	2	2	4	1	4	3	2	3	4	1	3.58
1.4	5	4	5	3	5	2	5	4	4	4	5	4	5	5	4	1	5	1	5	5	2	4	4	4	4	5	5	3	4	3	3	4	5	5	4	2	3.94
																																					3.22
Control no pre-inf. DP																																					
2.1	3	2	4	2	2	2	2	2	2	4	4	3	2	4	2	1	4	5	2	3	1	5	4	4	2	2	2	4	4	3	4	3	2	1	3	1	2.78
2.2	2	2	3	3	5	2	2	2	2	2	4	3	2	4	2	1	2	5	2	2	1	4	3	4	2	4	2	2	4	2	2	3	3	2	3	4	2.69
2.3	2	2	4	2	2	2	2	2	5	5	2	5	5	4	4	2	2	5	4	3	1	5	4	2	2	4	3	3	4	2	2	3	2	2	3	2	3.00
2.4	2	4	3	2	2	1	2	2	2	5	1	3	1	1	4	2	2	4	2	2	1	2	4	4	2	2	1	1	2	2	1	2	2	2	2	3	2.22
																																					2.67
*Control pre-inf. DP																																					
3.1	4	2	3	3	2	2	3	2	2	2	2	5	1	3	2	1	2	5	1	1	1	4	3	4	2	1	1	2	2	2	2	2	1	1	2	1	2.19
3.2	3	1	1	2	4	2	2	2	4	2	2	3	2	1	2	1	2	2	4	1	1	2	2	4	2	1	3	2	2	2	1	1	2	2	2	3	2.08
3.3	2	2	4	2	4	4	3	4	2	5	4	4	4	4	4	1	4	5	5	5	1	4	2	4	2	2	2	2	3	1	2	2	2	2	3	4	3.06
3.4	2	2	3	2	1	2	5	4	2	5	2	3	2	5	2	1	2	4	4	4	1	5	2	1	3	1	2	2	3	2	1	2	3	1	2	3	2.53
																																					2.47
*Control no pre-inf. DP																																					
4.1	2	2	1	3	2	2	2	4	2	1	2	4	2	1	2	1	2	2	1	2	1	1	2	5	2	1	3	2	3	1	5	2	2	2	3	2	2.14
4.2	2	2	1	2	2	2	2	2	4	5	2	2	1	1	1	1	1	1	2	1	1	1	2	4	2	2	1	2	2	1	1	2	1	1	1	2	1.75
4.3	2	1	3	2	2	2	1	2	2	2	2	2	1	2	1	1	2	2	1	2	1	2	2	2	1	2	2	2	3	1	1	2	1	2	3	2	1.78
4.4	2	4	2	2	1	2	5	2	2	4	2	2	2	1	1	1	1	2	5	2	2	2	3	4	2	1	2	2	4	2	1	1	2	3	1	3	2.22
																																					1.97
*Opt. Control																																					
5.1	2	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	1	1	2	1	1	1	1	1.17
5.2	1	1	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1.11
5.3	1	1	1	1	1	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	2	1	1	1	1	2	1	2	1.19
5.4	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1.06
6.1	1	1	1	2	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	4	2	1	1	1	2	2	1	1	1	2	1	2	2	1.33
6.2	1	2	1	2	1	1	1	2	1	1	2	1	1	1	1	5	1	1	1	1	2	1	1	1	1	1	1	1	2	1	1	1	1	2	1	1	1.31
6.3	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1.08
6.4	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2	1	2	1	1	1	1	1.14
																																					1.17
ECM																																					
7.1	5	5	5	4	5	5	5	5	4	2	5	5	5	4	5	5	5	5	5	5	4	5	5	4	4	5	5	5	5	4	4	4	5	5	5	5	4.67
7.2	4	5	5	4	2	5	5	4	5	5	5	5	5	5	4	5	5	5	5	5	4	5	4	5	5	4	5	5	4	5	5	4	5	5	4	5	4.64
7.3	4	5	5	4	5	5	5	2	5	2	5	4	5	2	4	2	5	4	5	5	2	2	4	5	4	4	5	5	3	3	4	4	4	5	3	5	4.03
7.4	4	4	4	4	4	4	4	4	4	4	4	4	2	4	2	5	5	4	5	2	4	4	5	5	4	2	5	5	5	4	4	3	4	3	5	4	3.97
																																					4.33
*ECM																																					
8.1	2	1	1	2	2	2	1	2	2	1	2	2	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	2	1	1	1	1	1	1	1	1.31
8.2	2	1	1	2	1	1	2	1	4	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1.25
8.3	2	1	1	2	2	1	1	2	1	1	1	2	1	2	1	1	1	1	1	1	1	2	3	1	1	1	1	1	2	1	1	2	1	1	1	1	1.31
8.4	1	1	1	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	1	1	1	2	1	1	2	1.22
																																					1.27

Control constructions with pre-infinitival DP

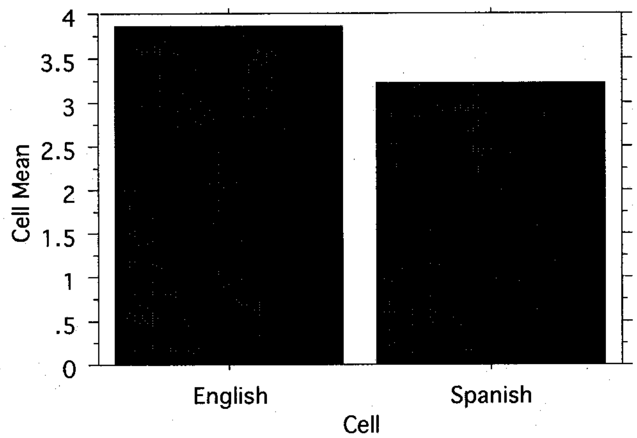
ANOVA Table for OCpre

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	6.349	6.349	8.695	.0045	8.695	.842
Residual	62	45.276	.730				

Means Table for OCpre
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	28	3.857	.901	.170
Spanish	36	3.222	.817	.136

Interaction Bar Plot for OCpre
Effect: L1



Fisher's PLSD for OCpre
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
English, Spanish	.635	.430	.0045	S

Control constructions with no pre-infinitival DP

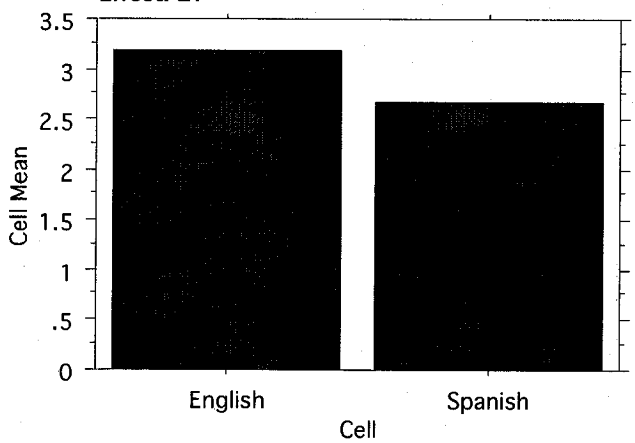
ANOVA Table for OCpos

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	4.159	4.159	6.150	.0159	6.150	.687
Residual	62	41.931	.676				

Means Table for OCpos
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	28	3.188	.878	.166
Spanish	36	2.674	.776	.129

Interaction Bar Plot for OCpos
Effect: L1



Fisher's PLSD for OCpos
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
English, Spanish	.514	.414	.0159	S

Control constructions total

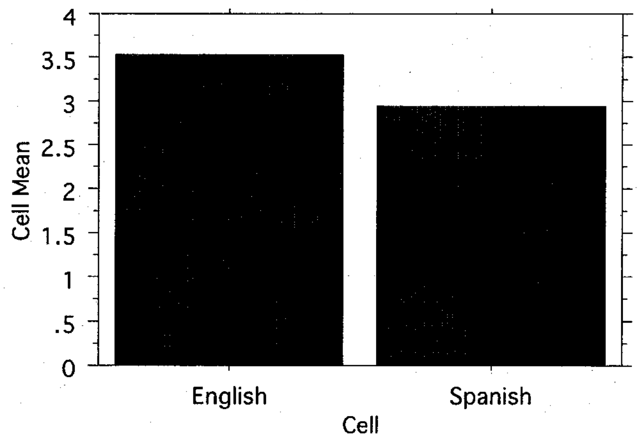
ANOVA Table for OCtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	5.197	5.197	9.268	.0034	9.268	.867
Residual	62	34.763	.561				

Means Table for OCtotal
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	28	3.522	.806	.152
Spanish	36	2.948	.702	.117

Interaction Bar Plot for OCtotal
Effect: L1



Fisher's PLSD for OCtotal
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
English, Spanish	.574	.377	.0034	S

*Control constructions with pre-infinitival DP

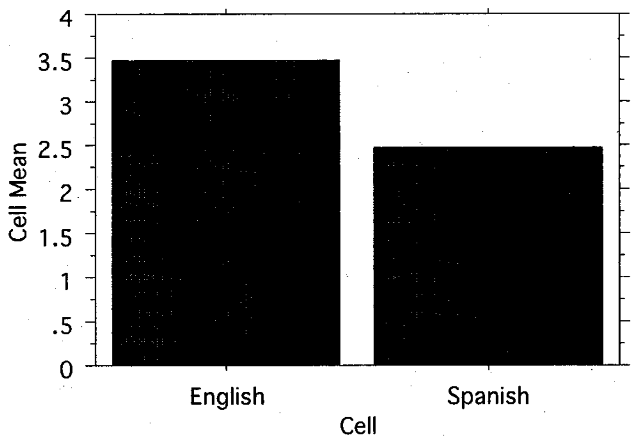
ANOVA Table for *OCpre

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	16.286	16.286	24.325	<.0001	24.325	1.000
Residual	62	41.510	.670				

Means Table for *OCpre
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	28	3.482	.884	.167
Spanish	36	2.465	.763	.127

Interaction Bar Plot for *OCpre
Effect: L1



Fisher's PLSD for *OCpre
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
English, Spanish	1.017	.412	<.0001	S

*Control constructions with no pre-infinitival DP

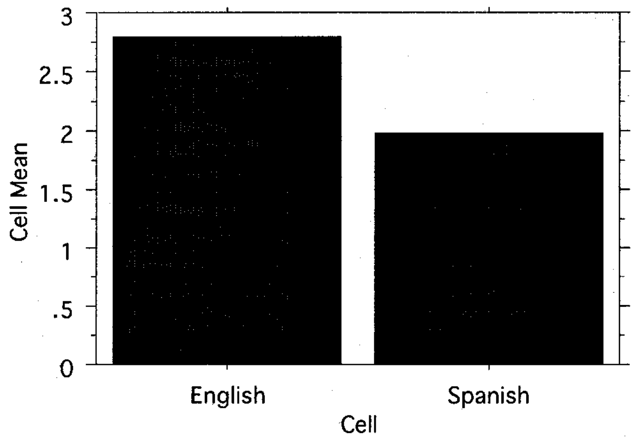
ANOVA Table for *OCpos

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	10.653	10.653	20.573	<.0001	20.573	.998
Residual	62	32.104	.518				

Means Table for *OCpos
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	28	2.795	.879	.166
Spanish	36	1.972	.566	.094

Interaction Bar Plot for *OCpos
Effect: L1



Fisher's PLSD for *OCpos
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
English, Spanish	.822	.362	<.0001	S

*Control constructions total

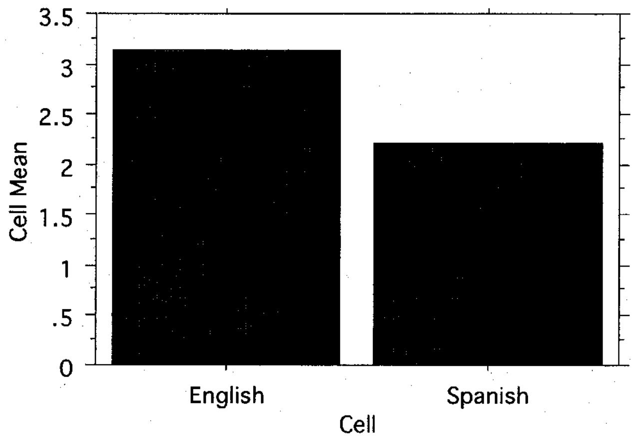
ANOVA Table for *OCtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	13.320	13.320	33.550	<.0001	33.550	1.000
Residual	62	24.616	.397				

Means Table for *OCtotal
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	28	3.138	.710	.134
Spanish	36	2.219	.561	.093

Interaction Bar Plot for *OCtotal
Effect: L1



Fisher's PLSD for *OCtotal
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
English, Spanish	.920	.317	<.0001	S

*Optional Control constructions

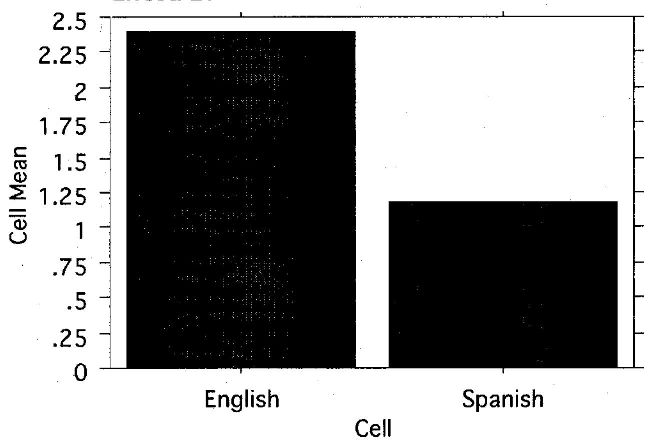
ANOVA Table for *PCtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	23.585	23.585	95.822	<.0001	95.822	1.000
Residual	62	15.260	.246				

Means Table for *PCtotal
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	28	2.397	.713	.135
Spanish	36	1.174	.210	.035

Interaction Bar Plot for *PCtotal
Effect: L1



Fisher's PLSD for *PCtotal
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
English, Spanish	1.224	.250	<.0001	S

ECM constructions

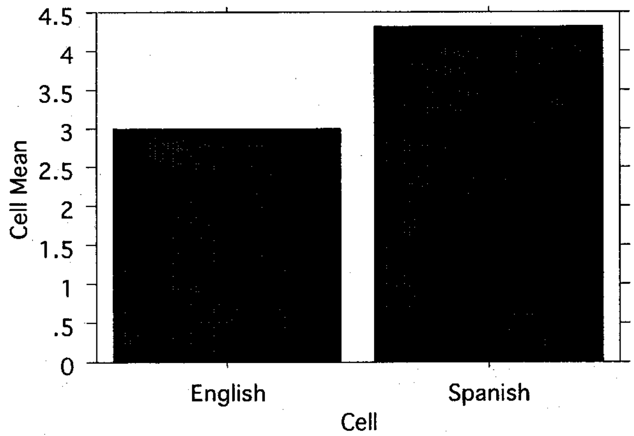
ANOVA Table for ECMtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	27.709	27.709	89.934	<.0001	89.934	1.000
Residual	62	19.102	.308				

Means Table for ECMtotal
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	28	3.000	.663	.125
Spanish	36	4.326	.454	.076

Interaction Bar Plot for ECMtotal
Effect: L1



Fisher's PLSD for ECMtotal
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
English, Spanish	-1.326	.280	<.0001	S

*ECM constructions

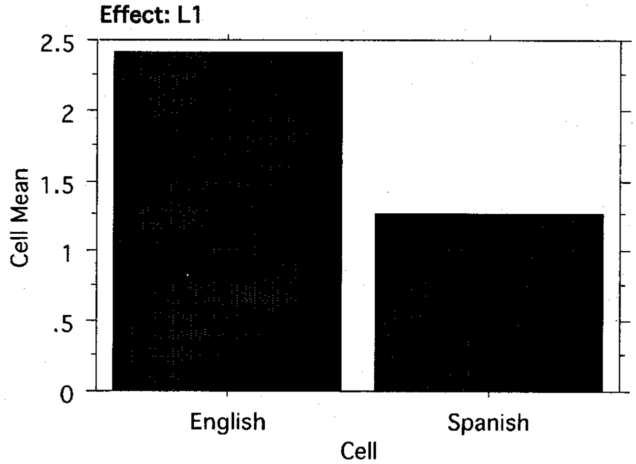
ANOVA Table for *ECMtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	20.786	20.786	81.548	<.0001	81.548	1.000
Residual	62	15.804	.255				

Means Table for *ECMtotal
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	28	2.420	.638	.121
Spanish	36	1.271	.370	.062

Interaction Bar Plot for *ECMtotal
Effect: L1



Fisher's PLSD for *ECMtotal
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
English, Spanish	1.149	.254	<.0001	S

Control constructions with pre-infinitival DP – intermediate level

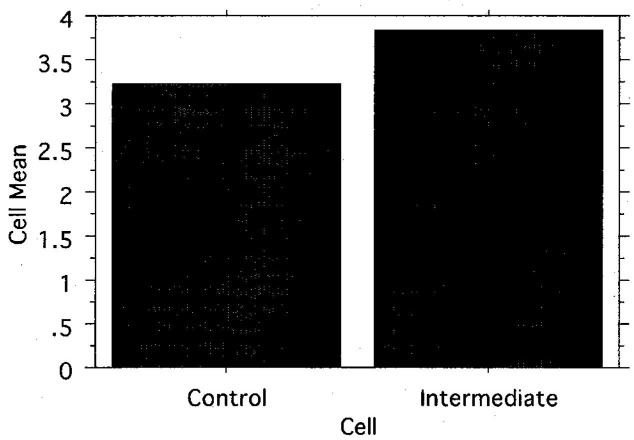
ANOVA Table for OCpre

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	3.838	3.838	6.342	.0152	6.342	.697
Residual	48	29.048	.605				

Means Table for OCpre
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	3.222	.817	.136
Intermediate	14	3.839	.662	.177

Interaction Bar Plot for OCpre
Effect: LEVEL



Fisher's PLSD for OCpre
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Intermediate	-.617	.493	.0152	S

Control constructions with no pre-infinitival DP – intermediate level

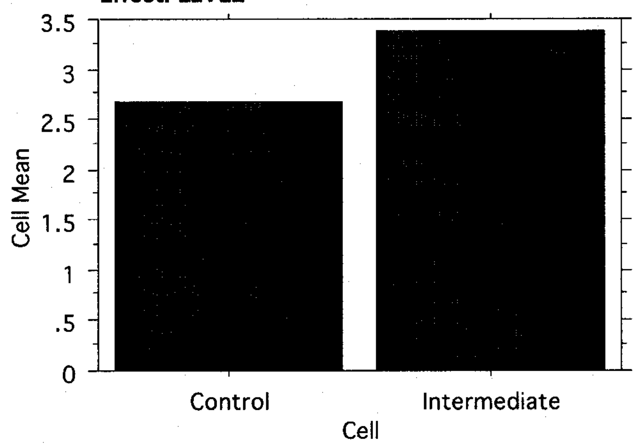
ANOVA Table for OCpos

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	4.959	4.959	9.494	.0034	9.494	.872
Residual	48	25.071	.522				

Means Table for OCpos
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	2.674	.776	.129
Intermediate	14	3.375	.553	.148

Interaction Bar Plot for OCpos
Effect: LEVEL



Fisher's PLSD for OCpos
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Intermediate	-.701	.458	.0034	S

Control constructions total – intermediate level

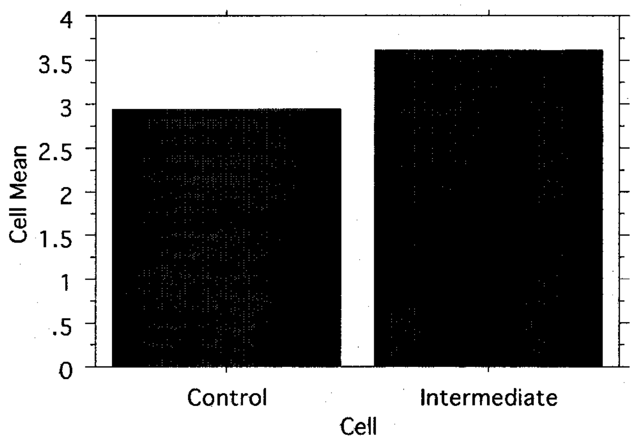
ANOVA Table for OCtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	4.381	4.381	10.510	.0022	10.510	.906
Residual	48	20.007	.417				

Means Table for OCtotal
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	2.948	.702	.117
Intermediate	14	3.607	.462	.124

Interaction Bar Plot for OCtotal
Effect: LEVEL



Fisher's PLSD for OCtotal
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Intermediate	-.659	.409	.0022	S

*Control constructions with pre-infinitival DP – intermediate level

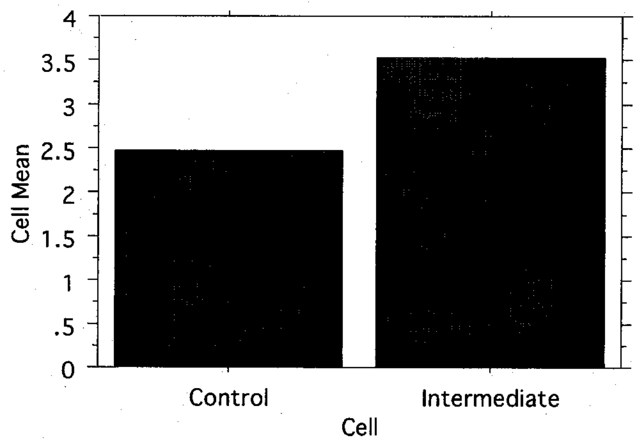
ANOVA Table for *OCpre

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	11.550	11.550	18.557	<.0001	18.557	.995
Residual	48	29.876	.622				

Means Table for *OCpre
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	2.465	.763	.127
Intermediate	14	3.536	.854	.228

Interaction Bar Plot for *OCpre
Effect: LEVEL



Fisher's PLSD for *OCpre
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Intermediate	-1.070	.500	<.0001	S

*Control constructions with no pre-infinitival DP – intermediate level

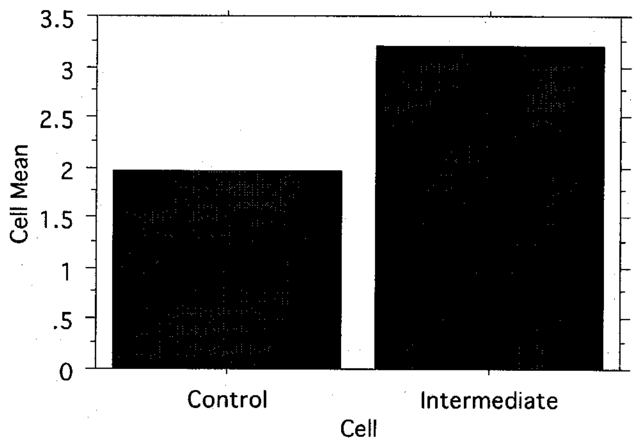
ANOVA Table for *OCpos

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	15.107	15.107	34.955	<.0001	34.955	1.000
Residual	48	20.745	.432				

Means Table for *OCpos
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.972	.566	.094
Intermediate	14	3.196	.856	.229

Interaction Bar Plot for *OCpos
Effect: LEVEL



Fisher's PLSD for *OCpos
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Intermediate	-1.224	.416	<.0001	S

*Control constructions total – intermediate level

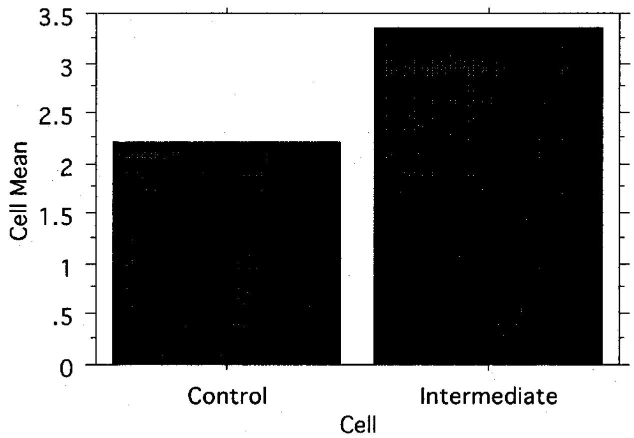
ANOVA Table for *OCtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	13.269	13.269	39.587	<.0001	39.587	1.000
Residual	48	16.089	.335				

Means Table for *OCtotal
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	2.219	.561	.093
Intermediate	14	3.366	.625	.167

Interaction Bar Plot for *OCtotal
Effect: LEVEL



Fisher's PLSD for *OCtotal
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Intermediate	-1.147	.367	<.0001	S

*Optional Control constructions – intermediate level

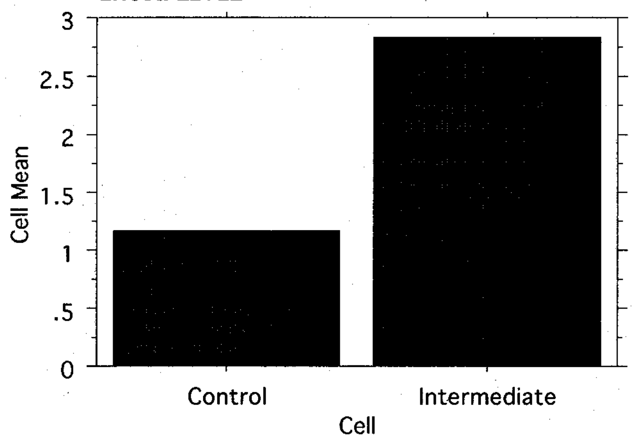
ANOVA Table for *PCtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	27.967	27.967	260.808	<.0001	260.808	1.000
Residual	48	5.147	.107				

Means Table for *PCtotal
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.174	.210	.035
Intermediate	14	2.839	.527	.141

Interaction Bar Plot for *PCtotal
Effect: LEVEL



Fisher's PLSD for *PCtotal
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Intermediate	-1.666	.207	<.0001	S

ECM constructions – intermediate level

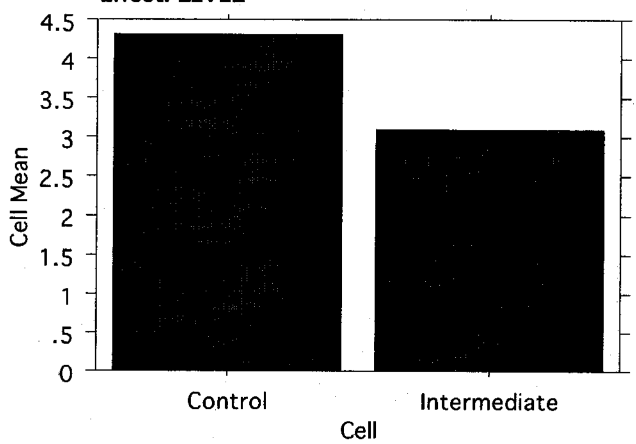
ANOVA Table for ECMtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	15.427	15.427	65.510	<.0001	65.510	1.000
Residual	48	11.303	.235				

Means Table for ECMtotal
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	4.326	.454	.076
Intermediate	14	3.089	.560	.150

Interaction Bar Plot for ECMtotal
Effect: LEVEL



Fisher's PLSD for ECMtotal
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Intermediate	1.237	.307	<.0001	S

*ECM constructions – intermediate level

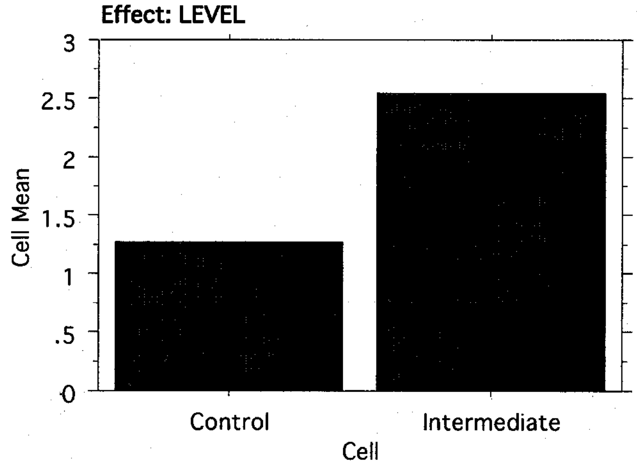
ANOVA Table for *ECMtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	16.127	16.127	90.762	<.0001	90.762	1.000
Residual	48	8.529	.178				

Means Table for *ECMtotal
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.271	.370	.062
Intermediate	14	2.536	.536	.143

Interaction Bar Plot for *ECMtotal
Effect: LEVEL



Fisher's PLSD for *ECMtotal
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Intermediate	-1.265	.267	<.0001	S

Control constructions with pre-infinitival DP – advanced level

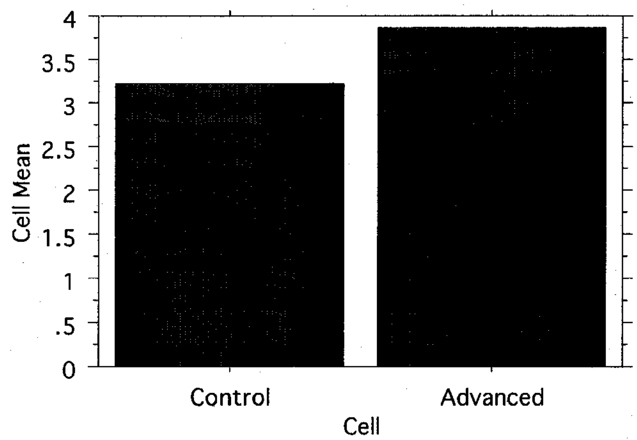
ANOVA Table for OCpre

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	4.295	4.295	5.211	.0269	5.211	.604
Residual	48	39.566	.824				

Means Table for OCpre
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	3.222	.817	.136
Advanced	14	3.875	1.117	.299

Interaction Bar Plot for OCpre
Effect: LEVEL



Fisher's PLSD for OCpre
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Advanced	-.653	.575	.0269	S

Control constructions with no pre-infinitival DP – advanced level

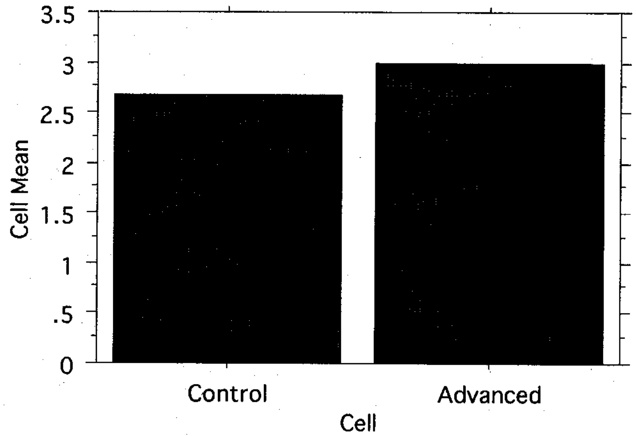
ANOVA Table for OCpos

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	1.074	1.074	1.394	.2436	1.394	.200
Residual	48	36.977	.770				

Means Table for OCpos
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	2.674	.776	.129
Advanced	14	3.000	1.105	.295

Interaction Bar Plot for OCpos
Effect: LEVEL



Fisher's PLSD for OCpos
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value
Control, Advanced	-.326	.556	.2436

Control constructions total – advanced level

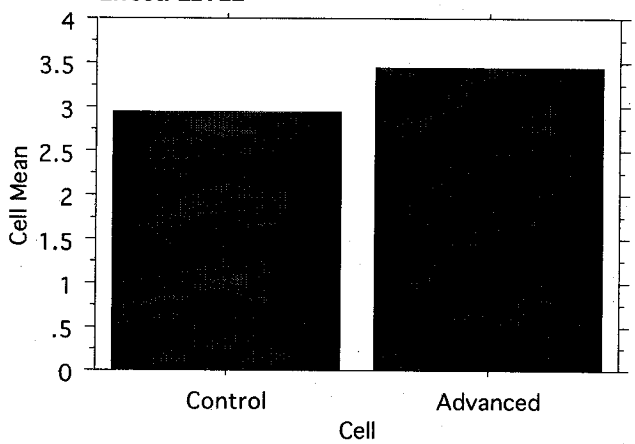
ANOVA Table for OCtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	2.416	2.416	3.649	.0621	3.649	.450
Residual	48	31.785	.662				

Means Table for OCtotal
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	2.948	.702	.117
Advanced	14	3.438	1.058	.283

Interaction Bar Plot for OCtotal
Effect: LEVEL



Fisher's PLSD for OCtotal
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value
Control, Advanced	-.490	.515	.0621

***Control constructions with pre-infinitival DP – advanced level**

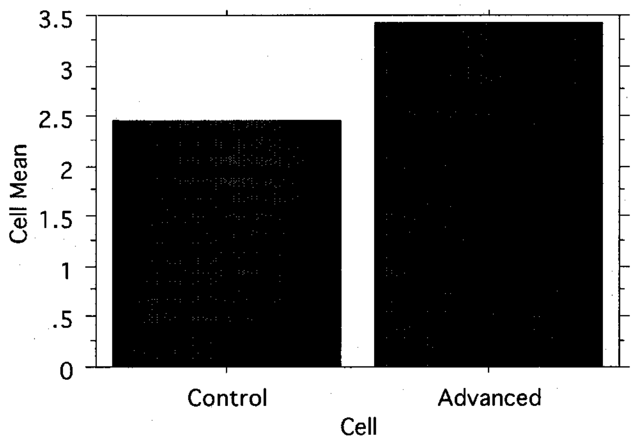
ANOVA Table for *OCpre

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	9.354	9.354	14.053	.0005	14.053	.971
Residual	48	31.948	.666				

Means Table for *OCpre
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	2.465	.763	.127
Advanced	14	3.429	.943	.252

Interaction Bar Plot for *OCpre
Effect: LEVEL



Fisher's PLSD for *OCpre
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Advanced	-.963	.517	.0005	S

*Control constructions with no pre-infinitival DP – advanced level

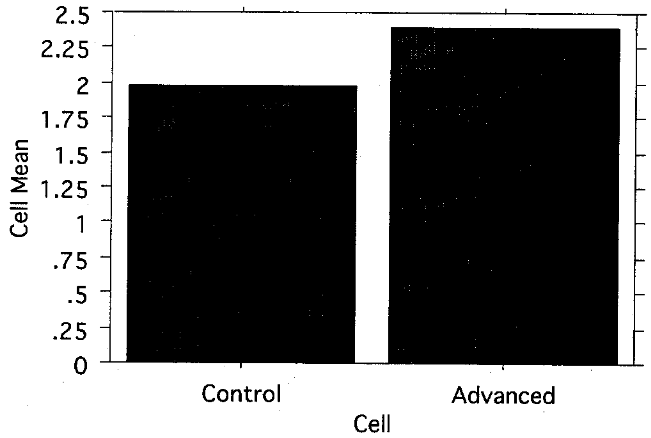
ANOVA Table for *OCpos

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	1.783	1.783	4.740	.0344	4.740	.560
Residual	48	18.062	.376				

Means Table for *OCpos
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.972	.566	.094
Advanced	14	2.393	.725	.194

Interaction Bar Plot for *OCpos
Effect: LEVEL



Fisher's PLSD for *OCpos
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Advanced	-.421	.388	.0344	S

*Control constructions total – advanced level

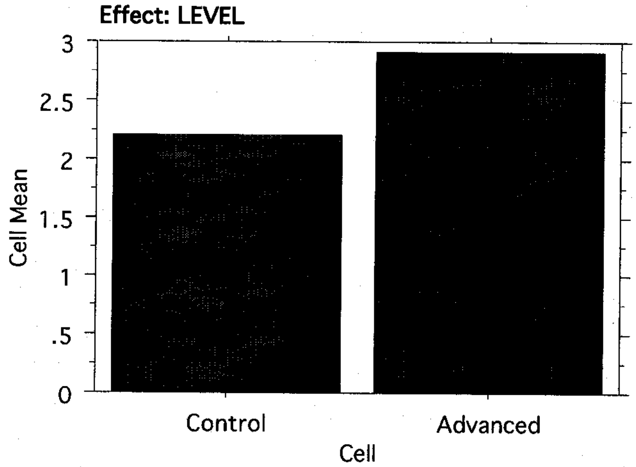
ANOVA Table for *OCtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	4.826	4.826	12.808	.0008	12.808	.956
Residual	48	18.088	.377				

Means Table for *OCtotal
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	2.219	.561	.093
Advanced	14	2.911	.738	.197

Interaction Bar Plot for *OCtotal
Effect: LEVEL



Fisher's PLSD for *OCtotal
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Advanced	-.692	.389	.0008	S

*Optional Control constructions – advanced level

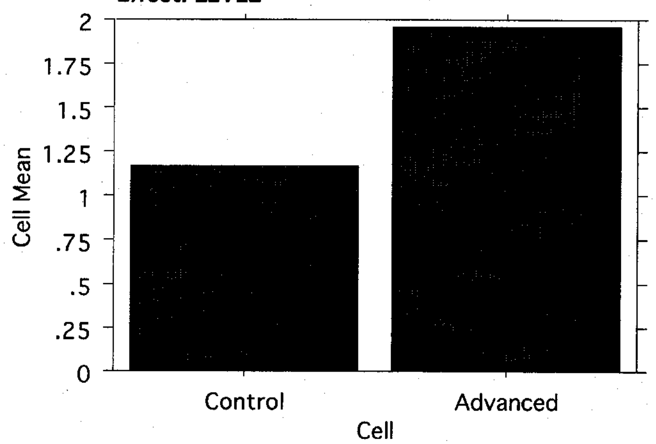
ANOVA Table for *PCtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	6.160	6.160	47.816	<.0001	47.816	1.000
Residual	48	6.184	.129				

Means Table for *PCtotal
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.174	.210	.035
Advanced	14	1.955	.598	.160

Interaction Bar Plot for *PCtotal
Effect: LEVEL



Fisher's PLSD for *PCtotal
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Advanced	-.782	.227	<.0001	S

ECM constructions – advanced level

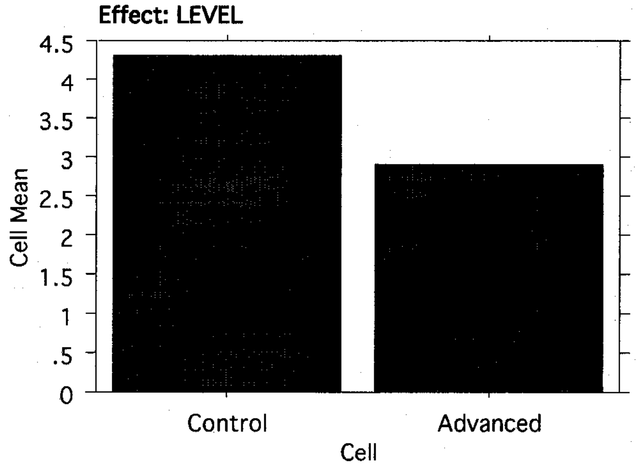
ANOVA Table for ECMtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	20.202	20.202	65.504	<.0001	65.504	1.000
Residual	48	14.803	.308				

Means Table for ECMtotal
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	4.326	.454	.076
Advanced	14	2.911	.763	.204

Interaction Bar Plot for ECMtotal
Effect: LEVEL



Fisher's PLSD for ECMtotal
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Advanced	1.416	.352	<.0001	S

*ECM constructions – advanced level

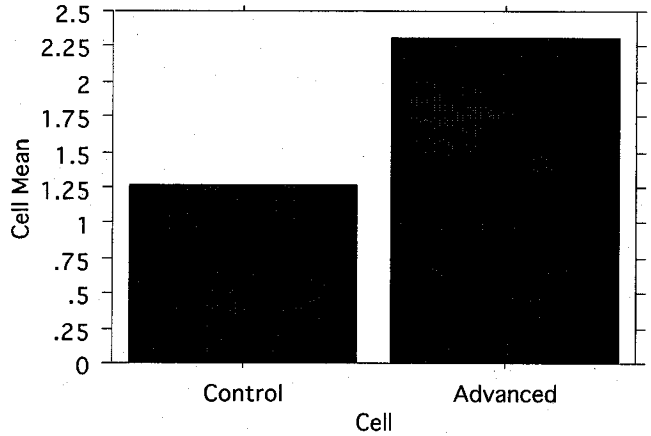
ANOVA Table for *ECMtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	10.751	10.751	44.128	<.0001	44.128	1.000
Residual	48	11.694	.244				

Means Table for *ECMtotal
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.271	.370	.062
Advanced	14	2.304	.728	.195

Interaction Bar Plot for *ECMtotal
Effect: LEVEL



Fisher's PLSD for *ECMtotal
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Advanced	-1.033	.313	<.0001	S

APPENDIX IIC

- **PERCENTAGES FOR EACH ITEM**

		GRAMMATICALITY JUDGMENT TASK; PERCENTAGES FOR CONTROL AND EXPERIMENTAL GROUPS																							
		INTERMEDIATE LEVEL						ADVANCED LEVEL						EXPERIMENTAL GROUP (ALL LEVELS)						CONTROL GROUP					
		5	4	3	2	1	TOTAL	5	4	3	2	1	TOTAL	5	4	3	2	1	TOTAL	5	4	3	2	1	TOTAL
Control pre-inf. DP	1.1	64.3%		28.6%		7.1%	100.0%	71.4%		0.0%		28.6%	100.0%	67.9%		14.3%		17.9%	100.0%	52.8%		8.3%		38.9%	100.0%
	1.2	57.1%		28.6%		14.3%	100.0%	50.0%		14.3%		35.7%	100.0%	53.6%		21.4%		25.0%	100.0%	13.9%		8.3%		77.8%	100.0%
	1.3	64.3%		7.1%		28.6%	100.0%	85.7%		0.0%		14.3%	100.0%	75.0%		3.6%		21.4%	100.0%	63.9%		5.6%		30.6%	100.0%
	1.4	92.9%		7.1%		0.0%	100.0%	92.9%		0.0%		7.1%	100.0%	92.9%		3.6%		3.6%	100.0%	75.0%		11.1%		13.9%	100.0%
Control no pre-inf. DP	2.1	64.3%		7.1%		28.6%	100.0%	64.3%		0.0%		35.7%	100.0%	64.3%		3.6%		32.1%	100.0%	33.3%		16.7%		50.0%	100.0%
	2.2	35.7%		42.9%		21.4%	100.0%	42.9%		35.7%		21.4%	100.0%	39.3%		39.3%		21.4%	100.0%	25.0%		19.4%		55.6%	100.0%
	2.3	64.3%		7.1%		28.6%	100.0%	42.9%		7.1%		50.0%	100.0%	53.6%		7.1%		39.3%	100.0%	36.1%		13.9%		50.0%	100.0%
	2.4	42.9%		21.4%		35.7%	100.0%	28.6%		14.3%		57.1%	100.0%	35.7%		17.9%		46.4%	100.0%	16.7%		8.3%		75.0%	100.0%
		60.7%		18.8%		20.5%	100.0%	59.8%		8.9%		31.3%	100.0%	60.3%		13.8%		25.9%	100.0%	39.6%		11.5%		49.0%	100.0%
*Control pre-inf. DP	3.1	50.0%		28.6%		21.4%	100.0%	78.6%		0.0%		21.4%	100.0%	64.3%		14.3%		21.4%	100.0%	13.9%		13.9%		72.2%	100.0%
	3.2	57.1%		21.4%		21.4%	100.0%	50.0%		14.3%		35.7%	100.0%	53.6%		17.9%		28.6%	100.0%	11.1%		11.1%		77.8%	100.0%
	3.3	71.4%		14.3%		14.3%	100.0%	64.3%		0.0%		35.7%	100.0%	67.9%		7.1%		25.0%	100.0%	47.2%		8.3%		44.4%	100.0%
	3.4	57.1%		14.3%		28.6%	100.0%	57.1%		14.3%		28.6%	100.0%	57.1%		14.3%		28.6%	100.0%	22.2%		16.7%		61.1%	100.0%
*Control no pre-inf. DP	4.1	57.1%		7.1%		35.7%	100.0%	50.0%		21.4%		28.6%	100.0%	53.6%		14.3%		32.1%	100.0%	11.1%		11.1%		77.8%	100.0%
	4.2	28.6%		42.9%		28.6%	100.0%	35.7%		7.1%		57.1%	100.0%	32.1%		25.0%		42.9%	100.0%	8.3%		0.0%		91.7%	100.0%
	4.3	42.9%		7.1%		50.0%	100.0%	0.0%		7.1%		92.9%	100.0%	21.4%		7.1%		71.4%	100.0%	0.0%		8.3%		91.7%	100.0%
	4.4	64.3%		14.3%		21.4%	100.0%	14.3%		14.3%		71.4%	100.0%	39.3%		14.3%		46.4%	100.0%	16.7%		8.3%		75.0%	100.0%
		53.6%		18.8%		27.7%	100.0%	43.8%		9.8%		46.4%	100.0%	48.7%		14.3%		37.1%	100.0%	16.3%		9.7%		74.0%	100.0%
Optional Control	5.1	64.3%		14.3%		21.4%	100.0%	14.3%		0.0%		85.7%	100.0%	39.3%		7.1%		53.6%	100.0%	0.0%		0.0%		100.0%	100.0%
	5.2	42.9%		21.4%		35.7%	100.0%	7.1%		14.3%		78.6%	100.0%	25.0%		17.9%		57.1%	100.0%	0.0%		2.8%		97.2%	100.0%
	5.3	35.7%		28.6%		35.7%	100.0%	35.7%		0.0%		64.3%	100.0%	35.7%		14.3%		50.0%	100.0%	0.0%		0.0%		100.0%	100.0%
	5.4	28.6%		14.3%		57.1%	100.0%	7.1%		21.4%		71.4%	100.0%	17.9%		17.9%		64.3%	100.0%	0.0%		0.0%		100.0%	100.0%
	6.1	35.7%		35.7%		28.6%	100.0%	14.3%		28.6%		57.1%	100.0%	25.0%		32.1%		42.9%	100.0%	2.8%		0.0%		97.2%	100.0%
	6.2	14.3%		21.4%		64.3%	100.0%	7.1%		14.3%		78.6%	100.0%	10.7%		17.9%		71.4%	100.0%	2.8%		0.0%		97.2%	100.0%
	6.3	28.6%		7.1%		64.3%	100.0%	7.1%		0.0%		92.9%	100.0%	17.9%		3.6%		78.6%	100.0%	0.0%		0.0%		100.0%	100.0%
	6.4	21.4%		14.3%		64.3%	100.0%	7.1%		14.3%		78.6%	100.0%	14.3%		14.3%		71.4%	100.0%	0.0%		0.0%		100.0%	100.0%
		33.9%		19.6%		46.4%	100.0%	12.5%		11.6%		75.9%	100.0%	23.2%		15.6%		61.2%	100.0%	0.7%		0.3%		99.0%	100.0%
*ECM	7.1	21.4%		21.4%		57.1%	100.0%	21.4%		7.1%		71.4%	100.0%	21.4%		14.3%		64.3%	100.0%	0.0%		2.8%		97.2%	100.0%
	7.2	14.3%		35.7%		50.0%	100.0%	14.3%		21.4%		64.3%	100.0%	14.3%		28.6%		57.1%	100.0%	2.8%		2.8%		94.4%	100.0%
	7.3	21.4%		7.1%		71.4%	100.0%	14.3%		0.0%		85.7%	100.0%	17.9%		3.6%		78.6%	100.0%	0.0%		2.8%		97.2%	100.0%
	7.4	28.6%		42.9%		28.6%	100.0%	28.6%		28.6%		42.9%	100.0%	28.6%		35.7%		35.7%	100.0%	0.0%		2.8%		97.2%	100.0%
		21.4%		26.8%		51.8%	100.0%	19.6%		14.3%		66.1%	100.0%	20.5%		20.5%		58.9%	100.0%	0.7%		2.8%		96.5%	100.0%
ECM	8.1	57.1%		14.3%		28.6%	100.0%	71.4%		7.1%		21.4%	100.0%	64.3%		10.7%		25.0%	100.0%	97.2%		0.0%		2.8%	100.0%
	8.2	64.3%		14.3%		21.4%	100.0%	71.4%		7.1%		21.4%	100.0%	67.9%		10.7%		21.4%	100.0%	97.2%		0.0%		2.8%	100.0%
	8.3	35.7%		21.4%		42.9%	100.0%	7.1%		7.1%		85.7%	100.0%	21.4%		14.3%		64.3%	100.0%	75.0%		8.3%		16.7%	100.0%
	8.4	7.1%		42.9%		50.0%	100.0%	14.3%		14.3%		71.4%	100.0%	10.7%		28.6%		60.7%	100.0%	83.3%		5.6%		11.1%	100.0%
		41.1%		23.2%		35.7%	100.0%	41.1%		8.9%		50.0%	100.0%	41.1%		16.1%		42.9%	100.0%	88.2%		3.5%		8.3%	100.0%

APPENDIX IId

- **TRUTH VALUE JUDGMENT TASK ITEM LIST**
- **SCORES AND MEANS FOR EACH ITEM**

EXPERIMENTAL ITEMS

Control constructions with a direct object DP

(1.1) Juana sabe que Elena está muy preocupada por el examen. Como es muy optimista, animó a Elena a aprovechar el tiempo antes del examen.

(1.2) El otro día Juan se dio cuenta de que Felipe no había dicho nada en toda la reunión. Un poco preocupado, invitó a Felipe a dar su opinión.

(1.3) Marta y Lola están preparando una presentación para su clase de español. Como Lola es muy cuidadosa, empujó a Marta a revisar la bibliografía.

(1.4) Andrés y Julio querían visitar a sus amigos en Barcelona, pero tenían que encontrar a alguien con quien dejar el perro. Como Andrés es muy tímido, obligó a Julio a preguntar a todos los vecinos.

Control constructions with a direct object clitic pronoun

(2.1) Juana sabe que Elena está muy preocupada por el examen. Como es muy optimista, la animó a aprovechar el tiempo antes del examen.

(2.2) El otro día Juan se dio cuenta de que Felipe no había dicho nada en toda la reunión. Un poco preocupado, lo invitó a dar su opinión.

(2.3) Marta y Lola están preparando una presentación para su clase de español. Como Lola es muy cuidadosa, la empujó a revisar la bibliografía.

(2.4) Andrés y Julio querían visitar a sus amigos en Barcelona, pero tenían que encontrar a alguien con quien dejar el perro. Como Andrés es muy tímido, lo obligó a preguntar a todos los vecinos.

Control constructions with an indirect object DP

(3.1) Amelia y Marisa llevan una semana esperando un paquete. Marisa está impaciente por saber qué ha pasado con el paquete, así que mandó a Amelia a preguntar en la oficina de Correos.

(3.2) Hay una epidemia de gripe en China. Aunque Marco dice que no tiene importancia, Julián no está muy convencido, así finalmente recomendó a Marco retrasar el viaje.

(3.3) Isabel estaba harta de que María estuviera al teléfono a todas horas. Un buen día, lo escondió en su habitación y no permitió a María entrar bajo ningún concepto.

(3.4) Ivan y Álvaro tienen todo lo que necesitan para la fiesta de cumpleaños, pero no han comprado suficientes bebidas. Iván no quiere que las bebidas se acaben, así que prohibió a Álvaro beber antes de la fiesta.

Control constructions with an indirect object clitic pronoun

(4.1) Amelia y Marisa llevan una semana esperando un paquete. Marisa está impaciente por saber qué ha pasado con el paquete, así que le mandó a preguntar en la oficina de Correos.

(4.2) Hay una epidemia de gripe en China. Aunque Marco dice que no tiene importancia, Julián no está muy convencido, así finalmente le recomendó retrasar el viaje.

(4.3) Isabel estaba harta de que María estuviera al teléfono a todas horas. Un buen día, lo escondió en su habitación y no le permitió entrar bajo ningún concepto.

(4.4) Ivan y Álvaro tienen todo lo que necesitan para la fiesta de cumpleaños, pero no han comprado suficientes bebidas. Iván no quiere que las bebidas se acaben, así que le prohibió beber antes de la fiesta.

Exceptional Case Marking constructions with an object DP

(5.1) Teresa siguió a Susana por la calle principal hasta que entró en una tienda de discos. Sin que se diera cuenta, vio a Susana comprar un CD.

(5.2) Pedro estaba tomándose un café cuando Luis y sus amigos entraron en el bar para tomar el aperitivo. De pronto oyó a Luis hablar mal de su novia.

Exceptional Case Marking constructions with an object clitic pronoun

(6.1) Teresa siguió a Susana por la calle principal hasta que entró en una tienda de discos. Sin que se diera cuenta, le vio comprar un CD.

(6.2) Pedro estaba tomándose un café cuando Luis y sus amigos entraron en el bar para tomar el aperitivo. De pronto oyó le oyó hablar mal de su novia.

DISTRACTORS

(11.1) Cristina ha invitado a sus amigas a cenar. Sara, su mejor amiga, ha traído los aperitivos. Después de probarlos, Cristina felicitó a Sara.

(11.2) Jaime e Isabel van a casarse muy pronto y están organizando la boda perfecta. Antes de salir de compras, Jaime besó a Isabel muy cariñosamente.

(11.3) Guillermo tenía el coche en el taller, pero por suerte pudo tomar prestado el coche de José y dio a José las llaves después de volver del viaje.

(11.4) Vanessa quería comprar tabaco, pero no tenía dinero. Vio que el monedero de Laura estaba encima de la mesa, así que preguntó a Laura si le podía prestar algo antes de salir a la calle.

(11.5) Este domingo Óscar y Susana vieron una película en el cine. Después de ir al cine, Susana dio una sorpresa a Óscar.

(12.1) Cristina ha invitado a sus amigas a cenar. Sara, su mejor amiga, ha traído los aperitivos. Después de probarlos, Cristina le felicitó calurosamente.

(12.2) Jaime e Isabel van a casarse muy pronto y están organizando la boda perfecta. Antes de salir de compras, Jaime le besó muy cariñosamente.

(12.3) Guillermo tenía el coche en el taller, pero por suerte pudo tomar prestado el coche de José y le dio las llaves después de volver del viaje.

(12.4) Vanessa quería comprar tabaco, pero no tenía dinero. Vio que el monedero de Laura estaba encima de la mesa, así que le preguntó si le podía prestar algo antes de salir a la calle.

(12.5) Este domingo Óscar y Susana vieron una película en el cine. Después de ir al cine, Susana le dio una sorpresa.

FILLERS

(13.1) A Silvia y a Susana les gusta fumarse un cigarrillo después de cenar. Pero como Susana nunca fuma dentro de la casa, tiene que salir al balcón para fumar.

(13.2) A Silvia y a Susana les gusta fumarse un cigarrillo después de cenar. Pero como Silvia nunca fuma dentro de la casa, tiene que salir al balcón para fumar.

(14.1) Susana y Silvia van a llegar tarde a la universidad. Como Silvia no tiene carnet, deberá llamar un taxi.

(14.2) Susana y Silvia van a llegar tarde a la universidad. Como Susana no tiene carnet, deberá llamar un taxi.

(15.1) Silvia y Susana quieren viajar a Hawaii, pero no han comprado los pasajes todavía. Como Susana tiene más tiempo, se encargará de ir a la agencia de viajes.

(15.2) Silvia y Susana quieren viajar a Hawaii, pero no han comprado los pasajes todavía. Como Silvia tiene más tiempo, se encargará de ir a la agencia de viajes.

(16.1) Cuando Bruno y Antonio empezaron a hacer el café, se dieron cuenta de que no les quedaba leche. Como Antonio nunca bebe café solo, tendrá que ir a comprar leche al supermercado.

(16.2) Cuando Bruno y Antonio empezaron a hacer el café, se dieron cuenta de que no les quedaba leche. Como Bruno nunca bebe café solo, tendrá que ir a comprar leche al supermercado.

(17.1) Bruno quiere que Antonio vaya al médico. Como Antonio no tiene seguro médico, deberá pagar la consulta de su bolsillo.

(17.2) Bruno quiere que Antonio vaya al médico. Como Bruno no tiene seguro médico, deberá pagar la consulta de su bolsillo.

TRUTH VALUE JUDGMENT TASK: SCORES AND MEANS FOR EXPERIMENTAL GROUP (L1 ENGLISH/L2 SPANISH)

	INTERMEDIATE LEVEL														ADVANCED LEVEL																
	ES12	ES09	ES10	ES26	ES17	ES13	ES21	ES24	ES11	ES18	ES08	ES14	ES22	ES23	ES15	ES27	ES06	ES28	ES03	ES19	ES20	ES29	ES02	ES30	ES16	ES25	ES07	ES04	ES01	ES05	
Control DP DO																															
1.1	2	2	0	2	0	2	2	1	-	-	2	2	2	2	2	2	2	2	2	2	2	0	2	2	0	2	2	2	2	2	**1.7**
1.2	2	2	2	1	2	2	2	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	0	2	-	2	2	2	2	2	**1.8**
1.3	2	2	1	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	**1.9**
1.4	2	2	2	2	2	2	2	2	-	2	2	2	0	2	2	2	2	2	2	2	2	2	2	2	-	2	2	2	2	2	**1.9**
																															1.8
Control CL DO																															
2.1	2	0	0	0	0	-	2	1	0	0	-	0	0	0	0	0	2	1	0	2	2	0	2	0	-	2	2	2	2	2	**0.9**
2.2	2	2	2	2	2	2	2	2	2	-	2	2	2	2	2	2	2	2	2	2	2	2	0	2	0	2	2	2	2	2	**1.9**
2.3	0	0	0	2	0	-	0	0	0	0	2	2	0	1	2	0	2	1	0	2	2	0	2	0	0	2	-	2	0	0	**0.8**
2.4	0	0	2	0	0	2	-	2	2	-	2	0	0	2	0	0	2	2	0	2	2	2	2	2	2	2	-	2	2	2	**1.3**
																															1.2
Control DP IO																															
3.1	0	2	2	0	2	0	2	0	2	-	2	2	2	0	2	2	2	0	2	2	2	2	2	-	2	2	2	2	2	2	**1.6**
3.2	1	1	1	1	1	1	1	1	1	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**1.0**
3.3	2	2	2	2	2	2	2	2	2	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	0	2	2	2	2	2	**1.9**
3.4	0	1	2	2	2	2	2	1	0	2	2	1	2	2	1	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	**1.7**
																															1.5
Control CL IO																															
4.1	1	1	-	0	1	2	0	0	0	-	2	1	0	1	2	2	-	1	2	2	2	2	2	-	-	1	2	2	2	2	**1.3**
4.2	0	0	0	2	0	0	2	1	2	-	2	0	0	0	0	2	2	2	2	2	0	2	0	2	2	-	2	2	-	2	**1.1**
4.3	2	2	2	2	2	2	2	2	2	-	0	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	**1.9**
4.4	2	1	2	2	0	1	2	1	2	2	2	-	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	0	2	2	**1.7**
																															1.5
ECM DP																															
5.1	2	2	1	0	2	2	2	2	2	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	0	2	2	2	2	2	**1.8**
5.2	0	2	0	2	2	2	0	0	0	2	2	1	0	2	2	2	2	0	2	2	2	2	2	2	2	2	2	2	0	0	**1.4**
																															1.6
ECM CL																															
6.1	-	0	0	0	0	0	2	2	-	2	-	0	0	0	2	2	-	2	0	2	0	2	2	2	2	2	2	2	2	2	**1.2**
6.2	-	2	-	2	2	0	2	0	0	2	2	1	1	2	1	2	-	2	2	2	2	0	2	2	-	2	2	2	2	2	**1.6**
																															1.4

TRUTH VALUE JUDGMENT TASK: SCORES AND MEANS FOR EXPERIMENTAL GROUP (L1 ENGLISH/L2 SPANISH)

INTERMEDIATE LEVEL

	ES12	ES09	ES10	ES26	ES17	ES13	ES21	ES24	ES11	ES18	ES08	ES14	ES22	ES23	
Control DP DO															
1.1	2	2	0	2	0	2	2	1	-	-	2	2	2	2	**1.6**
1.2	2	2	2	1	2	2	2	2	2	0	2	2	2	2	**1.8**
1.3	2	2	1	2	2	2	2	2	2	2	2	1	2	2	**1.9**
1.4	2	2	2	2	2	2	2	2	-	2	2	2	0	2	**1.8**
															1.8
Control CL DO															
2.1	2	0	0	0	0	-	2	1	0	0	-	0	0	0	**0.4**
2.2	2	2	2	2	2	2	2	2	2	-	2	2	2	2	**2.0**
2.3	0	0	0	2	0	-	0	0	0	0	2	2	0	1	**0.5**
2.4	0	0	2	0	0	2	-	2	2	-	2	0	0	2	**1.0**
															1.0
Control DP IO															
3.1	0	2	2	0	2	0	2	0	2	-	2	2	2	0	**1.2**
3.2	1	1	1	1	1	1	1	1	1	-	1	1	1	1	**1.0**
3.3	2	2	2	2	2	2	2	2	2	2	2	0	2	2	**1.9**
3.4	0	1	2	2	2	2	2	1	0	2	2	1	2	2	**1.5**
															1.4
Control CL IO															
4.1	1	1	-	0	1	2	0	0	0	-	2	1	0	1	**0.8**
4.2	0	0	0	2	0	0	2	1	2	-	2	0	0	0	**0.7**
4.3	2	2	2	2	2	2	2	2	2	-	0	0	2	2	**1.7**
4.4	2	1	2	2	0	1	2	1	2	2	2	-	2	2	**1.6**
															1.2
ECM DP															
5.1	2	2	1	0	2	2	2	2	2	2	2	0	2	2	**1.643**
5.2	0	2	0	2	2	2	0	0	0	2	2	1	0	2	**1.071**
															1.357
ECM CL															
6.1	-	0	0	0	0	0	2	2	-	2	-	0	0	0	**0.545**
6.2	-	2	-	2	2	0	2	0	0	2	2	1	1	2	**1.333**
															0.939

ADVANCED LEVEL

	ES15	ES27	ES06	ES28	ES03	ES19	ES20	ES29	ES02	ES30	ES16	ES25	ES07	ES04	ES01	ES05	
Control DP DO																	
1.1	2	2	2	2	2	2	2	0	2	2	0	2	2	2	2	2	**1.8**
1.2	2	2	2	2	2	2	2	2	0	2	-	2	2	2	2	2	**1.9**
1.3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	**2.0**
1.4	2	2	2	2	2	2	2	2	2	2	-	2	2	2	2	2	**2.0**
																	1.9
Control CL DO																	
2.1	0	0	2	1	0	2	2	0	2	0	-	2	2	2	2	2	**1.3**
2.2	2	2	2	2	2	2	2	2	0	2	0	2	2	2	2	2	**1.8**
2.3	2	0	2	1	0	2	2	0	2	0	0	2	-	2	0	0	**1.0**
2.4	0	0	2	2	0	2	2	2	2	2	2	2	-	2	2	2	**1.6**
																	1.4
Control DP IO																	
3.1	2	2	2	0	2	2	2	2	2	-	2	2	2	2	2	2	**1.9**
3.2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**1.0**
3.3	2	2	2	2	2	2	2	2	2	2	0	2	2	2	2	2	**1.9**
3.4	1	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	**1.9**
																	1.7
Control CL IO																	
4.1	2	2	-	1	2	2	2	2	2	-	-	1	2	2	2	2	**1.8**
4.2	0	2	2	2	2	2	0	2	0	2	2	-	2	2	-	2	**1.6**
4.3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	**2.0**
4.4	0	2	2	2	2	2	2	2	2	2	2	2	2	0	2	2	**1.8**
																	1.8
ECM DP																	
5.1	2	2	2	2	2	2	2	2	2	2	0	2	2	2	2	2	**1.9**
5.2	2	2	2	0	2	2	2	2	2	2	2	2	2	2	0	0	**1.6**
																	1.8
ECM CL																	
6.1	2	2	-	2	0	2	0	2	2	2	2	2	2	2	2	2	**1.7**
6.2	1	2	-	2	2	2	2	0	2	2	-	2	2	2	2	2	**1.8**
																	1.8

TRUTH VALUE JUDGMENT TASK: SCORES AND MEANS FOR CONTROL GROUP (L1 SPANISH)

	SS03	SS04	SS05	SS07	SS08	SS09	SS11	SS12	SS13	SS14	SS15	SS16	SS17	SS18	SS19	SS20	SS21	SS23	SS24	SS25	SS26	SS27	SS29	SS30	SS31	SS32	SS33	SS34	SS35	SS36	SS37	SS38	SS39	SS40	SS41	SS42	
Control DP DO																																					
1.1	1	2	2	1	2	2	2	-	1	1	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	1.8
1.2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2	2	2	2	2	2	2	2	1.9
1.3	2	1	2	2	2	2	2	1	2	2	2	1	2	2	2	2	2	2	2	2	2	-	2	2	1	1	2	2	2	2	2	2	2	2	2	2	1.9
1.4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
																																					1.9
Control CL DO																																					
2.1	1	2	2	1	2	2	2	2	2	1	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.9
2.2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2	1	2	2	2	2	2	2	2	1.9
2.3	2	2	2	2	2	2	2	2	2	2	2	1	2	1	2	2	2	2	2	2	2	-	2	2	1	1	2	2	2	2	2	2	2	2	2	2	1.9
2.4	2	2	2	2	0	2	2	2	2	2	2	2	2	2	-	0	0	2	2	0	1	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1.7
																																					1.8
Control DP IO																																					
3.1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
3.2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0
3.3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
3.4	1	2	2	2	1	2	2	-	2	2	1	1	1	2	2	2	2	2	1	2	1	2	1	2	1	1	2	2	2	1	2	2	2	2	2	2	1.7
																																					1.7
Control CL IO																																					
4.1	1	1	1	2	1	1	1	1	1	1	1	1	2	2	-	2	1	1	2	1	1	-	1	1	1	1	-	1	1	1	2	2	2	2	1	1	1.3
4.2	2	1	2	2	2	1	1	2	1	2	2	1	1	2	2	1	1	2	2	1	2	1	2	2	1	-	2	-	1	-	2	2	2	2	1	2	1.6
4.3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.0
4.4	1	2	2	2	1	2	1	-	2	2	1	1	2	2	2	2	2	2	1	1	1	2	1	1	1	1	2	2	1	1	2	2	2	1	1	2	1.5
																																					1.6
ECM DP																																					
5.1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
5.2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
																																					2
ECM CL																																					
6.1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	2	2	2	2	2	2	2	2	1.9
6.2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	2	-	2	2	1	2	2	2	2	2	2	2	2	2	2	0	1.9
																																					1.9

Control constructions with a direct object DP

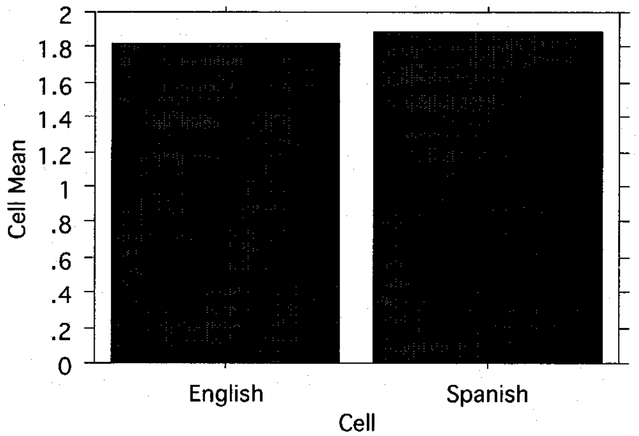
ANOVA Table for OCnoCLdoTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	.096	.096	1.863	.1772	1.863	.254
Residual	62	3.194	.052				

Means Table for OCnoCLdoTOTAL
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	28	1.815	.288	.054
Spanish	36	1.894	.165	.027

Interaction Bar Plot for OCnoCLdoTOTAL
Effect: L1



Fisher's PLSD for OCnoCLdoTOTAL
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value
English, Spanish	-.078	.114	.1772

Control constructions with a direct object clitic

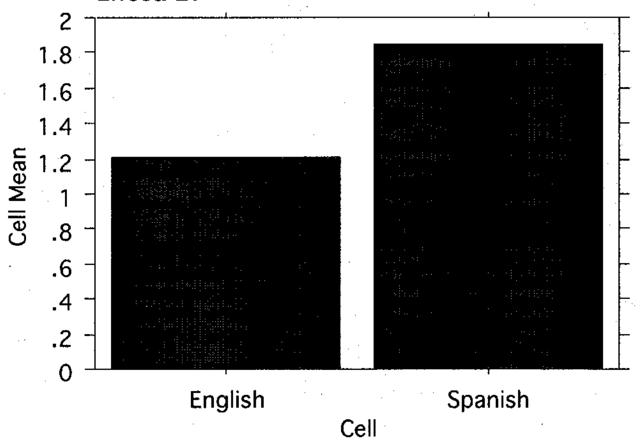
ANOVA Table for OCCLdoTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	6.310	6.310	34.863	<.0001	34.863	1.000
Residual	62	11.221	.181				

Means Table for OCCLdoTOTAL
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	28	1.214	.603	.114
Spanish	36	1.847	.201	.033

Interaction Bar Plot for OCCLdoTOTAL
Effect: L1



Fisher's PLSD for OCCLdoTOTAL
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
English, Spanish	-.633	.214	<.0001	S

Control constructions with a direct object

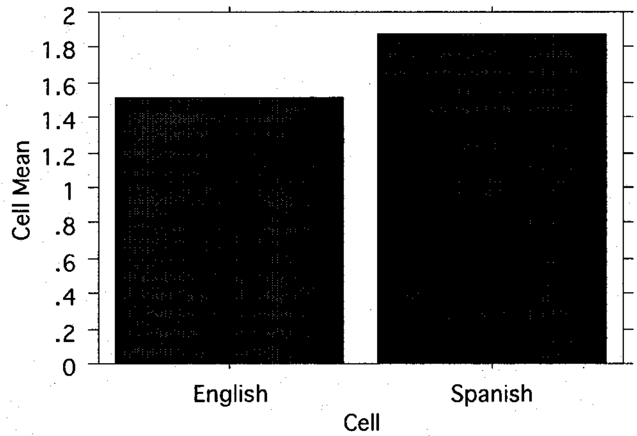
ANOVA Table for OCdoTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	1.990	1.990	24.885	<.0001	24.885	1.000
Residual	62	4.958	.080				

Means Table for OCdoTOTAL
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	28	1.515	.393	.074
Spanish	36	1.870	.151	.025

Interaction Bar Plot for OCdoTOTAL
Effect: L1



Fisher's PLSD for OCdoTOTAL
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
English, Spanish	-.355	.142	<.0001	S

Control constructions with an indirect object DP

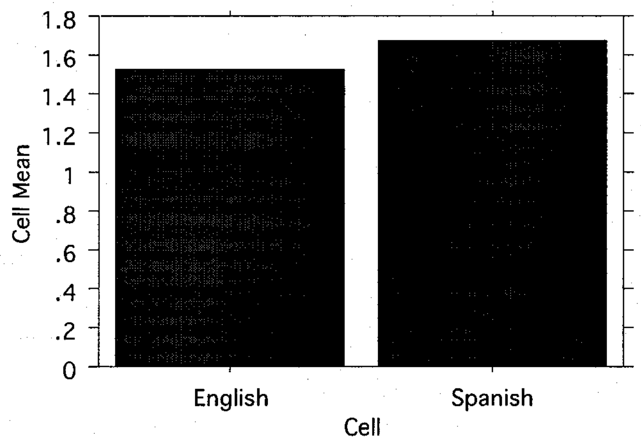
ANOVA Table for OCnoCLioTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	.316	.316	6.313	.0146	6.313	.699
Residual	62	3.100	.050				

Means Table for OCnoCLioTOTAL
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	28	1.530	.312	.059
Spanish	36	1.671	.116	.019

Interaction Bar Plot for OCnoCLioTOTAL
Effect: L1



Fisher's PLSD for OCnoCLioTOTAL
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
English, Spanish	-.142	.113	.0146	S

Control constructions with an indirect object clitic

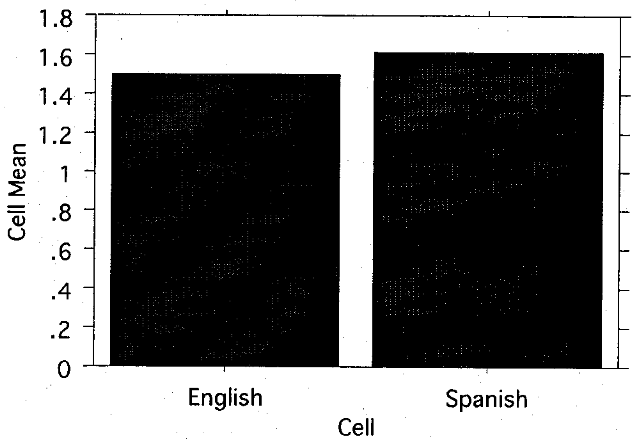
ANOVA Table for OCCLioTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	.200	.200	1.600	.2106	1.600	.225
Residual	62	7.762	.125				

Means Table for OCCLioTOTAL
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	28	1.503	.451	.085
Spanish	36	1.616	.255	.043

Interaction Bar Plot for OCCLioTOTAL
Effect: L1



Fisher's PLSD for OCCLioTOTAL
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value
English, Spanish	-.113	.178	.2106

Control constructions with an indirect object

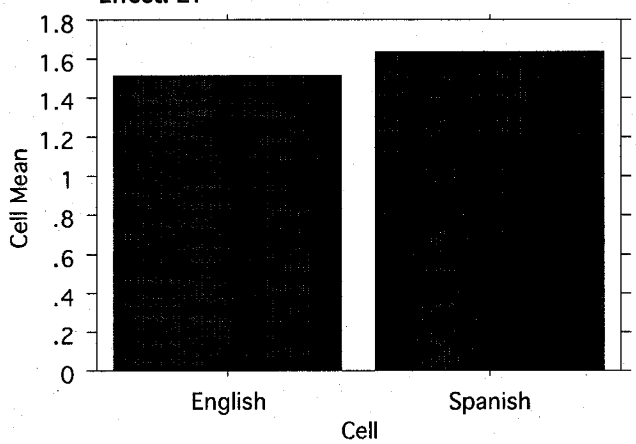
ANOVA Table for OCioTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	.255	.255	4.274	.0429	4.274	.519
Residual	62	3.693	.060				

Means Table for OCioTOTAL
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	28	1.516	.322	.061
Spanish	36	1.644	.159	.027

Interaction Bar Plot for OCioTOTAL
Effect: L1



Fisher's PLSD for OCioTOTAL
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
English, Spanish	-.127	.123	.0429	S

ECM constructions with a DP

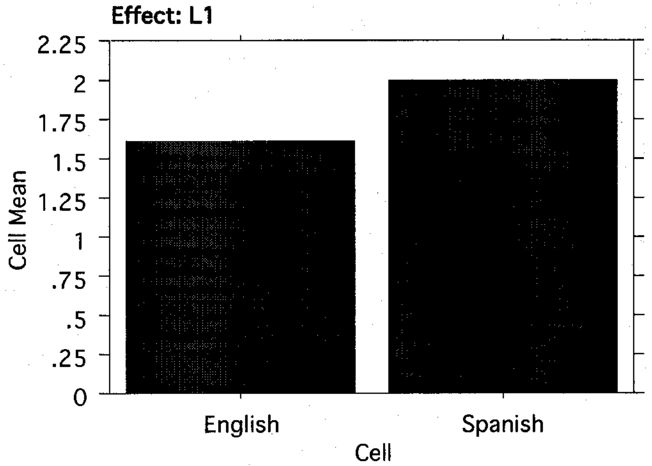
ANOVA Table for ECMnoCLtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	2.431	2.431	18.427	<.0001	18.427	.995
Residual	62	8.179	.132				

Means Table for ECMnoCLtotal
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	28	1.607	.550	.104
Spanish	36	2.000	0.000	0.000

Interaction Bar Plot for ECMnoCLtotal
Effect: L1



Fisher's PLSD for ECMnoCLtotal
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
English, Spanish	-.393	.183	<.0001	S

ECM constructions with a clitic

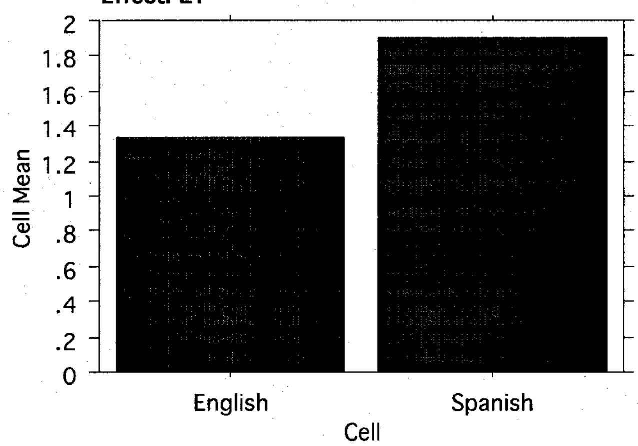
ANOVA Table for ECMCLtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	5.006	5.006	18.914	<.0001	18.914	.996
Residual	60	15.881	.265				

Means Table for ECMCLtotal
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	26	1.327	.720	.141
Spanish	36	1.903	.288	.048

Interaction Bar Plot for ECMCLtotal
Effect: L1



Fisher's PLSD for ECMCLtotal
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
English, Spanish	-.576	.265	<.0001	S

ECM constructions

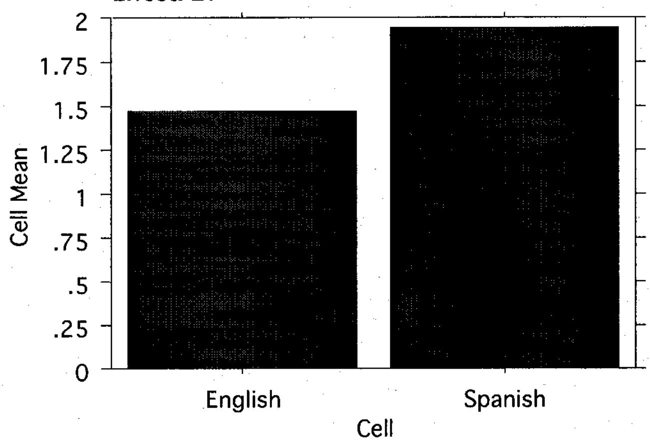
ANOVA Table for ECMtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
L1	1	3.601	3.601	26.597	<.0001	26.597	1.000
Residual	62	8.395	.135				

Means Table for ECMtotal
Effect: L1

	Count	Mean	Std. Dev.	Std. Err.
English	28	1.473	.533	.101
Spanish	36	1.951	.144	.024

Interaction Bar Plot for ECMtotal
Effect: L1



Fisher's PLSD for ECMtotal
Effect: L1
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
English, Spanish	-.478	.185	<.0001	S

Control constructions with a direct object DP – intermediate level

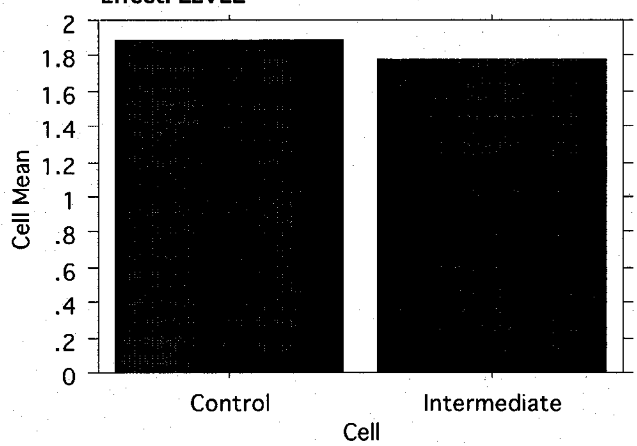
ANOVA Table for OCnoCLdoTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	.145	.145	3.592	.0641	3.592	.444
Residual	48	1.931	.040				

Means Table for OCnoCLdoTOTAL
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.894	.165	.027
Intermediate	14	1.774	.274	.073

Interaction Bar Plot for OCnoCLdoTOTAL
Effect: LEVEL



Fisher's PLSD for OCnoCLdoTOTAL
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value
Control, Intermediate	.120	.127	.0641

Control constructions with a direct object clitic – intermediate level

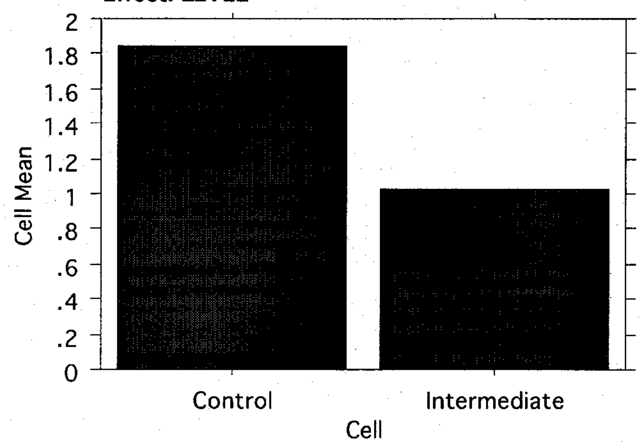
ANOVA Table for OCCLdoTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	6.835	6.835	60.892	<.0001	60.892	1.000
Residual	48	5.388	.112				

Means Table for OCCLdoTOTAL
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.847	.201	.033
Intermediate	14	1.024	.553	.148

Interaction Bar Plot for OCCLdoTOTAL
Effect: LEVEL



Fisher's PLSD for OCCLdoTOTAL
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Intermediate	.823	.212	<.0001	S

Control constructions with a direct object – intermediate level

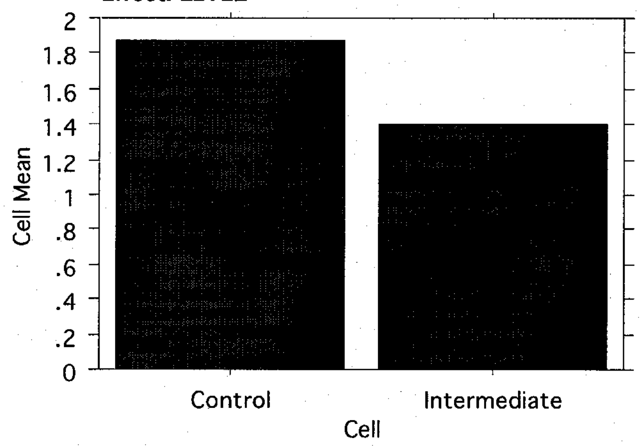
ANOVA Table for OCdoTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	2.241	2.241	40.955	<.0001	40.955	1.000
Residual	48	2.626	.055				

Means Table for OCdoTOTAL
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.870	.151	.025
Intermediate	14	1.399	.375	.100

Interaction Bar Plot for OCdoTOTAL
Effect: LEVEL



Fisher's PLSD for OCdoTOTAL
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Intermediate	.472	.148	<.0001	S

Control constructions with an indirect object DP – intermediate level

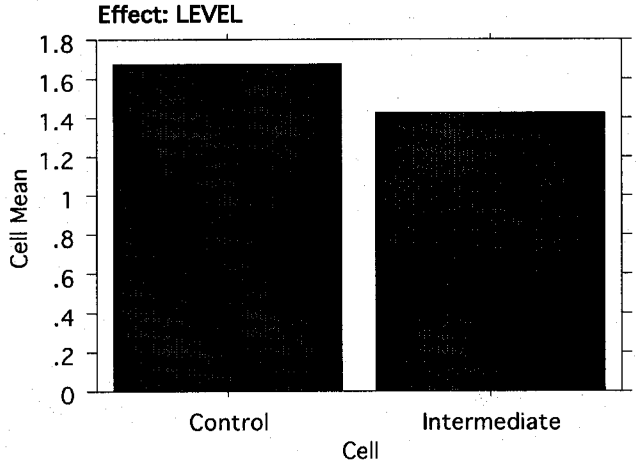
ANOVA Table for OCnoCLioTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	.594	.594	12.531	.0009	12.531	.951
Residual	48	2.275	.047				

Means Table for OCnoCLioTOTAL
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.671	.116	.019
Intermediate	14	1.429	.372	.100

Interaction Bar Plot for OCnoCLioTOTAL
Effect: LEVEL



Fisher's PLSD for OCnoCLioTOTAL
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Intermediate	.243	.138	.0009	S

Control constructions with an indirect object clitic – intermediate level

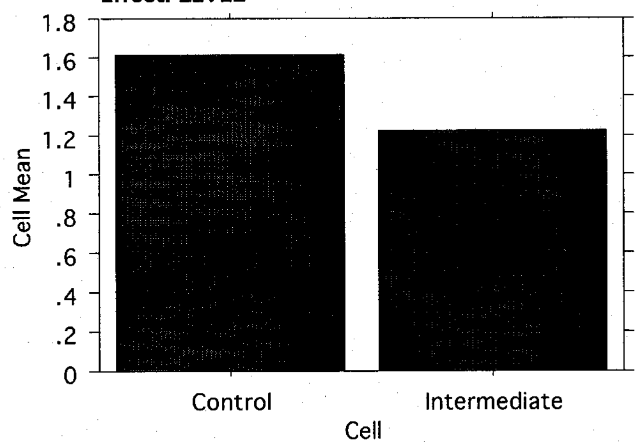
ANOVA Table for OCCLioTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	1.530	1.530	16.799	.0002	16.799	.990
Residual	48	4.372	.091				

Means Table for OCCLioTOTAL
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.616	.255	.043
Intermediate	14	1.226	.401	.107

Interaction Bar Plot for OCCLioTOTAL
Effect: LEVEL



Fisher's PLSD for OCCLioTOTAL
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Intermediate	.390	.191	.0002	S

Control constructions with an indirect object – intermediate level

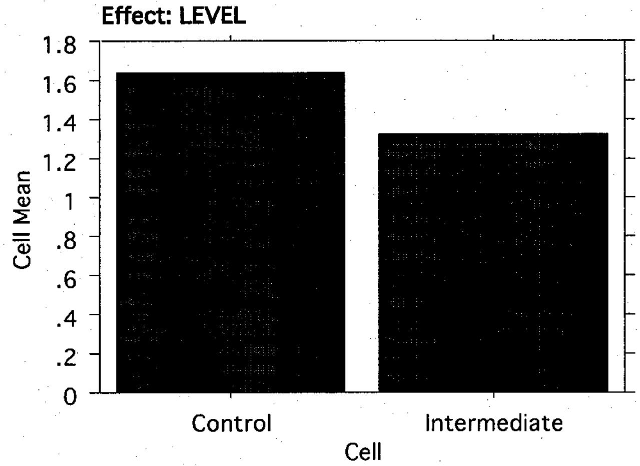
ANOVA Table for OCIoTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	1.007	1.007	21.549	<.0001	21.549	.998
Residual	48	2.243	.047				

Means Table for OCIoTOTAL
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.644	.159	.027
Intermediate	14	1.327	.323	.086

Interaction Bar Plot for OCIoTOTAL
Effect: LEVEL



Fisher's PLSD for OCIoTOTAL
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Intermediate	.316	.137	<.0001	S

ECM constructions with a DP – intermediate level

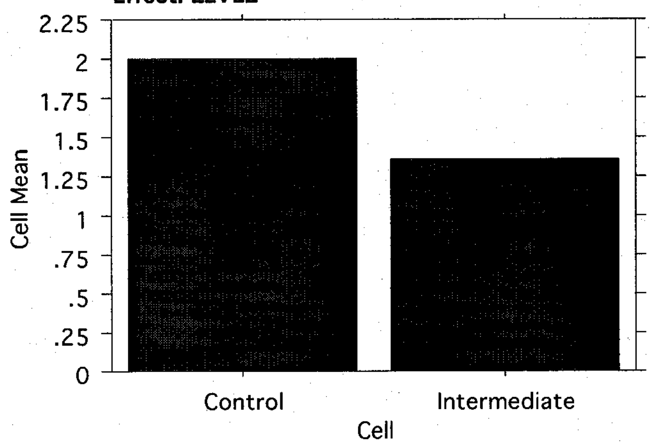
ANOVA Table for ECMnoCLtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	4.166	4.166	42.415	<.0001	42.415	1.000
Residual	48	4.714	.098				

Means Table for ECMnoCLtotal
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	2.000	0.000	0.000
Intermediate	14	1.357	.602	.161

Interaction Bar Plot for ECMnoCLtotal
Effect: LEVEL



Fisher's PLSD for ECMnoCLtotal
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Intermediate	.643	.198	<.0001	S

ECM constructions with a clitic – intermediate level

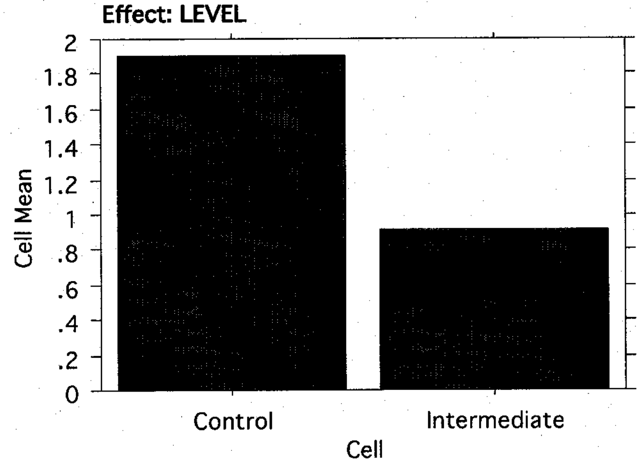
ANOVA Table for ECMCLtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	9.167	9.167	46.166	<.0001	46.166	1.000
Residual	47	9.333	.199				

Means Table for ECMCLtotal
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.903	.288	.048
Intermediate	13	.923	.732	.203

Interaction Bar Plot for ECMCLtotal
Effect: LEVEL



Fisher's PLSD for ECMCLtotal
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Intermediate	.980	.290	<.0001	S

ECM constructions – intermediate level

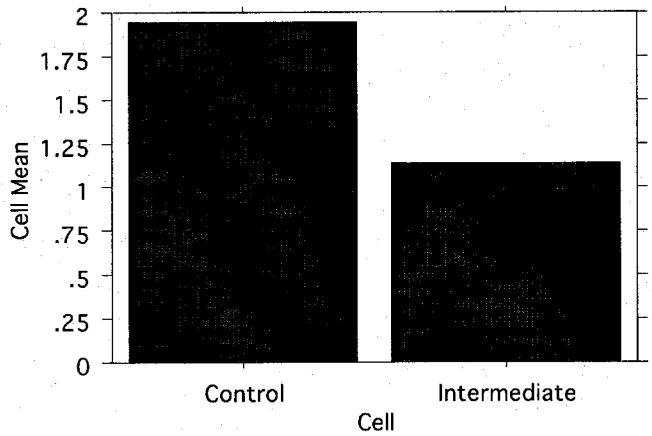
ANOVA Table for ECMtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	6.590	6.590	69.262	<.0001	69.262	1.000
Residual	48	4.567	.095				

Means Table for ECMtotal
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.951	.144	.024
Intermediate	14	1.143	.543	.145

Interaction Bar Plot for ECMtotal
Effect: LEVEL



Fisher's PLSD for ECMtotal
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Intermediate	.809	.195	<.0001	S

Control constructions with a direct object DP – advanced level

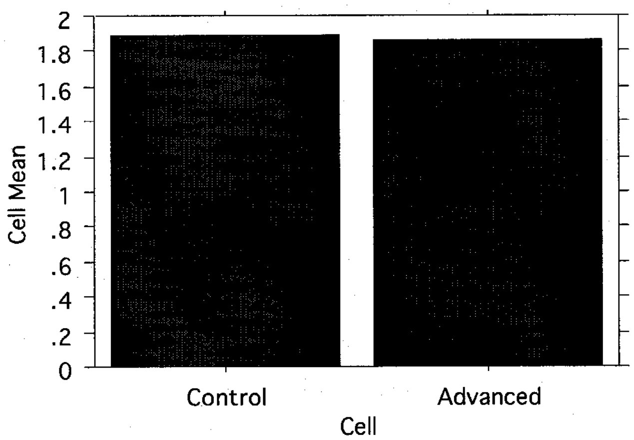
ANOVA Table for OCnoCLdoTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	.013	.013	.296	.5892	.296	.082
Residual	48	2.167	.045				

Means Table for OCnoCLdoTOTAL
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.894	.165	.027
Advanced	14	1.857	.306	.082

Interaction Bar Plot for OCnoCLdoTOTAL
Effect: LEVEL



Fisher's PLSD for OCnoCLdoTOTAL
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value
Control, Advanced	.036	.135	.5892

Control constructions with a direct object clitic – advanced level

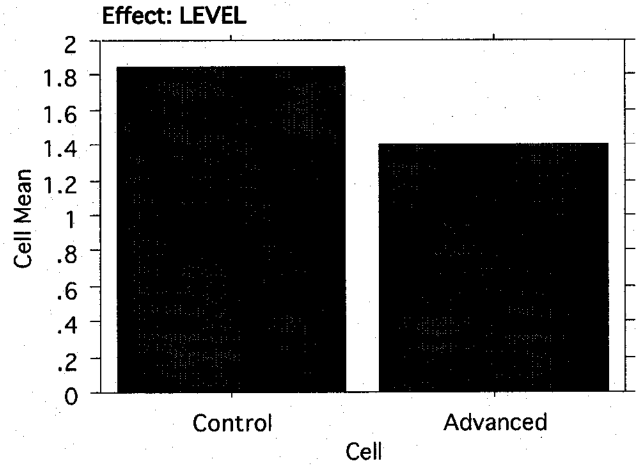
ANOVA Table for OCCLdoTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	1.973	1.973	15.211	.0003	15.211	.981
Residual	48	6.227	.130				

Means Table for OCCLdoTOTAL
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.847	.201	.033
Advanced	14	1.405	.609	.163

Interaction Bar Plot for OCCLdoTOTAL
Effect: LEVEL



Fisher's PLSD for OCCLdoTOTAL
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Advanced	.442	.228	.0003	S

Control constructions with a direct object – advanced level

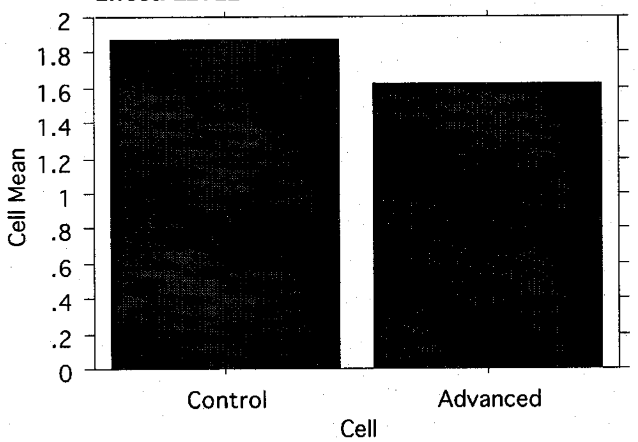
ANOVA Table for OCdoTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	.578	.578	10.076	.0026	10.076	.893
Residual	48	2.753	.057				

Means Table for OCdoTOTAL
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.870	.151	.025
Advanced	14	1.631	.388	.104

Interaction Bar Plot for OCdoTOTAL
Effect: LEVEL



Fisher's PLSD for OCdoTOTAL
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Advanced	.239	.152	.0026	S

Control constructions with an indirect object DP – advanced level

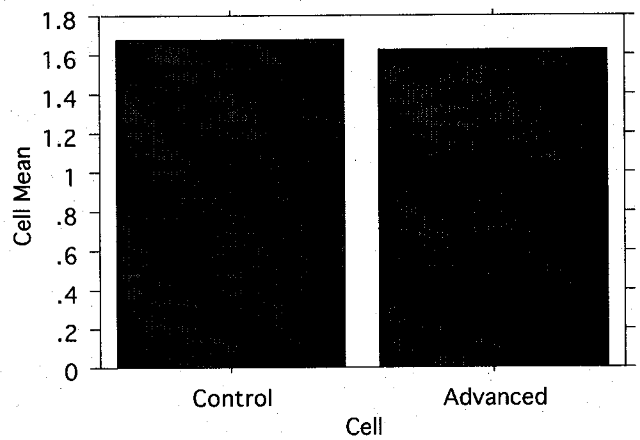
ANOVA Table for OCnoCLioTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	.016	.016	.782	.3811	.782	.133
Residual	48	1.009	.021				

Means Table for OCnoCLioTOTAL
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.671	.116	.019
Advanced	14	1.631	.203	.054

Interaction Bar Plot for OCnoCLioTOTAL
Effect: LEVEL



Fisher's PLSD for OCnoCLioTOTAL
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value
Control, Advanced	.040	.092	.3811

Control constructions with an indirect object clitic – advanced level

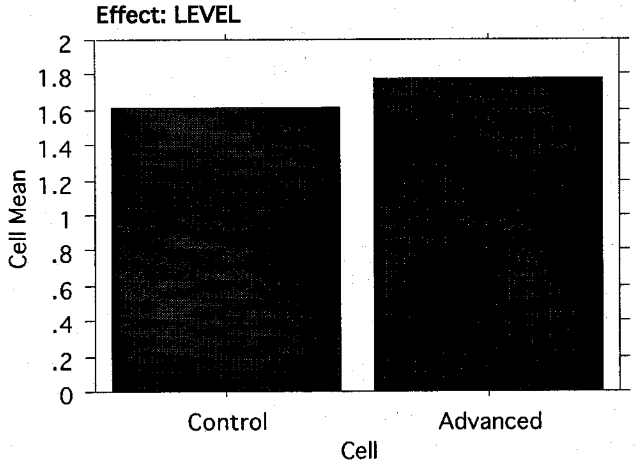
ANOVA Table for OCCLioTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	.271	.271	3.692	.0606	3.692	.455
Residual	48	3.527	.073				

Means Table for OCCLioTOTAL
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.616	.255	.043
Advanced	14	1.780	.309	.083

Interaction Bar Plot for OCCLioTOTAL
Effect: LEVEL



Fisher's PLSD for OCCLioTOTAL
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value
Control, Advanced	-.164	.172	.0606

Control constructions with an indirect object – advanced level

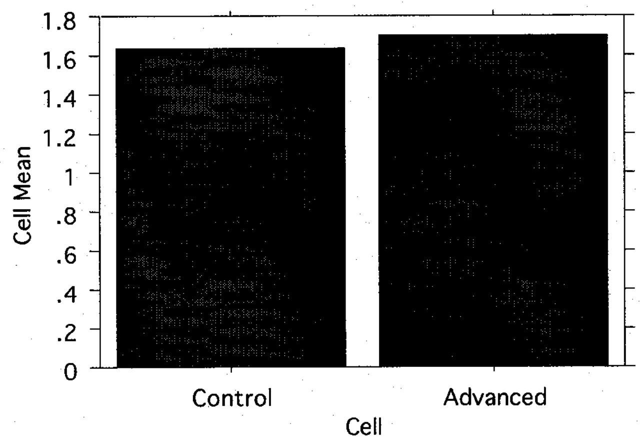
ANOVA Table for OCioTOTAL

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	.039	.039	1.384	.2452	1.384	.199
Residual	48	1.336	.028				

Means Table for OCioTOTAL
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.644	.159	.027
Advanced	14	1.705	.186	.050

Interaction Bar Plot for OCioTOTAL
Effect: LEVEL



Fisher's PLSD for OCioTOTAL
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value
Control, Advanced	-.062	.106	.2452

ECM constructions with a DP – advanced level

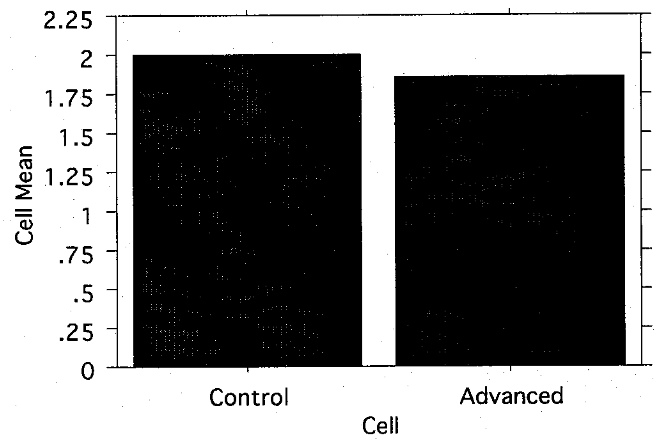
ANOVA Table for ECMnoCLtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	.206	.206	5.760	.0203	5.760	.651
Residual	48	1.714	.036				

Means Table for ECMnoCLtotal
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	2.000	0.000	0.000
Advanced	14	1.857	.363	.097

Interaction Bar Plot for ECMnoCLtotal
Effect: LEVEL



Fisher's PLSD for ECMnoCLtotal
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Advanced	.143	.120	.0203	S

ECM constructions with a clitic – advanced level

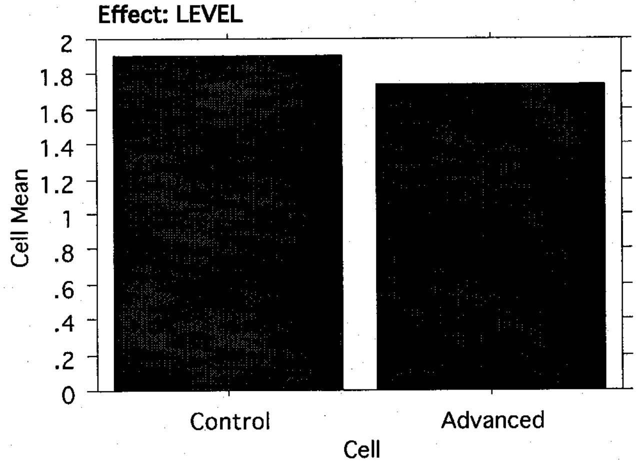
ANOVA Table for ECMCLtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	.283	.283	2.546	.1173	2.546	.329
Residual	47	5.217	.111				

Means Table for ECMCLtotal
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.903	.288	.048
Advanced	13	1.731	.439	.122

Interaction Bar Plot for ECMCLtotal
Effect: LEVEL



Fisher's PLSD for ECMCLtotal
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value
Control, Advanced	.172	.217	.1173

ECM constructions – advanced level

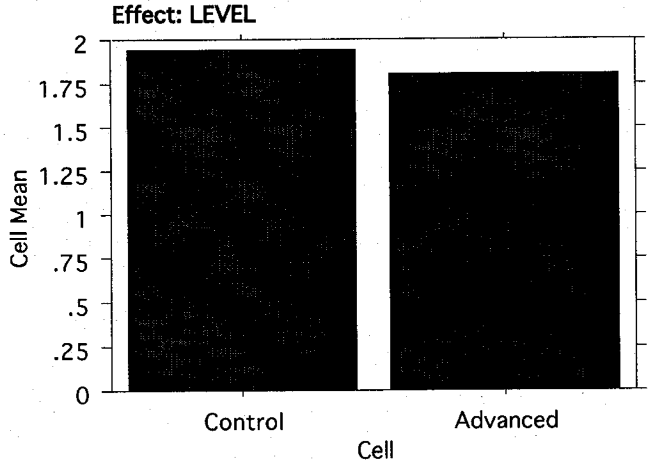
ANOVA Table for ECMtotal

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
LEVEL	1	.220	.220	7.049	.0107	7.049	.747
Residual	48	1.500	.031				

Means Table for ECMtotal
Effect: LEVEL

	Count	Mean	Std. Dev.	Std. Err.
Control	36	1.951	.144	.024
Advanced	14	1.804	.244	.065

Interaction Bar Plot for ECMtotal
Effect: LEVEL



Fisher's PLSD for ECMtotal
Effect: LEVEL
Significance Level: 5 %

	Mean Diff.	Crit. Diff	P-Value	
Control, Advanced	.148	.112	.0107	S

APPENDIX IIe

- **PERCENTAGES FOR EACH ITEM**

TRUTH VALUE JUDGMENT TASK: PERCENTAGES FOR CONTROL AND EXPERIMENTAL GROUPS

		INTERMEDIATE LEVEL				ADVANCED LEVEL				EXPERIMENTAL GROUP (ALL LEVELS				CONTROL GROUP			
		2	1	0	TOTAL	2	1	0	TOTAL	2	1	0	TOTAL	2	1	0	
Control DP DO	1.1	75.0%	8.3%	16.7%	100.0%	85.7%	0.0%	14.3%	100.0%	80.8%	3.8%	15.4%	100.0%	80.0%	20.0%	0.0%	100.0%
	1.2	85.7%	7.1%	7.1%	100.0%	92.3%	0.0%	7.7%	100.0%	88.9%	3.7%	7.4%	100.0%	91.7%	8.3%	0.0%	100.0%
	1.3	85.7%	14.3%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	92.9%	7.1%	0.0%	100.0%	85.7%	14.3%	0.0%	100.0%
	1.4	92.3%	0.0%	7.7%	100.0%	100.0%	0.0%	0.0%	100.0%	96.2%	0.0%	3.8%	100.0%	100.0%	0.0%	0.0%	100.0%
		84.9%	7.5%	7.5%	100.0%	94.4%	0.0%	5.6%	100.0%	89.7%	3.7%	6.5%	100.0%	89.4%	10.6%	0.0%	100.0%
Control CL DO	2.1	15.4%	7.7%	76.9%	100.0%	53.8%	7.7%	38.5%	100.0%	34.6%	7.7%	57.7%	100.0%	88.9%	11.1%	0.0%	100.0%
	2.2	100.0%	0.0%	0.0%	100.0%	85.7%	0.0%	14.3%	100.0%	92.6%	0.0%	7.4%	100.0%	88.9%	11.1%	0.0%	100.0%
	2.3	23.1%	7.7%	69.2%	100.0%	53.8%	7.7%	38.5%	100.0%	38.5%	7.7%	53.8%	100.0%	88.6%	11.4%	0.0%	100.0%
	2.4	50.0%	0.0%	50.0%	100.0%	76.9%	0.0%	23.1%	100.0%	64.0%	0.0%	36.0%	100.0%	82.9%	5.7%	11.4%	100.0%
		47.1%	3.9%	49.0%	100.0%	67.9%	3.8%	28.3%	100.0%	57.7%	3.8%	38.5%	100.0%	87.3%	9.9%	2.8%	100.0%
Control DP IO	3.1	61.5%	0.0%	38.5%	100.0%	92.3%	0.0%	7.7%	100.0%	76.9%	0.0%	23.1%	100.0%	100.0%	0.0%	0.0%	100.0%
	3.2	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
	3.3	92.9%	0.0%	7.1%	100.0%	92.9%	0.0%	7.1%	100.0%	92.9%	0.0%	7.1%	100.0%	100.0%	0.0%	0.0%	100.0%
	3.4	64.3%	21.4%	14.3%	100.0%	85.7%	14.3%	0.0%	100.0%	75.0%	17.9%	7.1%	100.0%	68.6%	31.4%	0.0%	100.0%
		55.6%	29.6%	14.8%	100.0%	67.3%	29.1%	3.6%	100.0%	61.5%	29.4%	9.2%	100.0%	67.1%	32.9%	0.0%	100.0%
Control CL IO	4.1	16.7%	41.7%	41.7%	100.0%	81.8%	18.2%	0.0%	100.0%	47.8%	30.4%	21.7%	100.0%	27.3%	72.7%	0.0%	100.0%
	4.2	30.8%	7.7%	61.5%	100.0%	76.9%	0.0%	23.1%	100.0%	53.8%	3.8%	42.3%	100.0%	60.6%	39.4%	0.0%	100.0%
	4.3	84.6%	0.0%	15.4%	100.0%	100.0%	0.0%	0.0%	100.0%	92.6%	0.0%	7.4%	100.0%	100.0%	0.0%	0.0%	100.0%
	4.4	69.2%	23.1%	7.7%	100.0%	85.7%	0.0%	14.3%	100.0%	77.8%	11.1%	11.1%	100.0%	54.3%	45.7%	0.0%	100.0%
		51.0%	17.6%	31.4%	100.0%	86.5%	3.8%	9.6%	100.0%	68.9%	10.7%	20.4%	100.0%	61.3%	38.7%	0.0%	100.0%
ECM DP	5.1	78.6%	7.1%	14.3%	100.0%	92.9%	0.0%	7.1%	100.0%	85.7%	3.6%	10.7%	100.0%	100.0%	0.0%	0.0%	100.0%
	5.2	50.0%	7.1%	42.9%	100.0%	92.9%	0.0%	7.1%	100.0%	71.4%	3.6%	25.0%	100.0%	100.0%	0.0%	0.0%	100.0%
		64.3%	7.1%	28.6%	100.0%	92.9%	0.0%	7.1%	100.0%	78.6%	3.6%	17.9%	100.0%	100.0%	0.0%	0.0%	100.0%
ECM CL	6.1	27.3%	0.0%	72.7%	100.0%	84.6%	0.0%	15.4%	100.0%	58.3%	0.0%	41.7%	100.0%	100.0%	0.0%	0.0%	100.0%
	6.2	58.3%	16.7%	25.0%	100.0%	83.3%	8.3%	8.3%	100.0%	70.8%	12.5%	16.7%	100.0%	91.4%	2.9%	5.7%	100.0%
		43.5%	8.7%	47.8%	100.0%	84.0%	4.0%	12.0%	100.0%	64.6%	6.3%	29.2%	100.0%	95.8%	1.4%	2.8%	100.0%