THE ACQUISITION OF POSTVERBAL SUBJECTS IN SPANISH AND ITS INFORMATION STRUCTURE BY ENGLISH-SPEAKING STUDENTS

TESIS DE DOCTORADO EN ESTUDIOS FILOLÓGICOS

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DEDICATION

To my husband, I couldn't have done it without you, I love you.

A mi marido, no lo habría logrado sin ti, te quiero.

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When I think about the beginning of this research, the first thought that comes to my mind is my "Trabajo Fin de Máster" (TFM), which is the final project before completing a Master's degree. In my case, the degree was on *teaching Spanish as a foreign language and other modern languages*, since my main interest lies on the field of language teaching and learning. The final project of my Master's degree is closely related to this doctoral thesis.

The title of my "TFM" is *Estudio longitudinal sobre la adquisición de los patrones V-X-S / X-V-S en español y su estructura informativa en hablantes anglófonos.* The development of this project was my first academic experience working on the theory of Information Structure within the field of language acquisition.

After that, my PhD "adventure" began. These years have been essential for my professional development and personal growth. During this time, I had the opportunity to study, learn and work really hard in order to achieve my goal. Apart from working on this research, I woke up everyday and went to university to do my job as a teacher. I love my job and I have learnt a lot from this experience, but it has not been easy. For this reason, I have to say thank you.

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INTRODUCTION

INTRODUCTION

The aim of this dissertation is to research the interaction between word order and information structure in Spanish. In particular, this study has been developed based on preceding theories that deal with information structure in pro-drop languages and how it affects the acquisition of postverbal subjects in Spanish in order to accomplish a descriptive and experimental research on the interaction between the different levels of analysis.

This study concerns the acquisition of postverbal subjects by L1 and L2 English speakers of Spanish from an experimental and descriptive perspective, using the main theoretical concepts assumed in the literature on information structure and argument structure. However, the analysis carried out is not entirely theoretical; the theoretical framework is needed in order to present and develop the main studies on the topic, but this dissertation stands on the statistical and descriptive analysis of two linguistic experimental tests.

The general hypothesis is that the realization of postverbal subjects may be sensitive to specific focus types. In line with this, we support that: a) the acquisition of subject production and distribution in Spanish (null/explicit or postverbal subjects) might be related one another and share some of the main properties from a syntax and discourse viewpoint; b) from an evolutionary perspective, postverbal subject strategies can be considered as a *late acquisition* for narrow focus constructions; c) from a second language acquisition perspective, the existence of differences between L1 and L2 speakers of Spanish in relation to the acceptance of postverbal subject structures is relevant enough to carry out an experimental analysis that allows us to develop some didactic proposals for the classroom in the future.

Therefore, this research is intended to:

- study the realization of subjects (specifically in postverbal position) in broad and narrow constructions from an acquisitional and experimental perspective. For this reason, experimental tests have been carried out by children and adults.
- (ii) analyze the results obtained following the appropriate statistical methods according to the design of each test, and thus, according to the type of answer required. A chi-squared test was needed to carry out the open-(free) answer test type (children), whereas an ANOVA test was the proper statistical analysis to carry out the Likert scale answer test type (adults).
- (iii) conduct a comparative (statistical) analysis on the acceptability of postverbal subjects by making use of the results obtained from the L1 and L2 speakers of Spanish (adults) and determine where the differences found are significant.

The realization of this study has provided interesting and relevant data for the objectives pursued in this research. However, and more importantly, the data obtained amply justifies further study of the different discourse-syntax phenomena from different perspectives in the near future. The results leave some questions unanswered and open to debate and to be analyzed in detail, focusing not only on the experimental and statistics analysis, but also on the interface perspective to examine in depth some syntax and discourse issues. These issues have been proposed for discussion in literature from previous studies.

The present dissertation is organized in four chapters, which are divided as described below:

Chapter 1 introduces the theoretical background on which this experimental dissertation is based. In this chapter, the previous theories and

background research are presented, describing the preceding literature as the basis for our experimental purposes.

The focus of chapter 2 is to present and explain the linguistic experiment that has been developed from an organizational and structural point of view. Throughout the chapter, a very general introduction of this experiment is given as well as the participants' profile and the creative process and methodology followed. The statistical methods chosen to carry out the analysis of data are also explained in this chapter.

Chapter 3 looks at the statistical methodology that has been applied to analyze the results . In addition, the results of this analysis are discussed and the significant differences in data collected from each group are reported. Therefore, the statistical analysis of data which we have based this study on will be explained in detail.

Chapter 4 outlines the main conclusions of this study and describes some of the future studies that we intend to conduct in the near future, involving the syntax-discourse interface and its influence on the field of second language acquisition.

CHAPTER 1. THEORETICAL BACKGROUND

1.1.GENERAL NOTIONS OF INFORMATION STRUCTURE

One of the essential aspects that we need to deal with in this study is the importance of Information Structure and its relationship with both language and communication. In general, it has been assumed that information structure is a way of packaging information from a statement with the purpose of responding to the communicative needs of interlocutors in a communicative exchange, as in Chafe (1976), Vallduví & Vilkuna (1998), Villalba (2018), among others.

Many theoretical studies about Information Structure are based on the work of Chafe (1976) and, with that perspective in mind, other authors have discussed the basic notions of Information Structure within the field of communication. In this section some of these crucial concepts are mentioned from a theoretical point of view.

1.1.1. Theoretical approach

Before discussing the Information Structure approach in greater depth, we will refer to the term "*syntax*". In a language, the term syntax is related to the area of linguistics that deals with the connection and combination of words in groups of words, denominated "constituents", leading to the construction of a statement. The construction of a statement is established by the specific properties of the syntactic structure. Thus, everything pertinent to syntax is also related to terms such as "*structure*" (Frascarelli, Ramaglia, & Corpina, 2012)

As it is known, languages around the world are different from one another. However, in many cases they share similarities that allow us to understand and communicate with each other despite speaking different languages (this is, for instance, the case of Italian and Spanish). Even languages that seem totally unrelated, are not as different as they may appear at first sight. According to one of the several lines of thought on this, the reason why languages

present common features is that they share the same purpose: achieving effective communication through a communicative system. In contrast to this point of view, languages may share certain features since they develop in relation to the cognitive abilities of human beings, specifically the capacity of acquisition and *"linguistic competence"*. Thus, if we consider these abilities to be *"innate"*, it can be stated that a Universal Grammar is shared by humankind, using a series of instructions regarding how language is organized with the purpose of building a system. Following this theoretical framework, this study is based on the field of Generative Grammar, initiated by Noam Chomsky in the 50's and developed by numerous linguistic studies over the years. Within the field of Generative Grammar, the principles which rule the language functions are considered to be innate to the human mind, so the concept of language acquisition is closely related to this interpretation (Frascarelli, Ramaglia & Corpina, 2012).

Universal Grammar is composed by universal language principles and parameters. The general properties of language refer to the concept of principle, for example the Structure Dependence Principle, related to the fact that the elements of a sentence (words and constituents) do not depend on its linear order, but on the syntactic struture of the sentence itself. In relation to this, another example of principle is the one that establishes that every sentence must have a subject, although in some languages such as Spanish or Italian the subject does not have to be explicit. As for the concept of parameter, it refers to the fact that "languages can vary by "choosing" among a limited number of possible alternatives" (Frascarelli, Ramaglia & Corpina, 2012, p. 15, my own translation).

Regarding the previous example of the principle about the obligatory presence of a subject in a sentence, it should be stated that some languages allow the subject not to be explicit, but rather, implied. When this happens, even if the subject is not pronounced explicitly, it remains present within the syntactic

structure. A clear example of languages that contemplate this possibility is the following:

(1) Sto partendo

`*(*I*) *am leaving'* (Frascarelli, Ramaglia & Corpina, 2012, p. 16)

This issue is an essential part of the present study, since the Parameter of Null Subject (Chomsky 1982; Rizzi 1986) and how it relates to the acquisition of postverbal subjects is one of the issues included in this dissertation. According to this parameter, some languages allow the option of having a non explicit or implied subject in a sentence, such as Spanish, while others such as English do not allow this option. Thus, this aspect makes reference to the possibility of variation among languages that we mentioned above. This aspect is essential for the existence of the parameter we are discussing. In line with this, it is important to point out that Frascarelli (2007, 2014) and Jiménez-Fernández (2014) "have shown that in null subject languages such as Italian and Spanish (but also Portuguese and Polish) the distribution of NSs is crucially determined by discourse factors" (Camacho-Taboada, Jiménez-Fernández, & López-Rueda, 2014, p. 311). The present study takes this proposal with the objective of discussing the relationship between the Null Subject Parameter and the acquisition of postverbal subjects from an experimental point of view, since languages which allow the subject to appear in postverbal positon are in all probability null subject languages.

With respect to the levels of analysis and interfaces, Frascarelli, Ramaglia & Corpina (2012) describe human language as a complex and articulated system, separable at different levels of analysis: phonology, morphology, syntax,

semantics, pragmatics. These levels are not dependent on one another. However, they interact with each other at the same time and work within the system to reach a proper functioning. In order to explain the connection and relationship among the diverse levels of grammar, the concept of interface must be explained. This term refers to the fact that inside the system the different levels of analysis are connected to each other. Examples of this connection are the Syntax-Morphology interface or the Syntax-Semantics interface, and so on. Since language is a complex system, as previously mentioned, the elements of grammar should not be considered as independent parts, so it is necessary to introduce an interface analysis taking into account the complex interaction among such parts (Frascarelli, Ramaglia & Corpina, 2012).

As for the notion of interface specifically, it has been stated that despite being essentially independent from one another, the diverse levels of grammar interact and work together within the language system. With this perspective of integrated system, these levels do not interact freely and without restriction. According to the theory of Generative Grammar, their relationship follows an order in the process of building a sentence, especially, syntax has a fundamental role in the architecture of grammar. As we know, syntax deals with the formal properties of a language, using rules in order to build complex "*entities*" such as sentences by combining simple elements. Words are combined to build "*groups of words*", called constituents, which are combined in a more complex unit to build the sentences. Then, following the authors' words:

[...] syntax represents the generative level of grammar since it is built by an operative system that generates all infinite sentences of a language. In fact, following the Generative Grammar model, human language is formed by lexicon on the one hand, that is, a group of elements (such as words) containing phonologic and semantic properties, and, on the other hand, by a computational system which combines the lexical units according to the principles and parameters of Universal Grammar. (Frascarelli, Ramaglia & Corpina, 2012, pp. 20-21, my own translation)

Information Structure is a significant topic of research in the field of pragmatics, communication and linguistics. The basic theoretical analysis presented in this section follows the Chafe's theory (1976) which has been the basis for more recent studies developed by authors such as Krifka, among others. Following Chafe's approach, Krifka (2008) gives a general description of information structure within the model of Common Ground (CG) introduced by Chafe (1976).

If we understand communication as "transfer of information and its optimization relative to the temporary needs of interlocutors" (Krifka, 2008, p. 15), we may use a model of information exchange based on the notion of Common Ground. Before Chafe (1976), the original notion of CG referred to the information that is known by both participants to be shared and modified in communication. From this definition, the distinction between *presuppositions* and assertions or *preferred content* can be explained. Presuppositions are understood as requirements for the input CG, whereas assertions are the proposed change in the output CG. According to this idea, Krifka (2008) claims that "this distinction is relevant for information packaging, as the CG changes continuosly, and information has to be packaged in correspondence with the CG at the point at which they are uttered" (p.16).

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Apart from consisting of a group of propositions (or one proposition) that is supposed to be mutually known and accepted, CG can also consist of a set of items that might be previously introduced. These properties are likely to belong to the CG content, as they have to do with the truth-conditional information mutually shared, but we cannot ignore that information related to the interests and communicative goals of the interlocutors is also part of the CG. Questions, for instance, show informational needs from one of the participants waiting for the other one to respond and satisfy that need in the conversation. To clarify this idea, Krifka (2008) suggests the concept of CG management, since this idea concerns the development of the CG content. Both CG content and CG management are supposed to share information among interlocutors, but in the case of CG management we must understand that "the responsability for it may be asymmetrically distributed among participants" (Krifka, 2008, p. 17).

In essence, it is important to distinguish between these concepts when we connect them to information structure. To that effect, "we can associate those aspects of IS that have truth-conditional impact with CG content, and those which relate to the pragmatic use of expressions with CG management" (Krifka, 2008, p. 17).

1.1.2. Focus, Topic and Givenness

In relation to the basic notions of Information Structure metioned above, terms such as Focus¹, Topic and Givenness are the roots of this theoretical dimension. In this case, the theoretical framework that we are focusing on is the study of how communication works. As for the term *focus*, Krifka (2008) chooses the following definition given by Rooth (1985, 1992) in Alternative Semantics:

¹ In the subsequent sections the notions of information *focus*, corrective *focus* and broad *focus* will be described, since they play an important part in this experimental study.

"focus indicates the presence of alternatives that are relevant for the interpretation of linguistic expressions". (Krifka, 2008, p. 18) The focus in a sentence can be marked in different ways, but focus marking should be used "only to indicate that alternatives play a role in interpretation" (Krifka, 2008, p. 18). For example, the interpretation of focus marking in cleft sentences is different from the one marked by in-situ focus. Also, sometimes alternatives play a role that is not marked by focus (Krifka, 2008).

- (2) a. They live in BERlin.
 - b. They live in [BerLIN]^F! (Krifka, 2008, p. 20)

In (2) the alternatives differ in the accent, one of the speakers corrects the other by emphasizing the right accent. In this way, the example shows how speaker (b) corrects speaker (a) by marking the *"right"* accent, as we can see in [BerLIN].

The term givenness is a significant category of information structure. Krifka (2008) describes the concept of givenness as "the indication that the denotation of an expression is present in the immediate Common Ground content" (p.37). There are some ways of expressing givenness in human languages, but one of them is particularly important to us in this study since it has to do with word order. When an expression is realized in a non-canonical position, the given element is usually placed before the canonical position. Krifka (2008) illustrates this phenomenon with the following examples: (3) a.Bill showed the boy a girl.

b.*Bill showed a boy the girl.

c. Bill showed the girl to a boy. (Krifka, 2008, p. 38)

In this type of construction with double object, it is shown that new constituents come after given constituents. As for the interaction between focus and givenness, Krifka (2008) takes Schwarzschild's theory (1999) to explain that given constituents must not be in focus, and following the author's words: "(...) focus has to be applied only when necessary, that is, to prevent that a constituent is given"(Krifka, 2008, p. 39).

As previously mentioned, focus can be expressed by both indicating alternatives and rules of denoting given constituents. One example of this would be the deaccentuation in focus, that is, in VP focus the accent is usually on the argument and when the argument is given, the accent is normally realized on the head:

(4) A: I know that John stole a cookie. What did he do then?

B: He [reTURned [the cookie]given]F (Krifka, 2008, p. 40)

In the case of wide focus, the accent is normally realized on the argument. A possible explanation for this could be that the arguments need to express whether they refer to a given element. The arguments are referential², while the heads are not. Krifka (2008) concludes with this idea: "if the normal accentuation rules state that accent is realized on the argument, then givenness of arguments can be expressed by deaccenting the argument and accenting the head instead" (p.40).

The concept of topic³, has been generally used to refer to the object that a speaker identifies about the information that is given. This information, thus, is supposed to be "*about*" something and organized in a certain way, in terms of human communication (Krifka, 2008). The idea of topic in relation to communication and information structure theories has to do with the notion of Common Ground (from now on CG). Reinhart (1982) considers this notion of topic to be new information included in the CG content and at the same time, she believes that this information is associated with entities which, depending on the way they are structured, express different information. This is illustrated in the following example:

(5) a. [Aristotle Onassis]topic[married Jacqueline Kennedy]comment

b. [Jacqueline Kennedy]topic[married Aristotle Onassis]comment (Krifka, 2008, p. 41)

In this case, although the proposition is the same, the information in (a) is supposed to be about Aristotle Onassis whereas the structure in (b) indicates that the information presumably is about Jacqueline Kennedy. Based on these ideas,

² In a sentence, arguments are so-called *"referential"* when they refer to a given element in the previous context. The concept of referentiality corresponds to the information given previously.

³ The different types of Topic will be explained in the subsequent sections.

Krifka (2008) suggests the following definition: "The topic constituent identifies the entity or set of entities under which the information expressed in the comment constituent should be stored in the CG content" (p.41)."

There is not just one definition of topic in fact, many authors in the linguistics field have described this notion differently over the years. Chafe (1976) called it *"subject"*, Vallduví (1992) and Vallduví & Engdahl (1996) defined this term as *"link"*, thus, we can say that terminology for this concept, just as with *"focus"*, is not clear enough (Krifka, 2008).

1.1.3. Given information and new information

The distribution of information is a fundamental topic of discussion in the field of linguistics, specifically in relation to syntax and discourse grammar. The internal structure of the single constituents and the different ways they are organized within the sentence is one of the main interests when discussing the theory of Information Structure. According to Cecchetto (2002), the constituents are organized following a hierarchic structure and each constituent has a determined internal structure.

The informative content is organized following the principles of the theory of Information Structure and according to this, given information is distinguished from new information. Regarding the notion of "given" vs "new", it is still an open question which is up for discussion in the field of the interface on Information Structure at the moment (Corpina, 2009). Some of the basic concepts to take into account when discussing Information Structure, apart from the distinction between given/new, are the terms topic/comment and focus/background (Krifka, 2008; Zubizarreta, 1998) which will be discussed later on. In relation to the packaging of information and the distinction between "new" vs "given" information, following the theory of "The Given-New Principle" mentioned by Leonetti (2014), in a non-marked sentence "given information tends to precede new information" (p. 4, my own translation). ⁴ This refers to the "Information Flow Principle", proposed by Lambrecht (1994).

Taking the work of Prince (1981) on given *vs* new information and the three levels of *givenness*, a summary of this concept and three definitions that refer to this notion are presented by Corpina (2009):

Givenness in relation to *predictability*. In terms of the interaction between speaker and hearer, the speaker may assume that the hearer is able to predict that a linguistic element can be a part of a statement, located in a specific position as well. Regarding this topic, linguists such as Halliday (1967), for instance, support that elements taking part in a statement are considered old information when they are predicted from a previous context. On the contrary, if this information or element cannot be predicted or assumed from a previous linguistic context, the information is considered new and unpredictable.

Givenness in reference to *saliency*. The speaker assumes that the hearer may be aware of a particular notion or have some information at the time of interacting. According to this description, it is claimed that given (old) information represents what the speaker considers to be present in the awareness of the hearer in the time of interlocution, while new information would be what the speaker introduces or communicates to the hearer's awareness at that specific time of linguistic interaction. This definition is accepted by Chafe (1976).

Givenness in terms of *shared knowledge*. In this case, the speaker believes that the hearer knows or might infer a precise part of information. Following this definition, it can be said that given information is known

⁴ We refer to the non-marked order in the section about word order in Spanish.

and believed by the hearer (or at least, that is what the speaker thinks), while new information is not yet known by the hearer (according to the speaker's assumption).

According to Corpina (2009) and based on the work of Prince (1981), these definitions are not independent; on the contrary, they are related to each other since there is a connection between all three categories: if the speaker assumes the hearer may predict that a constituent is in a specific position inside the statement (predictability), the speaker might presuppose the hearer is aware of that particular notion (saliency). If the interpretation of these facts is right, the speaker must suppose that the hearer should be able to make assumptions and thus draw conclusions.

Regarding the different levels mentioned above, it should be noted that Chafe (1987) discussed this topic and suggested the existence of three categories depending on the activation state that a concept is in. These categories are labelled as *active, semi-active* and *inactive* concepts (Chafe, 1987):

Active concept refers to "a concept in a person's focus of consciousness" (Chafe, 1987, p. 25).

Semi-active concept corresponds to "a concept of which a person has a background awareness, but which is not being directly focused on" (Chafe, 1987, p. 25)

Inactive is defined as a concept that "is currently in a person's long term memory, neither focally nor peripherally active" (Chafe, 1987, p. 25) or, likewise, "what the speaker does not assume to be in the hearer's consciousness" (Geluykens, 1994, p. 28)

This triple distinction corresponds to the concepts of *given information*, *accessible information* and *new information* (Chafe, 1976, 1987), respectively. In

relation to this division of concepts, it is assumed that "these activation states are a direct reflection of cognitive activity" (Geluykens, 1994, p. 28) and try to develop this argument. What Geluykens (1994) remarks on here is the importance of interactional dimension in real conversation, since he claims that the cognitive activity is dependent on interaction, adding to Chafe's view, a matter to be taken into account. Geluykens (1994) elaborates on this dependence by suggesting two stages:

Firstly, regarding conversational discourse, the information structure and what it is considered given or new information is highly dependent on speakerhearer communication; this theoretical dimension cannot be ignored.

Secondly, another interactional dimension regards the fact that information transmission is a possible aim of communication, but not the only one. This activity could also lead to a more important goal, a request, for instance.

Following Geluykens (1994), the aim of communication is "to effect changes in the activation states of concepts in the consciousness of the hearer" (p.30).

It can be said that depending on what is or is not in the hearer's and speaker's awareness, the active-inactive categories of concepts (or given - new) will have a cognitive base and thus, a psychological effect. This information issue is generally considered as a cognitive evolutionary process that develops through time. The role of interaction is, according to Geluykens (1994) an important fact ignored by Chafe. As he states, "the cognitive activity expressed through discourse is always, in essence, also an interactional phenomenon" (Geluykens, 1994, p. 30). Therefore, the cognitive dimension together with the interactional dimension are dependent on and directly connected to one another. Information flow is a cognitive process as well as an interactional aspect, both closely related to each other.

Because of this, the fact that the information flow depends on speakerassumptions and on what is supposed to be in the hearer's awareness (Chafe, 1987) would make the actual data very difficult to analyze, according to Geluykens (1994). Due to the limitations this interpretation offers, this author proposes the necessity of a more practical and useful identification of the information flow.

In relation to the distinction between given information and new information, Geluykens (1994) takes Halliday's (1967) definition of new information, which is basically defined as non-predictable, following Halliday's words: "not in the sense that it cannot have been previously mentioned, (...) but in the sense that the speaker presents it as not being recoverable from the preceding discourse" (Halliday, 1967, p. 204). As reported by Geluykens (1994), "given information, then, is information which is presented as being recoverable from the preceding discourse" (p.30).

Regarding the notion of predictability used by Prince (1981) and presented at the beginning of this section, Geluykens (1994) considers it to be confusing, "since it suggests that, for an item to be given, it has to be predictable at a specific place in the utterance" (Geluykens, 1994, p. 31). He prefers to use the alternative term "recoverability" in order to replace the traditional notions of given-new information, since, from his point of view, such terms are "over-used and confusing". Following this idea, he proposes that information can be either "recoverable" or "irrecoverable" as in Geluykens (1992).

In line with this approach, according to Zubizarreta (1998), the notions of new information and old (or given) information are closely related to discourse and have a "very superficial relation to the grammar" (p. 159). A similar view about the distinction between new *vs* old information is given by Suñer (1982). In agreement with this interpretation, "*new information*" should be considered as the

information that is not shared by the speaker and the hearer at a specific time when interacting, whereas "given information" should be associated to the assumptions made about the shared knowledge between speaker and hearer and in general (what is present in the context). In other words, the distinction between given *vs* new distinguishes the information the speaker considers to be familiar to the hearer from the information that was not previously present in the hearer's consciousness. Thus, there is a difference between what is presented as presupposed from what is provided as new or an unfamiliar piece of information in the statement (Leonetti, 2014).

As previously seen, different insights into the notions of given and new information have been proposed by diverse authors. Together with the concepts of focus and topic, some basic notions of Information Structure have been introduced. This phenomenon of information packaging responds to the communicative needs of interlocutors, according to Chafe's definition (1976). It should be stated that the Information Structure deals with the way information is organized in a sentence depending on the communicative needs. The information must be properly included in the context so that the interlocutors have access to an appropriate interpretation and achieve effective communication.

1.2.ORGANIZATION OF CONSTITUENTS

1.2.1. Approaching Word-Order

The most significant elements in a sentence are subject, verb and object⁵. Every sentence has a nucleus that is related to the rest of the elements in different ways. Also, every sentence has two basic constituents: a noun phrase and a verb phrase. The Spanish language allows the organization of the elements in groups of words (sentences) and divides the sentence in separate parts. Therefore, it can be said that a basic order exists to organize the elements in a sentence, although it may be subject to change (Fernández Soriano, 1993)

The different combinations that can be made when distributing the elements S, V, O are possible in languages with a basic order, so the information can be organized according to what we mean or want to say by changing the distribution of the constituents. These combinations can be: SVO, SOV, VSO, VOS, OVS, OSV. Some languages can be associated with one of these types of basic order. However, other languages can include more than just one possibility. In general, this fact depends on the position of the nucleus, that is, if the nucleus is located at the beginning or at the end of the sentence within the verbal group. In Spanish, the head of the verbal group precedes the complement, so the head is initial and consequently, the word order is SVO (Fernández Soriano, 1993).

Taking into account the mentioned concept, there are languages that follow their corresponding combination in a precise way, while others are allowed to modify their basic order in some cases. That is why another division between fixed order languages and free order languages is possible. This

⁵ Throughout this study, the "O" label in SVO, OVS, VSO and VOS abbreviations refers to any type of object (not only Direct Object) including adjuncts such as PP (*Juan thinks about his girlfriend all day*, etc). In the case of patterns with unaccusative and unergative verbs, the "O" does not refer to "object", but indirect objects or adjuncts.

Theoretical background

depends on the appropriate organization of the sentence, in other words, if the different roles such as agent, patient, subject, etc. are clearly expressed by using the right markers such as declinations, prepositions, concordance, pronouns, etc. within the word group they belong to. This is what allows objects to be expressed correctly without the necessity of following the established system, that is, despite using a different order in the distribution of constituents, it is not difficult to comprehend each part of the sentence (Fernández Soriano, 1993).

In relation to the distribution of constituents, it is important to point out that, in general, languages have a basic order (also called unmarked) and several marked orders. The unmarked order in Spanish is SVO; it corresponds to the most frequent distribution of elements, this is, the most neutral ordering since "it is compatible with the highest number of possible contexts of use" (Leonetti, 2014, p. 3, my own translation).

In line with this, it should be stated that Spanish is a basic-order language that allows the possible reorganization of elements depending on the communicative needs. At the same time, it is also considered a language with a less limited word order than others, such as English. According to Leonetti (2014), "Spanish is not (...) a free order language, but it is relatively flexible compared to others, even within the limited field of Romanic languages" (p. 3, my own translation). Although word order is closely related to pragmatics, some aspects of word order are dependent on grammar exclusively⁶, and apparently they cannot be explained in pragmatic terms. (Leonetti, 2014).

⁶ According to Leonetti (2014), discourse consequences are effective when the way of organizing information depends on the speaker's choice, showing a contrast with other alternative options determined by the system, however, they are not effective when a specific construction is established by internal principles of the system. For example, in the case of partial interrogatives in Spanish, subject inversion is required by grammar principles.

The structure of elements in a sentence is not an easy issue in the case of a language such as Spanish, since it allows the shift of its components as appropriate. These possible changes in the distribution of elements may influence their grammatical, syntactic or morphological role, among others.

It is known that the way in which words and sentences are organized is not the same in every language, but this syntactic structure is conducted by following some determined sentence patterns and not arbitrarily. According to this,

The fact that some languages use different syntactic structures to express a different packaging of information has long been known and numerous studies have been devoted to investigating the appropriate articulation of this packaging, the informational primitives involved, and the syntactic correlations of different information structures in different languages (Casielles-Suárez, 2004, p. 213)

In relation to this, it should be noted that packing of information is a basic aspect of communication in general. Since the way of packaging information is not common to every language and neither are the syntactic structures. It is important to take this into account when studying a second language. The study of some aspects such as grammar, lexicon or phonetics is essential to achieve of effective communication.

Therefore, the word order of a language, together with its information structure, should be considered as a grammatical aspect to be studied in a Spanish L2 classroom. This could help when dealing with linguistic transfer problems, for instance. As Fernández Soriano (1993) claims, "the word order in a sentence is certainly one of the fundamental typological parameters" (p.114, my own translation).

1.2.2. Information and Syntactic Structures in Spanish

As mentioned earlier, word order issues are closely related to the distribution of information. In fact, the position of certain elements is associated with aspects such as contrast, emphasis, focus, presupposition and others that do not correspond directly to a "grammatical" category. In addition, word order is generally considered as restricted, and those restrictions can be studied within the grammar field. Some properties of the syntactic structures are associated with the distribution of constituents. In relation to this, terms such as "focalization" and "topicalization" will be explained in this section (Fernández Soriano, 1993, Jiménez-Fernández, 2005). Since the notions of focus⁷ and topic are closely related to the way of packaging information, some issues related to the behavior of these elements in the sentence must be discussed.

According to the theory of CG, previously introduced, a distinction between CG content and CG management is made. In relation to this distinction, two different uses of focus can be distinguished: the use of focus that relate to the communicative needs of the interlocutors is associated to the CG management, while the use of focus that relate to the factual information corresponds to the CG content. An example of the use of focus in reference to the CG management (pragmatic use)⁸ is to emphasize the part of an answer that correlates to the *wh*part of a question. As pointed out by Krifka (2008), a question changes the CG in order to indicate the communicative goal of the speaker, considering the question as a set of propositions. Thus, the question and the possible alternatives of the answers belong to the CG management. Another pragmatic use of focus is to confirm information, for instance. In this case, a context must have been proposed so that this leads the speaker to a confirmative interpretation, excluding other

⁷ In the next section, the concepts of topic and focus are explained in detail.

⁸ More uses of pragmatic focus (CG management) such as corrections, parallels, delimitations, etc are mentioned by Krifka (2008), but not inlcuded in this section.

alternatives. The following examples from Krifka (2008) illustrate both uses of focus in reference to the CG management:

(6) *Who* stole the cookie?

[*Peter*]^{*F*} stole the cookie (p. 22)

(7) Mary stole the cookie.

Yes, [*Mary*]^F stole the cookie (2008, p. 24)

Regarding the uses of focus in relation to the CG content (semantic use)⁹, the most common examples are represented by semantic operators such as , *fortunately, only, also* and *even*, all of them related to the notion of alternatives. However, in most cases alternatives (previously associated to the CG management) are used for semantic purposes. As Krifka (2008) claims: "it might be suggestive to distinguish between pragmatic and semantic focus by stating that the latter type of focus associates with an operator, while the former does not" (p. 28)

The following examples illustrate the semantic use of focus, represented mostly by operators:

(8) Fortunately, Bill spilled [WHITE]_F wine on the carpet. (Krifka, 2008, p. 26)

(9) John only introduced Mary to Sue (Krifka, 2008, p. 27)

⁹ See more information about semantic focus (CG content) in Krifka (2008).

The notion of topic within the theory of CG indicates that the new information added to the CG content must be associated with entities, just like in file card system.

As we previously mentioned, in a non-marked situation the topic precedes the focus in a sentence. However, both elements can be influenced by other aspects that can modify the way they are organized by movement mechanisms. In particular, there are two processes consisting of the movement of an element to a preceding position depending on its informative role: *topicalization* and *focalization* (Fernández Soriano, 1993).

In the case of *topicalization*, the topic is the element placed in initial position. This situation is typical of "free order" languages, in which grammar does not restrict the possibilities of organizing the elements. When the element placed in initial position is the focus, the syntactic process is called *focalization*, and it gives the sentence the pertinent intensity (or stress) (Fernández Soriano, 1993). This is illustrated in the following examples:

- (10) Ese libro, el niño debe leerlo cuanto antes (topicalization)
 `*That book, the boy must read it as soon as possible'* (Fernández Soriano, 1993, p. 140)
- (11) UN ABRIGO necesitas tú (no esa gabardina) (focalization)
 `A COAT need you*' (not that raincoat) (Fernández Soriano, 1993, p. 140)

We can observe that in (11) the verb is placed before the subject, or, in other words, the subject is postponed, while in (10) the position of the verb remains the same¹⁰.

According to the unmarked order in Spanish (SVO), the subject should appear in preverbal position (at the beginning of the sentence), but this is not always so. It is possible to find other elements (different to the subject) in initial position, depending on the way of presenting information in the sentence, so order possibilities are diverse. Also, the intonation¹¹ factor may change the interpretation, and in reference to this, the focus could be the last element, more than one element, the whole sentence, etc. As illustrated in some examples from Fernandez Soriano (1993):

(12) Juan le ha dicho a María la verdad

*`*Juan has told María the truth'* (Fernández Soriano, 1993, p. 145)

There are different possible questions that this sentence can respond to:

- (13) ¿Qué le ha dicho Juan a María? (focus=DO)`*What did say Juan to María'
- (14) ¿Qué ha hecho Juan? (focus=predicate)`*What did do Juan?'

¹⁰ We discuss the postposition of the subject later on.

¹¹ Despite collecting data about intonation, prosody analysis has not been developed in this work.

(15) ¿Qué pasó? (focus = whole sentence)`What happened?'

In effect, it should be stated that there is a basic order in Spanish and it seems that there is a relationship between the position of the elements and the different possibilities when it comes to interpreting a sentence. In some cases, the order is modified changing the position of the subject to a postverbal position and it works as the focus of the sentence. According to Hatcher (1956), verbs of beginning, appearance and existence indicate that the subject must be in postverbal position, being the focus of the sentence. Some examples of this are the following:

(16) Comenzó la película

`*Began the movie' (Fernández Soriano, 1993, p. 146)

(17) Amaneció un día espléndido

`*Dawned a wonderful day' (Fernández Soriano, 1993, p. 146)

Apart from that, interpretation can also be influenced by the position of other complements originally associated with the final or "*external*" position. For instance, when adverbial complements (of place, time, etc) are placed before a direct or indirect object the interpretation of information may change, without forgetting the intonation aspect as well. In example (19) the level of contextual freedom is lower than in example (18) because the adverbial complement is preceding the direct object.

- (18) Juan compra el periódico en ese quiosco
 `Juan buys the newspaper in that store' (Fernández Soriano, 1993, p. 146)
- (19) Juan compra en ese quiosco el periódico *`*Juan buys in that store the newspaper'* (Fernández Soriano, 1993, p. 146)

According to Zubizarreta (1999), normally the element placed at the end of the sentence corresponds to the focus, so the focus in (18) would be the adverbial complement, while in (19) the focus would be the direct object.

As observed in this section, the different elements may affect the possible interpretations within the sentence as well as the organization of information.

1.3.THE CONCEPTS OF TOPIC AND FOCUS

This section aims to provide a grammatical analysis of the Focus and Topic constructions within the field of Information Structure and describe their main properties in connection with the interpretation of interfaces. Although Focus and Topic constructions are considered to be "*marked constructions*", it is essential for the understanding of the present study to take special notice of the role of interpretation from an interface perspective. These two notions have been discussed by numerous authors over the years, in fact, there are different viewpoints of these aspects, and specifically within the area of Information Structure in general, this depends on the approach chosen by each linguist.

The phenomenon of *topicalization* along with the phenomenon of *focalization* (section 1.2.2) both strictly related to the structure and the way of presenting information, have been debated following different perspectives. Together with the notions of new and given, previously discussed, these phenomena are a fundamental part of the organization of linguistic information and a basic issue for us to deal with.

As stated above, Chafe (1976) introduced the notion of "*packaging*" on which Krifka (2008) based his work on Information Structure. Krifka points out that "Chafe wisely restricted his notion of Information Structure to the temporary state of the addresse's mind, thus excluding several other aspects of messages, like reference to long-term background knowledge, choice of language or level of politeness that otherwise could be understood as packaging as well" (Krifka, 2008, p. 14).

It is assumed that statements consist of two parts: new information, usually named as "*Comment*" and given information, that is, the given element assumed to be shared by both participants and known as the starting point of predication (Chafe, 1987; Puglielli & Frascarelli, 2008). This part of the sentence

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in which the given information is considered to be the starting point is called *"Topic"* (Corpina, 2009).

Take the following example from Italian (see Zubizarreta (1998) for Spanish):

(20) Cosa sta facendo tua sorella?

`*What is doing your sister?'

(Mia sorella) sta parlando al telefono.

'(*My sister*) *is talking on the phone*' (Corpina, 2009, p. 9)

In this case, the given information is *my sister* and thus, what we identify as Topic. The topic could be omitted in case of being available from the linguistic context or related to the shared information by speaker and hearer. The verbal group "*is talking on the phone*" is the new information, what we name Comment, and the information that cannot be omitted. Besides this, the verbal group can also be the given information and the nominal group, on the contrary, is the new information, as we can see in the following example from Corpina (2009):

(21) Cosa stai mangiando?

`What are you eating?'

(Sto mangiando) la pasta

`(*I am eating*) *pasta'* (Corpina, 2009, p. 7)

In such case, when the nominal group corresponds to the new information, this group is known as Focus, while the verbal group is named Presupposition (assumption), which can be omitted as in the case of Topic. Following this description, Corpina (2009) presents the following examples:

Topic – Comment

(22) Hai comprato il giornale?

`Have you bought the newspaper?'

Il giornale, l'ho comprato stamattina all'alba.

`*The newspaper, I have bought it this morning' (Corpina, 2009, p. 7)

Focus – Presupposition

(23) Chi è arrivato?

`Who has arrived?'

É arrivato MIRKO

*`*Has arrived MIRKO'* (Corpina, 2009, p. 7)

In line with this, Leonetti (2014) distinguishes the concepts of topic and comment, describing topic as the *"starting point"* (in agreement with Chafe (1987) among others) which is the link to introduce the rest of information in the sentence. Topics express given information that is connected to the previous speech and they are normally placed in initial position, although it is possible to

find them in final position (dislocated to the right). This distinction between topic and comment establishes a division of the sentence structure in two information sections. As for the distinction between focus and background (also called presupposition), it is commonly accepted that the focus is considered new and important information that needs to be remarked. The background or presupposition is the information that we find explicitly in the sentence and thus, assumed (Leonetti, 2014).

The different levels of analysis are interrelated and thus, when referring to discourse grammar we cannot forget that information structure is associated to syntactic structure and the different levels mentioned above: semantic, phonological, logical and pragmatic level, as proposed by Chomsky in the 60's (Corpina, 2009). Therefore, the relationship between the double articulation of the sentence in terms of discourse (Rizzi 1997) presented above (*Topic-Comment* and *Focus-Pressupposition*) is carefully connected to the diverse levels of linguistic analysis as in the following table from Puglielli e Frascarelli (2008) :

LEVELS OF ANALYSIS AND INFORMATION STRUCTURE				
PRAGMATICS	GIVEN		NEW	
DISCOURSE GRAMMAR	TOPIC	PRESUPPOSITION	FOCUS	COMMENT
SYNTACMATIC CATEGORY	NP	VP	NP	VP
SYNTACTIC FUNCTION	Related to SUBJECT/OBJECT	SUBJECT	PREDICATE	
SEMANTIC VALUE	Related to ARGUMENT		DISCOURSE	

Table 1 Levels of analysis and information structure. Adapted from P&F (2008)

As we can see in Table 1, this distribution of information in a sentence identifies two main parts: given information (Topic) and new information (Focus), as stated in Zubizarreta (1999).

Theoretical background

At the beginning of this chapter we introduced the concepts of *topic* and *focus* from a very general perspective, mainly following Krifka's view (2008). In this section, we have concentrated on the description of these concepts based on the insights of some experts such us Chafe (1976, 1987), Krifka (2008), Corpina (2009), Puglielli e Frascarelli (2008), Rizzi (1997), Zubizarreta (1999) and Leonetti (2014). Let us now focus on the types of topic and focus.

1.3.1. Types of Topic

1.3.1.1. <u>Aboutness-Shift Topic.</u>

As stated in Frascarelli (2007, p. 3) "the Aboutness-shift Topic has the discourse function of introducing a new topic (or proposing a topic-shift) in the discourse". An example of this is illustrated as follows:

(24) Has estado hablando de Juan durante horas... Me han dicho que él no sabe nada de los resultados del examen.

'You have been talking about John for hours... (as for him), I've been told that he doesn't know anything about the exam results.' (Camacho-Taboada, Jiménez-Fernández & López-Rueda, p. 314)

According to Bianchi and Frascarelli (2010), Aboutness-Shift Topics implement a *conversational move* and they belong to the dimension of CG management (Camacho-Taboada, Jiménez-Fernández & López-Rueda, 2014)

1.3.1.2. <u>Contrastive Topic.</u>

Contrast-marking in topics is used to "split a complex proposition into a conjunction of simpler ones in which a predicate applies separately to each member or a salient set" (Camacho-Taboada, Jiménez-Fernández & López-Rueda, 2014, p. 314). An example of this is illustrated in (25):

(25) A: ¿Cómo nos organizamos para preparar la fiesta?

'How shall we do to organize the party?'

B: Yo me encargo de la compra, tú puedes enviar las invitaciones.

'I will do the shopping, you can send the invitations' (Camacho-Taboada, Jiménez-Fernández & López-Rueda, 2014, p. 314)

1.3.1.3. <u>Familiar Topic.</u>

Following the description given by Frascarelli (2007): "The relevant familiar topic is used to refer to background information, for topic continuity (Givón 1983) or as an "afterthought" (p.7). This is illustrated in (26):

(26) A: ¿Tomamos gazpacho para cenar?

'Shall we have gazpacho for dinner?'

B: ¡No, por Dios! **El gazpacho**, lo tomo todas las noches!

'*No, please, I have gazpacho every evening*!' (Camacho-Taboada, Jiménez-Fernándes & López-Rueda, 2014, p. 314)

As for pronominal subjects, when they are Familiar G-Topics a null subject shows up, as we can see in this example by Camacho-Taboada, Jiménez-Fernández & López-Rueda, (2014, p. 315):

(27) No he visto a María desde mayo. *Ella/^{ok}pro debe estar muy ocupada.
'I haven't seen María since May. She must be very busy'.

1.3.2. Types of Foci

In relation to the notions of focus previously mentioned and according to the definition given by Rooth (1985, 1992), it should be stated that the concept of focus refers to the possibility of having different alternatives, since "focus indicates the presence of alternatives that are relevant for the interpretation of linguistic expressions". (Krifka, 2008, p. 18). An example of this is shown by Jiménez-Fernández (2015a, p. 51)

> [...] for a question such as "what does Mary want?" there is a number of propositions which vary in the content provided by the focused direct object (Mary wants COKE, Mary wants ICE-CREAM,...) [...] the whole set of propositions make up what is known as congruent answers to the question

In the Structured Meaning approach by Krifka (2006), instead "the proposition is divided in two parts, namely a Focus (e.g., "ice-cream" in the example above) and a background ((...) i.e., the property of being something that Mary wants)". (Jiménez-Fernández, 2015a, p. 51)

In line with this, it is assumed that there are different types of foci (and topics, as we have seen in section 1.3.1) which may behave differently depending on "the relative position of subject and verb both across languages and within a single-language", as stated in Jiménez-Fernández (2015a, p. 50).

Normally, the term focus is used to make reference to two different discourse functions (Kiss (1998), Zubizarreta (1998)). As Jiménez-Fernández claims,

(a) to introduce new information, which is known as Information Focus (IF), and (b) to introduce a contrast with respect to a previous assertion by denying one part and proposing another part (...), typically referred to as Contrastive Focus (CF) (2015a, pp. 50-51)

A clear distinction between these discourse categories has been supported by diverse experts in the field, such as Kiss (1998) and Zubizarreta (1998). These differences are based on morphological, syntactic, phonological and discourse factors. A distinction between different types of Focus is supported by crosslinguistic evidence (Molnár (2006), Bianchi & Bocci (2012), Cruschina (2012) Jiménez-Fernández (2015b)).

The syntactic position of focus, specifically IF and CF, may change depending on the language. To illustrate, the position of CF in Romance languages is typically in the left periphery, whereas IF commonly occurs in postverbal position, as shown by Zubizarreta (1998):

(28) A: ¿Qué compró Pedro?
`What did Peter buy'?
B: Pedro compró manzanas
B': #Manzanas compró Pedro (Jiménez-Fernández, 2015a, p. 51)

The different possibilities regarding the position of focus do not work in every case, but in general, it does for Standard Spanish and for some varieties of Spanish. In fact, the possibility of a left-periphery position for IF is available according to Jiménez-Fernández (2015a). Apart from the syntactic properties, the different types of foci are differently interpreted at the interfaces regarding discourse and prosodic properties (Frascarelli & Ramaglia, 2013).

With respect to the different "*sizes*" of constituents within a sentence, terms such as "*Broad Focus*" (BF) and "*Narrow Focus*" (NF) are used (Lambrecht, 1994). The main difference between these two aspects is that NF refers to focus on single words or constituents, while BF refers to complex constituents, VP for instance, being all parts newly introduced into the discourse at the moment of utterance (Krifka, 2008). In particular, BF is used to refer to all-focus sentences, where the whole content of a proposition is new.

Within NF, diverse subtypes can be distinguished, such as Information Focus, Contrastive¹²/Corrective Focus or Mirative Focus, among others (Krifka (2008), Cruschina (2012)). For the purposes of the present study we will concentrate on two of these subtypes (Information Focus and Contrastive/Corrective Focus) along with Broad Focus later on, referring to Mirative Focus from a merely descriptive point of view.

1.3.2.1. <u>Mirative Focus</u>

Based on Cruschina (2012), Mirative Focus is considered as not merely informative. "It provides new information and, based on the speaker's knowledge of what the hearer's expects, indicates that such information will be unexpected" (Jiménez-Fernández, 2015a, p. 52)

¹² Notice that no specific distinction is made between contrastive/corrective focus. Both terms are related to the rejection of an alternative

(29) ¡No puedo creerme eso de María! ELLA ha terminado sus estudios de doctorado!

'I can't believe that about Mary! She has finished her doctorate studies!' (Camacho-Taboada, Jiménez-Fernández & López-Rueda., 2014, p. 315)

Due to the unexpected information typically related to Mirative Focus, the set of alternatives is very large. Besides, this type of focus does not depend on a question-answer context. According to Bianchi (2012), within the shared knowledge of the participants a contrast must be established and it can be described as a "proposal to negotiate a shared evaluation" from a semantic point of view (Jiménez-Fernández, 2015a, p. 52)

1.3.2.2. Information Focus

IF refers to new information purely (Zubizarreta, 1998). Following the Structure Meaning approach by Krifka (2006), the Focus in the answer should refer to the interrogative phrase of the question (wh-phrase), which is known as "question-answer congruence" (Jiménez-Fernández, 2015b, p. 122). An example of this is illustrated in (30):

(30) A: ¿A quién viste en la playa?

'Who did you see at the beach?'

B: Vi a Marta

'I saw Marta' (Jiménez-Fernández, 2015b, p. 122)

The information requested in the question is provided by the object *a Marta,* standing as the Information Focus (IF). As stated by Zubizarreta (1998) Ortega-Santos (2006) and Gutiérrez Bravo (2008), new information is normally placed in final position in Spanish.

As illustrated in (31) with subjects pronouns, the answer corresponds to the new information:

(31) A: ¿Quién ha roto el vaso?

'Who has broken the glass?'

B: Ha sido ELLA.

'She has' (Camacho-Taboada, Jiménez-Fernández, López-Rueda, 2014, p. 316)

1.3.2.3. <u>Corrective/Contrastive Focus</u>

This type of focus refers to the denotation of a constituent which is asserted in clear opposition with a previously mentioned one (Zubizarreta, 1998) usually being related to the rejection of an alternative (Gussenhoven, Lee, Gordon, Biiring, 2007).

The rejection of an alternative can be spoken by the speaker himself ("not A, but B") or by the hearer, denoting a "Corrective" Focus and implying removal of information (Gussenhoven, Lee, Gordon, Biiring, 2007) (Jiménez-Fernández, 2015b)

Let us see the example illustrated in (32):

(32) A: I heard you met Fred yesterday.

B: No, I met Bill. (Jiménez-Fernández, 2015b, p. 123)

With respect to this matter, Jiménez-Fernández (2015b) states that: "correction implies a Focus-Background partition and the set of alternatives is very restricted (limited by the semantic properties of the rejected item) However, this type of Contrast may not be associated with a corrective import" (p. 123)

This is shown in (33) from Frascarelli & Jiménez-Fernández (2013) and (34) from Kratzer (2004):

- (33) My doctor is always so late that a newspaper is not enough: you can read a novel from Tolstoj while you wait!
- (34) A: Guess what? Fred passed

B: If Fred passed, bar exams have become too easy

Due to the Focus-Background partition that the contrast implies, the set of alternatives is restricted. In the following example by Camacho-Taboada, Jiménez-Fernández & López-Rueda (2014, p. 316) it is illustrated that subjects pronouns modified by focus-inducing adverbs such as *sólo "only"*, are used as CF:

(35) A: María y José han pasado unas vacaciones fantásticas en el Caribe.

'María and Jose have had a fantastic vacation in the Caribbean'

B: No, no. SÓLO ELLA ha estado en el Caribe (José se quedó en España).

'No way. Only she has gone to the Caribbean (José stayed in Spain)'.

In (35), CF refers to information shared in the context, but new information can also be involved, as we can see in (36):

(36) A: He organizado todo para la fiesta de cumpleaños de Jimena.

'I have arranged everything for Jimena's birthday party".

B: No, no. Yo he organizado todo, no tú.

'No way. I have organized everything, not you'. (Camacho-Taboada, Jiménez-Fernández & López-Rueda, 2014, p. 316)

1.3.2.4. Broad Focus

This type of focus, together with IF and CF, is essential for the experimental approach of this dissertation. As stated earlier, BF is related to the notion of all-focus sentences. The main aspect of BF is that it is involved in out-of-the-blue sentences since all the information provided is new. Besides, thetic constructions are identified with BF constructions (for more information, see Ojea

2017). As illustrated in example (37) by Zubizarreta, the question does not refer to any specific matter, so the information provided in the answer is totally new:

(37) A: What happened?

B: John ate the pie (1998, p. 3)

We find another example of this illustrated in (38):

(38) A: ¿Qué pasó?

"What happened?"

B: El gato se comió un ratón

"The cat ate a mouse" (Zubizarreta, 1999, p. 4225)

1.4.SUBJECTS AND THEIR INFORMATION STRUCTURE

1.4.1. Subject Inversion

Spanish is a SVO language that allows the alternation VSO and VOS in its organization of constituents, that is, subjects are allowed to appear postverbally before or after objects. From a pragmatic perspective, the VSO and VOS orders are different with regard to their interaction with focus (Ordóñez, 2000). Both orders are attested in questions and declaratives sentences, as illustrated in the following examples from Ordóñez (2000):

- (39) ¿A quién le prestó Juan el diccionario? (p. 26) VSO'Who did Juan lend the dictionary to?'
- (40) Espero que te devuelva Juan el libro (p. 26) VSO'I hope Juan returns the book to you'
- (41) ¿A quién le prestó el diccionario Juan? (p. 26) VOS'Who did Juan lend the dictionary to?'
- (42) Espero que te devuelva el libro Juan (p. 26) VOS'I hope that Juan returns the book to you'

The possible changes in the word order structure do not interfere in the single role of any part of the sentence. However, the distribution of information as well as the position of some emphatic or contrastive elements are factors we need to take into account since they influence the word order variation (Fernández Soriano, 1993)

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In this case, the main focus will be the position of the subject in the sentence. In Spanish, it can be observed that the subject takes different positions in the same sentence depending on the information we aim to give, in which case every structure is possible and each one of them responds to different interpretations. In line with the previous examples from Ordóñez (2000), we can see that, apart from the basic order SVO, there are other possibilities, as illustrated by examples (43-45) from Fernández-Soriano (1993):

(43) Juan ha comprado el periódico (p. 121) SVO

Juan has bought the newspaper

(44) Ha comprado Juan el periódico (p. 121) VSO

*Has bought Juan the newspaper

(45) Ha comprado el periódico Juan (p. 121) VOS

*Has bought the newspaper Juan

Some of the factors that influence the position of the subject are related to the sentence distribution, that is, whether it is an interrogative or an exclamation sentence, for instance, and in some cases related to subject properties or the type of verb. In these cases, the subject must be placed in postverbal position for syntactic reasons, as illustrated in the following examples from Fernández Soriano (1993): Interrogative and exclamative sentences:

- (46) ¿A quién ha visto Juan? (p. 122)
 *¿A quién Juan ha visto? *'Who has Juan seen?'*
- (47) No sé a quién ha visto Juan (p. 122)
 *No sé a quién Juan ha visto
 'I don't know who Juan has seen'
- (48) ¡Qué bonito coche tiene Juan! (p. 122)
 *¡Qué bonito coche Juan tiene! *'What a nice car Juan has got! '*
- (49) Llegaron niños (p. 124)*Niños llegaron'Children arrived'

In cases such as example (49), more elements can be included in the noun phrase in order to make the sentence acceptable. This facilitates the use of the preverbal subject. In coordination, as in (51), we find the same property:

(50) Hombres <u>de todo el mundo</u> se han concentrado en Nueva York en señal de protesta (p. 125)
'Men from all over the world have come together in New York in protest ' (51) <u>Hombres, mujeres y niños</u> se han concentrado en señal de protesta (p. 125) 'Men, women and children have come together in protest'

As observed in Fernández Soriano (1993), when the subject is not accompanied by other complements within the noun phrase, it must be placed in postverbal position necessarily, as shown in example (49). In addition, there are specific types of intransitive verbs that allow this kind of construction in Spanish, such as *arrive* (llegar) or *grow up* (crecer), as in examples (52) and (53). For the rest of verbs, another element must appear in initial position in the noun phrase, as observed in example (54).

- (52) Han llegado niños (Fernández Soriano, 1993, p. 125)*'*Have arrived children'*
- (53) Han crecido flores (Fernández Soriano, 1993, p. 125)*'*Have grown flowers'*
- (54) Aquí han comido niños (Fernández Soriano, 1993, p. 126)*'*Here have eaten children'*

In line with this, it is important to mention that there is a contrast between transitive and intransitive verbs. Throughout the experimental part of this study, we concentrate on transitive and intransitive verbs for the development of the linguistic experiment (structure of the experimental tests), and within intransitive verbs we have specifically distinguished between unaccusative and

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unergative verbs. In reference to intransitive verbs, some of them have particular characteristics that distinguish them from other types of verbs and because of this, they have been studied in different languages such as French or Italian (see Burzio (1986) for Italian). With regard to Spanish, Fernández Soriano states that the "basic" position of the subject is postverbal in certain structures. As a matter of fact, in languages such as English or French, which do not allow postverbal subjects in unmarked situations, with unaccusative verbs they are accepted:

Il est venue un homme (*Il a parlé un homme)

There came a man (*There spoke a man)

[...] in fact, that is the "natural" organization, based on interpretative properties, but the important thing is that sometimes this is the only option [...] with some of those verbs, such as happen (suceder), take place (ocurrir), miss (faltar)..." (Fernández Soriano, 1993, p. 129, my own translation).

(55) Falta café/el café/Juan

*Café/el café/Juan falta *'Coffee/Juan is missing'* (Fernández Soriano, 1993, p. 129)

(56) Sucedió un incidente

*Un incidente sucedió *'An incident happened*' (Fernández Soriano, 1993, p. 129)

1.4.2. Pro-drop languages and the Null Subject Parameter

1.4.2.1. <u>Tradition and literature</u>

As mentioned earlier, some languages allow the realization of null arguments in certain situations, while others do not. This is the case of languages such as Italian or Spanish, where "the occurrence of null subjects correlates with a set of other syntactic properties, thus suggesting that the same abstract property is responsible for apparently unrelated syntactic phenomena" (Barbosa, 2011, p. 551). However, this possibility is not feasible in languages such as English. An example of this is illustrated in (57):

(57) a. Chegaram [Portuguese] *'They have arrived'*'b. *Arrived (Barbosa, 2011, p. 551)'

This phenomenon is known as *pro*-drop and it has been a focus of study over the years. In Frascarelli & Jiménez-Fernández's words (2019), "in its original formulation (Perlmutter 1971), the pro-drop parameter was aimed at capturing the empirical observation that in some languages a definite, referential, pronominal subject must be expressed in all finite clauses" (p. 1)

Later on, in the 80s, this idea was elaborated and extended in the theory of Government and Binding (Chomsky, 1981) and the Extended Projection Principle (Chomsky, 1982). Since then, many authors have studied the properties of the *pro*-drop parameter and several analyses from different points of view have been proposed regarding this matter. Some of the authors who have worked on this issue in recent years are Frascarelli (2007, 2017), Jaeggli (1982), Jaeggli & Safir (1989), Rizzi (1982, 1986), among others. According to Chomsky's approach to *pro*-drop, "a phonetically null pronominal argument (pro) is an inherently unspecified nominal projection whose features are supplied contextually" (Barbosa, 2011, p. 551). Conforming to the Principles and Parameters approach to the theory of grammar, a null argument is considered a pronominal category (*pro*), hence languages that permit the realization of NSs are known as *pro-drop* languages or *null subjects languages* (NSLs). In this type of languages, we can find examples where the subject is apparently missing, however, from a syntactic perspective the subject is present in the sentence since "it can bind an anaphor in the object position just like any overt subject" (Barbosa, 2011, p. 551).

(58) Feriam-se a si mesmos [Portuguese] `*They hurt themselves'*

Besides, within the category of NSLs there can be found two types of null subject constructions determined by the subject position, this is, constructions in which the subject is referential (57) and those in which it is not (59). As illustrated in the following example from Barbosa (2011), this difference can be observed:

(59) a. Chove (2011, p. 552) [Portuguese] *'b. It rains'*

Also, when the subject is not referential, non-NSL such as English have an expletive subject, as it can be seen in (59).

1.4.2.2. <u>Agreement in Null Subject languages</u>

It is clear that *pro*-drop is not a simple issue and thus, there are a series of factors that influence this phenomenon. With regard to the main aspects of NSL and this research approach, it is important to highlight one of these factors: "Languages with rich subject agreement morphology (...), such as Italian, Spanish, Portuguese, Hungarian, Greek among many others. In this type of language, subjects are freely dropped under the appropriate discourse conditions" (Barbosa, 2011, p. 552).

Regarding the discovery of this phenomenon, it was proposed that the possibility of subject drop in this kind of languages is correlated with some other syntactic properties, consequently, a theory of parameter regarding language acquisition and language variation emerged. Within the theory of Government and Binding (GB) (Chomsky, 1981), the Extended Projection Principle (EPP) (Chomsky, 1982) "stated that all clauses must have a structural subject" (Barbosa, 2011, p. 553). Based on the observation that rich subject agreement languages presumably have the possibility of dropping an argument, a distinction between NSLs and non-NSLs was proposed by authors such us Chomsky (1981), Jaeggli (1982) and Rizzi (1982).

In line with this, some relevant properties of the rich agreement NSLs are discussed in Barbosa (2011). The first property, crucially related to this research, is the SV/VS order alternation or "free-inversion". An example of this for Portuguese is illustrated in Barbosa (2011, p. 556):

(60) a. O Joao telefonou*the Joao called'John called'

b. Telefonou o Joao*called the Joao'John called'

As mentioned previously, languages such as Spanish or Italian belong to the category of rich agreement NSLs and in these cases, just like in Portuguese, order alternation is also allowed. Another property shown in Barbosa (2011) is the lack of *that*-trace effects: subject extraction is from post-verbal position. An illustration of this is shown in the following contrast between English and Spanish:

(61) *Who did you say that bought a computer?
¿Quién dices <u>que</u> compró un ordenador? [Spanish]
Who say-2SG that bought a computer
`Who do you say bought a computer?' (Barbosa, 2011, p. 556)

This lack of *that*-trace property is generalized in all Romance NSLs. As reported in Barbosa (2011):

Rizzi (1982) and Jaeggli (1984) pursue an account on this contrast based on the claim that the subject is extracted not from the pre-verbal position but rather from post-verbal position. Burzio (1986, p. 165), however, notes that a stronger statement is needed: it is not simply the case that subjects in Italian can be extracted from post-verbal position; in fact, they must be (p. 556) Regarding order alternation (SV/VS) in Romance NSLs (and specifically Spanish), an aspect which is related to this property and a matter of interest among many authors such as Contreras (1991), Ordoñez (1998), Valduvì (1992) (for Catalan) or Zubizarreta (1998), is that "preverbal subjects tend to be topics, whereas post-verbal subjects tend to be foci¹³" (Barbosa, 2011, p. 557). In line with this, another feature that needs to be mentioned is the association between object Clitic Doubling and post-verbal subject constructions in Spanish. According to Ordóñez and Treviño (1999), "both cases pattern similarly in relation to the determination of binding in certain cases of mismatches in person between the doubling DP and the object clitic or between the post-verbal subject and Agr" (Barbosa, 2011, p. 557). In this connection, the actual issue about the thematic subject position in NS sentences is its association with pronominal clitics in general. According to Villa-García (2012), apart from purely syntactic factors, other aspects regarding the discourse-pragmatic interface or the lexicon-syntax interface affect the existence and distribution of subjects.

In any case, Barbosa (2011) states that some of these NSLs features, among others, have not been accurately analyzed and understood in the literature over the years. As mentioned before, the *pro*-drop or NS parameter is not a simple matter. Diverse and various theories about rich agreement NSLs have been proposed over the years, becoming a matter of interest in the linguistic field and an issue to deal with in this research, as it seems to be connected to post-verbal subject structures along with some general aspects of Information Structure. In line with this, Frascarelli (2007) and Frascarelli & Jiménez-Fernández (2019) deal

¹³ But see Leonetti & Escandell (2017) for the possibility that a postverbal subject is not focus.

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with an IS strategy and discuss about the interpretation of a referential NS. According to them, there is a relationship of agreement between pro and a specific type of Topic, the Aboutness-shift Topic (A-Topic) (see Jiménez-Fernández 2016 for a similar analysis in Spanish). As stated in Frascarelli & Jiménez-Fernández (2019):

The A-Topic combines the [aboutness] feature with the [shift] feature, which is the property of A-Topics to move to conversation from one topic to another, updating the discourse context (Bianchi & Frascarelli, 2010). This means that A-Topics are present in every predicative sentence to establish "what the sentence is about" and shift the topic across sentences when overtly realized (2019, p. 3).

1.4.3. Null Subject Parameter in L2 Spanish acquisition

1.4.3.1. Linguistic approach

Within the field of linguistic research, and particularly in the relevant literature on syntax and acquisition, the Null-Subject Parameter has been a focus of discussion over the years since it was first discussed by Chomsky (1981), Jaeggli (1982), and Rizzi (1982, 1986), as mentioned above. In addition, this topic has generated a hot debate concerning NSP acquisition in adult L2 studies, resulting in controversy and lack of understanding, especially in relation to Universal Grammar (UG) role in L2 acquisition (Rothman & Iverson, 2007).

The concept of Universal Grammar (UG) assumes that children are born with the ability of learning the given language they are exposed to, being able to acquire "a complete native grammar that reflects more knowledge that can be derived directly from the input they receive". (Rothman & Iverson, 2007, p. 329). In fact, humans are supposedly born with a specific mental sub-system intended to the development of the language skill, so when we are born, we do not need to learn all aspects of the native language. In line with this, some authors such as Bley-Vroman (1990), Hawkins and Chan (1997), Tsimpli and Roussou (1991), argue that a potentially influential factor regarding L1 and adult L2 acquisition may be the differences in UG-accessibility (Rothman & Iverson, 2007). Some of these variations can be related to specific learning problems. According to White (1985), some examples of differences in UG-accessibility are issues such as mapping problems, transfer of the L1 or problems in interface-conditioned properties (e.g. at the syntax/phonology, syntax/semantics and syntax/pragmatic interfaces), being the latter one of the main aspects of discussion in this study.

As stated in Rothman (2009), following Sorace (2005) and Valenzuela (2006):

[...] interfaces are precisely the source of L2 non-convergence. Sorace and others contend that interfaces (e.g. the syntaxpragmatics, syntax-semantics interfaces) are especially vulnerable for adults and therefore subject to greater difficulty and delays, if not the principle loci for inevitable fossilization in adult grammars (p. 952)

In fact, according to Sorace (2005), in the field of adult L2 acquisition some frequent problems are the ones related to the interpretation of features, since this is relevant to the syntax-discourse interface.

Regarding the pragmatics-discourse interface, studies have demonstrated that it is not unusual to find adult monolingual variability and developmental L1 delays with properties, as well as cross-linguistic interference and optionality of properties for bilinguals at this interface. Because of this, it has been pointed out that syntax might come before discourse, in other words, this leads to the possibility that narrow syntax properties are acquired before syntax-pragmatics ones, or pragmatics interface (Rothman, 2009). In line with this proposal and following Rothman's words:

While we know that this interface is a source of delay for children [...], child learners inevitably acquire an adult grammar, [...]. If such delays in children are, at least in part, related to the cognitive development (Pérez-Leroux, 1998), adults should have fewer problems in this regard since they come to the learning task with fully developed cognitive abilities (Rothman, 2009, p. 953)

As for the acquisition of grammar in the case of L2 learners, there are no guarantees of achieving it. Some L2 features are no longer acquirable after the so-called critical period, so it should be concluded that there are properties which an adult finds impossible (or at least more difficult) to acquire. Regarding this idea, the possibility of a delay in the acquisition of syntax-pragmatics interface properties is also considered. The level of difficulty for adults L2 learners is not the same in all interfaces. As Rothman (2009) points out, following Sorace (2004, 2005), the reason for the slower acquisition of properties at interfaces is likely to be the difficulty in integrating syntactic knowledge with other cognitive systems.

Taking all these possibilities into account, subsequently Rothman (2009) carries out an experiment (one of the many carried out by this author) that is aimed at testing the knowledge of overt subject vs. null subject distribution in L2 Spanish by English native-speakers. The objective is to prove that L2 learners

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acquire the syntax of null subjects more easily than the discourse distribution of null and overt subjects, in line with the *"syntax before discourse"* proposal previously introduced. A possible consequence of this could be that, while native speakers perceive a difference between the use of subject and its omission (Luján, 1999) being *"optional"* in some discourse contexts (Silva-Corvalán, 2001), L2 learners would not find this difference so simple to perceive.

In consonance with Safir (1985) and Jaeggli and Hyams (1988), among others, Rothman and Iverson (2007) agree with the idea that Null Subject Parameter consists of the following properties: "a) the licensing of pro, b) instantiation of the OPC (Overt Pronoun Constraint), and perhaps c) obligatorily null expletive subjects" (Rothman & Iverson, 2007, p. 330). These properties are closely related to the syntax-discourse and syntax-pragmatics interfaces, as we have seen before. Thus, the way in which interfaces influence the adult L2 acquisition is fundamental for the purposes of this work.

The present section aims to provide a general background of the NSP from a L1/L2 acquisitional perspective, in order to establish a certain number of circumstances that may be related with the acquisition of postverbal subjects in Spanish, a topic to be discussed in the next section.

1.4.3.2. L2 postverbal subject acquisition in Spanish

Based on the idea that the distribution of NSs is related to discourse factors, some references to the acquisition of the discourse properties of null subjects (and its potential relation to the acquisition of subject inversion in Spanish) must be mentioned. First of all, it should be emphasized that when we talk about Spanish language we refer to Standard Spanish. However, it is important to mention that the American varieties are not taken into account. In relation to this, as discussed in RAE (2009) – ASALE (2011), it is complicated to

identify what Standard Spanish is, but it can be understood as "the variety spoken by educated people in all dialects" (Jiménez-Fernández, 2015b, p. 125).

As is known, the use of subject pronouns in Spanish and English languages is certainly different. In the case of English-speaking students of Spanish (L2), they tend to overuse subject pronouns (Saunders, 1999) probably because of its compulsory use in English, being this one of the most usual errors they make. Contrary to English language, Spanish is a null subject language that allows the absence of the subject as long as this information may be recovered from the context (Camacho-Taboada, Jiménez-Fernández, López-Rueda 2014). This absence could be related to syntactic and discourse factors, as supported in this study.

According to the Plan Curricular del Instituto Cervantes (2006), when teaching Spanish as a Second Language "explicit pronominal subjects are said to be used to avoid ambiguity, to emphasize, or to specify, whenever the subject is different" (Camacho-Taboada, Jiménez-Fernández, López-Rueda, 2014, p. 311). Thus, the distribution of pronominal subjects together with the acquisition of null subjects and postverbal subjects is a focus of attention in the context of teaching Spanish as a Second Language, specially by English-speaking students, given the syntactic and discourse differences in both languages and therefore, the problems of interlanguage when acquiring these aspects in Spanish.

As previously stated, English language is considered as a "*fixed*" word order language, as opposed to Romance languages such as Italian and Spanish. Contrary to what happens in Spanish, in English the occurrence of VS order is highly restricted and hardly found. In consonance with Lozano and Mendikoetxea (2008), we agree that "the properties of VS order have to be analysed at different levels: a) the lexicon-syntax interface (...), b) the syntaxdiscourse interface (...), c) the syntax-phonology interface" (p. 87). In this study,

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the properties of V and their connection to the grammatical aspects of the structure are discussed (a); in addition, the discourse conditions (topic/focus) of the phrase elements and their association with the syntactic properties are described (b); an analysis of the syntax-phonology interface is not included in this research (c), however, this aspect should be taken into account for future studies.

Following Lozano and Mendikoetxea's (2008) words:

[...] the grammaticality of postverbal subjects in languages like Spanish/Italian vs English has often been attributed to the Null Subject Parameter [...] Free inversion is among the cluster of properties that distinguish languages that allow null Ss, like Spanish and Italian, from languages which do not allow null Ss, like English (p. 88)

As previously mentioned, the purpose of this linguistic experiment is to verify whether the association between syntax and discourse interfaces is part of the abilities of an English learner of Spanish L2 from an experimental and statistical perspective. In the subsequent chapters, the methodology followed and the discussion of results will be presented.

CHAPTER 2. THE LINGUISTIC EXPERIMENT

2.1.THE STUDY: A GENERAL INTRODUCTION OF THE EXPERIMENTAL TESTS.

The main focus of this study is the interaction between word order and information structure. As is known, the unmarked order in English, Italian and Spanish is SVO¹⁴. However, in Spanish and Italian this order can be modified depending on discourse requirements (Fernández Soriano, 1993). In particular, the subject can be realised in postverbal position (e.g., *Lo ha dicho Juan* 'Juan told that', *È arrivato papà* 'Dad has arrived').

Our long-term goal is to check whether the association between context(s) and word order variation is part of the abilities of an English learner of Spanish L2, and to check possible difficulties in order to have a better understanding of language acquisition and improve methods in the field of second language learning and teaching.

The hypothesis is that the realization of postverbal subjects might be sensitive to specific focus types. We have conducted two experimental tests. Each test took into consideration the influence of two factors in the realization of postverbal subjects: focus type (information, corrective and broad focus) (Jiménez-Fernández, 2015a, 2015b) and verb type (transitive [+animate or – animate object], unaccusative [progressive or result change; motion] and unergative [mono-argumental or bi-argumental] verbs). These tests are intended for adults and children.

The experimental tests are two: an open-(free) answer test intended for children, namely *"The Smurfs Test"* and an online test intended for adults, namely *"The Online Test"*. Both tests are based on the association between context(s) and

¹⁴ As we mentioned earlier, throughout this work, the "O" label in SVO, OVS, VSO and VOS abbreviations refers to any type of object (not only Direct Object) See note 1.

word order variation and aimed at investigating the acquisition of postverbal subject in Spanish.

The organization of the two experimental tests is divided as follows:

EXPERIMENTAL TESTS

- a) The Smurfs Test: Spanish native-speakers (children)
- b) *The Online Test*:
 - Spanish native-speakers (adults)
 - English-speaking students of Spanish as a second language (adults)

2.1.1. The Smurfs Test: L1 children

"The Smurfs Test" is an experimental test taken by children in which we tested language production of postverbal subjects depending on different situational contexts (93 children). The following example shows one of the contexts presented to the children in Spanish:

	Los Pitufos tienen que escribir una carta muy importante, la está
<u>The Smurfs</u>	escribiendo Papá Pitufo, ¿no?
<u>Test</u>	The Smurfs have to write a very important letter, Papa Smurf
<u>(Spanish L1)</u>	is writing it, right?
<u>topullon 11</u>	
	[they are shown the picture of Smurfette writing the letter]
	(corrective focus question type)

2.1.2. The Online Test: L1 and L2 adults

"The Online Test" is an experimental test distributed to adults in which we test the acceptability of postverbal subject depending on different situational

contexts. This test is intended to L1 and L2 speakers of Spanish. The control group is composed of 137 Spanish native-speakers, while the target group is composed of 34 English-speaking students of Spanish as a second language. This is an example of a dialogue from the online test in Spanish:

<u>The Online Test</u> (<u>Spanish L1/L2)</u>	Esta mañana había un gato en el jardín, pero ya no está ¿Quién lo ha cogido? This morning there was a cat in the garden and now I can't see it anymore. Who took the cat
	(information focus question type)

The Online Test	El armario está todo desordenado, ¿qué ha pasado?
<u>(Spanish L1/L2)</u>	The wardrobe is a mess what happened?
	(broad focus question type)

The fact that both groups of adults completed the exact same online test is the key for a real comparative analysis of data from a linguistic-methodological point of view, as we will see further on in section 3.4. In this way, the group of L1 speakers of Spanish is labelled Control Group while the group of L2 speakers is named Target Group. It is essential to mention that the methodology followed is different for children, therefore, we will use the Control Group as a "*reference*" group when discussing the children's responses in an attempt to do so from an acquisitional and evolutionary perspective.

So far in chapter 2, what we have presented is the main focus of this study along with a very general summary of the experimental tests that we designed. The aim of this linguistic experiment was to collect the necessary information for the development of this research. In the subsequent sections of this chapter, the aim will be to describe the creative process of this experiment by explaining in detail the methodology followed and providing specific information in relation to the participants who collaborated in the methodological part of the study.

2.2.METHODOLOGY

2.2.1. Participants

In this section, the profile of the participants who collaborated in this study is described. These participants have been classified in two groups: in the first place, the academic colleagues who took part in the research by helping mostly in the experimental process and, in the second place, the groups of informants (children and adults) who were asked to complete the experimental tests. Thanks to all of them, we were able to collect the data needed for developing and analyzing this written dissertation.

2.2.1.1. <u>Preparation and distribution of the experimental tests</u>

First of all, it is essential to mention that this study has been carried out under joint supervision by the universities of Seville and Roma Tre. The collaborative work and joint effort between teams have proved essential for the preparation and distribution of the experimental tests.

Secondly, we must take into account that this research and specifically, the elaboration and distribution of the experimental tests, have been conducted in both languages Spanish and Italian. In this study, we deal with the experimental tests in Spanish, and thus, the description of the tests and the discussion of results refer to the surveys written in Spanish.

The process that led to the creation of the different experimental tests and the distribution procedure that helped us collect the data are the basis of this thesis from a methodological point of view. The written test intended for adult participants was distributed online, while the test intended for children was carried out *"in situ"* at Kindergarten and Primary schools. Through the development of this experimental method we aimed to analyze the validity of our initial hypothesis.

2.2.1.2. <u>Groups of Informants</u>

2.2.1.2.1. The Smurfs Test - Spanish L1 (children)

The Smurfs Test was designed to be completed by Kindergarten and Primary students. In the case of Spanish, the test was completed by a total of 93 children. All of them were students at *Colegio de Educación Infantil y Primaria San Isidoro*, Seville, Spain. The students come from the geographical and linguistic area of Seville or close-by areas (same variety of Spanish).



Figure 1 Children age ranges. The Smurfs Test

As we can see in the figures, our students range from 4 years old (II Kindergarten School) to 9¹⁵ years old (IV Primary School). Thus, it was necessary to divide children into two groups in order to provide a more accurate analysis of data from an evolutionary perspective . We separated participants into two groups:

- o Children from 4 to 6 years old, corresponding to the classes of II, III Kindergarten School and I Primary School
- Children from 7 to 9 years old, corresponding to the classes of II, III and IV Primary School.

¹⁵ By the time the test was conducted some of the children were already 10 years old, but most of them were 9 y.o. This difference is not relevant, so 10 y.o. children have been included in the 7-9 y.o. group.

GROUP	PARTICIPANTS	GENDER		CLASS	GENDER		
				II Kindergarten	9	М	3
		MALE	17	School	9	F	6
GROUP	38			III Kindergarten	12	М	6
4-6 Y.O.	30			School	12	F	6
		FEMALE	21	I Primary	17	М	8
				School		F	9
	55	MALE	32	II Primary	14	М	8
				School	14	F	6
GROUP				III Primary	21	М	16
7-9 Y.O.				School	Δ1	F	5
		FEMALE	23	IV Primary	20	М	8
				School	20	F	12

Table 2 The Smurfs Test; Participants data

The 4-6 years old group is composed of 38 participants in total, of whom 17 are male and 21 female. The 7-9 years old group is composed of 55 participants in total, of whom 32 are male and 23 female.

In Table 2, we can see the number of participants per class and the number of male and female children within each class.

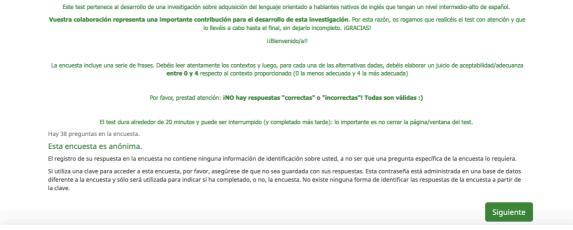
2.2.1.2.2. The Online Test – Spanish L1: Control Group (adults)

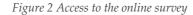
The Online Test is for speakers of Spanish as a first and as a second language. Firstly, we shared the test with L1 speakers since we needed a control group of native informants in Spanish in order to carry out a proper analysis of the L2 responses. The test was distributed online by sending the link through social networking channels such as Facebook or Twitter and also by email contact. Due to the fact that the distribution of this test was online, it was completed by speakers of more languages other than Spanish, so we omitted those who were not speakers of Spanish as a first language. The informants had access to a survey by clicking the link previously received by one of these channels and then they could enter on the online platform in order to complete the survey. In Figure 2 we can see the website screen to the survey:



Cargar encuesta sin terminar

SEVILLA-ROMA3 II





This test was completed by a total of 157 informants. However, as mentioned earlier, some of them were omitted because they did not respond to the test's needs, so the final number of informants is 137. The information about the participants profile¹⁶ is registered in the first part of the survey. The participants' identity is anonymous but there are some questions regarding the sociolinguistic and geographic profile of these informants that we would like to highlight:

[PD04sub2a] > Detalles Caribe				
[PD04sub2b] > Detalles Área Andina				
[PD04sub2d]> Detalles Centroamerica [PD05]> Educación				
[PD07] > Tienes competencias de lingüística ?				

Figure 3 Sociolinguistic & Geographic Information

Regarding the participants' gender, a total of 100 female informants completed the test, while a number of 37 were male. As for the age, there are 67

¹⁶ Personal information about the participants (gender, age, geographical area, etc) has not been relevant for the statistical analysis, however, we were interested in having a similar profile of informants to make it as accurate as possible)

informants who are under 29 years old and 70 who are older than 29 years old. In relation to the geographical origin of the informants, all of them were Spanish speakers from the area of Spain.

2.2.1.2.3. The Online Test – Spanish L2: Target Group (adults)

The Online Test, apart from being intended for our control group of Spanish native speakers, as we have seen above, is also intended for our target group of English-speaking students who study Spanish as a second language. The test was distributed online by sending the link through social networking channels such as Facebook or Twitter and also by email contact. We also designed and distributed a flyer written in English with a summary of the study and the instructions to the survey to make it more accessible. See annex I.

However, unlike the control group, the target group of informants was not simple to get in contact with, since we needed a specific profile of participants and not just any native speaker of English.

The profile¹⁷ of these students was quite general regarding the study program or degree, but less general in terms of age and language knowledge: most of them are university students between 18 and 25 years old with upperintermediate or advanced level of Spanish (B2-C1).

The target group consists of 34 informants who speak English as a first language and whose level of Spanish is upper-intermediate or advanced. This specific feature allowed us to carry out a much more accurate analysis of data, as we are working with two groups of native speakers (Spanish in the case of the control group, English in the case of the target group) and their behavior as regards understanding postverbal subjects in Spanish.

¹⁷ See note 16.

The website to the survey was the one previously used for the control group. The students could enter on the online platform and complete the test by clicking the link received through one of the channels mentioned previously, including the flyer. In the next figure we can see the website screen to the survey:

Lime	Survey Cargar encuesta sin termina
	SEVILLA-ROMA3 II
	Este test pertenece al desarrollo de una investigación sobre adquisición del lenguaje orientado a habiantes nativos de inglés que tengan un nivel intermedio-alto de español.
	Vuestra colaboración representa una importante contribución para el desarrollo de esta investigación. Por esta razón, os rogamos que realicéis el test con atención y que lo llevéis a cabo hasta el final, sin dejarlo incompleto. IGRACIAS!
	liBienvenido/a!!
	La encuesta incluye una serie de frases. Debéis leer atentamente los contextos y luego, para cada una de las alternativas dadas, debéis elaborar un juicio de aceptabilidad/adecuanza entre 0 y 4 respecto al contexto proporcionado (0 la menos adecuada y 4 la más adecuada)
	Por favor, prestad atención: iNO hay respuestas "correctas" o "incorrectas"! Todas son válidas :)
	El test dura alrededor de 20 minutos y puede ser interrumpido (y completado más tarde): lo importante es no cerrar la página/ventana del test. Hay 38 preguntas en la encuesta.
	Esta encuesta es anónima.
	El registro de su respuesta en la encuesta no contiene ninguna información de identificación sobre usted, a no ser que una pregunta específica de la encuesta lo requiera.
	Si utiliza una clave para acceder a esta encuesta, por favor, asegúrese de que no sea guardada con sus respuestas. Esta contraseña está administrada en una base de datos diferente a la encuesta y sólo será utilizada para indicar si ha completado, o no, la encuesta. No existe ninguna forma de identificar las respuestas de la encuesta a partir de la clave.
	Siguiente

Figure 4 Access to the survey

Just like in the case of the control group, the specific information about the participants is registered in the first part of the survey. The participants' identity is anonymous but several questions about the sociolinguistic and geographic profile of the participants are illustrated in the following figure:

Datos Personales	[PD04sub2a] > Detalles Caribe				
[PD01] > Nombre o nick					
	[PD04sub2b] > Detalles Área Andina				
[PD02] > EDAD	[PD04sub2c] > Detalles Area Rioplatense				
[PD2a] > Correo Electrónico					
[PD03] > SEXO	[PD04sub2d] > Detalles Centroamerica				
[PD03]> SEXO					
[PD04] > ¿Cuál es tu Área lingüística?	[PD05] > Educación				
	[PD06] > Orientación formativa				
[PD04sub1] > Detalles de España.					
[PD04sub2] > Detalles América	[PD07] > Tienes competencias de lingüística ?				

Figure 5 Personal Information

Regarding participants' gender, a total of 25 female informants completed the test, while only 9 were male. As for the age, there are 19 informants who are under 24 years old and 15 who are older than 24 years old (not significantly older anyway). In relation to the geographical origin of the informants, half of them (17) are originally from The United States and the other half (17) are from The United Kingdom. As we mentioned earlier, the 34 informants speak English as a first language and Spanish as a second language.

2.2.2. The structure of experimental tests

As previously mentioned, the development of the experimental tests is based on the hypothesis that the realization of postverbal subjects might be sensitive to specific focus types. Because of that, every test took into consideration the influence of two factors in the realization of postverbal subjects: focus type (information, corrective and broad focus) (Jiménez-Fernández, 2015b) and verb type (transitive [+animate or –animate object], unaccusative [progressive or result change; motion] and unergative [mono-argumental or biargumental] verbs).

In order to collect and organize data correctly, some specific programs have been used. Microsoft Excel has been used to create spreadsheets for the data storage and tables/figures for the correct visualization of results. In order to collect the answers given by the participants through the survey the online platform "Limesurvey" has been used. Finally, the ANOVA test has been carried out using the statistical software "STATISTICA".

In the subsequent sections, the structure of each test will be explained in detail.

2.2.2.1. The Smurfs Test

We created a one-to-one question-(free) answer test with The Smurfs characters for the syntax-prosody¹⁸ analysis of Postverbal Subjects in L1 children. The structure of the test consists of a series of sentences/dialogues set in different audiovisual contexts and a final part (question) that motivates the child's spontaneous answer, instead of the selection of alternatives. They were presented a power point presentation (ppt) and they were asked to answer a question

¹⁸ Despite collecting data about intonation, prosody analysis has not been developed in this work.

concerning either the subject or the action at issue. The test was distributed as a power point presentation in two different working sessions¹⁹. See annex III.

No selection of alternatives, but spontaneous answers + recording and transcription

This test took into consideration the influence and interplay of different factors in the realization of postverbal subjects:

- o Focus type: information, corrective or broad focus
- o Verb type: transitive, unaccusative or unergative verb
- o Within verb types²⁰:
 - Transitives²¹: +animated, -animated object
 - Unaccusatives: motion verbs, result change verbs, progressive change verbs
 - Unergatives: mono-argumental, bi-argumental

Different scenes:



Information Focus:

"Antes, Pitufo Enamorado ha cogido una

flor. Y ahora, ¿quién la ha cogido?

¹⁹ The two sets of slides were distributed at 2 weeks intervals (or more than two weeks). On the one hand, to avoid tiredness and, on the other, not to use similar slides inducing different stimuli in the same session.

²⁰ Three verb types have been analyzed for unaccusative verbs, whereas two verb types have been considered for transitive and unergative verbs. Thus, the data obtained have been *normalized* in order to conduct an accurate analysis of results.

²¹ According to the type of verbs we have used, in transitive verbs we have two arguments: subject and object, however, in unaccusatives and unergatives we only have one, so in order for the sentence to be balanced with the sentences types, we needed to add an "adjunct" for intransitive verbs, as we mentioned earlier.

Earlier, Enamored Smurf took a flower. And now, who took it?



Corrective Focus:

"Los Pitufos tienen que escribir una carta muy importante, la está escribiendo Papá Pitufo, ¿no?

The Smurfs have to write a very important letter, Papa Smurf is writing it, right?



Broad Focus:

¡Cuántas cosas hay encima de la mesa: papeles, una pluma, libros, una vela encendida...¿qué está pasando?

There are so many things on the table: papers, a fountain pen, books, a candle... what is happening?

Children were assisted by a researcher from the Department of English Language. S/he had an answer sheet with 4 possible options and would select the one provided by the child (or take note of different answers). See annex II (a) and (b). For example:



La está escribiendo Pitufina, la carta It is writing Smurfette, the letter	VSO
Pitufina está escribiendo la carta <i>Smurfette is writing the letter</i>	svo
La está escribiendo, la carta, Pitufina <i>It is writing the letter, Smurfette</i>	vos
La carta, la está escribiendo Pitufina <i>The letter, it is writing Smurfette</i>	ovs

The Smurfs Test Structure (children)																		
A - IN	FORMATI	VE F	OCU	S		B - C	ORRI	ECTIV	VE FC	CUS	1	C - BROAD FOCUS						
TRANSITIVE VERBS	UNACCUSATIVE VERBS		UNERGATIVE	VERBS	TRANSITIVE	VERBS		UNACCUSATIVE VERBS		UNERGATIVE	VERBS				UNERGATIVE VERBS		VERBS	
1 -TRANSITIVE OD [+ANIMATED] 2 -TRANSITIVE OD [- ANIMATED]	3 - MOTION VERB 4 - INHERENTLY REFLEXIVE VERB	5 - CHANGE OF STATE	6 - MONO- ARGUMENTAL	7 - BI-ARGUMENTAL	1 -TRANSITIVE OD [+ANIMATED]	2 -TRANSITIVE OD [- ANIMATED]	3 - MOTION VERB	4 - INHERENTLY REFLEXIVE VERB	5 - CHANGE OF STATE	6 - MONO- ARGUMENTAL	7 - BI-ARGUMENTAL	1 -TRANSITIVE OD [+ANIMATED]	2 -TRANSITIVE OD [- ANIMATED]	3 - MOTION VERB	4 - INHERENTLY REFLEXIVE VERB	5 - CHANGE OF STATE	6 - MONO- ARGUMENTAL	7 - BI-ARGUMENTAL
1-A 2-A	3 - A 4 - A	5 - A	6 - A	7 - A	1 - B	2 - B	3 - B	4 – B	5 - B	6 - B	7 - B	1 - C	2 - C	3 - C	4 - C	5 - C	6 - C	7 - C

 Table 3 The Smurfs Test Structure (children)

The Smurfs Test (children): Answer Structure									
Spontaneous Answer	OSV	Overt - SVO	Null - SVO	SOV	SVO	Cleft	ЪР	Other	
				X					

Table 4 The Smurfs Test (children): Answer Structure

2.2.2.2. <u>The Online Test</u>

The structure of the test consists of a series of sentences/dialogues set in different contexts, and a final part (generally a question) with four options proposing different word orders to complete the relevant micro-text. For each option the student should provide a judgement on its acceptability along a Likert scale²² running from 0 to 4 (where 0= very bad and 4 = the best option). All options are grammatical. We are interested to know which word order option the learner would choose for that specific context. This test is distributed online, it is anonymous and it takes about 20 minutes.

This test took into consideration the influence and interplay of different factors in the realization of postverbal subjects:

- o Focus type: information, corrective or broad focus
- o Verb type: transitive, unaccusative or unergative verb
- o Within verb types²³:
 - Transitives : +animated, -animated object
 - Unaccusatives: motion verbs, result change verbs, progressive change verbs
 - Unergatives: mono-argumental, bi-argumental

Example of the different types of focus using a transitive (+animated) verb:

o Information Focus

A: Esta mañana había un gato en el jardín, pero ya no está. ¿Quién lo ha cogido? *A: This morning there was a cat in the garden and now I can't see it anymore. Who took the cat?*)

 $^{^{\}rm 22}$ Description of the analysis methods will be thoroughly explained later on.

²³ See note 20.

- Lo ha cogido el niño, el gato (It took the boy, the cat)	VSO
- El niño ha cogido el gato (The boy took the cat)	SVO
- Ha cogido el gato el niño (It took the cat the boy)	VOS
- El gato lo ha cogido el niño (The cat it took the boy)	OVS

o Corrective Focus

A: Esta mañana había un gato en el jardín, pero ya no está. Estoy segura de que lo ha cogido esa niño que lo miraba tanto... B: Te equivocas... *A: This morning there was a cat in the garden and now I can't see it anymore. I'm sure that it has been taken by that girl who was looking at it. B: You are wrong...)*

- Te equivocas, lo ha cogido el niño, el gato	VSO
- Te equivocas, el niño ha cogido el gato	SVO
- Te equivocas, ha cogido el gato el niño	VOS
- Te equivocas, el gato lo ha cogido el niño.	ovs

o Broad Focus

A: Te veo nerviosa... ¿Qué ha pasado?... A: You seem nervous... what happened?

- Que hoy lo ha cogido mi hijo, un gato, y se lo ha traído a casa! VSO

- ¡Que hoy mi hijo ha cogido un gato y se lo ha traído a casa! **SVO**

- ¡Que hoy ha cogido un gato mi hijo, y se lo ha traído a casa! VOS
- ¡Que hoy un gato lo ha cogido mi hijo, y se lo ha traído a casa! OVS

* 15 A1 Esta mañana había un gato en el jardín pero ya no está, ¿Quién lo ha cogido?

	0	1	2	3	4
(a) Lo ha cogido el niño el gato					
(b) El niño ha cogido el gato					
(c) Ha cogido el gato el niño					
(d) El gato lo ha cogido el niño					

Figure 6 Information Focus question simple

The online survey is divided into two main parts: sociolinguistic and geographic information (previously exposed in section 2.2.1.2) and the list of 21 questions, including 3 distractors, so students answered 24 questions which were randomized to avoid any priming deviance. See annex IV.

This experimental test is the same version for both the control group of Spanish native-speakers and the target group of English-speaking students. In this way, we were able to collect results for the same test from two different informants so that the analysis of data is comparable.

The Online Test Structure (adults)								
A - INI	FORMATION I	FOCUS	B - C	ORRECTIVE FO	OCUS	C	- BROAD FOC	US
TRANSITIVE VERBS	UNA CCUSATIVE VERBS	UNERGATIVE VERBS	TRANSITIVE VERBS UNACCUSATIVE VERBS UNERGATIVE VERBS		TRANSITIVE VERBS UNACCUSATIVE VERBS		UNERGATIVE VERBS	
1 -TRANSITIVE OD [+ANIMATED] 2 -TRANSITIVE OD [- ANIMATED]	3 - MOTION VERB 4 - INHERENTLY REFLEXIVE VERB 5 - CHANGE OF STATE	6 - MONO- ARGUMENTAL 7 - BI- ARGUMENTAL	1 -TRANSITIVE OD [+ANIMATED] 2 -TRANSITIVE OD [- ANIMATED]	3 - MOTION VERB 4 - INHERENTLY REFLEXIVE VERB 5 - CHANGE OF STATE	6 - MONO- ARGUMENTAL 7 - BI- ARGUMENTAL	1 -TRANSITIVE OD [+ANIMATED] 2 -TRANSITIVE OD [- ANIMATED]	3 - MOTION VERB 4 - INHERENTLY REFLEXIVE VERB 5 - CHANGE OF STATE	6 - MONO- ARGUMENTAL 7 - BI- ARGUMENTAL
1 - A 2 - A	3-A 4-A 5-A	6 - A 7 - A	1 – B 2 – B	3-B 4-B 5-B	6 - B 7 - B	1-C 2-C	3-C 4-C 5-C	6-C 7-C

Table 5 The Online Test Structure (adults)

The Online Test (adults): Answer Structure						
	0 Least Acceptable	1	2	3	4 - Most Acceptable	
VSO						
SVO						
VOS						
OVS						

Table 6 The Online Test (adults): Answer Structure

Encuesta

[A1] > Esta mañana había un gato en el jardín pero ya no está, ¿Quién lo ha cogido?
[B2] > He visto una carta encima de la mesa. La ha escrito Daniel, ¿verdad?
[C3] › El armario está todo desordenado, ¿qué ha pasado?
[D1] > Considera las dos alternativas (a) y (b) y valora de 0 a 4 cada una de ellas. ¿A quién vio Mario
[A4] > Me han dicho que uno de tus hijos está en la cama con fiebre. ¿Quién está mal?
[B5] › ¡Me imagino que ayer Jorge se enfadaría mucho por lo que pasó!
[C6] > A: Hubo un error con la reserva de la casa rural y cuando llegamos no había camas para todos
[A7] > Esta noche ha empezado a sonar una alarma en frente de tu casa y al rato ha llegado la policí
[B1] > Esta mañana había un gato en el jardín pero ya no está. Estoy segura de que lo ha cogido esa
[C2] › ¡Qué lío hay encima de la mesa! Bolígrafos, lápices, un bloc de notas ¿qué ha pasado?
[D2] > Considera las dos alternativas (a) y (b) y valora de 0 a 4 cada una de ellas. ¿A quién ayudó Jua
[A3] › Tus amigos habían dicho que querían ir a la playa en el fin de semana. ¿Quién ha ido al final?

Figure 7 Survey questions from 1 to 12

[B4] > ¡Me han dicho que tu hijo Lucas está en la cama con fiebre!

[C5] > Ayer Juan y yo estuvimos más de dos horas esperando a Carlos...

[A6] > A: Hubo un error con la reserva de la casa rural y cuando llegamos no había camas para todos...

[B7] > Esta noche ha empezado a sonar una alarma en frente de tu casa y al rato ha llegado la policía...

[C1] > A: Te veo nerviosa... ¿qué ha pasado? B:

[A2] > He visto una carta encima de la mesa. ¿Quién la ha escrito?

[D3] > Considera las dos alternativas (a) y (b) y valora de 0 a 4 cada una de ellas. ¿A quién saludó Ca...

[B3] > ¡Han comenzado los días bonitos y estoy segura de que ayer María fue a la playa!

[C4] > En este periodo ronda mucho la gripe ...

[A5] > ¿Quién de vosotros se enfadó mucho ayer por lo que pasó?

[B6] > A: Hubo un error con la reserva de la casa rural y cuando llegamos no había camas para todos...

[C7] > ¿Qué pasó anoche en frente de tu casa? ¡Había mucho jaleo!

Figure 8 Survey questions from 13 to 24

2.2.2.3. <u>Different methodology for each experimental test</u>

It is essential to highlight the fact that the way in which questions are posed in each test is different, depending on the structure of the test itself, the profile of the participants and the purposes from a linguistic point of view in each case. Note that The Online Test, intended for adults, includes a Likert scale from 0 to 4 (4 meaning that they would definitely use it in the context provided, and 0 meaning that they would never use it) to show the level of "acceptability" according to the context. All options are grammatical though. On the contrary, The Smurfs Test, intended for children, consists of a series of sentences/dialogues set in different audiovisual contexts and a question that motivates the child's spontaneous answer, instead of the selection of alternatives, as previously mentioned.

Both tests have the acquisition of Postverbal Subjects as the main focus of interest, but from a methodological perspective we considered the spontaneous answer option more suitable for carrying out the children's tests "in-situ", while the structure of The Online Test and the fact that it was distributed online and intended for adults made the option of a Likert scale more appropriate and practical. This is a crucial factor when it comes to deciding the statistical method for the analysis of each test.

2.3.DATA ANALYSIS

2.3.1. Analysis Methods

The tests that have been discussed in the previous chapter create two different types of answers:

- For the Smurfs Test, the informant generates a "qualitative" answer based on the production of one of four different patterns (VSO- SVO– OVS-VOS)
- For the Online Test, the informant generates a quantitative answer where he rates the acceptability of the postverbal subject position. This rate is done through the Likert Scale, which measures the attitude of the informant towards a specific answer. The way these data should be analyzed are debated in a paper by (Carifio & Perla, 2008) where the two major hypothesis are discussed ("ordinal view" vs "interval view"). This thesis follows the "interval view" which states "that the Likert response format produces empirically interval data" (i.e. Carifio (1976), (1978); Vickers (1999)) and thus, a parametric analysis can be performed.

As discussed in the previous paragraph, the type of answer determines the type of methodology that should be applied to analyze these answers:

- The qualitative answers received in The Smurfs Test lead us to apply a chi-square test for independence to evaluate the null hypothesis (no significant difference among the groups).
- The "interval view" of the Likert Scale gives us the opportunity to apply a parametric analysis to individuate significant differences among the answers. The analysis has been carried out by applying a Multi-Factor ANOVA.

2.3.2. Chi-Square Test for Independence

The Chi-Square Test is a non-parametric statistic test that is used to determine whether there is a significant relationship between the expected frequency and the observed frequency of two variables.

While the observed frequencies are derived directly from the experiment (i.e., you flip a coin ten times and you count how many times appeared heads), the observed frequencies are calculated applying the statistical theory (i.e., flipping a coin you would expect 50% chances to appear heads).

The formula for expected cell frequencies is:

$$E_{i,j} = \frac{T_i \cdot T_j}{N}$$

Where:

E_{i,j}= Expected frequency for the cell in the *ith* row and *jth* column;

T_i= Total number of answers in the *ith* row;

T_j= Total number of answers in the *jth* row;

N= Total number of answers in the whole table.

In this case the variables are:

- The age group of the informants (II Kindergarten IV Primary).
- The subject position (VSO -OVS- VOS SVO)

The statistic test is based on the comparison of two hypothesis:

- The "Null Hipothesis": the two variables are independent;
- The "Alternative Hipothesis": the two variables are not independent;

To calculate the chi-square value the following formula has been applied:

$$\chi^{2} = \sum_{i=1}^{r} \sum_{j=1}^{c} \frac{(O_{i,j} - E_{i,j})^{2}}{E_{i,j}}$$

Where:

 χ^2 = Chi – square test for independence;

Oi,j= observed value of two nominal variables;

E_{i,j} = expected value of two nominal variables

Once the chi-square value has been calculated, we need to determine whether to accept or reject the "Null hypothesis".

The null hypothesis states that the two variables are independent, in other words, that the answer distribution is the same independently from the age group. For this analysis a significant value of 0,05 has been set; this means that the p-value has to be below this number to reject the null hypothesis (in other words, to prove that the answer distribution is different).

To calculate the p-value we need to provide two values: one is the chisquare value previously calculated, and the other is the degree of freedom of the system, which is calculated as $(i-1)^*(j-1)$, where *i* and *j* represent the number of rows and the number of columns of the analysis.

In the subsequent sections the analysis that has been done in The Smurf Test (L1 children, reference group) is reported according to this methodology.

2.3.3. Anova Test

According to the "interval view" of the Lickert scale (illustrated in section 2.2.2.2), a parametric test can be used to investigate the outcome. For The Online Test (L1 and L2 adults, control and target groups) we have used the ANOVA (ANalysis Of VAriance) test.

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By applying the Multi-Factor ANOVA analysis it has been possible to define the significant factors in a multi factors model, using the analysis of variance to determine, on the one hand, the amount/type of data influenced by each factor taken into examination and, on the other, the amount of data influenced by a casual error.

Specifically, the factors analyzed are the following:

- Position, with 4 possible identities: VSO, SVO, VOS, OVS.
- Focus, with 3 possible identities: Information Focus, Corrective Focus, Broad Focus.
- Verb, with 3 possible identities: Transitive, Unaccusative, Unergative.

Within the same group (L1 or L2) the 4 combinations of variables have been analyzed (Position, Focus Vs Position, Verb Vs Position, Focus Vs Verb Vs Position) in order to determine what factor or combination of them is "significant" (i.e., which one generates a significant difference in the outcome). In each combination the factor "position" has to be present, since this is the key element of this study. In this analysis a significant value of 0,05 has been established, which means that when the p-value is lower the two means are different (and thus, the null hypothesis is rejected).

As previously mentioned, although the ANOVA test allows us to individuate if and what factor (position, focus or verb) or combination is significant, it does not tell us where this difference lies (i.e., comparing the VSO with the other orders within the factor "position", there could be a significant difference for the pairs VSO-SVO and VSO-OVS, but not for VSO-VOS). In order to determine which specific combination of variable means are different from one another, a Tukey HSD²⁴ test has been carried out.

Finally, a comparison between the two groups (L1 and L2 participants) has been conducted. The ANOVA test has been used in order to analyze if and what factor (or combination of them) generates a significant variation among the answers given for the same type of variables identified for the 2 groups. In this case, a new factor is generated, the "language" factor, with two possible identities: L1-Spanish and L2 – English speaking students).

²⁴ Tukey HSD "honestly significant difference" or "honest significant difference" test is a statistical test which is used to determine whether the difference between two means (influenced by three or more variables) is greater than the standard error, and therefore, significantly different between each other.

CHAPTER 3. DISCUSSION OF RESULTS

3.1.THE SMURFS TEST

3.1.1. Descriptive Statistics

The purpose of this section is to present the results obtained from Spanish L1 children, aged 4 to 9, to provide an interface analysis on the realization of Postverbal Subjects in IF, CF and BF constructions. We attempt to do this from an acquisitional and evolutionary perspective.

Before presenting and describing the results obtained from The Smurfs Test, it is necessary to mention some important assumptions that we have taken into account in order to interpret the data correctly. We need to establish the premise that, unlike the case of adults, who tend to think through and try to give a "correct" answer to a question in a situation in which they feel "examined", children do not provide standard answers since they respond spontaneously. In order to classify their answers properly, we have followed the following assumptions:

First of all, SVO category has been divided into two types of answers: **Null Subjects and Overt Subjects**. Also, possible variation in the selection of **synonym verbs** has not been considered (e.g., *venido = llegado*). As for **Cleft Sentences** (both full and reduced), they have been included in a specific category. Finally, regarding **Only Focus** answers, they have been included in a separate **(DP)** category as well.

3.1.1.1. <u>Differences across Focus types</u>

4 - 6 Years Old			7 - 9 Years Old			
VSO			VSO			
1.9%		5	1.09	%	4	
27.3% 72	.7%	0.0%	27.3%	18.2%	54.5%	
SVO Overt			SVO Overt			
67.7%		180	39.2%		151	
31.7% 33	.3%	35.0%	33.0%	31.7%	35.3%	
SVO Null			S	VO Null		
1.1%		3	0.5	%	2	
	0.0%	0.0%	0.0%	100.0%	0.0%	
V	OS _		VOS			
2.6%		7	27.0%		104	
17.6% 47	.1%	35.3%	11.7%	42.8%	45.5%	
OVS		OVS				
5.3%		14	26.8%		103	
47.4% 21	.1%	31.6%	54.4%	28.9%	16.7%	
C	eft		Cleft			
1.5%	1.5%		0.5%		2	
30.0% 40	.0%	30.0%	0.0%	40.0%	60.0%	
C)P		DP			
16.2%		43	4.7%		18	
39.5% 26	.3%	34.2%	36.7%	20.4%	42.9%	
Other		Other				
3.8%	3.8%		0.3%		1	
36.0% 40	.0%	24.0%	100.0%	0.0%	0.0%	
Transitive U			ccusative	Unerg	ative	

3.1.1.1.1. Information Focus

Table 7 Differences across focus types IF

As is shown in the table with IF results (Table 7)²⁵, the preferred strategy for children from 4 to 7 is SVO. The percentages vary according to the children's age and the growing/decreasing importance of alternative strategies (cf. Frascarelli & Stortini (2019) for Italian). As for children from 7 to 9 y.o., they also prefer the order SVO, but the relevant percentage is considerably lower (almost 30% less) in comparison to younger children.

On the contrary, the VS strategy shows a significant increase (for statistical analysis and evaluation, see below, section 3.1.3) from the age of 7 y.o., specially VOS (27%) and OVS (26,8%), as we can see in Table 7 above. As for the OVS

²⁵ Colors in tables 7, 9 and 11 represent the types of verbs: transitive verbs are represented in green, unaccusatives in orange and unergatives in blue.

position, a slightly decrease is observed in 9 y.o., children within the 7-9 y.o., group. This can be explained by assuming that they are replacing syntax by phonology, and this is predicted by the Minimalist preference of merge over move, since if they go for a prosodic strategy, they do not need to move and this is more "economic". However, even if this is what is expected, languages do sometimes use both strategies. In general, VS strategies (considering the union of VSO, OVS and VOS) can be considered as a *late acquisition* for narrow focus constructions according to these results.

As for the DP (only focus) strategy, it is largely used by kindergarten children (16,2%), in alternation with SVO. However, its frequency shows a decrease with school education (from 16,2% to 4,7%). Cleft sentences are almost immaterial for IF structures.

IF	vso	SVO Overt	SVO Null	vos	ovs	Cleft	DP	Other
4 - 6 Years Old	1,88%	67,67%	1,13%	2,63%	5,26%	1,50%	16,17%	3,76%
7 - 9 Years Old	1,04%	39,22%	0,52%	27,01%	26,75%	0,52%	4,68%	0,26%

Table 8 Answering strategies for IF in Spanish children

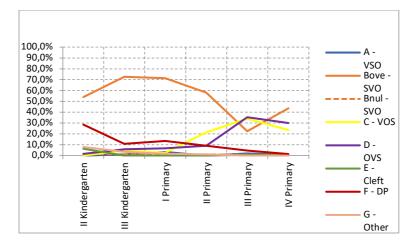


Figure 9 IF trend by class group

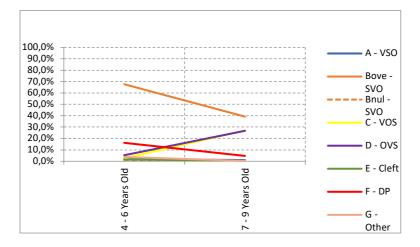


Figure 10 IF trend by age group

If we analyze the trend in order to assess this progression, it is clearly shown that there is a decrease of the SVO order and an increase of some VS strategies, in particular the development of VOS and OVS orders, as observed in *C* and *D* in Figure 10.

3.1.1.1.2. Corrective Focus

4 - 6	S Years	Old	7 - 9 Years Old			
	VSO		VSO			
4.9	9%	13	2.0	5%	10	
35.3%	29.4%	35.3%	11.5%	30.8%	57.7%	
;	SVO Overt			SVO Over	t	
33.	33.8%		19.	2%	74	
21.1%	37.9%	41.0%	10.0%	46.7%	43.3%	
	SVO Nuli			SVO Nuli		
1.1	1.1%		1.8	3%	7	
75.0%	25.0%	0.0%	0.0% 80.0%		20.0%	
	VOS			VOS		
7.9	7.9%		15.	59		
6.5%	73.9%	19.6%	2.2%	60.3%	37.5%	
	ovs			OVS		
30.	.1%	80	49.9%		192	
52.2%	8.7%	39.1%	55.3%	16.5%	28.2%	
	Cleft			Cleft		
9.	8%	26	9.′	1%	35	
10.9%	83.6%	5.5%	0.0%	62.5%	37.5%	
	DP			DP		
3.4	4%	9	0.8	3%	3	
72.0%	16.0%	12.0%	37.5%	25.0%	37.5%	
	Other			Other		
9.	9.0%		1.:	3%	5	
25.4%	44.1%	30.5%	69.2%	30.8%	0.0%	
Tran	sitive	Unacc	usative	Unerg	gative	

Table 9 Differences across focus types CF

With respect to the data concerning the realization of CF, Table 9 illustrates what follows:

The SVO strategy is still largely used in all age groups, although it decreases with age (from 33,8% to 19,2%), and, despite it is the preferred option, its percentage is not as high as for IF (from 67,8% to 39,2%). However, it should be mentioned that the use of SVO decreases in CF constructions (as illustrated in Table 9) with transitive verbs in particular, probably due to the emergence of the VS order. In fact, the VS strategy starts to emerge earlier for CF, at the age of 6 y.o., in line with Frascarelli & Stortini (2019) results for Italian. As we can see, there are important values for OVS (30,1% children from 4 to 7 y.o. and 49,9% in older children) becoming the preferred strategy in children from 7 to 10 y.o. There is a progressive increase for VOS, but not very significant. In general, OVS is more frequent than VOS in all ages. The most relevant fact in this case is that OVS is a "competitive" strategy for CF already for kindergarten children and growing as children become older.

In relation to the DP (only focus) strategy, it is shown as progressively abandoned with age, going from 3,4% in younger children to become almost immaterial. As for Cleft sentences, they are more frequent in CF than in IF.

The VS strategy is slightly more relevant for CF than IF, as the percentages are considerably higher in older children, especially for OVS (49,3%). It should be noted that even younger children chose the OVS order from the beginning (30,1%). The VSO order is not an option in Spanish.

CF	vso	SVO Overt	SVO Null	vos	ovs	Cleft	DP	Other
4 - 6 Years Old	4,89%	33,83%	1,13%	7,89%	30,08%	9,77%	3,38%	9,02%
7 - 9 Years Old	2,60%	19,22%	1,82%	15,32%	49,87%	9,09%	0,78%	1,30%

Table 10 Answering strategies for CF in Spanish children

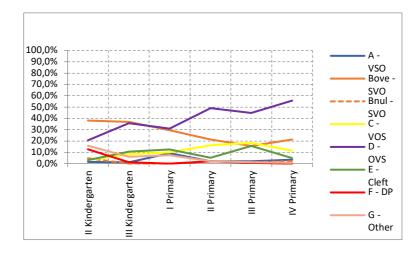


Figure 11 CF trend by class group

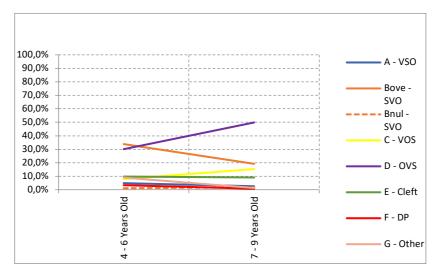


Figure 12 CF trend by age group

If we analyze the trend to assess the evolution from a different perspective, we can establish that there is an increase in the VS order (OVS, VOS) and, on the other hand, a decrease in SVO, although it is largely used in all ages. Therefore, the use of VS strategy starts to emerge earlier for CF than for IF. The DP strategy is not very relevant in CF contexts, while Cleft sentences are constant over the analysis (9%).

	VSO		VSO				
3.0)%	8	1.0)%	4		
0.0%	82.4%	17.6%	54.5%	18.2%	27.3%		
	SVO Overt			SVO Overt			
56.	8%	151	6 8.	1%	262		
34.4%	25.9%	39.7%	33.9%	24.9%	41.2%		
	SVO Null			SVO Null			
19.2%		51	12.	7%	49		
36.9%	35.4%	27.7%	50.0%	33.3%	16.7%		
VOS				VOS			
2.3%		6	3.9%		15		
42.9%	57.1%	0.0%	18.2%	72.7%	9.1%		
	OVS			OVS			
11.	3%	30	11.9%		46		
8.7%	60.9%	30.4%	0.0%	93.6%	6.4%		
	Cleft		Cleft				
0.0)%	0	0.0	0%	0		
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
	DP			DP			
0.0)%	0	0.0	0%	0		
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
	Other			Other			
7.5	7.5%		2.3	3%	9		
56.6%	26.4%	17.0%	66.7%	0.0%	33.3%		
Trans	sitive	Unacc	usative	Unerg	gative		

3.1.1.1.3. Broad Focus

Table 11 Differences across focus types BF

Let us now examine the data concerning BF constructions:

As expected, SVO is definitely the preferred strategy to realize BF constructions at any age. The VS strategy has a very limited relevance, generally restricted to unaccusative verbs. The SVO (null-subjects) answers²⁶ are more frequent for BF, in particular in younger children, while for IF and CF in most SVO answers the subject is overt. Also, reduced strategies are not an option for BF. The "other" category for BF presents higher percentages in children from 4 to 7 y.o, since kindergarten children have sometimes provided free answers not related to the context in this case.

²⁶ The reason for this might be the fact that the referents of subjects constituents were "shown" in the picture and they might be considered as "given" elements by children.

Although the VS strategy has very limited relevance for BF, the use of the OVS order is especially interesting, being not completely immaterial and very similar at all ages, as illustrated in Table 12.

BF	vso	SVO Overt	SVO Null	vos	ovs	Cleft	DP	Other
4 - 6 Years Old	3,01%	56,77%	19,17%	2,26%	11,28%	0,00%	0,00%	7,52%
7 - 9 Years Old	1,04%	68,05%	12,73%	3,90%	11,95%	0,00%	0,00%	2,34%

Table 12 Answering strategies for BF in Spanish children

In particular, the use of VS constructions in BF is limited to unaccusative (especially motion) verbs, in agreement with Frascarelli & Stortini (2019) for Italian, as observed in Table 13 below:

	Broad Focus: Unaccusative Verbs									
	Mo	tion	Result	change	Progressiv	ve change				
Order	4 - 6 Years Old	7 - 9 Years Old	4 - 6 Years Old	7 - 9 Years Old	4 - 6 Years Old	7 - 9 Years Old				
SV	15,79%	14,55%	89,47%	83,64%	92,11%	98,18%				
VS	73,68%	85,45%	10,53%	16,36%	0,00%	1,82%				
Other	10,53%	0,00%	0,00%	0,00%	7,89%	0,00%				

Table 13 VS strategy in BF (unaccusative verbs)

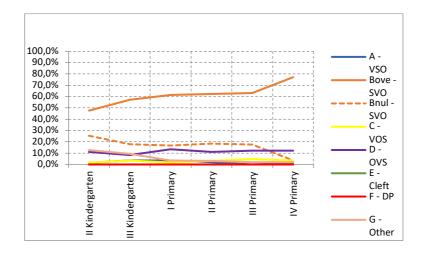


Figure 13 BF trend by class group

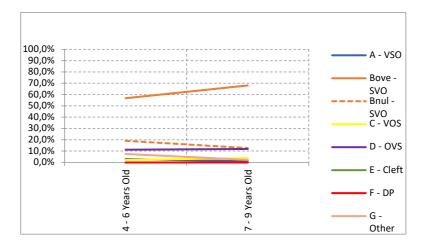


Figure 14 BF trend by age group

As seen in Figure 13 and Figure 14, the trend shows that SVO is definitely the preferred strategy at any age for BF. In this case, the VS strategy has a very limited relevance, even if the OVS order is the second option. This result is far from the SVO preference, but still interesting.

3.1.1.1.4. Association between strategies and focus types

The results obtained with this experiment allow for some general considerations on the development of Focus strategies.

As is shown, the SVO order strategy is the most frequent for all the foci examined until the age of 6-7 y.o. The VS strategy, on the contrary, shows a constant increase emerging at the age of 7 (even earlier for CF, 6 y.o.) which affects specially CF and IF. The OVS order becomes the preferred strategy in children from 7 to 9 y.o. In BF sentences, the SVO is more frequent for all age groups, whereas VS is more frequent with specific types of verbs (i.e. unaccusative verbs) after the age of 6-7 y.o. The VSO order does not seem an option in Spanish, where VOS is preferred. Regarding the differences among verb types, both object types and adjuncts were always mentioned in the context preceding the questions, so any variation is not related to an experimental bias. These results support the claim that the VS strategy can be considered a *late acquisition* emerging at the age of 6 y.o., becoming a significant alternative to SVO order for NF constructions in the children's competence after that age. The evolution of answering strategies is illustrated in Figure 15.

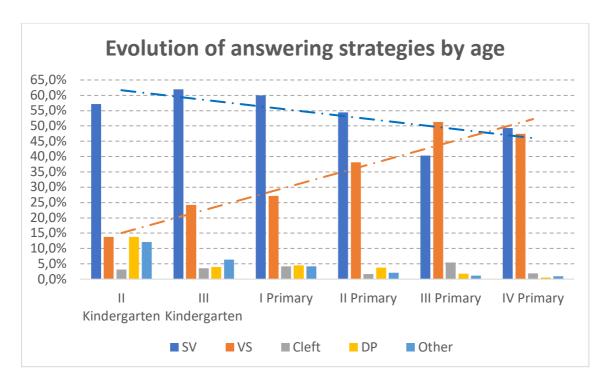


Figure 15 Evolution of answering strategies (SV-VS) by age

As seen in Figure 15, the blue line shows that there is an emerging trend in reducing the use of the SV strategy as children grow up. On the other hand, the orange line illustrates a clear increasing of VS strategies (considering the union of VOS, VSO and OVS) with age. The difference between the use of SV and VS is higher in Kindergarten and I Primary children, while this difference is less pronounced as they grow up, as observed in this figure.

As for reduced strategies, they are largely used by kindergarten children in alternation with SVO. However, its frequency shows a decrease with school education becoming almost immaterial.

3.1.3. Statistical Significance: Chi-square Test

The statistical analysis has been carried out to determine the existence of significant differences between answering strategies in the two age groups. The test used is the Chi-square Test, a non-parametric statistical test described in section 2.3.2. In particular we are interested in verifying whether there is a significant difference from an evolutionary perspective. Hence, each column in Table 14 indicates the statistical difference attested in the answering strategies used in the two groups (4-6 and 7-9 y.o. children), where the lower the value is, the higher the significance.

Chi-Square Test Results (Conf. Level 0,05)	Information Focus	Corrective Focus	Broad Focus
Transitive	<0,001	<0,001	0,133
Transitive (+anm obj.)	0,001	0,005	0,270
Transitive (-anm obj.)	<0,001	0,018	0,213
Unaccusative	<0,001	<0,001	<0,001
Unaccusative (motion)	<0,001	0,003	0,001
Unaccusative (result change)	<0,001	0,323	0,588
Unaccusative (progressive change)	<0,001	<0,001	0,031
Unergative	<0,001	0,001	0,039
Unergative (mono)	<0,001	0,228	0,047
Unergative (bi)	0,001	0,003	0,483

The outcome of this test is shown as follows:

Table 14 Chi-Square test results

In Table 14, colors represent what follows:

- Red: values marked in red show a significant difference

- Black: values marked in black do not show a significant difference

In order to correlate the descriptive statistics with the statistical significance the following summary is presented:

As illustrated in Table 14, the use of answering strategies shows differences that are statistically significant in most cases for IF and CF (applying a 5% confidence level).

Regarding IF, Table 14 shows that the answering distribution changes with age (groups 4-6 y.o. and 7-9 y.o.). This means that the hypothesis about an evolution in the answers depending on the age is feasible, since the answers vary and go from choosing SVO in kindergarten levels to producing VS structures while they grow in age. The answers provided in IF are significantly different (<0,001) in all cases. In this case, the general trend is clear and all the differences attested in the descriptive analysis are significant. Although children in general prefer SVO order in IF, the decreasing of the preference for SVO with age is significant according to the chi-square test, as well as the increasing of the VS strategy with age, specially VOS and OVS, since all the possible answers show a <0,001. The significance of this result is in line with the *late acquisition* of VS strategies that we support.

As for CF, important differences are attested regarding the three groups of verbs: transitives (<0,001), unaccusatives (<0,001), unergatives (0,001), as shown in Table 14. In particular, for unaccusative verbs important differences are observed in motion and progressive change verbs, (0,003) and (<0,001) respectively, while for unergatives, significant differences are observed for biargumental (0,003). Only in the case of result verbs (unaccusatives) and monoargumental (unergatives) differences are not significant. This means that the evolution of the answers is different in relation to most verb types, showing that the learning process generates a variation in the production of the answers given by children. However, this is not the case of result verbs (unaccusatives) and mono-argumental (unergatives).

In general, for BF it emerges that the answers given do not show an evolution with age except for the unaccusative motion and progressive change, as well as unergative mono-argumental (see Table 14). While for unaccusative motion the significant difference is clear (0,001), for unaccusative progessive change (0,031) and unergative mono-argumental (0,047) the p-values obtained are closed to the limit of significance, being this fact a possible object of research in further studies from a statistical perspective.

It should be noted that in the case of unaccusative verbs the results are particularly interesting. On the one hand, the evolution of the responses in motion and progressive change verbs shows a significant difference regardless the type of focus (IF, CF and BF). On the other hand, as for the unaccusative (result change) verb, the answers do not show a significant difference with age in the cases of CF and BF, while they do for IF.

3.2. THE ONLINE TEST (CONTROL GROUP: SPANISH L1)

3.2.1. Statistics Analysis

The Online Test has been carried out by a control group (137 speakers of Spanish as a first language). The answers given by the participants have been collected in order to:

- explore the effect of the different factors on the acceptability of each answer;
- use these data as reference values to compare them with those of English-speaking students of Spanish as a second language.

The acceptability judgments obtained in the experimental test have been analyzed to determine whether there is a significant difference within the three factors involved regarding the acceptability variation between the different contexts. In this case, the statistical method used for this is the ANOVA (ANalysis Of VAriance) test, described in section 2.3.3.

	Sigma-restricte	s of Significance d parameterization hesis decompos							
Effect	SS	Degr. of (Freedom)	MS	F	p				
Intercept	63906,48	1	63906,48	47041,25	0,000000				
FOCUS	148,47	2	74,23	54,64	0,000000				
VERB	36,04	2	18,02	13,27	0,000002				
POSITION	6286,18	3	2095,39	1542,41	0,000000				
FOCUS*VERB	45,44	4	11,36	8,36	0,000001				
FOCUS*POSITION	1643,08	6	273,85	201,58	0,000000				
VERB*POSITION	1479,07	6	246,51	181,46	0,000000				
FOCUS*VERB*POSITION	N 523,49 12 43,62 32,11 0,0								
Error	15584,94	11472	1,36						

3.2.1.1. Effect of the main factors and their interactions

Table 15 L1 ANOVA test, significance of the factors

In the previous table the following information is reported:

- The first column on the left corresponds to the factors being examined: the target is focused on the factors that contain "position", as we are interested in analyzing the acceptability of different orders.
- SS (sum of square): it is the sum of the squares of the deviations of all the answers x_i, it represents the sum of the squared differences from their mean value x̄.
- Degrees of Freedom (DF): the degrees of freedom (from now on called *m*) are calculated as the number of variables for each factor (3 different Focus types, 3 different Verb types, 4 different positions) minus one²⁷.
- MS (`Mean Sum of Square'): it is calculated as the Sum of Square divided by the DF and it is a representation of population variance.
- F represents the *F- statistic,* and it is calculated by dividing the MS value by the MS error. It helps to verify whether the variance between the means of two populations is significantly different.
- Finally, the last column corresponds to the *p-value*; the p-value is the probability of obtaining a result at least as extreme as the one observed; the p-value represents the most important output of this table as it gives us the smallest significance level at which the null hypothesis should be rejected. If the p- value is less than 0,05 the effect of the relevant factor or interaction is considered significant (all significant values are marked in red in this study).

²⁷ Where a combination of factors is analyzed, the degrees of freedom of the groups are calculated as $(a-1)^*(b-1)$ (i.e. for Focus – Position the degrees of freedom are $(4-1)^*(3-1) = 3^*2 = 6$). The degrees of freedom for the Error row are the n data collected minus the product of all the factors (7 questions * 3 foci * 4 positions * 137 subjects – 4 position * 3 verbs * 3 foci). For a detailed illustration and explanation of relevant notions, the interested reader is referred to The ANOVA table (SS, df, MS, F), GraphPad, 2014.

According to Table 15, all the factors and their combinations are significant (the p-value is lower than 0,05, as observed in the last column, which means that the differences between the means are statistically significant).

In the following sections, the effect of each factor will be analyzed (those factors which comprehend "position") in order to determine which specific variables (compared to one another) are different.

3.2.1.2. Effect of the position factor

As mentioned above, the factor involved in every possible response and thus the main focus of attention in this study is the position. In Table 16 the effect of the factor "position" on the answers is analyzed, without differentiating whether it be by Focus or Verb.

As previously mentioned, the factor "position" is significant (as expected); by applying a Tukey HSD test to this factor, the results for each pair of variables are the following:

L1 TUKEY HSD Test: Position	Cell Row	NSO	SVO	SOV	OVS
Cell Column		1	2	3	4
VSO	1		<0.001	<0.001	<0.001
SVO	2			<0.001	<0.001
VOS	3				<0.001
OVS	4				

Table 16 L1 Tukey HSD Test: Position

The output of Tukey HSD test is a table where each variable (in this case, the order of constituents) is compared to every other variable. From now on, in

order to distinguish a specific cell, a matrix reference (row, column) will be used²⁸.

Table 16 above shows how each order, when compared to one another, generates a significant difference. Therefore, there is no relation whatsoever between orders (p-values are all below the significant value of 0,05, and are marked in red).

The difference in the preferences influenced by the position in the calculated mean can be seen below:

Cell	POSITION	MEAN
1	VSO	1.54
2	SVO	3.58
3	VOS	2.42
4	OVS	2.07

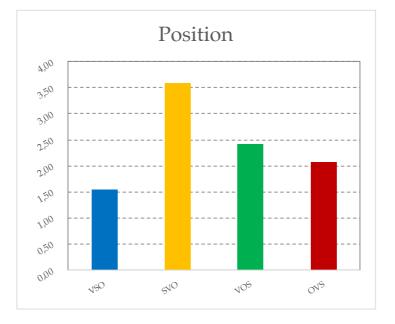
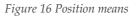


Table 17 L1 Tukey HSD Test, Position Means



In Table 18 and Figure 16 the mean values for each order are shown.

²⁸ For instance, cell (1;4) is <0.001, corresponding to Cell Row 1 and Cell Column 4, (highlighted in yellow in this case).

Overall, without considering Focus or Verb, L1 participants (speakers of Spanish as first language) strongly prefer the SVO order (3,58), while the other orders show a difference of more than one point (VOS 2,42, OVS 2,07 and VSO 1,54), which means that they are considerably far from the most acceptable option.

3.2.1.3. Effect of the factors focus - position

In the following table, the significance relation between the pairs of focus and position (without differentiating by verb) is illustrated:

L1 TUKEY HSD Test: Focus - Position	Cell Row	IF-VSO	IF-SVO	IF-VOS	IF-OVS	CF-VSO	CF-SVO	CF-VOS	CF-OVS	BF-VSO	BF-SVO	BF-VOS	BF-OVS
Cell Column		1	2	3	4	5	6	7	8	9	10	11	12
IF-VSO	1		<0.001	<0.001	<0.001	0.022	<0.001	<0.001	<0.001	1.000	<0.001	<0.001	<0.001
IF-SVO	2			<0.001	<0.001	<0.001	0.978	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
IF-VOS	3				0.892	<0.001	<0.001	0.999	<0.001	<0.001	<0.001	0.299	<0.001
IF-OVS	4					<0.001	<0.001	1.000	<0.001	<0.001	<0.001	0.002	<0.001
CF-VSO	5						<0.001	<0.001	<0.001	0.134	<0.001	<0.001	<0.001
CF-SVO	6							<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
CF-VOS	7								<0.001	<0.001	<0.001	0.023	<0.001
CF-OVS	8									<0.001	<0.001	<0.001	<0.001
BF-VSO	9										<0.001	<0.001	<0.001
BF-SVO	10											<0.001	<0.001
BF-VOS	11												<0.001
BF-OVS	12				T 11 10				D 11				

Table 18 L1 Tukey HSD Test: Focus Position

Cell No.	FOCUS	POSITION	MEAN
1	Information Focus	VSO	1.61
2	Information Focus	SVO	3.48
3	Information Focus	VOS	2.39
4	Information Focus	OVS	2.30
5	Corrective Focus	VSO	1.42
6	Corrective Focus	SVO	3.41
7	Corrective Focus	VOS	2.34
8	Corrective Focus	OVS	2.84
9	Broad Focus	VSO	1.58
10	Broad Focus	SVO	3.84
11	Broad Focus	VOS	2.52
12	Broad Focus	OVS	1.08

Table 19 L1 Tukey HSD Test, Focus - Position Means

Discussion of Results

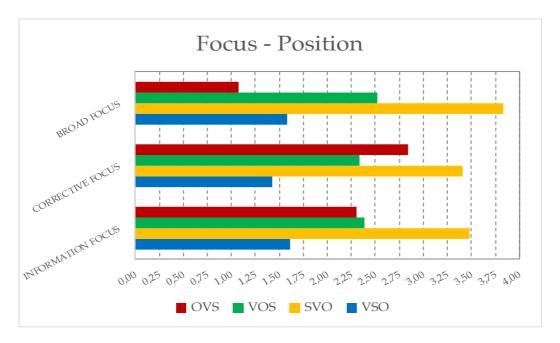


Figure 17 Focus – Position means

As shown in Figure 17, SVO is the preferred order for all verb types. It is observed that its values are always over 3 in the Likert scale for all focus types, but there is no significant difference between CF and IF (cf. Table 18, cell (2;6) = 0,978) according to the statistical analysis. However, the SVO order is so strongly preferred for BF, with a significant difference with respect to both CF and IF (respectively, cell (2;10) = <0,001 and cell (6;10) = <0,001).

The OVS order is associated to left-dislocation of the object and represents a very frequent order in Spanish. Nevertheless, the present analysis shows that use of this order varies considerably (Table 17 shows significant differences between IF/CF/BF – OVS cell (4;8), cell (4;12) and cell (8;12) = <0,001) when it is associated to:

- Corrective Focus (second preferred option)
- Information Focus (third preferred option, although there is no significant difference between OVS and VOS as shown in Table 17, cell (3;4) = 0,892)
- Broad Focus (least preferred option).

The VOS position, associated with an in situ object, can be generally considered as the second preferred order (except for the CF where OVS is strongly accepted, see Figure 17). Its level of acceptability is constant and it is not so strongly influenced by Focus since the difference between IF – VOS and CF – VOS is not significant (Table 18, cell (3;7) = 0,999), as is the case between IF – VOS and BF – VOS (cell (3;11) = 0,299), while there is a significant difference between CF – VOS and BF – VOS (cell (7;11) = 0,023).

The VSO order shows very low values in general. It can be considered to be the last preference, which leads us to the assumption that right dislocation²⁹ of the object is not a real option in Spanish. In general, the acceptability concerning VSO is not so greatly influenced by the type of focus, since there is no significant difference between IF – VSO and BF – VSO (Table 18, cell (1;9) = 1,000), and for CF-VSO and BF – VSO (cell (5;9) = 0,134), while there is a significant difference between IF VSO (cell (1;5) = 0,022).

According to these results, the following conclusions are reached:

- SVO is the preferred order in all cases.
- There is no significant difference between VOS and OVS for IF, thus both options are acceptable.
- Although the acceptance of VOS constructions varies, this order shows a considerable constant level of acceptability among all foci
- OVS strategy is strongly influenced by the type of focus, showing significant differences among all of them
- VSO order is generally the least acceptable option

²⁹ According to the Italian results of a similar study (Frascarelli & Stortini, 2019) right dislocation of the object is very frequent in Italian. However, it is not in Spanish, where the unfocused object is destressed in VOS constructions. These constructions are immaterial in Italian, where destressing is not an option.

3.2.1.4. Effect of the factors verb-position

In the following table, the significant relation between the factors verb and position (without differentiating by focus) is illustrated:

L1 TUKEY HSD Test: Verb - Position	Cell Row	TRANS-VSO	TRANS-SVO	TRANS-VOS	TRANS-OVS	UNACC-VSO	UNACC-SVO	UNACC-VOS	UNACC-OVS	UNERG-VSO	UNERG-SVO	UNERG-VOS	UNERG-OVS
Cell Column		1	2	3	4	5	6	7	8	9	10	11	12
TRANS-VSO	1		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TRANS-SVO	2			<0.001	<0.001	<0.001	0.118	<0.001	<0.001	<0.001	0.872	<0.001	<0.001
TRANS-VOS	3				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.183	<0.001
TRANS-OVS	4					<0.001	<0.001	1.000	<0.001	<0.001	<0.001	<0.001	0.001
UNACC-VSO	5						<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
UNACC-SVO	6							<0.001	<0.001	<0.001	0.994	<0.001	<0.001
UNACC-VOS	7								<0.001	<0.001	<0.001	<0.001	0.002
UNACC-OVS	8									0.644	<0.001	<0.001	<0.001
UNERG-VSO	9										<0.001	<0.001	<0.001
UNERG-SVO	10											<0.001	<0.001
UNERG-VOS	11												0.757
UNERG-OVS	12					TulentII							

Table 20 L1 Tukey HSD Test: Verb - Position

Cell No.	VERB	POSITION	MEAN
1	TRANSITIVE	VSO	0.96
2	TRANSITIVE	SVO	3.48
3	TRANSITIVE	VOS	2.16
4	TRANSITIVE	OVS	2.68
5	UNACCUSATIVE	VSO	1.92
6	UNACCUSATIVE	SVO	3.64
7	UNACCUSATIVE	VOS	2.65
8	UNACCUSATIVE	OVS	1.43
9	UNERGATIVE	VSO	1.54
10	UNERGATIVE	SVO	3.58
11	UNERGATIVE	VOS	2.32
12	UNERGATIVE	OVS	2.43

Table 21 L1 Tukey HSD Test, Verb - Position Means

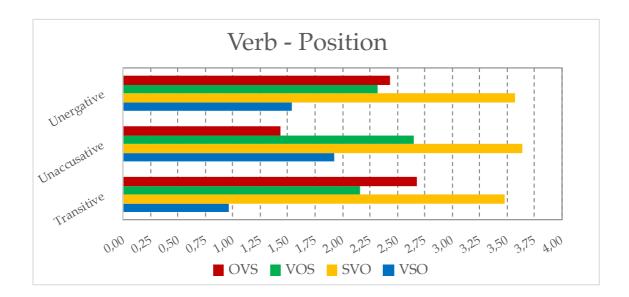


Figure 18 L1 Verb – Position means

In Table 21 and Figure 18 the average Likert acceptability of each pair is shown.

In line with the previous Focus – Position analysis, SVO is the most frequently selected option for all verb types. In this case, the level of acceptability for this order does not depend on the type of verb, since there is no significant difference among them: transtive and unaccusative verbs (Table 20, cell (2;6) = 0,118), transitive and unergative verbs (cell (2;10) = 0,872) and between unaccusatives and unergatives (cell (6;10) = 0,994).

As for OVS, in two out of three cases (unergative and transitive) this is the second preferred order (even though it does not show a significant difference in unergative verbs compared to VOS, see Table 20, cell (11;12) = 0,757). Its level of acceptability decreases with unaccusative verbs, being the least acceptable option (see Figure 18).

Similarly to the Focus – Position analysis, the VOS option shows a considerable constant level of acceptability, although the only no significant difference is between transitive and unergative verbs (Table 20, cell (3;11) = 0,183).

The VSO construction is the least acceptable option. It shows no relation at all between VSO – TR/UNERG/UNACC or with any other position or verb type (for all significant differences across all types of orders and verbs, see Table 20, row 1 and 5).

To summarize the results of this analysis, it is shown that:

- SVO order is the preferred option and this does not depend on the verb type
- For unergative verbs, there is no significant distinction between VOS and OVS strategies.
- OVS varies considerably depending on the type of verb;
- Although VOS constructions vary, they have a considerable constant level of acceptability among all verb types.
- The VSO strategy is generally the least acceptable order.

3.2.1.5. Effect of the factors focus-verb-position

L1 TUKEY HSD Test: Focus - Verb - Position; subtable Information Focus	Cell Row	IF-TRANS-VSO	IF-TRANS-SVO	IF-TRANS-VOS	IF-TRANS-OVS	IF-UNACC-VSO	IF-UNACC-SVO	IF-UNACC-VOS	IF-UNACC-OVS	IF-UNERG-VSO	IF-UNERG-SVO	IF-UNERG-VOS	IF-UNERG-OVS
Cell Column		1	2	3	4	5	6	7	8	9	10	11	12
IF-TRANS-VSO	1		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.959	0.649	<0.001	<0.001	<0.001
IF-TRANS-SVO	2			<0.001	0.404	<0.001	0.998	<0.001	<0.001	<0.001	1.000	<0.001	<0.001
IF-TRANS-VOS	3				<0.001	0.992	<0.001	<0.001	0.010	0.348	<0.001	<0.001	<0.001
IF-TRANS-OVS	4					<0.001	<0.001	0.143	<0.001	<0.001	0.979	<0.001	0.321
IF-UNACC-VSO	5						<0.001	<0.001	<0.001	<0.001	<0.001	0.018	<0.001
IF-UNACC-SVO	6							<0.001	<0.001	<0.001	0.583	<0.001	<0.001
IF-UNACC-VOS	7								<0.001	<0.001	<0.001	<0.001	1.000
IF-UNACC-OVS	8									1.000	<0.001	<0.001	<0.001
IF-UNERG-VSO	9										<0.001	<0.001	<0.001
IF-UNERG-SVO	10											<0.001	<0.001
IF-UNERG-VOS	11												0.002
IF-UNERG-OVS	12												

This section shows the effects and the means for each output:

Table 22 L1 Tukey HSD Test: Focus - Verb – Position; subtable Information Focus

Cell No.	FOCUS	VERB	POSITION	MEAN
1	Information Focus	TRANSITIVE	VSO	1.20
2	Information Focus	TRANSITIVE	SVO	3.44
3	Information Focus	TRANSITIVE	VOS	1.79
4	Information Focus	TRANSITIVE	OVS	3.13
5	Information Focus	UNACCUSATIVE	VSO	1.97
6	Information Focus	UNACCUSATIVE	SVO	3.60
7	Information Focus	UNACCUSATIVE	VOS	2.81
8	Information Focus	UNACCUSATIVE	OVS	1.40
9	Information Focus	UNERGATIVE	VSO	1.48
10	Information Focus	UNERGATIVE	SVO	3.34
11	Information Focus	UNERGATIVE	VOS	2.35
12	Information Focus	UNERGATIVE	OVS	2.81

Table 23 L1 HSD Test, Focus - Verb - Position Means; subtable Information Focus

Discussion of Results

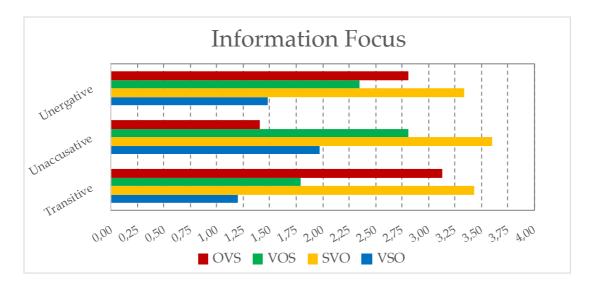


Figure 19 L1 Information Focus: Focus - Verb – Position means

As illustrated in Figure 19, in the case of IF answers, the SVO order is preferred for all verb types, and is not influenced by the verb, since there is no significant difference (Table 22, cell (2;6) = 0,998, cell (2;10) = 1,000, cell (6;10) = 0,583). The values for this type of answer are, in all cases, between 3 and 4 in the Likert scale.³⁰ In the case of transitive verbs, no significant difference has been found for SVO and OVS strategies (Table 22, cell (2;4) = 0,404.

As for the OVS order, (postverbal subject associated with left-dislocation in Spanish) it is shown that for transitive and unergative verbs OVS is quite an acceptable option, between 2,75 and 3,25 in the Likert scale (and no significant difference has been found between these two verbs, as shown in Table 22, cell (4;12) = 0,321), while this order can be considered almost unacceptable for unaccusative verbs, with values under 1,50 in the Likert scale.³¹

In relation to the VOS order, (postverbal subjects associated with "in situ" objects), low values are shown (1,79, Table 23) for transitive verbs. As for the rest

³⁰ This may mean that the subject has been moved to a position in the left periphery. As argued by Jiménez-Fernández (2015b), IF can be constructed by moving the relevant constitutent to the left.

³¹ This shows that left-dislocation is not used for the objects of unaccusatives, while this is frequent for transitives (especially) and unergatives.

of the verbs, in general VOS shows values around 2,5 in the Likert scale (see Table 23). The VOS strategy scores different values for different verbs types in the case of IF, highlighting the importance of the influence of the verb factor (see Figure 19).

As mentioned earlier, the VSO order for IF shows very low values in general (Table 23). As with VOS, the VSO strategy shows different values for different verb types.

Both OVS and VOS orders are acceptable options when the postverbal subject is focused, after the preferred SVO order. It should be noted that in the case of transitive and unergartive verbs, the OVS order is the preferred option after SVO, while VOS is the preferred option in the case of unaccusative verbs, followed by VSO and lastly OVS.

L1 TUKEY HSD Test: Focus - Verb - Position; subtable Corrective Focus	Cell Row	CF-TRANS-VSO	CF-TRANS-SVO	CF-TRANS-VOS	CF-TRANS-OVS	CF-UNACC-VSO	CF-UNACC-SVO	CF-UNACC-VOS	CF-UNACC-OVS	CF-UNERG-VSO	CF-UNERG-SVO	CF-UNERG-VOS	CF-UNERG-OVS
Cell Column		13	14	15	16	17	18	19	20	21	22	23	24
CF-TRANS-VSO	13		<0.001	<0.001	<0.001	0.016	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
CF-TRANS-SVO	14			<0.001	0.089	<0.001	0.221	<0.001	<0.001	<0.001	0.010	<0.001	1.000
CF-TRANS-VOS	15				<0.001	0.236	<0.001	<0.001	0.068	0.999	<0.001	<0.001	<0.001
CF-TRANS-OVS	16					<0.001	1.000	<0.001	<0.001	<0.001	1.000	<0.001	0.433
CF-UNACC-VSO	17						<0.001	<0.001	<0.001	1.000	<0.001	<0.001	<0.001
CF-UNACC-SVO	18							<0.001	<0.001	<0.001	1.000	<0.001	0.746
CF-UNACC-VOS	19								<0.001	<0.001	<0.001	0.034	<0.001
CF-UNACC-OVS	20									<0.001	<0.001	0.959	<0.001
CF-UNERG-VSO	21										<0.001	<0.001	<0.001
CF-UNERG-SVO	22											<0.001	0.099
CF-UNERG-VOS	23												<0.001
CF-UNERG-OVS	24												

Table 24 L1 Tukey HSD Test: Focus - Verb - Position; subtable Corrective Focus

Cell No.	FOCUS	VERB	POSITION	MEAN
13	Corrective Focus	TRANSITIVE	VSO	1.12
14	Corrective Focus	TRANSITIVE	SVO	3.16
15	Corrective Focus	TRANSITIVE	VOS	1.80
16	Corrective Focus	TRANSITIVE	OVS	3.53
17	Corrective Focus	UNACCUSATIVE	VSO	1.49
18	Corrective Focus	UNACCUSATIVE	SVO	3.46
19	Corrective Focus	UNACCUSATIVE	VOS	2.70
20	Corrective Focus	UNACCUSATIVE	OVS	2.14
21	Corrective Focus	UNERGATIVE	VSO	1.62
22	Corrective Focus	UNERGATIVE	SVO	3.58
23	Corrective Focus	UNERGATIVE	VOS	2.34
24	Corrective Focus	UNERGATIVE	OVS	3.22

Table 25 L1 HSD Test, Focus - Verb - Position Means; subtable Corrective Focus

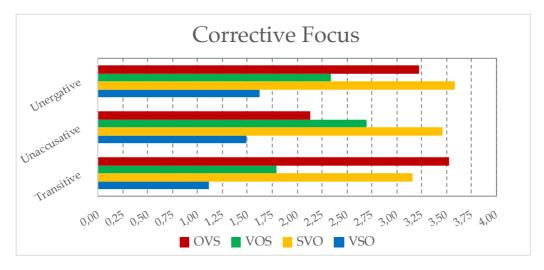


Figure 20 L1 Corrective Focus: Focus - Verb – Position means

As we can see in Table 25 and Figure 20 the preferred options in the case of CF are SVO and OVS.

Postverbal subject in the OVS order is extremely frequent with transitive and unergative verbs (relevant values in the Likert scale are over 3 in both cases), while for unaccusative verbs, not only SVO but also the VOS order is preferred over OVS. ³²

In Table 24, no significant difference between OVS transitive and unergative verbs (cell (16;24) = 0,433) emerges, while both of them are different with unaccusative OVS (cell (16;20) = <0,001 and cell (20;24), = <0,001). An

³² As mentioned earlier, left dislocation is not associated to unaccusative verbs.

important feature of the OVS strategies for CF is that not only is there no significant difference among them, but also there is no significant difference between OVS transitive and SVO transitive (cell (14;16) = 0,089), between OVS transitive and SVO unergative (cell (16;22) = 1,000), between OVS unergative and SVO unergative (cell (22,24) = 0,099). This means that, in transitive and unergative verbs, there is no significant difference for OVS and SVO answers, the latter being the first option and the former, the second.

SVO is once again the preferred option³³. While SVO unaccusative does not reflect a significant difference between SVO transitive (cell (14;18) = 0,221) and SVO unergative (cell (18;22) = 1,000), there exists a significant difference between SVO transitive and unergative (cell (14;22) = 0,010).

The VOS order is the third preferred option in the case of transitive and unergative verbs, after SVO and OVS. However, the this order shows a higher level of acceptability than OVS in the case of unaccusative verbs. The difference between VOS unaccusative and the rest of the variables is significant (Table 24, row and column 19); no relation has been found between any VOS order in the Corrective Focus (Table 24, cell (15;19) = <0,001, cell (15;23) = <0,001, cell (19;23) = 0,034).

The VSO order is the last option in all cases, showing values that are located far from the preferred options, thus showing a significant difference (<0,05) among all the other variables (Table 24, row 13 and 17), except for VSO unaccusative and VSO unaccusative, where the difference is not significant (cell (17;21) = 1,000)

³³ It would be very interesting to contrast this preference for SVO in a non-written test, that is, by offering the possibility of spontaneous answers to the same questions. In this way, we could check whether the option in most SVO answers is influenced by the fact that this is an online test completed by adults who think through and take time to mark the "correct" answer. Even if they are said that all options are grammatically correct, they tend to do this unconsciously.

L1 TUKEY HSD Test: Focus - Verb - Position; subtable Broad Focus	Cell Row	BF -TRANS-VSO	BF -TRANS-SVO	BF -TRANS-VOS	BF -TRANS-OVS	BF -UNACC-VSO	BF -UNACC-SVO	BF -UNACC-VOS	BF -UNACC-OVS	BF -UNERG-VSO	BF -UNERG-SVO	BF -UNERG-VOS	BF -UNERG-OVS
Cell Column		25	26	27	28	29	30	31	32	33	34	35	36
BF -TRANS-VSO	25		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.981	<0.001	<0.001	<0.001	<0.001
BF -TRANS-SVO	26			<0.001	<0.001	<0.001	1.000	<0.001	<0.001	<0.001	1.000	<0.001	<0.001
BF -TRANS-VOS	27				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
BF -TRANS-OVS	28					<0.001	<0.001	<0.001	<0.001	1.000	<0.001	<0.001	1.000
BF -UNACC-VSO	29						<0.001	0.999	<0.001	<0.001	<0.001	1.000	<0.001
BF -UNACC-SVO	30							<0.001	<0.001	<0.001	1.000	<0.001	<0.001
BF -UNACC-VOS	31								<0.001	<0.001	<0.001	0.998	<0.001
BF -UNACC-OVS	32									<0.001	<0.001	<0.001	<0.001
BF -UNERG-VSO	33										<0.001	<0.001	0.764
BF -UNERG-SVO	34											<0.001	<0.001
BF -UNERG-VOS	35												<0.001
BF -UNERG-OVS	36		TI 11 06				I/ 1 D		1 (11)	1.0			

Table 26 L1 Tukey HSD Test: Focus - Verb - Position; subtable Broad Focus

Cell No.	FOCUS	VERB	POSITION	MEAN
25	Broad Focus	TRANSITIVE	VSO	0.56
26	Broad Focus	TRANSITIVE	SVO	3.85
27	Broad Focus	TRANSITIVE	VOS	2.89
28	Broad Focus	TRANSITIVE	OVS	1.39
29	Broad Focus	UNACCUSATIVE	VSO	2.30
30	Broad Focus	UNACCUSATIVE	SVO	3.84
31	Broad Focus	UNACCUSATIVE	VOS	2.44
32	Broad Focus	UNACCUSATIVE	OVS	0.75
33	Broad Focus	UNERGATIVE	VSO	1.52
34	Broad Focus	UNERGATIVE	SVO	3.81
35	Broad Focus	UNERGATIVE	VOS	2.28
36	Broad Focus	UNERGATIVE	OVS	1.26

Table 27 L1 HSD Test, Focus - Verb - Position Means; subtable Corrective Focus

Discussion of Results

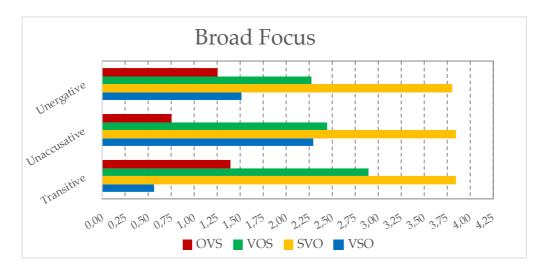


Figure 21 L1 Broad Focus: Focus - Verb – Position means

Regarding BF, the SVO order is definitely associated with this type of focus, so the numbers in this case meet the expectations (see Table 27 and Figure 21). The values for the preferred option (SVO) are higher than in any other case, there are no SVO options under 3,75 in the Likert scale. It can therefore be claimed that the connection between SVO and BF is appropriate. The SVO preference in BF is not influenced by the verb type, as there is no significant difference between any of the SVO answers (Table 26, cell (26;30) = 1,000, cell (26;34) =1,000 and cell (30;34) =1,000).

Despite that, it is necessary to highlight the relevance of VOS order in all BF cases, since the values for this option are mostly over 2 on the Likert scale and is the informants' second preferred option. There is no significant difference in the acceptability of VOS answers between unaccusative and unergative (Table 26, cell (31;35) = 0,998), whereas there is significant difference between transitive and unergative (cell 27;35) and transitive and unaccusative verbs (cell 27;31).

Regarding the results for VSO order, transitive verbs show really low values (Table 27, 0,56), while unaccusative (2,30) and unergative (1,52) verbs show higher values. It is important to notice how, for unergative verbs, there is no significant difference between VSO and OVS (Table 26, (cell 33;36) = 0,764),

while, for unaccusative verbs, there is no significant difference between VSO and VOS (Table 26, cell (29;31) = 0,999).

While for CF and IF the OVS strategy was a valid answer, for BF it is shown that this order is not an option. In all verb types the acceptability of this answer is below 1,5 (see Table 27) with a lower mean for unaccusative verbs and a grade of acceptability of 0,75. There is no significant difference in the answers given for transitive and unergative verbs Table 26, cell (28;36) =1,000).

The results of this analysis can be summarized as follows:

- SVO is generally the most acceptable answer, and this is not influenced by the type of verb (except for CF between transitive and unergative verbs).
- The preference for OVS answers is strongly influenced by the type of focus: it is widely accepted in IF and CF, but it is not considered as a valid order for BF. Generally, OVS answer strategies are best linked with transitive verbs, with slightly less preference for unergative verbs, while unaccusative verbs are considered a less acceptable option.
- The VOS strategies are generally accepted with all focus types and verbs; for IF and CF the least preferred VOS order is linked with transitive verbs, while in BF most preference is given to this option.
- The VSO strategy is are the least acceptable option. The only value over 2 can be found in BF for unaccusative verbs.

3.3. THE ONLINE TEST (TARGET GROUP: SPANISH L2)

3.3.1. Statistics Analysis

The Online Test has been carried out by a target group (34 speakers of Spanish as a second language). The answers given by the participants have been collected in order to:

- explore the effect of the different factors on the acceptability of each answer;
- use these data as reference values to compare them with those of speakers of Spanish as a first language;

The acceptability judgments obtained in the experimental test have been analyzed to determine whether there is a significant difference within the three factors involved regarding the acceptability variation between the different contexts. In this case, the statistical method used for this is the ANOVA (ANalysis Of VAriance) test, described in section 2.3.3.

Effect	Univariate Tests of Significance for Lickert (Respuestas_EnglishStudents2019) Sigma-restricted parameterization Effective hypothesis decomposition										
	SS	Degr. of (Freedom)	MS	F	р						
Intercept	15240.00	1	15240.00	9052.157	<0.001						
Focus	4.15	2	2.07	1.231	0.292						
Verb	7.83	2	3.91	2.325	0.098						
Position	1258.22	3	419.41	249.116	<0.001						
Focus*Verb	6.06	4	1.52	0.900	0.463						
Focus*Position	31.52	6	5.25	3.121	0.005						
Verb*Position	115.44	6	19.24	11.428	<0.001						
Focus*Verb*Posit ion	44.64	12	3.72	2.209	0.009						
Error	4747.69	2820	1.68								

3.3.1.1. Effect of the main factors and their interactions

Table 28 L2 ANOVA test, significance of the factors

The description of the components in Table 28 is explained in section 3.2.1.1.

According to Table 28, it is shown that the main effect among all three factors (focus*verb*position*) is significant (p-value = 0,009). In addition, when factors are compared in pairs it is observed that the interaction between them is also significant (verb*position*; focus*position*), except for the case of focus*verb*, where the difference is not significant. Finally, each individual factor shows a difference in the answers that, as we can see in the table, is significant in the case of position, but not in the cases of focus and verb.

As previously mentioned, the factor "position" is the key factor since we are interested in studying the order (SVO, VSO, VOS, OVS) chosen by the participants. This factor is related to the verb types and the focus types, it is always present and produces a variation in the answer. All significant values are marked in red.

3.3.1.2. Effect of the position factor

. In Table 29 the effect of the "position" factor on the answers is analyzed, without differentiating whether it be by Focus or Verb.

As previously mentioned, the "position" factor is significant (as expected); by applying a Tukey HSD test to this factor, the results for each pair of variables are the following:

SVO	SOV	SVO	NSO	Cell Row	L2 TUKEY HSD Test: Position
4	3	2	1		Cell Column
<0.001	<0.001	<0.001		1	VSO
< 0.001	<0.001			2	SVO
<0.001				3	VOS
				4	OVS
	<0.001	<0.001		3 4	SVO VOS

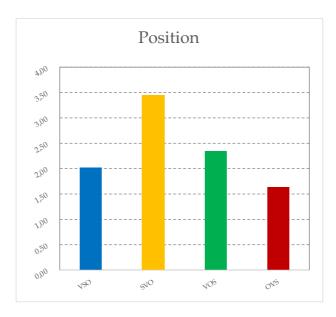
Table 29 L2 Tukey HSD Test: Position

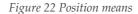
Table 29 shows how each order, when compared to one another, generates a significant difference, as is the case of L1. Therefore, there is no relation whatsoever between orders (all p-values are below the significant value of 0,05, and are marked in red).

The difference in the preferences influenced only by the position in the calculated mean can be seen below:

Cell	POSITION	MEAN
1	VSO	2.03
2	SVO	3.45
3	VOS	2.34
4	OVS	1.63

Table 30 L2 Tukey HSD Test, Position Means





In Table 30 and Figure 22, mean values for each order are shown. As observed in the values of the Likert scale, the preferred order is SVO (3,45), followed by VOS (2,34) and VSO (2.03). The OVS order is the least acceptable option in the case of L2 participants, unlike the case of L1, where the responses showed higher values for this order and lower values for VSO. As previously mentioned, all these values are significantly different to each other (see Table 28).

3.3.1.3. Effect of the factors focus - position

In the following table, the significance relation between the pairs of focus and position (without differentiating by verb) is illustrated:

L2 TUKEY HSD Test: Focus - Position	Cell Row	IF-VSO	IF-SVO	IF-VOS	IF-OVS	CF-VSO	CF-SVO	CF-VOS	CF-OVS	BF-VSO	BF-SVO	BF-VOS	BF-OVS
Cell Column		1	2	3	4	5	6	7	8	9	10	11	12
IF-VSO	1		<0.001	0.357	0.038	1.000	<0.001	0.130	0.968	1.000	<0.001	0.583	<0.001
IF-SVO	2			<0.001	<0.001	<0.001	1.000	<0.001	<0.001	<0.001	0.999	<0.001	<0.001
IF-VOS	3				<0.001	0.042	<0.001	1.000	0.007	0.798	<0.001	1.000	<0.001
IF-OVS	4					0.335	<0.001	<0.001	0.709	0.004	<0.001	<0.001	0.583
CF-VSO	5						<0.001	0.009	1.000	0.945	<0.001	0.108	<0.001
CF-SVO	6							<0.001	<0.001	<0.001	0.999	<0.001	<0.001
CF-VOS	7								0.001	0.479	<0.001	1.000	<0.001
CF-OVS	8									0.684	<0.001	0.021	0.002
BF-VSO	9										<0.001	0.936	<0.001
BF-SVO	10											<0.001	<0.001
BF-VOS	11												<0.001
BF-OVS	12												

Table 31 L2 Tukey HSD Test: Focus Position

Cell No.	FOCUS	POSITION	MEAN
1	Information Focus	VSO	2.04
2	Information Focus	SVO	3.42
3	Information Focus	VOS	2.33
4	Information Focus	OVS	1.64
5	Corrective Focus	VSO	1.94
6	Corrective Focus	SVO	3.42
7	Corrective Focus	VOS	2.39
8	Corrective Focus	OVS	1.87
9	Broad Focus	VSO	2.11
10	Broad Focus	SVO	3.52
11	Broad Focus	VOS	2.29
12	Broad Focus	OVS	1.38

Table 32 L2 Tukey HSD Test, Focus - Position Means

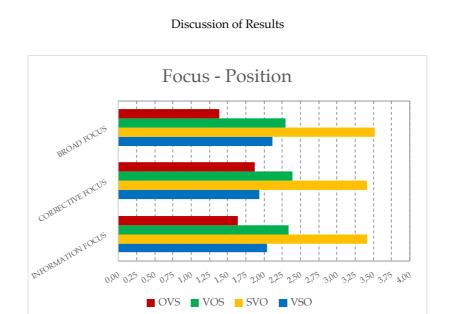


Figure 23 L2 Focus – Position means

As shown in Figure 23, SVO is the most acceptable order for all verb types. It is observed that values are all above 3 on the Likert scale in all cases and the selection of this order is not influenced by the type of focus, since there is no significant difference in any case among the focus types (Table 31, cell (2;6) = 1,000, cell (2;10) = 0,999 and cell (6;10) = 0,999). This result is similar to the output obtained for L1, although in that case the significant difference was generated between BF with respect to the other focus types.

The VOS order is the second preferred option in all focus types. The mean is constant in all cases, around 2,3 (see Table 32). Its grade of acceptability is not influenced by the type of focus since there is no significant difference among the focus types (Table 31, cell (3;7) = 1,000, cell (3;11) = 1,000 and cell (7;11) = 1,000). In addition, it is important to highlight that there is no significant difference for IF (Table 31; cell (1;3) = 0,357) and for BF (Table 31, cell (9;11) = 0,936) between VOS and VSO strategy, the latter being the third option, and the former, the second.

The VSO order is the third preferred answer and, as is the case with SVO and VOS, its mean values are constant across all types of focus, with values around 2,0 (see Table 32). Again, the acceptability of this order is not influenced

by the verb type, as there is no significant difference between each VSO pair compared to each other (Table 31, cell (1;5) = 1,000, cell (1;9) = 1,000 and cell (5;9) = 0,945). While the VSO order does not show significant difference with VOS for IF and BF, in the case of CF, the VSO order does not show any significant difference with the OVS answers (Table 31, cell (5;8) = 1,000).

The OVS order is the least acceptable option in all cases, although in the case of CF there is no significant difference with VSO. As with previous cases, OVS does not show any significant difference between IF and CF (Table 31, cell (4;8) = 0,709) and between IF and BF (cell (4;12) = 0,583), while there is a significant difference between BF and CF regarding the OVS order (cell (8;12) = 0,002).

According to these results, the following conclusions are reached:

- Overall, the grade of acceptability of the orders is not influenced by the focus type in the case of L2 informants (the only exception is CF – OVS vs BF – OVS);
- The SVO order is the most acceptable option, followed by VOS,
 VSO. The least acceptable order is OVS.
- There is no significant difference between VOS and VSO, thus both can be considered as the second preferred option in the cases of BF and IF.
- In the case of CF, there is no significant difference between VSO and OVS, the latter being the last option and the former, the third.

3.3.1.4. Effect of the factors verb-position

In the following table, the significant relation between the factors verb and position (without differentiating by focus) is illustrated:

L2 TUKEY HSD Test: Verb - Position	Cell Row	TRANS-VSO	TRANS-SVO	TRANS-VOS	TRANS-OVS	UNACC-VSO	UNACC-SVO	UNACC-VOS	UNACC-OVS	UNERG-VSO	UNERG-SVO	UNERG-VOS	UNERG-OVS
Cell Column		1	2	3	4	5	6	7	8	9	10	11	12
TRANS-VSO	1		<0.001	<0.001	0.203	<0.001	<0.001	<0.001	1.000	0.002	<0.001	<0.001	0.994
TRANS-SVO	2			<0.001	<0.001	<0.001	0.996	<0.001	<0.001	<0.001	0.909	<0.001	<0.001
TRANS-VOS	3				0.026	1.000	<0.001	0.986	<0.001	0.651	<0.001	0.953	<0.001
TRANS-OVS	4					0.005	<0.001	<0.001	0.008	0.962	<0.001	0.678	0.894
UNACC-VSO	5						<0.001	0.982	<0.001	0.437	<0.001	0.875	<0.001
UNACC-SVO	6							<0.001	<0.001	<0.001	1.000	<0.001	<0.001
UNACC-VOS	7								<0.001	0.024	<0.001	0.168	<0.001
UNACC-OVS	8									<0.001	<0.001	<0.001	0.699
UNERG-VSO	9										<0.001	1.000	0.094
UNERG-SVO	10											<0.001	<0.001
UNERG-VOS	11												0.013
UNERG-OVS	12												

Table 33 L2 Tukey HSD Test: Verb Position

Cell No.	VERB	POSITION	MEAN
1	TRANSITIVE	VSO	1.53
2	TRANSITIVE	SVO	3.56
3	TRANSITIVE	VOS	2.33
4	TRANSITIVE	OVS	1.88
5	UNACCUSATIVE	VSO	2.34
6	UNACCUSATIVE	SVO	3.44
7	UNACCUSATIVE	VOS	2.47
8	UNACCUSATIVE	OVS	1.44
9	UNERGATIVE	VSO	2.06
10	UNERGATIVE	SVO	3.36
11	UNERGATIVE	VOS	2.14
12	UNERGATIVE	OVS	1.67

Table 34 L2 Tukey HSD Test, Verb - Position Means

Discussion of Results

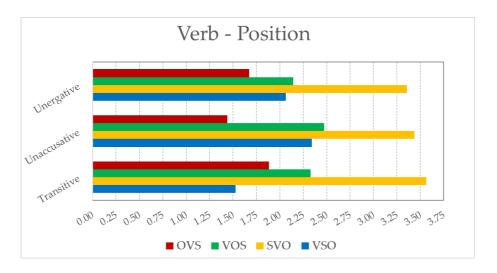


Figure 24 L2 Verb – Position means

As expected, SVO is the preferred order for all verbs. In Table 34 it is observed that values are around 3,4 on the Likert scale. The level of acceptability for this order does not depend on the type of verb, since there is no significant difference in any of the cases: between transitive and unaccusative verbs (Table 33, cell (2;6) = 0,996), transitive and unergative verbs (cell (2;10) = 0,909) and unaccusatives and unergatives (cell (6;10) = 1,000). This result is similar to the output obtained for L1, as there is no significant difference among the verb types.

The VOS order is the second most acceptable option for all verbs. As observed in Table 34, its means are over 2 points in all cases and it does not depend on the verb type since there is no significant difference among them (Table 33, cell (3;7) = 0,986, cell (3;11) = 0,953 and cell (7;11) = 0,168). Additionally, it is important to highlight that there is no significant difference between the VOS and VSO orders for unaccusative verbs (Table 33; cell (5;7) = 0,982) and unergative verbs (cell (9;11) = 0,982), in both cases its mean values are over 2 on the Likert scale.

As mentioned above, VSO is generally the third preferred option, although it is the least acceptable option for transitive verbs (as previously mentioned, there is no significant difference between VSO and VOS for unergative and unaccusative verbs). The level of acceptability of VSO is not 130

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influenced by the verb type in the case of unaccusative and unergative verbs, since there is no significant difference between them (Table 33, cell (5;9) = 0,437), while both of them show significant differences with transitive verbs (cell (1;5) = <0,001 and cell (1;9) = 0,002), which is not considered as an acceptable option (Table 34: 1,53). The VSO and OVS options do not show any significant difference between them in transitive (cell (1;4) = 0,203) and unergative verbs (cell (9;12) = 0,094).

The OVS order is the least acceptable option, except for transitive verbs. There is no significant difference between unergative and unaccusative verbs (Table 33, cell (8;12) = 0,699) and between transitive and unergative verbs (cell (4;12) = 0,894), while there is a significant difference between unaccusative and transitive verbs (cell (4;8) = 0,008)

According to these results, the following conclusions are reached:

- The SVO order is the most acceptable option and this does not depend on the verb type;
- The VOS order does not depend on the focus, since there is no significant difference among the focus types. This option shows a similar level of acceptance to VSO in unaccusative and unergative verbs.
- The acceptability of the VSO order is not influenced by the focus type in relation to unaccusative and unergative verbs (relatively acceptable answer), while it is not considered such an acceptable option in the case of transitive verbs.
- OVS is generally considered the least acceptable option, except in the case of transitive verbs.

3.3.1.5. Effect of the factors focus-verb-position

L2 TUKEY HSD Test: Focus - Verb - Position; subtable Information Focus	Cell Row	IF-TRANS-VSO	IF-TRANS-SVO	IF-TRANS-VOS	IF-TRANS-OVS	IF-UNACC-VSO	IF-UNACC-SVO	IF-UNACC-VOS	IF-UNACC-OVS	IF-UNERG-VSO	IF-UNERG-SVO	IF-UNERG-VOS	IF-UNERG-OVS
Cell Column		1	2	3	4	5	6	7	8	9	10	11	12
IF-TRANS-VSO	1		< 0.001	0.040	0.913	0.002	<0.001	<0.001	1.000	0.011	<0.001	0.382	0.999
IF-TRANS-SVO	2			<0.001	<0.001	<0.001	1.000	<0.001	<0.001	<0.001	0.937	<0.001	<0.001
IF-TRANS-VOS	3				1.000	1.000	<0.001	1.000	0.016	1.000	0.032	1.000	0.970
IF-TRANS-OVS	4					0.992	<0.001	0.216	0.862	0.998	<0.001	1.000	1.000
IF-UNACC-VSO	5						<0.001	1.000	<0.001	1.000	0.027	1.000	0.697
IF-UNACC-SVO	6							0.001	<0.001	<0.001	0.999	<0.001	<0.001
IF-UNACC-VOS	7								<0.001	1.000	0.753	0.819	0.021
IF-UNACC-OVS	8									0.003	<0.001	0.259	0.999
IF-UNERG-VSO	9										0.097	1.000	0.848
IF-UNERG-SVO	10											0.001	<0.001
IF-UNERG-VOS	11												1.000
IF-UNERG-OVS	12												

This section shows the effects and the means for each output:

Table 35 L2 Tukey HSD Test: Focus - Verb - Position; subtable Information Focus

Cell No.	FOCUS	VERB	POSITION	MEAN
1	Information Focus	TRANSITIVE	VSO	1.37
2	Information Focus	TRANSITIVE	SVO	3.63
3	Information Focus	TRANSITIVE	VOS	2.24
4	Information Focus	TRANSITIVE	OVS	1.90
5	Information Focus	UNACCUSATIVE	VSO	2.30
6	Information Focus	UNACCUSATIVE	SVO	3.47
7	Information Focus	UNACCUSATIVE	VOS	2.58
8	Information Focus	UNACCUSATIVE	OVS	1.39
9	Information Focus	UNERGATIVE	VSO	2.31
10	Information Focus	UNERGATIVE	SVO	3.12
11	Information Focus	UNERGATIVE	VOS	2.06
12	Information Focus	UNERGATIVE	OVS	1.75

Table 36 L2 Tukey HSD Test, Focus - Verb - Position Means; subtable Information Focus

Discussion of Results

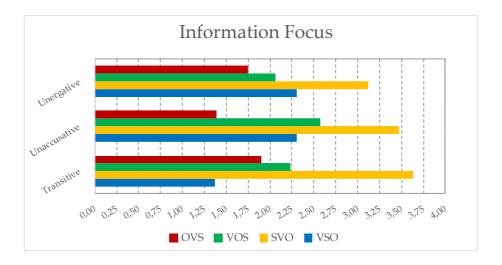


Figure 25 L2 Information Focus: Focus - Verb - Position means

As illustrated in Figure 25 the three-factor analysis shows that SVO is the most acceptable order. Its acceptability within IF does not depend on the verb, as there is no significant difference between transitive and unaccusative verbs (Table 35, cell (2;6) = 1,000) transitive and unergative verbs (cell (2;10) = 0,937) and unaccusatives and unergatives (cell (6;10) = 0,999).

The VOS order is the second most acceptable option, and its level of acceptability is not influenced by the verb, as there is no significant difference between transitive and unaccusative verbs (Table 35, (cell (3;7) = 1,000), transitive and unergative verbs (cell (3;12) = 1,000) and unaccusatives and unergatives (cell (7;11) = 0,819). In all cases, the VOS order shows no significant difference with VSO (cell 5;7) = 1,000) for unergative and unaccusative verbs (cell (3;4) = 1,000).

In relation to VSO, there is a high level of discrepancy regarding acceptability since it is the second preferred option in the case of unergative verbs, but the least preferred option for transitive verbs. While for unaccusative and unergative verbs the acceptability of VSO is not influenced by the type of verb (as there is no significant difference, Table 35, cell (5;9) = 1,000), in the case of transitive verbs there is (cell (1;5) = 0,002 and cell (1;9) = 0,011). As for

unergative verbs, the VSO order does not show any significant difference with the other orders (row 9); in the case of unaccusative verbs, it shows no significant difference with VOS (see Table 35, cell (5;7)=1000) while in transitive verbs the VSO order does not show any significant difference with OVS (Table 35, row 1).

The OVS order is, in general, the least acceptable order. It is not influenced by the verb type, as observed in Table 35 (cell (4;8) = 0,862, cell (4;12) = 1,000; cell (8;12) = 0,999). This order does not show a significant difference between transitive verbs and unergative verbs, with VSO (cell (1;4) = 0,913 and cell (9;12) = 0,848 respectively) and VOS (cell (3;4) = 1,000 and cell (11;12) = 1,000).

According to these results, the following conclusions are reached:

- The SVO order is the most acceptable option and this does not depend on the verb type;
- The acceptability of VOS order is not influenced by the focus type and is similar to VSO in unaccusative and unergative verbs.
- The VSO option is not influenced by the focus type regarding unaccusative and unergative verbs (acceptable answers), while it is not considered such an acceptable option in the case of transitive verbs.
- The OVS order is considered the least acceptable option, although it is not significantly different with both VSO and VOS in the case of unergative and transitive verbs.

Discussion of Results

L2 TUKEY HSD Test: Focus - Verb - Position; subtable Corrective Focus	Cell Row	CF-TRANS-VSO	CF-TRANS-SVO	CF-TRANS-VOS	CF-TRANS-OVS	CF-UNACC-VSO	CF-UNACC-SVO	CF-UNACC-VOS	CF-UNACC-OVS	CF-UNERG-VSO	CF-UNERG-SVO	CF-UNERG-VOS	CF-UNERG-OVS
Cell Column		13	14	15	16	17	18	19	20	21	22	23	24
CF-TRANS-VSO	13		<0.001	0.848	0.913	0.999	<0.001	0.013	1.000	0.999	<0.001	0.546	1.000
CF-TRANS-SVO	14			<0.001	<0.001	<0.001	1.000	0.003	<0.001	<0.001	1.000	<0.001	<0.001
CF-TRANS-VOS	15				1.000	1.000	<0.001	1.000	0.434	1.000	<0.001	1.000	1.000
CF-TRANS-OVS	16					1.000	<0.001	1.000	0.556	1.000	<0.001	1.000	1.000
CF-UNACC-VSO	17						<0.001	0.677	0.951	1.000	<0.001	1.000	1.000
CF-UNACC-SVO	18							0.001	<0.001	<0.001	1.000	<0.001	<0.001
CF-UNACC-VOS	19								<0.001	0.936	0.017	1.000	0.494
CF-UNACC-OVS	20									0.972	<0.001	0.156	1.000
CF-UNERG-VSO	21										<0.001	1.000	1.000
CF-UNERG-SVO	22											0.002	<0.001
CF-UNERG-VOS	23												0.999
CF-UNERG-OVS	24			LIGD					11 0				

Table 37 Tukey HSD Test: Focus - Verb - Position; subtable Corrective Focus

Cell No.	FOCUS	VERB	POSITION	MEAN
13	Corrective Focus	TRANSITIVE	VSO	1.68
14	Corrective Focus	TRANSITIVE	SVO	3.46
15	Corrective Focus	TRANSITIVE	VOS	2.24
16	Corrective Focus	TRANSITIVE	OVS	2.21
17	Corrective Focus	UNACCUSATIVE	VSO	2.03
18	Corrective Focus	UNACCUSATIVE	SVO	3.42
19	Corrective Focus	UNACCUSATIVE	VOS	2.53
20	Corrective Focus	UNACCUSATIVE	OVS	1.62
21	Corrective Focus	UNERGATIVE	VSO	2.06
22	Corrective Focus	UNERGATIVE	SVO	3.37
23	Corrective Focus	UNERGATIVE	VOS	2.32
24	Corrective Focus	UNERGATIVE	OVS	1.93

Table 38 L2 Tukey HSD Test, Focus - Verb - Position Means; subtable Corrective Focus

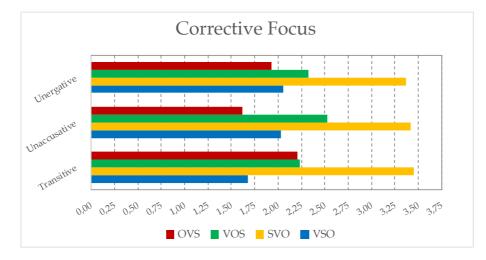


Figure 26 L2 Corrective Focus: Focus - Verb – Position means

Discussion of Results

As expected, SVO is once again the most acceptable order by far. It does not show any significant difference between transitive and unaccusative verbs (Table 37 cell (14;18) = 1,000) transitive and unergative verbs (cell (14;22) = 1,000) and unaccusatives and unergatives (cell (18;22) = 1,000); in addition, SVO answers are statistically different compared to any other answer (Table 37, row 14 and row 22).

The VOS order is the second most acceptable option. It is not influenced by the verb type since there is no significant difference between transitive and unaccusative verbs (Table 37, cell (15;19) = 1,000), transitive and unergative verbs (cell (15;23) = 1,000) and unaccusative and unergative verbs (cell (19;23) = 1,000).

The VSO is the third preferred option for unaccusative and unergative verbs, and as with SVO and VOS, there is no significant difference between transitive and unaccusative verbs (Table 37, cell (13;17) = 0,999) transitive and unergative verbs (cell (13;21) = 0,999) and unaccusatives and unergatives (cell (17;21) = 1,000).

Regarding OVS, this order is not influenced by the verb type either, since there is no significant difference between transitive and unaccusative verbs (Table 37, cell (16;20) = 0,556), transitive and unergative verbs (cell (16;24) = 1,000) and finally, unaccusative and unergatives (cell (20;24) = 1,000).

In the case of transitive and unergative verbs, apart from SVO, there is no significant difference among the three other orders (transitive verbs: VOS-VSO cell (13;15) = 0,848, VOS-OVS cell (15;16) = 1,000, and VSO-OVS cell (13;16) = 0,913. Unergative verbs: VOS-VSO cell (21;23) = 1,000, VOS-OVS cell (23;24) = 0,999, and VSO-OVS cell (21;24) = 1,000).

As for unaccusative verbs, without including SVO, VSO does not show any significant difference with VOS (cell (17;19) = 0,677) and with OVS (cell

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(17;20) = 0,951, while between VOS and OVS there is a significant difference (cell (19;20) = <0,001).

According to these results, the following conclusions are reached:

- In the case of CF, the acceptability of all orders is not influenced by the verb type.
- While SVO is by far the most acceptable option for any type of verb, there is no significant difference between the other three orders in transitive and unergative verbs. However, in unaccusative verbs there is no significant difference between VSO and VOS/OVS, but VOS and OVS show a significant difference compared to each other.

Discussion of Results

L2 TUKEY HSD Test: Focus - Verb - Position; subtable Broad Focus	Cell Row	BF -TRANS- VSO	BF -TRANS- SVO	BF -TRANS- VOS	BF -TRANS- OVS	BF -UNACC- VSO	BF -UNACC- SVO	BF -UNACC- VOS	BF -UNACC- OVS	BF -UNERG- VSO	BF -UNERG- SVO	BF -UNERG- VOS	BF -UNERG- OVS
Cell Column		25	26	27	28	29	30	31	32	33	34	35	36
BF -TRANS-VSO	25		<0.001	0.007	1.000	<0.001	<0.001	0.059	1.000	1.000	<0.001	0.956	1.000
BF -TRANS-SVO	26			0.001	<0.001	0.003	1.000	<0.001	<0.001	<0.001	1.000	<0.001	<0.001
BF -TRANS-VOS	27				0.007	1.000	0.004	1.000	<0.001	0.382	0.001	0.981	<0.001
BF -TRANS-OVS	28					<0.001	<0.001	0.059	1.000	1.000	<0.001	0.956	1.000
BF -UNACC-VSO	29						0.023	0.988	<0.001	0.011	0.005	0.341	<0.001
BF -UNACC-SVO	30							<0.001	<0.001	<0.001	1.000	<0.001	<0.001
BF -UNACC-VOS	31								<0.001	0.898	<0.001	1.000	0.001
BF -UNACC-OVS	32									0.819	<0.001	0.095	1.000
BF -UNERG-VSO	33										<0.001	1.000	0.970
BF -UNERG-SVO	34											<0.001	<0.001
BF -UNERG-VOS	35												0.333
BF -UNERG-OVS	36		1 00 10						1.11.1				

Table 39 L2 Tukey HSD Test: Focus - Verb - Position; subtable Broad Focus

Cell No.	FOCUS	VERB	POSITION	MEAN
25	Broad Focus	TRANSITIVE	VSO	1.54
26	Broad Focus	TRANSITIVE	SVO	3.60
27	Broad Focus	TRANSITIVE	VOS	2.52
28	Broad Focus	TRANSITIVE	OVS	1.54
29	Broad Focus	UNACCUSATIVE	VSO	2.69
30	Broad Focus	UNACCUSATIVE	SVO	3.42
31	Broad Focus	UNACCUSATIVE	VOS	2.31
32	Broad Focus	UNACCUSATIVE	OVS	1.30
33	Broad Focus	UNERGATIVE	VSO	1.82
34	Broad Focus	UNERGATIVE	SVO	3.59
35	Broad Focus	UNERGATIVE	VOS	2.04
36	Broad Focus	UNERGATIVE	OVS	1.33

Table 40 L2 Tukey HSD Test, Focus - Verb - Position Means; subtable Broad Focus

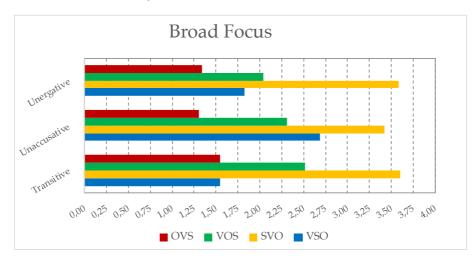


Figure 27 L2 Broad Focus: Focus - Verb – Position means

Discussion of Results

As previously mentioned, the SVO order is definitely associated with this type of focus and it is the most acceptable order in this case. All the values for SVO are around 3,5 on the Likert scale. In Table 39 it is observed that there is no significant difference in the following cases: between transitive and unaccusative verbs (cell (26;30) = 1,000), transitive and unergative verbs (cell (26;34) = 1,000) and unaccusative and unergative verbs (cell (30;34) = 1,000); in addition, SVO answers are statistically different when compared to any other focus and verb answer (row 26 and row 30).

The VOS is not influenced by the type of verb, since there is no significant difference between transitive and unaccusative verbs (Table 39, cell (27;31) = 1,000), transitive and unergative verbs (cell (27;35) = 1,000) and finally, unaccusative and unergative verbs (cell (31;35) = 0,981).

As for VSO, this order is generally the third option, showing no significant difference between transitive and unergative verbs (cell (25;33) = 1,000), whereas the differences between transitive and unaccusative verbs and between unergative and unaccusative verbs are significant (cell (25;29) = <0,001 and cell (29;33) = 0,011, respectively).

The OVS order is the least acceptable option in this case, as clearly observed in Figure 27, and no significant differences are shown across the verb types: the differences between transitive and unaccusative verbs (Table 39 cell (28;32) = 1,000), transitive and unergative verbs (cell (28;36) = 1,000) and unaccusatives and unergatives (cell (32;36) = 1,000) are not significant.

The VOS order is the second most acceptable option for BF in transitive verbs, being statistically different compared to SVO (as previously mentioned), OVS (Table 39, cell (27;28) = 0,007) and VSO (Table 39Table 39, cell (25;27) = 0,007). As for OVS and VSO, these orders do not show a significant difference between them (cell 25;28) = 1,000). Its mean values are considerably low (around

1,5) as observed in Table 40. In the case of unaccusative verbs, there is no significant difference between VOS and VSO (cell (28;31) = 0,988), the latter being the second option and the former, the third. The OVS order is not considered an acceptable option for this type of verb. Regarding unergative verbs, as with transitive and unnacusative verbs, SVO is the most acceptable option. In this case, there is no significant difference among the three orders compared to each other, as shown in Table 39 (cell (33;35) = 1,000, cell (33;36) = 0,970, and cell (35;36) = 0,333). This is also illustrated in Table 40, where the means show low values for VSO, VOS and OVS (rows 33, 35 and 36 respectively).

According to these results, the following conclusions are reached:

- The VSO order is the only one statistically different depending on the verb type, while the other orders are not.
- The SVO order is clearly the first option for transitive verbs, followed by VOS, while OVS and VSO are the least acceptable options.
- There is no significant difference between VOS and VSO in the case of unaccusative verbs, both considered acceptable answers, while OVS is the least acceptable option.
- The preference for SVO is clear in the case of unergative verbs, showing a difference of more than one point with the other orders. There is no significant difference among VSO, VOS and OVS since they are not considered acceptable options.

3.4.OVERVIEW ANALYSIS L1 VS L2

3.4.1. Statistics Analysis

In this section, an overview analysis concerning the L1 responses in contrast to the L2 responses is carried out. In addition to the three factors previously involved, there is a fourth factor: the language.

The aim of this comparison is to analyze the effects of this new additional factor in the answers provided by the English-speaking students (target group) and the Spanish informants (control group). Thus, the results will be compared in order to verify if there is a significant difference between the acceptability of the different orders.

In the next sections this issue will be analyzed.

3.4.1.1. Effect of the main factors and their interaction

The effects of the main factors and their interaction is illustrated as follows:

Discussion o	f Results
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Effect	Univariate Tests of Significance for Lickert (Comparing) Sigma-restricted parameterization Effective hypothesis decomposition									
	SS	Degr. of (Freedom)	MS	F	р					
Intercept	49827.80	1	49827.80	35024.44	<0.001					
{1}Language	4.95	1	4.95	3.48	0.062					
{2}Focus	50.62	2	25.31	17.79	<0.001					
{3}Verb	13.67	2	6.83	4.80	0.008					
{4}Position	4223.76	3	1407.92	989.64	<0.001					
Language*Focus	15.06	2	7.53	5.29	0.005					
Language*Verb	13.21	2	6.61	4.64	0.010					
Focus*Verb	24.98	4	6.24	4.39	0.002					
Language*Position	292.10	3	97.37	68.44	<0.001					
Focus*Position	522.95	6	87.16	61.26	<0.001					
Verb*Position	673.35	6	112.22	78.88	<0.001					
Language*Focus*Verb	2.81	4	0.70	0.49	0.741					
Language*Focus*Position	180.95	6	30.16	21.20	<0.001					
Language*Verb*Position	99.80	6	16.63	11.69	<0.001					
Focus*Verb*Position	218.90	12	18.24	12.82	<0.001					
Language*Focus*Verb*Position	60.80	12	5.07	3.56	<0.001					
Error	20332.63	14292	1.42							

Table 41 L1 vs L2: Significant factors

Table 41 provides a huge amount of information. The main aspects that will be described are all those factors or combination of factors which include language (key element of this chapter) and position (key element of this research).

To begin with, it is important to point out that the "language" factor does not generate a significant difference in the answer. This is important because it means that, without differentiating by focus, verb or position, the average level of acceptability is the same. Therefore, all the differences will be generated by the interaction of this factor with other ones (especially the position).

Another interaction which does not generate a significant difference is the language – focus – verb, since it shows that the presence of the position factor is fundamental in order to generate a significant difference (although in some other cases where the position is not present there is a significant difference).

Discussion of Results

Those interactions which generate significant differences will now be analyzed.

	Cell		Lang	uage	ME	AN	
	1		L2		2.36		
	2	2	L1		2.4	40	
		Table 42	2 Langua	ige mean	S		
L1 vs L2 TUKEY HSD Test: Language			Uell YOW	<u>-</u>	1	-	5
Cell C	olumn			Ĩ	1	2	2
L	2		1			0.1	19
L	1		2				
	Т	Tahle 43	L1 vs L2	Tukeu l	HSD Tes	st [.] Positi	011

Effect of the position language 3.4.1.2.

43 L1 vs L2 Tukey HSD Test: Position

As illustrated in Table 43, the *language factor shows "no significance" between L1 and L2 answers. The fact that these average results are close to each other (Table 42, 2,40 and 2,36) and thus, the difference is not significant, only shows that the grade of acceptability of the different answers provided is similar. However, this does not add any additional information about the correlation between the other factors (focus, position, verb). The effect of the position in relation to the language factor will be developed in the subsequent sections.

Effect of the factors language - position 3.4.1.3.

	Tukey HSD Test: Language - Position										
Position	L1 Mean	L2 Mean	Difference	p-value							
VSO	1.54	2.03	-0.49	<0.001							
SVO	3.58	3.45	0.13	0.19							
VOS	2.42	2.34	0.08	0.76							
OVS	2.07	1.63	0.44	<0.001							

Table 44 L1 vs L2 Tukey HSD Test: Language - Position:

Table 44 shows the mean values obtained for the different positions for L1 and L2.

As already discussed in the previous section, SVO is the most acceptable order for both experimental groups, and there is no significant difference between them.

The second preferred order in both tests is VOS, which is considered acceptable and does not show any significant difference between the two languages.

The VSO and OVS orders are the ones which are statistically different in this comparison. In fact, they show a reverse preference order. The control group prefers OVS over VSO, while for the target group, the choice is the opposite. Apart from this, it should be noted that both options are the least acceptable ones in both cases.

Tukey HSD Test: Language - Focus - Position						
Focus	Position	L1 Mean	L2 Mean	Difference	p-value	
Information Focus	VSO	1.61	2.04	-0.43	<0.001	
Information Focus	SVO	3.48	3.42	0.07	1.000	
Information Focus	VOS	2.39	2.33	0.06	1.000	
Information Focus	OVS	2.30	1.64	0.66	<0.001	
Corrective Focus	VSO	1.42	1.94	-0.51	<0.001	
Corrective Focus	SVO	3.41	3.42	0.00	1.000	
Corrective Focus	VOS	2.34	2.39	-0.05	1.000	
Corrective Focus	OVS	2.84	1.87	0.97	<0.001	
Broad Focus	VSO	1.58	2.11	-0.53	<0.001	
Broad Focus	SVO	3.84	3.52	0.31	0.050	
Broad Focus	VOS	2.52	2.29	0.23	0.543	
Broad Focus	OVS	1.08	1.38	-0.30	0.076	

3.4.1.4. <u>Effect of the factors language -focus - position</u>

Table 45 L1 vs L2: Tukey HSD Test: Language - Focus - Position

As illustrated in Table 45, the VSO order shows a significant difference in all types of focus (<0,001). There is a preference for this position by L2 students in comparison to L1 for IF, CF and BF, approximately 0,5 points more.

The SVO position does not show a significant difference between L1 and L2 responses for IF and CF, while this difference is significant (0,050) in the case of BF), with a difference of 0,31 points. It can be stated that L1 participants show a higher preference of SVO for BF in comparison to L2 students.

Regarding the VOS order, there is no significant difference between L1 and L2 answers for IF and CF. Also, although there is a difference of approximately 0,2 points with respect to BF, the difference is not significant (0,543).

In relation to OVS, it is important to highlight that this order is the second preferred option in L1 for CF (2,84), while it is the last preference in L2 (1,87), generating two statistically different values (<0,001).

In the case of IF, the difference between L1 and L2 regarding the OVS order is significant (<0,001), however this difference is not as relevant as with CF, since

it goes from the third option (2,30) to fourth (1,64), with a low level of acceptability.

As for BF, the value for the OVS order is the only case where the mean is higher for L2 (1,38) than for L1 (1,08), but it cannot be considered significantly different (0,076). In any case, it is remarkable that for both languages this combination is the least acceptable compared to all the others.

Tukey HSD Test: Language Verb - Position					
Verb	Position	L1 Mean	L2 Mean	Difference	p-value
TRANSITIVE	VSO	0.96	1.53	-0.57	<0.001
TRANSITIVE	SVO	3.48	3.56	-0.08	1.000
TRANSITIVE	VOS	2.16	2.33	-0.17	0.984
TRANSITIVE	OVS	2.68	1.88	0.80	<0.001
UNACCUSATIVE	VSO	1.92	2.34	-0.42	<0.001
UNACCUSATIVE	SVO	3.64	3.44	0.20	0.581
UNACCUSATIVE	VOS	2.65	2.47	0.18	0.798
UNACCUSATIVE	OVS	1.43	1.44	-0.01	1.000
UNERGATIVE	VSO	1.54	2.06	-0.52	<0.001
UNERGATIVE	SVO	3.58	3.36	0.22	0.770
UNERGATIVE	VOS	2.32	2.14	0.18	0.966
UNERGATIVE	OVS	2.43	1.67	0.76	<0.001

3.4.1.5.	Effect of the factors	<u>language -vei</u>	<u>b - position</u>

Table 46 L1 vs L2: Tukey HSD Test: Language - Verb - Position

Similarly to the Language – Focus – Position analysis, SVO and VOS do not show any significant difference comparing the two groups; overall, the mean values in unaccusative and unergative verbs are higher in L1, while in the case of L2, transitive verbs show higher means.

In the case of transitive verbs, there is a significant difference in OVS (diff. = 0,80, p-value = <0,001) and VSO (diff. = 0,96, p-value = <0,001). It should be noted that, while VSO is the least acceptable order in both groups (even if its mean increases in L2), OVS is the second most acceptable option in L1 but becomes the third option in L2 (see Table 46).

As for unaccusative verbs, both groups provide quite similar answers; the only significant difference is for VSO order, since for L2 this order is 0,42 points more acceptable.

Finally, in unergative verbs, there is a significant difference for VSO and OVS, where they exchange their position as the last two preferred options; the L2 group finds the VSO option more acceptable than OVS, while in L1 it is the opposite.

Τι	Tukey HSD Test: Language - Focus - Verb - Position					
Focus	Verb	Position	L1 Mean	L2 Mean	Difference	p- value
Information Focus	TRANSITIVE	VSO	1.20	1.37	-0.17	1.000
Information Focus	TRANSITIVE	SVO	3.44	3.63	-0.19	1.000
Information Focus	TRANSITIVE	VOS	1.79	2.24	-0.44	0.939
Information Focus	TRANSITIVE	OVS	3.13	1.90	1.23	<0.001
Information Focus	UNACCUSATIVE	VSO	1.97	2.30	-0.33	0.988
Information Focus	UNACCUSATIVE	SVO	3.60	3.47	0.13	1.000
Information Focus	UNACCUSATIVE	VOS	2.81	2.58	0.23	1.000
Information Focus	UNACCUSATIVE	OVS	1.40	1.39	0.01	1.000
Information Focus	UNERGATIVE	VSO	1.48	2.31	-0.83	0.001
Information Focus	UNERGATIVE	SVO	3.34	3.12	0.23	1.000
Information Focus	UNERGATIVE	VOS	2.35	2.06	0.29	1.000
Information Focus	UNERGATIVE	OVS	2.81	1.75	1.06	<0.001
Corrective Focus	TRANSITIVE	VSO	1.12	1.68	-0.56	0.393
Corrective Focus	TRANSITIVE	SVO	3.16	3.46	-0.30	1.000
Corrective Focus	TRANSITIVE	VOS	1.80	2.24	-0.44	0.947
Corrective Focus	TRANSITIVE	OVS	3.53	2.21	1.32	<0.001
Corrective Focus	UNACCUSATIVE	VSO	1.49	2.03	-0.54	0.072
Corrective Focus	UNACCUSATIVE	SVO	3.46	3.42	0.04	1.000
Corrective Focus	UNACCUSATIVE	VOS	2.70	2.53	0.17	1.000
Corrective Focus	UNACCUSATIVE	OVS	2.14	1.62	0.52	0.110
Corrective Focus	UNERGATIVE	VSO	1.62	2.06	-0.43	0.956
Corrective Focus	UNERGATIVE	SVO	3.58	3.37	0.22	1.000
Corrective Focus	UNERGATIVE	VOS	2.34	2.32	0.02	1.000
Corrective Focus	UNERGATIVE	OVS	3.22	1.93	1.30	< 0.001
Broad Focus	TRANSITIVE	VSO	0.56	1.54	-0.98	<0.001
Broad Focus	TRANSITIVE	SVO	3.85	3.60	0.24	1.000
Broad Focus	TRANSITIVE	VOS	2.89	2.51	0.38	0.997
Broad Focus	TRANSITIVE	OVS	1.39	1.54	-0.15	1.000
Broad Focus	UNACCUSATIVE	VSO	2.30	2.69	-0.39	0.834
Broad Focus	UNACCUSATIVE	SVO	3.84	3.42	0.42	0.629
Broad Focus	UNACCUSATIVE	VOS	2.44	2.31	0.13	1.000
Broad Focus	UNACCUSATIVE	OVS	0.75	1.30	-0.55	0.049
Broad Focus	UNERGATIVE	VSO	1.52	1.82	-0.31	1.000
Broad Focus	UNERGATIVE	SVO	3.81	3.59	0.22	1.000
Broad Focus	UNERGATIVE	VOS	2.28	2.04	0.23	1.000
Broad Focus	UNERGATIVE	OVS	1.26	1.34	-0.08	1.000

3.4.1.6. Effect of the factors language -focus - verb - position

Table 47 L1 vs L2: Tukey HSD Test: Language – Focus - Verb – Position

In order to carry out an analysis of the differences between L1 and L2 results considering all the possible factors (language, focus, verb and position), this table gives us detailed information to accomplish this. The analysis concentrates on the different types of focus.

The significant differences that can be found within the IF are:

- Regarding transitive verbs for the OVS order, the acceptability of this order dramatically drops from 3,13 in L1 to 1,90 in L2, showing that for L2 students this is not considered an acceptable option.
- As for the VSO and OVS orders in unergative verbs, in this case these orders exchange their position as third and last preferred option.

Regarding CF, the only differences concern the OVS order in relation to transitive and unergative verbs. In both cases the L1 group usually consider this order as quite acceptable answers, with values above 3 on the Lickert scale, while it receives low grades of acceptability from L2 students.

In both cases, IF and CF, the only types of verbs that do not show any significant difference are the unaccusatives. With respect to BF, the only significant difference that we find (OVS) is related to unaccusative verbs. In both cases this is considered the least acceptable option, and the difference is generated mostly in the extreme low values of acceptability that Spanish speakers assign to this order (0,75).

The table above reflects how the OVS position shows the most significant differences between the two languages. Although the OVS strategy, (Postverbal subject associated with left-dislocation) is a very frequent order in Spanish, we can see that it is the lowest option in L2 students in general for IF. So the relevance of OVS order, very acceptable in L1 (control group), it is not acceptable for L2 students (target group) and this difference is significant. Besides, in contrast to L1 answers, values for VSO are higher in general in L2 responses but the only significant differences are the ones previously mentioned.

Conclusions

CHAPTER 4. CONCLUSIONS

4.1.RESEARCH GOALS AND PRELIMINARY RESULTS

The present dissertation aimed to carry out an experimental and descriptive investigation on the interaction between word order and information structure in Spanish. In particular, this work involves the acquisition of postverbal subjects from an evolutionary perspective as well as the realization of postverbal strategies by L1 and L2 speakers of Spanish. In order to achieve that, this thesis stands on the statistical and descriptive analysis of two linguistic experimental tests.

This study is intended to: (i) research the realization of subjects (specifically in postverbal position) in broad and narrow constructions from an acquisitional and experimental perspective. For this reason, experimental tests have been completed by children and adults; (ii) analyze the results obtained following the appropriate statistical methods according to the design of each test, and thus, according to the type of answer required. A chi-square test was needed to carry out the open-(free) answer test type (children), whereas an ANOVA test was the proper statistical analysis to carry out the Likert scale answer test type (adults); (iii) conduct a comparative (statistical) analysis on the acceptability of postverbal subjects by making use of the results obtained from the L1 and L2 speakers of Spanish (adults) and determine whether the differences found are statistically significant.

The general hypothesis was that the realization of postverbal subjects may be sensitive to specific focus types (Information Focus, Corrective Focus and Broad Focus). According to the obtained results, we can show that:

• Concerning the association between strategies and focus types from an evolutionary perspective, the descriptive analysis shows that the SV strategy is the most frequent for all the types of focus until the age of 6-7 y.o. The VS strategy, on the contrary, shows a constant increase

emerging at the age of 7 which affects specially the CF and IF. In BF sentences, the SVO is the most frequent option for all age groups, whereas VS is more frequent with specific types of verbs (especially unaccusative motion verbs). This results support the claim that the VS strategy can be considered a *late acquisition* emerging at the age of 6 y.o., becoming a significant alternative to SVO order for NF constructions in the children's competence after that age.

• The statistical analysis (Chi-Square test) illustrates how most of the answer strategies (IF and CF) result statistically significant (applying a significant value of 0,05). As for CF, significant differences are attested regarding the three groups of verbs. In particular, for unaccusative verbs significant differences are observed in motion and progressive change verbs. This means that the evolution of the answers is different in relation to most verb types, showing that the learning process generates a variation in the production of the answers given by children. On the other hand, for BF it emerges that the answer distribution do not show an evolution with age except for the unaccusative motion and progressive change, as well as unergative mono-argumental, where the differences are significant.

Regarding the acceptability of postverbal strategies by L1 and L2 speakers of Spanish, we have carried out a statistical analysis (ANOVA test). The analysis of the data obtained from the L1 and L2 informants has been carried out in order to show the significant factors in a multi factors model. The acceptability judgments obtained in the experimental test have been analyzed to determine whether there is a significant difference within the three factors involved regarding the acceptability variation between the different contexts. According to these results, we can reach the following conclusions. In relation to the L1 results:

- The SVO order is generally the most acceptable answer, and this is not influenced by the type of verb (except for CF between transitive and unergative verbs). The level of acceptability on the Likert scale is over 3 in all cases. The association of the SVO order with BF is appropriate, as expected, since there is a significant difference between BF and the other focus types (IF and CF) in relation to this order.
- The OVS order is generally associated with CF and the results of this study confirm this relation. This order is also considered an acceptable option for IF (although the mean values in this case are not as high as for CF). On the contrary, the OVS order is not an acceptable option for BF. As for its relation to the verb types, there is no significance difference between transitive and unergative verbs and it is not considered an option in the case of unaccusative verbs.
- As for the VOS order, the analysis shows that this order is mostly influenced by the verb types, but no by the focus types. According to the results, this order is slightly more accepted for BF with respect to the other focus types due to the high grade of acceptability of transitive verbs answers. Its mean values are around 2,89 for BF, while in the cases of IF and CF the mean values are lower (1,79 and 1,80 respectively). As for unaccusative and unergative verbs, mean values are around 2,5 points, which means that it is less frequent but still an option (independently from the focus types).
- The VSO order is the least acceptable order and this is not influenced by the focus types, with mean values around 1,5 (not an option). Taking into account the verb factor, it should be noticed that generally, when associated with transitive verbs, this order shows the lowest values. Only

in the case of unaccusative verbs for BF, the mean values are over 2, but still not acceptable.

According to the L2 analysis for English-speaking learners of Spanish:

- The SVO order is the most acceptable option and all cases and these values are not influenced by the focus types or the verb types.
- The VOS order is, generally, the second most acceptable option. Its values are not influenced by the focus types or the verb types.
- The VSO order is not influenced by the focus types in general, with mean values around 2 on the Likert scale, which means that is not such an acceptable option. As for the influence of the verb types, an interesting pattern emerges in this case: there is no significant difference between unergative and unaccusative verbs for IF and CF, while both of them are significantly different from transitive verbs (which show lower level of acceptability). Regarding BF, this connection between unergative and unaccusative verbs is not observed: in this case, unaccusative verbs show higher mean values (around 2,75) than unergative verbs. The values in relation to transitive verbs are the lowest.
- The OVS order is the least acceptable option for L2 informants. All mean values are lower than 2 points on the Likert scale (which means that it is not an acceptable option), except for CF, in the case of transitive verbs.

Regarding the comparison between L1 and L2, the following conclusions are reached:

 The SVO order is the most acceptable option for both languages, with mean values higher than 3 on the Likert scale. There is not significant difference depending on the verb types or the focus types, except for BF.
 For this type of focus, L1 informants provided even higher values on the Likert scale than L2 informants.

- The VOS order is the second most acceptable option for L1 and L2 informants. There are no significant differences influenced by the focus types or the verb types in this case, although this order is considered slightly more acceptable by L1 informants in the case of unaccusative and unergative verbs, while L2 informants consider VOS slightly more acceptable in transitive verbs.
- The main difference between L1 and L2 is related to the OVS and VSO orders. Both options are the least acceptable for L1 and L2 informants, however, these orders exchange position as the least acceptable option. In general, OVS is considered a more acceptable option by L1 informants, while for L2 informants this order is not an option. The difference in OVS answers (L1 vs L2) is significant in the case of transitive and unergative verbs for IF and CF, where mean values go from 3 on the Likert scale for L1 to 2 for L2, showing a difference of one point. As for unaccusative verbs in the case of BF, the difference is also significant due to the extreme low grade of acceptability of the OVS order for L1 (0,75) in contrast to L2, where even if it is not considered an acceptable option, the mean values are higher (1,30).
- As already mentioned, while VSO is the least acceptable order for L1 informants, L2 informants prefer this order over OVS. This difference is observed in all types of focus and types of verb, as in all cases the level of acceptability for the VSO order given by L1 informants is lower than the L2 acceptability for this order. However, this difference is only significant regarding unergative verbs in the case of IF, and transitive verbs, in the case of BF.

4.2.FOLLOW-UPS AND FUTURE RESEARCH

The realization of this study has provided interesting and relevant data for the objectives pursued in this research, however, and more importantly, the data obtained is amply sufficient in order to continue studying the different phenomenon from different perspectives in the near future.

Some of the future projects we will conduct next are:

- An open-(free) answer test similar to "The Smurfs Test", since it would be very interesting to contrast the answers given by L1 and L2 adults in a non-written test, that is, by offering the possibility of spontaneous answers to the same questions. In this way, we could check whether the results obtained are influenced by the fact that adults tend to mark the "correct" answer in a written test.
- A thorough study about the behavior of the different factors and its influence in the outcome, and specially, the influence of transitive, unaccusative and unergative verbs within each individual factor.
- An exhaustive research on the most significant differences found in the comparison between L1 and L2 results, since the contrast in the answers provided by the control group and the target group is essential for the development of didactic proposals in the field of second language learning involving information structure.

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ANNEX I: Informative flyer for participants

ARE YOU A NATIVE SPEAKER OF ENGLISH?? ARE YOU STUDYING SPANISH??

This survey is part of a research project on the connection between discourse categories (such as focus and topic) and the interpretation of overt/covert subjects in languages like Italian and Spanish from a theoretical and acquisitional perspective.

It is supported by the Italian Government (PRINT grant: *Progetto di Ricerca di Interesse Nazionale* 'Research Project of National Interest') in collaboration with Spain (Innovation and Development (I+D) Project). Several universities, such as the University of Roma Tre University and the University of Seville are working on this investigation. Our working team is composed of recognised scholars in the (psycho) linguistic field, international experts, young researchers and senior students who are enriching their personal and professional development by collaborating in this project.

The main focus of specific survey is the interaction between word order and information structure. As is known, the unmarked order in English, Italian and Spanish is SVO. However, in Italian and Spanish this order can be modified depending on discourse requirements. In particular, the subject can be realised in postverbal position (e.g., *è arrivato Leo 'Leo arrived'; Lo ha dicho Juan 'Juan told that'*, etc), while this option is not available in English.

Our goal is to check whether the association between context(s) and word order variation is part of the competence of an English learner of Italian or Spanish L2 and to check possible difficulties in order to have a better understanding of language acquisition and improve methods and materials in the field of second language learning and teaching.

This test consists of a series of sentences/dialogues set in different contexts, and a final part (generally a question) with four options proposing different word orders to complete the relevant micro-text.

For each option the student should provide a judgement from 0 to 4 (where 0= very bad and 4 = the best option). What is important to remember is that <u>there are NO right or wrong answers</u>! All options are grammatical. We are interested to know which word order option the learner would choose for that specific context.

The test is also anonymous and it takes about 20 minutes.

Survey link for Spanish: http://vmthesis.limequery.com/index.php/679616/lang-es

NOTICE: the test is preceded by a section collecting data from informants (sex, age, nationality, etc), in particular, we are interested in the level of education (question 8). In particular students should enter their level of Italian or Spanish (cf. CLA B1, CLA B2 or other at the end of the list; CLA = Centro Linguistico). I hope this is clear. For any question, do not hesitate to contact me: <u>marymcn90@gmail.com</u>

Collaborating in this research represents a very important contribution to linguistics studies. THANK YOU VERY MUCH!

ANNEX II: Answer sheet "The Smurfs Test"

SUMINISTRADOR					FECHA DE SUMINISTRACIÓN		
CORRECTOR					FECHA DE CORRECCIÓN		
NOMBRE					NACIONALIDAD PADRES		
APELLIDOS					EDAD		
FECHA DE NACIMIENTO					MESES		
NACIONALIDAD					CLASE		
Ν.	ITEM	OPCIÓN 1 = VS-O	OPCIÓN 2 = SVO	OPCIÓN 3 = VO-S	OPCIÓN 4 = O-VS	OTRO	NOTAS
1	1A	La ha cogido Pitufina, la flor	Pitufina ha cogido la flor	Ha cogido la flor Pitufina	La flor, la ha cogido Pitufina		
2	2B	No, la está escribiendo Pitufina, la carta	No, Pitufina está escribiendo la carta	No, está escribiendo la carta Pitufina	No, la carta la está escribiendo Pitufina		
3	4C	Ha llegado Pitufina a la playa	Pitufina ha llegado a la playa	Ha llegado a la playa Pitufina	A la playa, ha llegado Pitufina		
4	5A	Ha cogido Papá Pitufo, la gripe	Papá Pitufo a cogido la gripe	Ha cogido la gripe Papá Pitufo	La gripe, la ha cogido Papá Pitufo		
5	6B	No, se enfadó Gargamel, muchísimo	No, Gargamel se enfadó muchísimo	No, se enfadó muchísimo Gargamel	No, muchísimo se enfadó Gargamel		
6	8C	Que está durmiendo Pitufo sobre la mesa	Que Pitufo está durmiendo sobre la mesa	Que está durmiendo sobre la mesa Pitufo	Que sobre la mesa está durmiendo Pitufo		
7	9A	Llamó Papá Pitufo a los bomberos	Papá Pitufo llamó a los bomberos	Llamó a los bomberos Papá Pitufo	A los bomberos llamó Papá Pitufo		
8	1B	No, ha cogido Pitufina la flor	No, Pitufina ha cogido la flor	No, ha cogido la flor Pitufina	No, la flor la ha cogido Pitufina		
9	2C	Que está escribiendo Pitufo una carta/poema/diario	Que Pitufo está escribiendo una carta/poema/diario	Que está escribiendo una carta/poema/diario Pitufo	Que una carta/poema/diario está escribiendo Pitufo		
10	4A	Ha ido Pitufina a la playa	Pitufina ha ido a la playa	Ha ido a la playa Pitufina	A la playa, ha ido Pitufina		
11	5B	No, se ha puesto Papá Pitufo, enfermo	No, Papá Pitufo se ha puesto enfermo	No, se ha puesto enfermo Papá Pitufo	No, enfermo se ha puesto Papá Pitufo		

SUMINISTRADOR		SUMINISTRADOR			FECHA DE SUMINISTRACIÓN		
	CORRECTOR				FECHA DE CORRECCIÓN		
NOMBRE					NACIONALIDAD PADRES		
APELLIDOS					EDAD		
FECHA DE NACIMIENTO					MESES		
NACIONALIDAD					CLASE		
Ν.	ITEM	OPCIÓN 1 = VS-O	OPCIÓN 2 = SVO	OPCIÓN 3 = VO-S	OPCIÓN 4 = O-VS	OTRO	NOTAS
12	6C	Que se enfadó, Gargamel, muchísimo	Que Gargamel se enfadó muchísimo	Que se enfadó muchísimo Gargamel	Que muchísimo se enfadó Gargamel		
13	8A	Está durmiendo Pitufo sobre la mesa	Pitufo está durmiendo sobre la mesa	Está durmiendo sobre la mesa Pitufo	Sobre la mesa está durmiendo Pitufo		
14	9B	No, llamó Papá Pitufo a los bomberos	No, Papá Pitufo llamó a los bomberos	No, llamó a los bomberos Papá Pitufo	No, a los bomberos los llamó Papá Pitufo		
15	1C	Ha cogido Pitufina una flor	Pitufina ha cogido una flor	Ha cogido una flor Pitufina	Una flor, ha cogido Pitufina		
16	2A	Está escribiendo Pitufina la carta	Pitufina está escribiendo la carta	Está escribiendo la carta Pitufina	La carta, la está escribiendo Pitufina		
17	4B	No, ha ido Pitufina a la playa	No, Pitufina ha ido a la playa	No, ha ido a la playa Pitufina	No, a la playa ha ido Pitufina		
18	5C	Que se puso Papá Pitufo enfermo	Que Papá Pitufo se puso enfermo	Que se puso enfermo Papá Pitufo	Que enfermo se puso Papá Pitufo		
19	6A	Puesse enfadó Gargamel muchísimo	PuesGargamel se esnfadó muchísimo	Puesse enfadó muchísimo Gargamel	Pues, muchísimo se enfadó Gargamel		
20	8B	No, está durmiendo Pitufo sobre la mesa	No, Pitufo está durmiendo sobre la mesa	No, está durmiendo sobre la mesa Pitufo	No, sobre la mesa está durmiendo Pitufo		
21	9C	Que llamó Papá Pitufo a los bomberos	Que Papá Pitufo llamó a los bomberos	Que llamó a los bomberos Papá Pitufo	Que a los bomberos llamó Papá Pitufo		

ANNEX III: "The Smurfs Test"

1A) Antes, Pitufo Enamorado ha cogido una flor. ¿Y ahora quién la ha cogido?

- 1. La ha cogido Pitufina
- 2. Pitufina ha cogido la flor
- 3. Ha cogido la flor Pitufina
- 4. La flor, la ha cogido Pitufina
- 5. _____

2B) Los Pitufos tienen que enviar una carta muy importante. La está escribiendo Papá Pitufo, ¿no?

- 1. No, la está escribiendo Pitufina, la carta
- 2. No, Pitufina está escribiendo la carta
- 3. No, está escribiendo la carta Pitufina
- 4. No, la carta la está escribiendo Pitufina
- 5.

4C) Hoy los Pitufos están muy contentos divirtiéndose en la playa, y ahora están más contentos todavía, ¿por qué? ¿qué ha pasado?

- 1. Ha llegado Pitufina a la playa
- 2. Pitufina ha llegado a la playa
- 3. Ha llegado a la playa Pitufina
- 4. A la playa, ha llegado Pitufina
- 5. _____

5A) En Pitufilandia hay alguien que está enfermo... Fíjate bien: ¿quién ha cogido la gripe?

- 1. Ha cogido Papá Pitufo, la gripe
- 2. Papá Pitufo ha cogido la gripe
- 3. Ha cogido la gripe Papá Pitufo
- 4. La gripe, la ha cogido Papá Pitufo
- 5. _____

6B) ¡Ayer Gargamel y Azrael se pelearon y me han dicho que Azrael se enfadó muchísimo!

- 1. No, se enfadó Gargamel, muchísimo
- 2. No, Gargamel se enfadó muchísimo
- 3. No, se enfadó muchísimo Gargamel
- 4. No, muchísimo se enfadó Gargamel
- 5. ____

8C) ¡Ayer los pitufos estuvieron en la discoteca hasta muy tarde y hoy se caen de sueño! De hecho... ¿qué está pasando ahora?

- 1. Que está durmiendo Pitufo sobre la mesa
- 2. Que el Pitufo está durmiendo sobre la mesa
- 3. Que está durmiendo sobre la mesa el Pitufo
- 4. Que sobre la mesa está durmiendo el Pitufo
- 5. _____

9A) ¡Ayer hubo un incendio en Pitufilandia! ¿Quién llamó a los bomberos?

- 1. Llamó Papá Pitufo a los bomberos
- 2. Papá Pitufo llamó a los bomberos
- 3. Llamó a los bomberos Papá Pitufo
- 4. A los bomberos llamó Papá Pitufo
- 5. _____

1B) Antes Pitufo Enamorado tenía una flor en la mano pero ya no la tiene.

¡Apuesto a que la ha cogido Pitufo Filósofo!

- 1. No, ha cogido Pitufina, la flor
- 2. No, Pitufina ha cogido la flor
- 3. No, ha cogido la flor Pitufina
- 4. No, la flor la ha cogido Pitufina
- 5. _____

2C) Cuántas cosas hay encima de la mesa: papeles, una pluma, libros, una vela encendida... ¿Qué está pasando?

- 1. Que está escribiendo Pitufo una carta/un poema/un diario
- 2. Que Pitufo..... está escribiendo una carta/un poema/un diario
- 3. Que está escribiendo una carta/un poema/un diario Pitufo
- 4. Que una carta/un poema/un diario está escribiendo el Pitufo......
- 5. _____

4A) Todos los Pitufos querían ir a la playa, pero al final ha ido solo uno. ¿Quién ha ido?

- 1. Ha ido Pitufina a la playa
- 2. Pitufina ha ido a la playa
- 3. Ha ido a la playa Pitufina
- 4. A la playa ha ido Pitufina

5. _____

5B) Me han dicho que Pitufina se ha puesto enferma

- 1. No, se ha puesto Papá Pitufo, enfermo
- 2. No, Papá Pitufo se ha puesto enfermo
- 3. No, se ha puesto enfermo Papá Pitufo
- 4. No, enfermo se ha puesto Papá Pitufo
- 5. _____

6C) Me han dicho que ayer Gargamel regañó a Azrael y, por lo que gritaba... ¿qué le pasó a Gargamel?

- 1. Que se enfadó, Gargamel, muchísimo
- 2. Que Gargamel se enfadó muchísimo
- 3. Que se enfadó muchísimo Gargamel
- 4. Que muchísimo se enfadó Gargamel
- 5. _____

9B) Ayer hubo un incendio en Pitufilandia. ¡Menos mal que Pitufo Filósofo llamó a los bomberos! ¿Verdad?

- 1. No, llamó Papá Pitufo a los bomberos
- 2. No, Papá Pitufo llamó a los bomberos
- 3. No, llamó a los bomberos Papá Pitufo
- 4. No, a los bomberos llamó Papá Pitufo
- 5. _____

8A) ¡Ayer los Pitufos estuvieron en la discoteca hasta muy tarde y hoy se caen de sueño! ¿Quién está durmiendo sobre la mesa?

- 1. Está durmiendo Pitufo, sobre la mesa
- 2. Pitufo está durmiendo sobre la mesa
- 3. Está durmiendo sobre la mesa Pitufo
- 4. Sobre la mesa está durmiendo Pitufo
- 5. _____

1C) Pitufina ha ido al jardín antes. ¿Sabes decirme qué ha hecho?

- 1. Ha cogido Pitufina una flor
- 2. Pitufina ha cogido una flor
- 3. Ha cogido una flor Pitufina
- 4. Una flor ha cogido Pitufina
- 5. _____

2A) Los Pitufos tienen que enviar una carta muy importante. ¿Quién la está escribiendo?

- 1. Está escribiendo Pitufina, la carta
- 2. Pitufina está escribiendo la carta
- 3. Está escribiendo la carta Pitufina
- 4. La carta la está escribiendo Pitufina
- 5. _____

4B) Todos los Pitufos querían ir a la playa, pero ha ido uno solo y estoy segura que ha sido Papá Pitufo, ¿a que sí?

- 1. No, ha ido Pitufina a la playa
- 2. No, Pitufina ha ido a la playa
- 3. No, ha ido a la playa Pitufina
- 4. No, a la playa ha ido Pitufina
- 5. _____

5C) En estos días ronda la gripe en Pitufilandia. Ayer por ejemplo, ¿qué ó?

pasó?

- 1. Que se puso Papá Pitufo enfermo
- 2. Que Papá Pitufo se puso enfermo
- 3. Que se puso enfermo Papá Pitufo
- 4. Que enfermo se puso Papá Pitufo
- 5. _____

6A) Ayer Azrael y Gargamel se pelearon y... ¿quién (gritó como un loco) y se enfadó muchísimo?

- 1. Pues...se enfadó Gargamel muchísimo
- 2. Pues...Gargamel se enfadó muchísimo
- 3. Pues...se enfadó muchísimo Gargamel
- 4. Pues...muchísimo se enfadó Gargamel
- 5. _____

8B) Ayer los Pitufos estuvieron en la discoteca hasta muy tarde, y hoy en la escuela ¡se caen de sueño! Pero, ¿está durmiendo Pitufina sobre la mesa?

- 1. No, está durmiendo el pitufo sobre la mesa
- 2. No, el pitufo está durmiendo sobre la mesa
- 3. No, está durmiendo sobre la mesa el pitufo
- 4. No, sobre la mesa está durmiendo el pitufo
- 5. _____

9C) Ayer hubo un incendio en Pitufilandia, menos mal que alguien tuvo una muy buena idea para solucionarlo ¿Qué pasó?

- 1. Que llamó Papá Pitufo a los bomberos
- 2. Que Papá Pitufo llamó a los bomberos
- 3. Que llamó a los bomberos Papá Pitufo
- 4. Que a los bomberos llamó Papá Pitufo
- 5. _____

ANNEX IV: "The Online Test"

(A) Information Focus (answer to Wh question)

(B) Corrective Focus (correction of a predecent affirmative sentence)

(C) Broad Focus ("new" sentence)

TRANSITIVE VERBS

TRANSITIVE OD [+ANIMATED]

1A. Esta mañana había un gato en el jardín pero ya no está, ¿Quién lo ha cogido?

- 1. Lo ha cogido el niño, el gato
- 2. El niño ha cogido el gato
- 3. Ha cogido el gato el niño
- 4. El gato lo ha cogido el niño

1B. Esta mañana había un gato en el jardín pero ya no está. Estoy segura de que lo ha cogido esa niña que lo miraba tanto...

- 1. Te equivocas, lo ha cogido el niño, el gato
- 2. Te equivocas, el niño ha cogido el gato
- 3. Te equivocas, ha cogido el gato el niño
- 4. Te equivocas, el gato lo ha cogido el niño

1C. A-Te veo nerviosa... ¿qué ha pasado?

- 1. ¡Que hoy lo ha cogido mi hijo, un gato, y se lo ha traído a casa!
- 2. ¡Que hoy mi hijo ha cogido un gato y se lo ha traído a casa!
- 3. ¡Que hoy ha cogido un gato mi hijo, y se lo ha traído a casa!
- 4. ¡Que hoy un gato lo ha cogido mi hijo, y se lo ha traído a casa!

TRANSITIVE OD [-ANIMATED]

2A.He visto una carta encima de la mesa. ¿Quién la ha escrito?

- 1. La ha escrito Manuel, la carta
- 2. Manuel ha escrito la carta
- 3. Ha escrito la carta Manuel
- 4. La carta la ha escrito Manuel

2B. He visto una carta encima de la mesa. La ha escrito Daniel, ¿verdad?

- 1. No, la ha escrito Manuel, la carta
- 2. No, Manuel ha escrito la carta
- 3. No, ha escrito la carta Manuel
- 4. No, la carta la ha escrito Manuel

2C. ¡Qué lío hay encima de la mesa! Bolígrafos, lápices, un bloc de notas... ¿qué ha pasado?

1. Que esta mañana la ha escrito Manuel, la lista de la compra, ¡y nunca coloca nada!

2. Que esta mañana Manuel ha escrito la lista de la compra, ¡y nunca coloca nada!

3. Que esta mañana ha escrito Manuel la lista de la compra, ¡y nunca coloca nada!

4. Que esta mañana la lista de la compra la ha escrito Manuel, jy nunca coloca nada!

UNACCUSATIVE VERBS

a) MOTION VERB

3A.Tus amigos habían dicho que querían ir a la playa en el fin de semana. ¿Quién ha ido al final?

- 1. Ha ido Laura, a la playa
- 2. Laura ha ido a la playa
- 3. Ha ido a la playa Laura
- 4. A la playa ha ido Laura

3B. ¡Han comenzado los días bonitos y estoy segura de que ayer María fue a la playa!

- 1. No, fue Laura, a la playa
- 2. No, Laura fue a la playa
- 3. No, fue a la playa Laura
- 4. No, a la playa fue Laura

3C.El armario está todo desordenado, ¿qué ha pasado?

- 1. ¡Que ha ido Laura a la playa y no encontraba su bañador!
- 2. ¡Que Laura ha ido a la playa y no encontraba su bañador!
- 3. ¡Que ha ido a la playa Laura y no encontraba su bañador!
- 4. ¡Que a la playa ha ido Laura y no encontraba su bañador!

b) RESULT CHANGE VERB

4A: Me han dicho que uno de tus hijos está en la cama con fiebre. ¿Quién está mal?

- 1. Pues... se ha puesto Marco enfermo
- 2. Pues... Marco se ha puesto enfermo
- 3. Pues... se ha puesto enfermo Marco
- 4. Pues... enfermo se ha puesto Marco

4B: ¡Me han dicho que tu hijo Lucas está en la cama con fiebre!

- 1. No: se ha puesto Marco, enfermo
- 2. No: Marco se ha puesto enfermo
- 3. No: se ha puesto enfermo Marco
- 4. No: enfermo se ha puesto Marco

4C: En este periodo ronda mucho la gripe...

- 1. Es verdad, de hecho se ha puesto Marco enfermo
- 2. Es verdad, de hecho Marco se ha puesto enfermo
- 3. Es verdad, de hecho se ha puesto enfermo Marco
- 4. Es verdad, de hecho enfermo se ha puesto Marco

c) PROGRESSIVE CHANGE VERB

5A: ¿Quién de vosotros se enfadó mucho ayer por lo que pasó?

- 1. Pues... ¡se enfadó Juan muchísimo!
- 2. Pues... ¡Juan se enfadó muchísimo!
- 3. Pues... jse enfadó muchísimo Juan!
- 4. Pues... jmuchísimo se enfadó Juan!

5B: ¡Me imagino que ayer Jorge se enfadaría mucho por lo que pasó!

- 1. No: ¡se enfadó Juan, muchísimo!
- 2. No: ¡Juan se enfadó muchísimo!
- 3. No: ¡se enfadó muchísimo Juan!
- 4. No: ¡muchísimo se enfadó Juan!

5C: Ayer Juan y yo estuvimos más de dos horas esperando a Carlos...

- 1.jy se enfadó Juan muchísimo!
- 2. ...;y Juan se enfadó muchísimo!
- 3. ...;y se enfadó muchísimo Juan!
- 4. ...;y muchísimo se enfadó Juan!

UNERGATIVE VERBS

a) MONO-ARGUMENTAL

6A: A: Hubo un error con la reserva de la casa rural y cuando llegamos no había camas para todos

B: ¿Quién ha dormido en el sofá?

- 1. Ha dormido Pedro, en el sofá
- 2. Pedro ha dormido en el sofá
- 3. Ha dormido en el sofá Pedro
- 4. En el sofá ha dormido Pedro

6B: A: Hubo un error con la reserva de la casa rural y cuando llegamos no había camas para todos

B: Así que Ana ha dormido en el sofá

- 1. No, ha dormido Pedro, en el sofá
- 2. No, Pedro ha dormido en el sofá
- 3. No, ha dormido en el sofá Pedro
- 4. No, en el sofá ha dormido Pedro

6C: A: Hubo un error con la reserva de la casa rural y cuando llegamos no había camas para todos

B: ¿Y qué habéis hecho?

- 1. Pues, que ha tenido que dormir Pedro, en el sofá
- 2. Pues, que Pedro ha tenido que dormir en el sofá
- 3. Pues, que ha tenido que dormir en el sofá Pedro
- 4. Pues, que en el sofá ha tenido que dormir Pedro

b) **BI-ARGUMENTAL**

7A: Esta noche ha empezado a sonar una alarma en frente de tu casa y al rato ha llegado la policía. ¿Sabes quién la ha llamado?

- 1. He llamado yo, a la policía: ¡no podía dormir!
- 2. Yo he llamado a la policía: ¡no podría dormir!
- 3. He llamado a la policía yo: ¡no podía dormir!
- 4. A la policía la he llamado yo: ¡no podía dormir!

7B: Esta noche ha empezado a sonar una alarma en frente de tu casa y al rato ha llegado la policía. ¡Apuesto a que la ha llamado tu vecina!

- 1. No: he llamado yo, a la policía: ¡no podía dormir!
- 2. No: yo he llamado a la policía: ¡no podía dormir!
- 3. No: he llamado a la policía yo: ¡no podía dormir!
- 4. No: a la policía la he llamado yo: ¡no podía dormir!

7C: ¿Qué pasó anoche en frente de tu casa? ¡Había mucho jaleo!

- 1. Que a las 4 llamó Jorge, a la policía, porque había saltado una alarma
- 2. Que a las 4 Jorge llamó a la policía, porque había saltado una alarma
- 3. Que a las 4 llamó a la policía Jorge, porque había saltado una alarma
- 4. Que a las 4 a la policía llamó Jorge, porque había saltado una alarma

DISTRACTORS:

D1: Considera las dos alternativas (a) y (b) y valora de 0 a 4 cada una de ellas. ¿A quién vio Mario en la estación?

- a. A María vio Mario en la estación
- b. Mario vio en la estación a María

D2: Considera las dos alternativas (a) y (b) y valora de 0 a 4 cada una de ellas. ¿A quién ayudó Juan con la compra?

- a. A su madre ayudó Juan con la compra
- b. Juan ayudó con la compra a su madre

D3: Considera las dos alternativas alternativas (a) y (b) y valora de 0 a 4 cada una de ellas. ¿A quién saludó Carlos en la puerta del colegio?

- a. A la maestra saludó Carlos en la puerta del colegio
 - b. Carlos saludó a la maestra, en la puerta del colegio