UNIVERSAL GRAMMAR AND FOCUS CONSTRAINTS: THE ACQUISITION OF PRONOUNS AND WORD ORDER IN NON-NATIVE SPANISH

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To the memory of my mother

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Abstract

A recent controversy in second language acquisition research concerns the extent to which adult non-native intuitions differ from adult native intuitions at advanced and near-native levels of competence (end-states). Two (apparently) contradictory findings pervade the L2 literature: while some studies reveal that learners can indeed achieve native-like intuitions, other findings show that they display near-native and optional intuitions. In short, there is a debate about whether adult non-native interlanguage grammars *converge* with (or *diverge* from) adult native grammars.

The first type of studies (*convergence*) focuses on constructions that are claimed to be part of the innate principles of Universal Grammar (UG), which typically represent a poverty-of-the-stimulus (POS) phenomenon. The second type (*divergence*) normally focuses on parameterisable functional features where the L1 and L2 values differ.

In this study I test whether this is the expected trend in advanced non-native Spanish acquisition, i.e., that learners show convergent knowledge where UG principles are involved, but divergent knowledge where parametric values differ between the native and the target language.

In particular, I investigate the distribution of overt and null pronominal subjects in Spanish, which is constrained by a principle of UG, the Overt Pronoun Constraint (OPC), and by a language-specific constraint, the Contrastive Focus Constraint (CFC). Similarly, the distribution of Subject-Verb (SV) and Verb-Subject (VS) word order is constrained by two principles of UG, namely, the Unaccusative Hypothesis (UH) and the Uniformity of Theta Assignment Hypothesis (UTAH), and by a language-specific constraint, presentational focus.

Results from two experiments (pronominal distribution and word order distribution) reveal that English learners of L2 Spanish and Greek learners of L3 Spanish show convergent (native-like) intuitions with respect to the principles of UG (OPC and UH/UTAH), while showing divergent (near-native and optional) intuitions in cases where the strength of the parameterisable focus head differs between their L1 and their L2/L3 Spanish (contrastive and presentational focus environments).

Chapter 1. INTRODUCTION

Current approaches to post-childhood second language acquisition (L2A)[1] are trying to account for three well-attested phenomena (Hawkins, 2001a):

(i) Why is knowledge of language underdetermined by the input? That is, why do learners seem to be sensitive to constructions they have not been exposed to?

(ii) Why is some input not properly represented? That is, why do learners seem not to be sensitive to constructions they have abundantly been exposed to?

(iii) Why does the L1 influence the L2 in some cases but not others? That is, what linguistic areas are more vulnerable to L1 influence in L2A?

Two intriguing (and somewhat contradictory) findings pervade recent L2A research. Some studies report that at advanced levels of proficiency post-childhood learners can achieve *convergent* (native-like) competence despite the input being underdetermined, showing similar mental representations to adult native speakers (observation *i* above). However, other studies show that learners achieve divergent (*near-native*, *optional* and/or *indeterminate*) competence despite abundant input and long immersion in the target language (observation *ii*) probably due to L1-L2 parametric differences (observation *iii*).

The first observation (native-like representations) concerns constructions that are claimed to be part of Universal Grammar (UG) and that are typical 'poverty-of-the-stimulus' (POS) phenomena (i.e., they are not present in the input the learners are exposed to). Such constructions are universal invariants and learners seem to show sensitivity to them, even though they may not necessarily be instantiated in their L1. This is the case of pronominal constructions in L1 English – L2 Japanese (Kanno, 1997; 1998; Marsden, 1998) and L1 English – L2 Spanish (Pérez-Leroux & Glass, 1997, 1999).

[1] While the acronym SLA is widely used in the literature to refer to second language acquisition, I will use the acronym L2A to differentiate it from L3A, third language acquisition, which is one of the objects of enquiry in the current study.

The second observation (near-native representations) comes from a series of studies claiming that adult language learners will show persistent difficulty with L2 functional features that are not instantiated in their L1. This is the case even after long immersion/exposure to the L2 (Al-Hamad *et al*., to appear; Franceschina, 2001; Hawkins, 2000; Hawkins & Chan, 1997). The L1 is claimed to be responsible for such L2 representational deficits, causing learners to show divergent representations from native speakers (Sorace, 1993a) and leading to persistent selective fossilisation (Hawkins, 2000).

This study deals with how the distribution of overt and null pronominal subjects and SV/VS word order in Spanish is determined by (i) universal constraints and (ii) language-specific/discursive constraints governed by functional features. Two experiments were conducted to test advanced adult learners' sensitivity to the two types of constraint. Results support the findings of a number of previous (and somewhat unrelated) studies: learners show native-like mental representations when universal constraints are involved, yet near native representations with discursive constraints.

This chapter sets the background for three main research questions in the present study, (i-iii) below. These questions are of a general nature now, though they will be refined later, becoming our working hypotheses in the experimental section (Chapter 5 and Chapter 7):

(i) Are advanced learners sensitive to universal constraints deriving from invariant *principles* of Universal Grammar?
   a. If so, we would expect them to show convergent (native-like) intuitions.
   b. If not, we would expect them to diverge from native intuitions.

(ii) Are advanced learners sensitive to discursive constraints deriving from the language-specific *parameterisation* of functional features?
   a. If so, we would expect them to show convergent (native-like) intuitions.
   b. If not, we would expect them to diverge from native intuitions.

Following a series of L2 studies, I will assume that advanced learners (i) show native-like intuitions when the principles of UG are involved (Hertel, 2000; Hirakawa, 1999, 2001; Kanno, 1999; Marsden, 1998; Pérez-Leroux & Glass, 1999) but (ii) show representational deficits and divergent intuitions when their L1 and L2 differ parametrically with respect to a given functional feature (Al-Hamad *et al*., to appear; Franceschina, 2001; Hawkins, 2000; Hawkins & Chan, 1997; Sorace, 1993, 2000). If these L2 findings are along the right lines, we would expect them to be generalisable to both L2 *and* L3 learners of Spanish.

Consider now a linguistic scenario like Table 1 below, which represents the three groups of subjects in the current study. While the learners in group 1 have only one L2 (Spanish), group 2 has two (L2 English, L3 Spanish).

Table 1: Language configuration in the current study

	L1	**L2**	**L3**
Natives	Spanish		
Group 1	English	Spanish	
Group 2	Greek	English	Spanish

This scenario raises the third question of our study:

(iii) Do advanced L3 learners (L3ers) also show convergent knowledge of universal principles but divergent knowledge of language-specific parameterisable features, as L2 learners (L2ers) seem to do?

a. If learners are sensitive to the principles of UG, we would expect both L2ers and L3ers to show convergent intuitions, irrespective of whether their previous languages differ parametrically from the target language (L_n) being acquired.

b. In cases where the L1 and L_n differ parametrically, we would expect L2ers and L3ers to show convergent intuitions if their L1 and L_n do not differ parametrically, yet divergent intuitions if their L1 and L_n differ parametrically[2].

[2] It is possible to assume that L2 can be a source of divergence in the case of L3ers. I will discuss this issue at length later (section 3.2, p. 59).

The choice of these learners with these linguistic configurations will become more obvious in later chapters.

In this chapter I set up the relevant background to formulate the main research question: whether advanced learners' intuitions (i) *converge* with natives' when the relevant constructions are constrained by principles of UG but (ii) *diverge* from natives' when the constructions are constrained by parameterisable features which differ between L1-L2. The rest of this study is divided as follows. Chapter 2 deals with constraints on grammar. I first report on universal constraints which are claimed to stem from the principles of Universal Grammar (UG) and represent a typical POS phenomenon. I later investigate discursive constraints which depend on the parameterisation of the functional focus head, Foc^0 –in particular, I will discuss the information packaging of sentences (topic-focus articulation) in the three languages under investigation (Spanish, Greek and English). In Chapter 3, I explore the difference between convergent and divergent intuitions in L2 advanced and end-state learners. The second section deals with L1/L2 influence in L3 acquisition. Chapter 4 presents the theoretical background to the first construction under investigation, namely, the distribution of overt and null pronominal subjects, which is constrained by UG principles and discursive constraints. Chapter 5 (test #1) presents empirical results concerning the acquisition of overt and null pronominal subjects by English and Greek natives in L2 and L3 Spanish. Chapter 6 presents the theoretical background to the second construction under investigation –the distribution of Subject-Verb and Verb-Subject word orders with unergative and unaccusative verbs, which is also governed by UG constraints and by discursive constraints. Empirical results are shown in Chapter 7 (test #2) and some implications are drawn regarding intuitions in advanced L2 grammars, the role of L1/L2 transfer and the role of input. Chapter 8 summarises the key findings in the current study and presents the final conclusions.

Chapter 2. UG CONSTRAINTS AND DISCURSIVE CONSTRAINTS

2.1 UG constraints: Principles of UG

In the generative tradition, UG is envisaged as a biologically innate language faculty, which consists of (i) an invariant syntactic-computational device (Computation for Human Language, C_{HL}), (ii) a set of universal principles that constrains the design of natural language grammars and (iii) language-specific parameters, whose values, [+] or [–], are located in functional heads (Borer, 1984; Chomsky, 1995) and allow for cross-linguistic variation[3]. Grammars develop mainly from the interaction between the Primary Linguistic Data, PLD (also known as input) and C_{HL}.

One of the arguments for invoking UG in language acquisition is the well-attested phenomenon where the PLD underdetermines the output in L1A (e.g., Crain & Thornton, 1998; Lightfoot, 1999) and in L2A (e.g., Pérez-Leroux & Glass, 1997, 1999; Kanno, 1997, 1998a, 1998b; Lozano, 2002b; Marsden, 1998, 2001a, 2001b; Schwartz, 2000; White, 2002). This is known as the *poverty of the stimulus*, POS (or the *logical problem of language acquisition*). To illustrate, consider the Overt Pronoun Constraint, OPC (Montalbetti, 1984, 1986), which restricts the distribution of overt and null pronominal subjects[4]. In null-subject languages, an overt pronominal subject cannot act as a bound variable with a quantifier (or a *wh*- operator) as an antecedent. Consider two typologically unrelated languages, Spanish, (1), and Japanese, (2), where the overt pronoun *él*/*kare* 'he' in the embedded clause cannot have the matrix quantifier *cada estudiante* 'every student' or the operator *dare* 'who' as an antecedent. By contrast, the null pronoun can. Further note that there is no restriction on either null or overt pronouns taking an extrasentential antecedent other

[3] Since I assume the reader's familiarity with the generative model, I only mention some basic concepts relevant for the argument of the current study. For an overview of the tenets of UG (Principles and Parameters), the reader is referred to, amongst others, Chomsky (1981, 1986, 1995, 1998, 2000), Culicover (1997), Haegeman (1994), Haegeman and Guéron (1999), Hawkins (2001a, 2001b), Herschensohn (2000), Radford (1988, 1997) and White (2002).

than the quantifier/operator. In short, an overt pronoun cannot be interpreted as a bound variable in null subject languages.

(1) Cada estudiante$_i$ dijo [que {*pro*$_{i/j}$/él$_{*i/j}$} sabe cantar]
Every student$_i$ said that *pro*$_{i/j}$/he$_{*i/j}$ knows sing
'Every student said that he knows how to sing'

(2) Dare$_i$ ga [{*pro*$_{i/j}$/kare$_{*i/j}$} ga sore o mita to] itta no
who$_i$ NOM pro$_{i/j}$/he$_{*i/j}$ NOM that ACC saw that said Q
'Who said that he saw that?'

At issue is whether the advanced L2 learner can discover the subtle restrictions on the distribution of overt and null pronouns imposed by the OPC. There is evidence suggesting that L2 learners of Spanish (and Japanese) show native-like intuitions with respect to OPC restrictions, as they reject an overt pronoun when the pronoun is coreferential with the quantifier/operator, but not when it is coreferential with a different antecedent. At the same time, learners accept a null pronoun equally with both a quantifier/operator and an extrasentential referent, similarly to what natives do (Kanno, 1997, 1998a, 1998b; Lozano, 2002b; Marsden, 1998, 2001a, 2001b; Pérez-Leroux & Glass, 1997, 1999). Given these facts, these L2 researchers argue that knowledge of the OPC must be innate, in the form of a principle of UG[5], since:

(i) OPC effects can be found in other null-subject Indo-European languages like Portuguese, Italian and Greek (Montalbetti, 1984, 1986) and in typologically unrelated languages like Chinese (Xu, 1986) and Japanese and Korean (Kanno, 1997)[6].

(ii) In learnability theory, the OPC represents a typical case of a POS phenomenon, since the ungrammatical interpretation, [quantifier$_i$/*wh*-

[4] In chapter 2 I will discuss the distribution of overt and null pronouns (including OPC constructions) at length, as they are one of the constructions under investigation in the current study. The evidence presented in this section simply illustrates a typical poverty-of-the-stimulus phenomenon.

[5] Note that I am leaving aside the traditional debate of 'accessibility to UG', i.e., whether learners' sensitivity to POS cases (like the OPC) indicates that UG is *fully* accessible (vs. *partially*/*not* accessible). This debate is irrelevant for the conclusions to be drawn in the current study, as I will not discuss the *degree* of access to UG, but rather whether the design of natural languages (UG) is an esplanation for learners' intuitions or not. For an overview of the 'access' debate, see Bley-Vroman *et al.* (1988), Herschensohn (2000), Li (1998) and White (2002), amongst others.

operator$_i$ … overt pronoun$_{*i}$], is not present in the Spanish/Japanese input (neither in L1 acquisition nor in L2 acquisition). In other words, input in the form of positive evidence alone does not contain ungrammatical expressions, as the OPC dictates what *cannot* be said, rather than with what can be said. Therefore, OPC knowledge must be part of UG principles (see Schwartz, 2000, for a discussion).

(iii) As I will argue in Chapter 4, OPC effects are not instantiated in English (the learners' L1 in the OPC studies by Kanno, Lozano, Marsden and Pérez-Leroux & Glass mentioned above), since null pronouns are not allowed in this language. It is therefore highly unlikely that L1 is the source of knowledge of OPC effects.

(iv) The above authors show that OPC constructions are never explained in textbooks and language instructors are not normally aware of them. As a result, instruction can be discarded as the source of knowledge of OPC.

There is further evidence from other L2A POS studies that the L2 output is underdetermined by the L2 input. For example, Hertel (2000) found that advanced English learners of Spanish show native-like intuitions with respect to the distribution of Subject-Verb (SV) and Verb-Subject (VS) word orders with unaccusatives and unergatives, despite the fact that such alternation (i) is not operative in their L1 English and (ii) it is not overtly marked in L2 Spanish (thus representing a typical POS phenomenon). Further evidence for L2 learners' knowledge of POS constructions is presented in Martohardjono's (1993) study on locality constraints and Schwartz & Sprouse's (1994, 2000) study on German word order.

Opinion is divided, however, as to whether POS cases are the most convincing evidence to invoke UG in L2A. Results from POS studies have led one line of L2 researchers to argue that such findings are a compelling reason for postulating the involvement of the principles of UG in L2A (e.g., White, 2002; Schwartz, 2000; Schwartz & Sprouse, 2000). In the words of Schwartz (2000:4):

[6] I will present further typological evidence on the OPC in chapter 2, where these issues will be discussed at length.

> 'Since the *poverty of the stimulus* problem in L1 acquisition is the crux of the argument for the existence of UG, then the way to probe whether UG operates in (adult) L2 acquisition is to look for UG-derived poverty of the stimulus problems.'

Another line of research contends that more conclusive evidence stems from studies focusing on parametric differences between the L1 and L2 (e.g., Hawkins, 2000, 2001c). In particular, it is argued that the basis of the POS approach rests on interlanguage phenomena that already exist in native, steady-state grammars, rather than on phenomena that may not be instantiated in either the L1 or L2, but still be constrained by UG. As Hawkins (2001c:346) remarks:

> 'I argue that while POS phenomena are important for establishing the UG-constrained nature of L2 mental representations, they are not the most compelling reason for its involvement. … A more compelling reason, I suggest, comes from the hypotheses that result from attempts to explain L1-L2 differences from a UG perspective.'

In the current study I will resolve the conflict posed by the results from studies like Schwartz & Sprouse (claiming full access to UG) and Hawkins (claiming that there are areas of UG which are not accessible) by examining phenomena which have both a POS dimension and a parametrised dimension. By using the right kind of elicitation technique, it is possible to show evidence both about the invariant properties of UG and parametric choices in L2 grammars.

As will become clear in the following chapters, given the same sentence, the preceding discourse can bias it towards an interpretation that either represents a typical POS phenomenon, or an L1-L2 difference. In particular, in Chapter 4 and Chapter 5 I investigate the distribution of pronominal subjects in POS contexts (i.e., OPC contexts) and in contexts governed by the discursive feature [Focus], whose parameterisation differs between L1 and L2. In Chapter 6 and Chapter 7 I investigate the distribution of word order in POS contexts (i.e., contexts governed by the Unaccusative Hypothesis) and in contexts regulated by the parameterisable feature [Focus]. The next section sets the background to constraints involving the discursive feature [Focus], whose functional head is amenable to parameterisation.

2.2 Discursive constraints: parameterisable Focus^0

Following Zubizarreta (1998), the information structure of a sentence is articulated into *focus* and *topic*, which can be informally defined as follows:

(i) *Topic* is the presupposed (or known) information in the sentence. The presupposition is the shared assumptions between the speaker and the hearer at the time of uttering the sentence.

(ii) *Focus* is the non-presupposed (or new) information in the sentence. The non-presupposition is the novel information the speaker is communicating to the hearer at the time of uttering the sentence.

Though information packaging is universal, languages use different means to realise discourse structure (Vallduví, 1995). Focus is syntactically marked in Spanish and Greek (though prosodic mechanisms are also available), while English tends to mark focus prosodically (e.g., Kiss, 1998; Zagona, 2002; Zubizarreta, 1998).

2.2.1 Topic vs. Focus

In this section, I will briefly discuss the major syntactic and semantic differences between topicalised vs. focalised elements (for in-depth analyses, see, e.g., López & Winkler, 2000; Puskas, 1997; Rizzi, 1997; Tsimpli, 1995).

It is important to highlight that, although some work has been done over the last two decades in the generative literature regarding the nature of focus (which we will analyse later), generative linguistics has been concerned with the sentential level more than with the discursive level. In the words of Chomsky (1995:220):

> 'Notice that I am sweeping under the rug questions of considerable significance … called "surface effects" on interpretation. These are manifold, involving topic-focus and theme-rheme structures … and many others.'

The acquisition of focus is also an underexplored area in L2A. I intend to bridge this gap in the L2A literature in the current study.

As the presence/absence of topic and focus is governed by discourse factors (such as the shared assumptions between the speaker and the hearer), the evidence that we are

about to present consists of small pieces of discourse in the form of dialogues, which bias for an answer containing different distributions of topic and focus[7].

In Romance languages, the topic-comment articulation corresponds to Cinque's (1990) Clitic Left Dislocation (CLLD) constructions. Topics in A-bar positions require a coreferential resumptive (overt) clitic in an A position, but focus disallows it, as the contrasts in (3Bi,ii) and (4Bi,ii) show[8].

(3) A: ¿Y el libro?
'What about the book?'
B: (i) [El libro_i]$_{\text{Top}}$, lo_i he perdido
'The book, I have lost it'
(ii) * [El libro_i]$_{\text{Top}}$, he perdido

(4) A: ¿Qué has comprado, un libro o una libreta?
'What did you buy, a book or a notebook?'
B: (i) [Un libro_i]$_{\text{Foc}}$ he comprado (y no una libreta)
'A book, I bought (and not a notebook)'
(ii) * [Un libro_i]$_{\text{Foc}}$ lo_i he comprado (y no una libreta)

In short, topicalised constituents in A-bar positions are construed as bound to a clitic in an A position, (5a), whereas focalised constituents are not, (5b).

(5) a. Top_i … [$_{\text{TP}}$ … CL_i …]
b. Foc_i … [$_{\text{TP}}$ … CL_{*i} …]

The topicalised element is normally delimited from the rest of the clause by "comma intonation" and normally expresses known information. Constructions of this type are known as *topicalisation* structures.

[7] It is worth noting that most of the literature on topic and focus appears to ignore the fact that the topic/focus articulation is regulated by discursive constraints. In some studies it is sometimes difficult to judge whether a given constituent is to be interpreted as focus (or topic) without a relevant piece of discourse. In other words, in discourseless contexts it is difficult to detect the (un)grammaticality of topicalised (or focalised) constituents in languages like Spanish, Italian, Greek and Hungarian, as their apparently 'free' word order is constrained by discursive factors.

[8] We follow López & Winkler (2000) for notation purposes. A subscript 'Top' will immediately follow topicalised constituents, as in [the book]$_{\text{Top}}$, to indicate that the constituent is interpreted as topicalised. By contrast, 'TopP' will precede the constituent to indicate the syntactic boundary of a Topic Phrase as in [$_{\text{TopP}}$ the book], as is standardly notated for other phrases. The same applies to focus.

(6) A: ¿Qué hago con el libro?
'What shall I do with the book?'
B: [El $libro_i$]$_{Top}$, deberías $ponerlo_i$ en la mesa
The book, should.2S put-it on the table
'The book , you should put it on the table'

In (6B), *el libro* 'the book' is known (topicalised) information to both the speaker and the hearer, as it has been previously mentioned in the discourse, (6A).
Note that although both topicalised and focalised elements can appear in the left periphery, they differ interpretively. Whereas *the book* in (6B) above introduces already mentioned information (topic), it introduces new information (focus) in (7B).

(7) A: ¿Qué pongo en la mesa?
'What shall I put on the table?'
B: [El libro]$_{Foc}$ deberías poner t_i en la mesa (no el lápiz)
The book should.2S put on the table (not the pencil)
'It is the book that you should put on the table (and not the pencil)'

Topic and focus also differ distributionally. *Wh*-operators are standardly assumed to express focused (new) information (Puskas, 1997). A matrix *wh*-operator can therefore coexist with a topic, (8), yet it is incompatible with a focus, (9). In other words, new information (*wh*-operator) can coexist with known information (topics) but not with new information (focus).

(8) [A $Juan_i$]$_{Top}$, [qué]$_{Foc}$ le_i has dicho?
To John, what him have.2S told?
'John, what did you tell him?'

(9) * [A $Juan_i$]$_{Foc}$ [qué]$_{Foc}$ has dicho t_i?
To John what have.2S told?
'John, what did you tell?'

The restriction that only one piece of new information (yet one or more pieces of known information) is allowed per sentence leads to constraints on the structural positions of topic and focus. Most authors (e.g., Puskas, 1997; Rizzi, 1997b; Tsimpli, 1995) agree that there is one designated structural focus position but several

(recursive) topic positions[9]. This constrains the possible number of focused constituents to only one, (10B), but no such restriction holds for topicalised elements (11B). Note that an answer to the question (10A) could in principle contain three focused constituents (*el libro* 'the book', *a Juan* 'to John', *ayer* 'yesterday') as responses to the *wh*-operators (*cuándo* 'when', *qué* 'what', *a quién* 'whom').

(10) A: ¿Cuándo vendiste qué a quién?
When sold.2SG what to who?
'When did you sell what to who?'
B: *[El libro$_j$]$_{Foc}$ [a Juan$_i$]$_{Foc}$ [ayer$_k$]$_{Foc}$ vendí t_j t_i t_k
The book to John yesterday sold.1SG
'I sold the book to John yesterday'

(11) A: ¿Diste el libro a Juan ayer?
'Did you give the book to John yesterday?
B: No, [el libro$_j$]$_{Top}$, [a Juan$_i$]$_{Top}$, [ayer$_k$]$_{Top}$, se$_j$ lo$_i$ vendí t_k
No, the book, to John, yesterday, him it sold.1SG
'No, the book, to John, yesterday, I sold it to him'

Universal quantifiers (*nobody, everybody, everything,* etc) cannot be topicalised in CLLD constructions, (12B) and (13B), while they allow focusing, (14B) and (15B).

(12) A: ¿Has visto a alguien?
'Did you see anyone?'
B: *[A alguien$_i$]$_{Top}$, no lo$_i$ he visto t_i
To nobody no him have.1SG seen
'I didn't see anybody'

(13) A: ¿Lo has terminado todo?
'Have you finished everything?'
*[Todo$_i$]$_{Top}$, lo$_i$ he terminado t_i
All it have.1SG finished
'I finished everything'

(14) A: ¿Has visto a alguien?
'Did you see anyone?'

[9] I will later discuss the precise structural position of focus.

B: [A nadie$_i$]$_{Foc}$ he visto t_i
To nobody have.1SG seen
'I saw nobody'

(15) A: ¿Cuánto has terminado?
'How much did you fisnish?'
[Todo$_i$]$_{Foc}$ he terminado t_i
All have.1SG finished
'I finished it all'

As the contrasts in (16)-(18) show, the licensing of (a) topic phrase(s) depends on the presence of a focus phrase and not vice versa because, while topics can be dropped, focus cannot (see Rizzi, 1997b for a discussion). In other words, answers to questions like (A) below are required to contain the focused phrased at least, (Bi). The use of topics as a reply to a question is ungrammatical, as the (Bii) answers show.

(16) A: ¿Quién vino?
'Who arrived?'
B: (i) [*e*]$_{Top}$ [Juan]$_{Foc}$
'John'
(ii) *[vino]$_{Top}$ [*e*]$_{Foc}$
'Arrived'

(17) A: ¿Qué pelicula viste anoche?
'What film did you see last night?'
B: (i) [*e*]$_{Top}$ [*e*]$_{Top}$ ["Jamón jamón"]$_{Foc}$
' "Jamon jamon" '
(ii) *[vi]$_{Top}$ [anoche]$_{Top}$ [*e*]$_{Foc}$
'I saw last night'

(18) A: ¿Cuando visitaste el MIT?
'When did you visit MIT?'
B: (i) [*e*]$_{Top}$ [*e*]$_{Top}$ [en Octubre]$_{Foc}$
'In October'
(ii) *[Visité]$_{Top}$ [el MIT]$_{Top}$ [*e*]$_{Foc}$
'I visited MIT'

It should be clear from the analysis presented above that topic differs from focus both configurationally and interpretively. However, focus is not a unitary phenomenon. Gundel (1998) distinguishes three types of focus: *psychological* focus (current centre of attention), presentational[10] focus (new information predicated about the topic) and *contrastive* focus (linguistic prominence for the purpose of contrast). Only the last two types of focus are linguistically relevant, as acknowledged in the literature (e.g., Kiss, 1998; López & Winkler, 2000; Zubizarreta, 1998).

Focus may be marked crosslinguistically by pitch accent (phonological focus), by word order (structural focus), by focusing particles (morphological focus), or by combinations of these devices (Gundel, 1998). In the next section I argue for the representational nature of the [+Focus] feature. Subsequent sections deal with the interpretive differences between neutral, contrastive and presentational focus. Finally, I will examine their syntactic differences.

2.2.2 The representational nature of the [+Focus] feature

Rochemont (1998) proposes two (necessary and sufficient) diagnostics to identify focalised elements: question-answer pairs and negative contrastive adjuncts. In a *question-answer pair* exchange, the focus is the element in the answer that corresponds to the wh-constituent in the question. In (19B)-(21B), the focalised elements correspond to the *wh*-operators in (19A)-(21A).

(19) A: ¿Quién vino?
'Who arrived?'
B: Vino [Juan]$_{Foc}$
'John arrived'

(20) A: ¿Qué película viste anoche?
'What film did you see last night?'
B: Anoche vi ["Jamón jamón"]$_{Foc}$
'Last night I watched "Jamon jamon"'

[10] Gundel (1998) terms this type of focus *semantic focus*. However, I adopt the term *presentational focus* as it is the most widely used in the linguistic literature.

(21) A: ¿Cuando visitaste el MIT?
'When did you visit MIT?'
B: Visité el MIT [en Octubre]$_{Foc}$
'I visited MIT in October'

In *negative contrastive adjuncts* the focus is the constituent in the answer that is set in contrast with the phrase appearing within the negative contrastive adjunct, as (22B)-(24B) show.

(22) A: ¿Quién vino, Juan o María?
'Who arrived, John or Mary?'
B: Vino [Juan]$_{Foc}$,no María
'John arrived, not Mary'

(23) A: ¿Qué película viste anoche, "Jamón Jamón" o "Casablanca"?
'What film did you see last night, "Jamón Jamón" or "Casablanca"?'
B: Anoche vi ["Jamón jamón"]$_{Foc}$, no "Casablanca"
'Last night I watched "Jamon Jamon", not "Casablanca"'

(24) A: ¿Cuando visitaste el MIT, en Octubre o en Noviembre?
'When did you visit MIT, in October or in November?'
B: Visité el MIT [en octubre]$_{Foc}$, no en noviembre
'I visited MIT in October, not in November'

Most authors in the generative literature agree that contrastive focus is represented syntactically cross-linguistically in the following languages[11]:

(i) Spanish: Camacho (1999), Casielles-Suarez (1999), Hernanz & Brucart (1987), López (1999), López & Winkler (2000), Ordoñez (1999), Zagona (2002), Zubizarreta (1998).
(ii) Greek: Agouraki (1990), Tsimpli (1990, 1995).
(iii) English: Kiss (1998), López & Winkler (2000); Rebuschi & Tuller (1999), Rochemont (1998).
(iv) Italian: Belletti & Shlonsky (1995), Pinto (1999), Rizzi (1997b).

[11] For phonological representation approaches see Kidwai (1999) for Hindi-Urdu, Selkirk (1995) for English. For phonological *and* syntactic representations see Roberts (1998) for English.

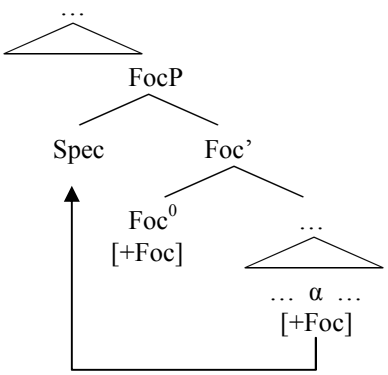
(v) Portuguese: Ambar (1999).
(vi) Western Romance (including Spanish): Uriagereka (1995).
(vii) Romanian: Hill (2002).
(viii) Hungarian: Brody (1990, 1995), Kiss (1995, 1998), Puskas (1997, 2000).
(ix) German: López & Winkler (2000).
(x) Hebrew: Belletti & Shlonsky (1995).
(xi) Finnish: Vilkuna (1995).
(xii) Malayalam: Jayaseelan (2001).
(xiii) Arabic-Tarifit: Ouhalla (1990).
(xiv) Chadic: Tuller (1992).
(xv) Kirundi: Ndayiragije (1999).
(xvi) Quechua: Camacho (1999).

The common proposal underlying these proposals is the following:

(i) A [+Foc] feature is assigned to element(s) expressing new (or contrastive) information, as shown in the previous examples, (19)-(24). Thus, the focalised element, *α*, contains a [+Foc] feature, which is interpretable by the system of thought (LF), as the distinction new vs. old information is interpretable at LF (e.g., Rebuschi & Tuller, 1999).
(ii) A functional focus head, Foc^0, heads its own maximal projection, Focus Phrase (FocP). The head contains a focus feature with is uninterpretable by LF as its sole function is to trigger movement of the focalised element *α*. The presence of a functional category like Foc^0 is allowed by UG and is reminiscent of other functional categories like T^0, C^0, D^0, etc.

In short, focalised elements appear in a focus configuration, as (25) shows. The focalised constituent, *α*, represents new information, hence the presence of a [+Foc] feature. *α* then raises to [Spec,FocP] for feature checking purposes.

(25) Syntactic representation of focus



The exact details of (i) the nature of the representation of focus in (25) and (ii) the feature checking process in focus configurations will become clear in the next sections. I discuss first the interpretive differences of contrastive vs. presentational focus and then I proceed to explain their syntactic differences.

2.2.3 Three types of focus: interpretive differences

In the generative tradition, linguistic analyses of focus vary with respect to the degree of partition between contrastive vs. presentational focus:

(i) Some studies implicitly assume a unique analysis for both contrastive and presentational focus, e.g., Casielles-Suarez (1999), Hernanz & Brucart (1987) for Spanish; Tsimpli (1995) for Greek; Brody (1995) for Hungarian.

(ii) Other studies briefly acknowledge that such a difference exists, though only contrastive focus analyses are considered, e.g., López (1999) and Ordoñez (1999) for Spanish; Rizzi (1997b) for Italian; Puskas (1997) and Hill (2002) for Hungarian.

(iii) Only recent approaches have started to differentiate between the two types of focus, e.g., Ambar (1999) for Portuguese; López & Winkler (2000), Zagona (2002) and Zubizarreta (1998) for Spanish; Kiss (1998) and Puskas (2000) for Hungarian. Even so, their analyses for presentational focus are very succinct.

(iv) Few studies discuss in detail the syntax of presentational focus, e.g., Belletti & Shlonsky (1995) for Italian and Hebrew and Ndayiragije (1999) for Kirundi (a Bantu language).

The next sections explore the interpretation of contrastive vs. presentational focus. But, first, I present an analysis of neutral focus, which entails the focusing of the whole sentence rather than individual constituents[12].

2.2.3.1 Neutral focus

In neutral focus contexts the whole sentence is new information, i.e., neutral focus is basically the absence of (a) topicalised constituent(s), as the whole sentence is focalised. Hertel (2000) calls this phenomenon 'out of the blue' constructions, since the hearer has no presupposition about the novelty of the information being uttered. Neutral focus can be elicited by general questions like *¿Qué pasó?* 'What happened?'.

Consider (26A), where the general question requires an all-focused reply, (26Bi), with the neutral word order in Spanish with transitives, i.e., SVO. Any other word orders are ungrammatical as an answer to a general question, as (26ii-v) show.

(26) A: ¿Qué pasó ayer?
'What happened yesterday?'
B: (i) [Pedro rompió una ventana]$_{Foc}$ (SVO)
'Peter broke a window'
(ii) * [Rompió una ventana Pedro]$_{Foc}$ (VOS)
(iii) * [Una ventana Pedro rompió]$_{Foc}$ (OSV)
(iv) * [Rompió Pedro una ventana]$_{Foc}$ (VSO)
(v) * [Pedro una ventana rompió]$_{Foc}$ (SOV)

Intransitive verbs also show SV order in neutral contexts, as (27Bi) shows. VS order is disallowed, (27Bii)[13].

[12] There is terminological confusion in the literature. *Contrastive* focus is also termed narrow focus and identificational focus. *Presentational* focus is termed wide focus and information focus. *Neutral* focus is also known as information focus. For convenience, I will use the terms *contrastive*, *presentational* and *neutral* throughout.

[13] VS is the preferred order in neutral contexts with a special set of intransitives, namely, unaccusatives. This issue will be discussed in chapter 3.

(27) A: ¿Qué pasó anoche en la calle?
'What happened last night in the street?'
B: (i) [Una mujer gritó]$_{Foc}$ (SV)
'A woman shouted'
(ii) *[Gritó una mujer]$_{Foc}$ (VS)

In short, SV(O) order is typically interpreted as neutral focus in Spanish.

2.2.3.2 Contrastive focus

Consider (28), where the universe of discourse, D, contains a limited set of entities, *e*, that are known both to the speaker and the hearer. In principle, only two are necessary for contrastive purposes, though we could have a set containing several of them.

(28) D: {e_1, e_2, (e_3), (e_4)}

Suppose that the first entity the speaker and hearer are talking about is *Juan*, and the second *María*, as in (29)[14]. A question headed by *quién* 'who', requires a contrastively focused subject as an answer in this context. The expected reply is B(i), where the subject *Juan* appears in pre-verbal position[15]. A post-verbal position is barred, B(ii).

(29) D: e_1 = *Juan*, e_2 = *María*
A: ¿Quién tiene dinero, Juan o María?
'Who has money, John or Mary?'
B: (i) [**Juan**]$_{Foc}$ tiene dinero
'It is Juan who has money'
(ii) *Tiene dinero [**Juan**]$_{Foc}$

As well as subjects, any constituent can be contrastively focused. Consider the case of direct objects, (30), where the speaker and hearer are conversing about whether *Juan* has *dinero* 'money' or *deudas* 'debts'.

[14] Contrastively focused constituents are presented in **bold** (to distinguish them from presentationally focused constituents in the next section, which will be presented in CAPITALS).
[15] Contrastive focus in English can be expressed via clefting, as the translations in (29) and (31) show. I will come back to this issue in the next sections.

(30) D: e_1 = *dinero*, e_2 = *deudas*
A: ¿Qué tiene Juan, dinero o deudas?
'What does Juan have, money or debts?'
B: (i) [**Dinero**]$_{Foc}$ tiene Juan
'It is money that Juan has'
(ii) *Juan tiene [**dinero**]$_{Foc}$

As (30Bi), shows, the expected answer must contain an object, *dinero* 'money', in pre-verbal position, and not in postverbal position, (Bii), where it would typically appear in neutral contexts.

Note that contrastive focus implies that what is true for e_1, *Juan*, is not so for e_2, *María*, as (31) shows.

(31) D: e_1 = *Juan*, e_2 = *María*
Juan tiene dinero (y no María)
'It is Juan that has money (not Maria)'

In short, given a set of contextually given elements, contrastive focus exhausts a subset of this set (Kiss, 1998). This entails that contrastive focus is discourse-linked (D-linked) in the sense of Pesetsky, 1987)[16].

From the above discussion I take it as uncontroversial that focalised elements displaced to a left peripheral position must be interpreted as contrastive focus in Spanish.

2.2.3.3 Presentational focus.

Consider now (32), where the discourse, D, contains a infinite number of entities, e_n, which are unknown to the hearer.

(32) D: {e_n}

[16] For a clearer understanding of D-linking, consider the wh-operator *which* in English. In (iA) below, the question containing *which* presupposes that the universe of discourse consists of a limited set of entities known to the hearer and speaker (*"Jamón jamón"* and *"Casablanca"*). In (iA) *what* is not a felicitous question for the answer, (iB), as the wh-operator *what* presupposes an infinite set of entities.
(i) A: Which/*what film did you see, "Jamón jamón" or "Casablanca"?
B: I saw "Casablanca" (not "Jamón jamón")

Suppose a conversation where A asks B *¿Quién robó el dinero del banco?* 'Who stole the money from the bank'. The question requires an answer with an unlimited number of entities (unlike in the case of contrastive focus, where the required answer must contain an entity out of a given, limited set). Speaker A's question, (33A), therefore presupposes an answer containing an unknown focused entity. The focused subject *Juan López* is a possible answer.

(33) D: e_n = *an infinite number of people unknown to person A*.
A: ¿Quién robó el dinero del banco?
'Who stole the money from the bank'
B: (i) Lo robó [JUAN LÓPEZ]$_{Foc}$
It stole John Lopez
'JOHN LOPEZ stole it'
(ii) *[JUAN LÓPEZ]$_{Foc}$ lo robó

Note that presentational focus requires the subject to surface in a post-verbal position, (33Bi). A pre-verbal subject is barred, (33Bii). The same is true for objects, as (34) shows.

(34) D: e_n = *any infinite number of objects unknown to person A*.
A: ¿Qué tiene Juan?
'What does Juan have?'
B: (i) Juan tiene [DINERO]$_{Foc}$
'Juan has MONEY'
(ii) *[DINERO]$_{Foc}$ tiene Juan

In (34Bi) the presentationally focused direct object *dinero* 'money' must appear in sentence-final position and not in sentence-initial position, (Bii). This entails that constituents displaced to the right edge of the sentence are to be interpreted as presentational focus in Spanish.

To summarise, (i) from a discursive viewpoint presentational focus is not discourse-linked (D-linked), whereas contrastive focus is (in the sense of Pesetsky, 1987); (ii) fronted focalised constituents are interpreted as contrastive focus, yet those surfacing in the right edge are interpreted as presentational focus. The next section deals with the syntactic properties of focus.

2.2.4 Three types of focus: syntactic differences

Our discussion has revealed that in Spanish (i) neutral focus has no designated structural position; (ii) contrastive focus tends to surface in the left periphery, and (iii) presentational focus tends to appear in sentence-final positions, (35).

(35) a. *Neutral focus*
(i) [Foc]
(ii) no designated structural position
b. *Contrastive focus*
(i) [Foc] [Top]
(ii) sentence-initial position
c. *Presentational focus*
(i) [Top] [Foc]
(ii) sentence-final position

The differences in (35) are explored in more detail in the next section.

2.2.4.1 Neutral focus: no structural position

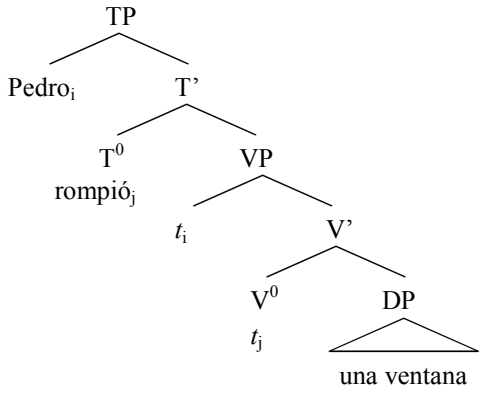
Recall from our earlier discussion that in neutral focus contexts, focused constituents do not move since the whole sentence is interpreted as new (focused) information. Spanish is an SVO language in neutral contexts (Zagona, 2002; Zubizarreta, 1998), as (36Bi) shows. Other word orders are not permitted, (36Bii-v).

(36) A: ¿Qué pasó ayer?
'What happened yesterday?'
B: (i) Pedro rompió una ventana (SVO)
'Peter broke a window'
(ii) * Rompió una ventana Pedro (VOS)
(iii) * Una ventana Pedro rompió (OSV)
(iv) * Rompió Pedro una ventana (VSO)
(v) * Pedro una ventana rompió (SOV)

The representation of neutral focus, (36Bi), is straightforward. Following standard analysis for Spanish, (e.g., Zagona, 2002), the subject *Pedro* in (37) is assumed to be base-generated VP-internally in [Spec,VP] and then raises to [Spec,TP] to check

nominative case. The verb *rompió* 'broke' raises from V to T to check T's strong [+V] feature, as Spanish is a verb-raising language (Pollock, 1989).

(37)



2.2.4.2 Contrastive focus: the CP domain

There is a consensus in the literature that contrastive focus is a syntactic phenomenon entailing movement of the focalised element to the left periphery of the sentence: Catalan (Ordoñez, 1999), Greek (Agouraki, 1990; Tsimpli, 1995), Hungarian (Brody, 1995; Kiss, 1998; Puskas, 1997, 2000), Italian (Rizzi, 1997b), Romanian (Hill, 2002), Spanish (López & Winkler, 2000; Zagona, 2002; Zubizarreta, 1998).

Contrastively focused questions like (38A) frame the discourse around two entities, *Casablanca* and *Terminator*. The contrastively focused answer requires the object *Casablanca* to appear in sentence-initial position, (38B). Note that the inflected verb *vio* 'saw' must invert with the subject to be right-adjacent to the focused object, (38Bi). It cannot remain in situ, as the ungrammaticality of (38Bii) shows.

(38) A: ¿Qué película vio Juan ayer, Casablanca o Terminator?
Which film did John see yesterday, Casablanca or Terminator?
B: (i) **Casablanca**$_i$ vio$_j$ [$_{TP}$ Juan t_j t_i ayer]
'It is Casablanca that John saw yesterday
(ii) ***Casablanca**$_i$ [$_{TP}$ Juan vio t_i ayer]

Consider embedded clauses, where the above observations must also apply. In (39B) the focused element *Casablanca* and the raised verb *vio* appear in the left periphery, i.e., above TP but below CP.

(39) B: (i) Creo [$_{CP}$ que [$_{XP}$ **Casablanca**$_i$ vio$_j$ [$_{TP}$ Juan t_j t_i ayer tarde]]]
'I think that it is Casablanca that John saw yesterday evening'
(ii) *Creo [$_{CP}$ que [$_{XP}$ **Casablanca**$_i$ [$_{TP}$ Juan vio t_i ayer tarde]]]

In sum, contrastively focused constituents appear in XP, somewhere between CP and TP, as CP is filled by the overt complementiser *que* 'that'. This observation holds for several languages such as Greek (Tsimpli, 1995), Italian (Belletti & Shlonsky, 1995; Rizzi (1997b), Finnish (Vilkuna, 1994), Hungarian (Brody, 1995; Kiss, 1998; Puskas, 1997, 2000) and Spanish (Hernanz & Brucart, 1987; López & Winkler, 2000; Zagona, 2002; Zubizarreta, 1998). These authors agree that contrastive focus is a syntactic phenomenon. This is motivated by the following observations:

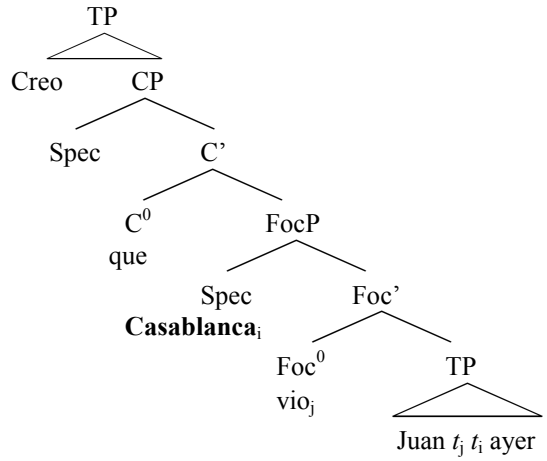
(i) The functional head, Foc^0, projects its own X-bar projection, Focus Phrase (FocP), similarly to what occurs with other functional categories like T^0, D^0, etc. (So, XP becomes FocP).
(ii) Foc^0 merges with TP and, in turn, C^0 merges with FocP. Thus, FocP appears in an A-bar position in the left periphery.
(iii) The specifier, [Spec,FocP], hosts the contrastively focalised constituent[17].
(iv) In addition, in some languages Foc^0 attracts the verb, e.g., Spanish (Hernanz & Brucart, 1987; López, 1999; López & Winkler, 2000; Ordoñez, 1999; Zagona, 2002); Greek (Tsimpli, 1995); Hungarian (Brody, 1990, 1995; Kiss, 1995, 1997; Puskas, 1997); Portuguese (Ambar, 1999). Other languages force the verb to remain in situ: Italian (Rizzi, 1997).

To illustrate (i-iv), consider the Spanish example in (40), where the contrastively focalised object *Casablanca* raises from the lower TP to land in [Spec,FocP]. Recall that Spanish Foc^0 hosts the raised verb *vio* 'saw'.

[17] It is important to emphasise that focalised elements raise to [Spec,FocP] (following Rizzi's (1997b) assumptions on the fine structure of the left periphery), as traditional generative analyses propose that they raise to [Spec,CP] (e.g., Hernanz & Brucart, 1987). In short, the CP domain is richer than initially assumed. Similarly to what occurred with the split-IP analysis (Pollock, 1989), Rizzi (1997b) proposes the split-CP analysis to account for the locus of contrastively focalised elements in the left periphery.

(40) a. Creo [$_{CP}$ que [$_{FocP}$ **Casablanca**$_i$ vio$_j$ [$_{TP}$ Juan t_j t_i ayer]
'I think that it is Casablanca that John saw yesterday'

b.



As (40b) shows, the verb *vio* 'saw' must surface to the right of the contrastively focalised object, *Casablanca*. This holds not only for arguments, but also for adjuncts, as Hernanz & Brucart (1987) observe. Consider (41Bi) where the contrastively ocused adjunct en primavera 'in springtime' appears in the left periphery and the verb *visitó* 'visited' appears to its right, not in situ, (41Bii)[18].

(41) A: ¿Cuándo visitó Juan Leningrado, en primavera o en invierno?
'When did John visit Leningrad, in springtime or in wintertime?'
B: (i) **En primavera** visitó Juan Leningrado
In springtime visited John Leningrad
'It was in springtime when John visited Leningrad'
(ii) ***En primavera** Juan visitó Leningrado

An examination of recent theoretical studies confirms the generalisation that in contrastive focus environments the verb typically raises to end up to the right of the focalised constituent, i.e., both the focused constituent and the verb end up in a Spec-H configuration. This observation holds cross-linguistically in other (typologically)

[18] Notice that (41Bii) is only possible in presentational contexts where *en primavera* (i) adjoins TP for stylistic reasons, (ii) is followed by a pause in speech and by a comma in writing and, therefore, (iii) is interpreted as topic, as shown below.
(i) A: ¿Qué hizo Juan en primavera?
'What did John do in springtime?'
B: En primavera, Juan visitó Leningrado
'In springtime, John visited Leningrad'

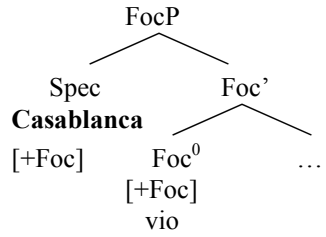
unrelated languages, such as Arabic (Ouhalla, 1990), Kirundi (Ndayiragije, 1999), Greek (Tsimpli, 1995), Hungarian (Kiss, 1998), Malayalam (Jayaseelan, 2001), Portuguese (Ambar, 1999), Quechua (Camacho, 1999) and Romanian (Hill, 2002).

To summarise, our discussion leads to two generalisations, (i) the contrastively focused element containing a [+Foc] feature raises from a TP-internal position to [Spec,FocP] and (ii) languages like Spanish and Greek (but not Italian) require the verb to raise from T^0 to Foc^0, which is specified as [+Foc]. Note that the [+Foc] constituent and the [+Foc] Foc^0 head end up in a Spec-H configuration to satisfy a claimed invariant universal of UG, namely, the Focus Criterion, (42).

(42) Focus Criterion (Brody, 1995; Rizzi, 1997b; Tsimpli, 1995)
   a. A [+Foc] operator must be in a Spec-H agreement with a [+Foc] H^0
   b. A [+Foc] H^0 must be in a Spec-H agreement with a [+Foc] operator

As (42) predicts, the focused object *Casablanca* in (43) must appear in [Spec,FocP] and the verb *vio* 'saw' in the [+Foc] Foc^0 to create a Spec-H configuration.

(43)



The Focus Criterion correctly predicts the (un)grammaticality of earlier sentences. (38Bii) and (39Bii) violate the Focus Criterion, as the focalised element *Casablanca* surfaces in [Spec,FocP], but no overt element appears in F^0, so the Spec-H configuration cannot be created. (38Bi) and (39Bi) satisfy the Focus Criterion, as *Casablanca* is in [Spec,FocP] and the verb *vio* 'saw' is in F^0, thus creating a Spec-H configuration.

It is not entirely clear why the focus head Foc^0 attracts the inflected verb *vio*. Brody (1990) and Puskas (1998) propose that verbs in Hungarian, which must also appear to the right of the contrastively focused element, (44), carry the feature [+Foc] and move to Foc to satisfy the Focus Criterion. However, Puskas (1998) shows evidence that copular verbs can be omitted in contrastive environments, as the contrast in (45a,b) shows.

(44) [$_{FocP}$ **Amarcord**$_i$ làtta$_j$ [$_{TP}$ Janos t_j t_i tegnap este]]
Amarcord saw John yesterday evening
'It is John who saw Amarcord last night'

(45) a. **As Oslasz film** volt érdekes
The Italian film is interesting
'It is the Italian film that is interesting'
b. **As Oslasz film** érdekes
The Italian film interesting
'It is the Italian film that is interesting'

Rizzi (1997b) also argues that Italian contrastive focus does not entail T^0 to Foc^0 raising. However, he points out that for some Italian speakers T^0 to Foc^0 may be acceptable.

In short, while in some languages (Spanish, Greek) Foc^0 attracts the inflectional head, in other languages it does not (Hungarian, Italian). I will tentatively suggest in section 2.2.6 (page 43) that this difference may be due to the fact that in some languages the focus head must contain overt phonological material, whereas in other languages it cannot. The inflected verb in Foc^0 would therefore be regarded as the spell-out of the uninterpretable [+Foc] feature of Foc^0. However, this cross-linguistic difference is not relevant for the experimental section of our study, as I only investigate Spanish and Greek (where the inflectional head raises to Foc^0) and English (where there is no syntactic movement triggered by focus). I delay the analysis of FocP in Greek and English until section 2.2.5, p. 36.

The Focus Criterion is an instantiation of the more general Affect Criterion (Haegeman, 1995). In fact, the Affect Criterion includes the Neg Criterion (Haegeman, 1995), the Wh criterion (Rizzi, 1991) and the Focus Criterion (Brody, 1990, 1995; Puskas, 1995; Rizzi, 1997b; Tsimpli, 1995). Movement of *wh*-phrases to the left periphery is analogous to focus. To illustrate, consider the declarative in (46a), with neutral SVO word order. Operator movement of *qué* 'what' triggers inversion of the verb *vio* 'saw', which must appear to the right of the operator, (46b). Lack of inversion results in ungrammaticality, (46b').

(46) a. [$_{TP}$Pedro vio Casablanca]
'Peter saw Casablanca'

b. [$_{CP}$ ¿Qué$_i$ vio$_j$ [$_{TP}$ Pedro t_j t_i ?]]
What saw Peter?
'What did Peter see?'

b'. *[$_{CP}$ ¿Qué$_i$ [$_{TP}$ Pedro vio t_i ?]]
What Peter saw?
'What did Peter see?'

Consider now the issue of the (un)interpretability of the focus feature. As (43) above shows, contrastively focused constituents are specified as [+Foc], which is an [+interpretable] feature as the distinction new/old information must be interpretable by the systems of thought (i.e., at LF) (Rebuschi & Tuller, 1999). The head Foc^0 contains an [–interpretable] focus feature, which serves a syntactic purpose, namely, to attract the focalised constituent from TP to [Spec,FocP][19]. The [+interpretable] focus feature of the focalised element matches and agrees against the [–interpretable] focus feature of the focus head. The [–interpretable] feature deletes, but the [+interpretable] feature proceeds to spell-out and then to LF. The derivation converges at LF.

This analysis entails that movement of the focalised constituent is not optional –it must be triggered to satisfy the (quasi)morphological requirements of heads, i.e., either to satisfy a criterion (à la Rizzi, 1997) or for feature checking purposes (à la Chomsky, 1995).

To sum up, the following observations hold for Spanish:

(i) FocP in contrastive focus environments appears in the left periphery (A-bar position), between CP and TP[20].

(ii) The functional head, Foc^0, projects its own FocP.

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[19] Similarly to what occurs with the (un)interpretability of the [+Foc] feature, it is standardly assumed that C^0 contains an *uninterpretable* [+wh] feature, whereas the displaced *wh*- constituent contains an interrogative *interpretable* [+wh] feature (e.g., Rizzi, 1997b). Therefore, strong features like [+Foc] in Foc^0 and [+wh] in C^0 are *uninterpretable* as their purpose is syntactic, i.e., they attract their *interpretable* counterpart for feature checking purposes.

[20] Topic Phrases (TopP) can also appear between CP and TP. They can be recursive, appearing before or after FocP, as (i) below shows (see Ambar, 1999 for Portuguese; ; López & Winkler, 2000 and Zubizarreta, 1998 for Spanish; Puskas, 1997 for Hungarian; Tsimpli, 1995 for Greek; Rizzi, 1997b for Italian). For conciseness, I will not present an analysis of TopP in contrastive environments, as left-peripheral topics are not relevant for the experimental section of our study (see Valenzuela, 2002, 2003 and Zagona, 2002, for details on Topic Phrases in Spanish).

(i) CP … (TopP*) … FocP … (TopP*) … TP

(iii) Foc^0 carries an uninterpretable [+Foc] feature.

(iv) Foc^0 attracts a focalised constituent with an interpretable [+Foc] feature to its specifier, so as to satisfy the Focus Criterion (this indicates that Foc^0 is [+strong] in Spanish).

(v) In languages like Spanish and Greek Foc^0 must be overtly realised in contrastive environment by attracting the finite verb.

2.2.4.3 Presentational focus: the TP domain

It has been known for some time that Spanish is a topic-first/focus-last language in presentational focus environments (Bolinger, 1954). This holds for subjects, (47), direct objects, (48), indirect objects, (49), and adjuncts as well, (50). In short, presentationally focused constituents must appear in sentence-final position.

(47) A: ¿Quién tiene el dinero?
'Who has the money'
B: (i) Lo tiene JUAN
It has.3SG John
'JOHN has it'
(ii) *JUAN lo tiene

(48) A: ¿Qué le dio Juan a María?
'What did John give Mary?'
B: (i) Juan le dio a María DINERO
John her gave to Mary money
'John gave MONEY to Mary'
(ii) *DINERO Juan le dio a María

(49) A: ¿A quién dio Juan dinero?
'Who did John give money to?'
B: (i) Juan dio dinero A MARÍA
'John gave money TO MARY'
(ii) *A MARÍA Juan dio dinero

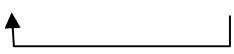
(50) A: ¿Cuándo le dio Juan dinero a María?
'When did John give money to Mary?
B: (i) Juan le dio dinero a María ANOCHE
'John gave the money to Mary LAST NIGHT'
(ii) *ANOCHE Juan le dio dinero a María

Bolinger's (1954) observation can be restated as in (51a). (51b) states that any number of topicalised phrases (known information) appears to the left of the focalised phrase (new information). Presentationally focalised constituents must appear in sentence-final position.

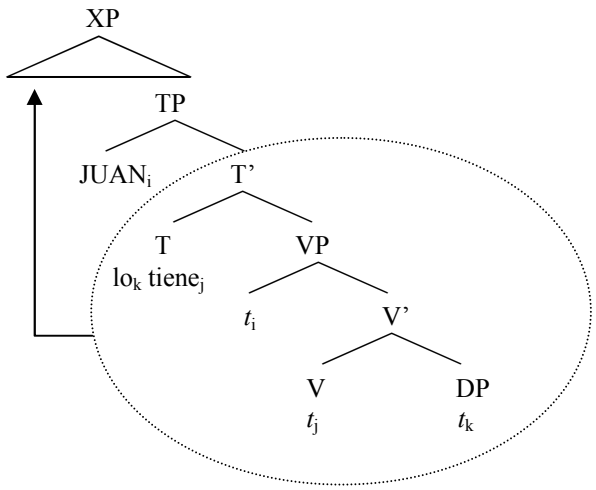
(51) Bolinger's (1954) generalisation:
a. Sentential informational packaging in Spanish in presentational environments: *Topic, Focus*
b. $[\ldots]_{Top}$ $[XP]_{Foc}$

Zubizarreta (1998) accounts for Bolinger's observation in generative terms. She proposes an analysis where defocalised elements (i.e., topics) undergo leftward movement to leave presentationally focalised elements in sentence-final position, a locus where they can receive main prominence. This movement is prosodically motivated (p-movement), i.e., it is not driven to satisfy feature checking.
To illustrate, consider (52a,b). The focused subject *Juan* is base-generated VP-internally and then raises to [Spec,TP] to check [NOM] case, as is standardly assumed (e.g., Zagona, 2002). The verb *tiene* 'has' raises from V to T to check T's strong [+V] feature (Spanish is a verb-raising language). The clitic *lo* 'it' also climbs from DP to be left adjacent to the raised verb. P-movement forces all unfocused constituents (anything below T') to raise to a projection above TP to leave the focused constituent *Juan* in sentence-final position

(52) a. $[_{XP}$ Lo tiene$]$ $[_{TP}$ JUAN $[_{T'}$ *t*$]]$



b.



Zubizarreta's (1998) analysis raises two immediate questions:

(i) It is not clear where the two topicalised (i.e., [–Foc]) constituents move to. Presumably in XP, somewhere above TP or perhaps in one of the multiple specifiers of T, as Zubizarreta (1998) opts for a syncretic analysis[21].

(ii) It assumes that the derivation for unaccusative verbs should be the same in both neutral and presentational contexts[22].

Belletti & Shlonsky (1995) propose an alternative analysis for Italian. Their analysis can handle the Spanish data as well. It is standardly assumed that the presentationally focused subject appears postverbally in sentence-final position in Italian (53Bi) (Belletti & Shlonsky, 1995; Pinto, 1999), similarly to what I have argued for Spanish, (53Bi). Preverbal focalised constituents in presentational contexts are barred in both languages, (53Bii,ii').

[21] Note that feature syncretism is allowed in minimalism (Chomsky, 1995) such that a functional head like T^0 can be specified for several features, each of which is checked against the equivalent feature of a specifier. This results in several specifiers for a given functional head.

[22] As we will discuss in chapter 3, Verb-Subject order with unaccusatives can be interpreted as neutral or as presentationally focused subject. Each interpretation is derived differently, though.

(53) A: Who has eaten?

B: (i) Ha mangiato $[GIANNI]_{Foc}$ (Italian)

(i') Ha comido $[JUAN]_{Foc}$ (Spanish)

Has eaten John

'JOHN has eaten'

(ii) *$[GIANNI]_{Foc}$ ha mangiato (Italian)

(ii')*$[JUAN]_{Foc}$ ha comido (Spanish)

A focused element in sentence-initial position is interpreted as contrastive focus both in Italian and Spanish, (54).

(54) A: Who has eaten, John or Mary?

B: (i) $[\textbf{Gianni}]_{Foc}$ ha mangiato (Italian)

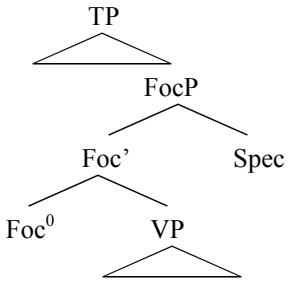
(ii) $[\textbf{Juan}]_{Foc}$ ha comido (Spanish)

John has eaten

'It is John who has eaten'

In Belletti & Shlonsky's (1995) analysis, the functional head Foc^0 heads its own projection. It merges with VP and, in turn, T^0 merges with FocP. In other words, FocP is located above VP and below TP, as (55) shows[23]. Presentationally focalised elements move to [Spec,FocP]. Spec appears to the right of Foc^0 in Italian (and also in Spanish) so that the focused constituent can surface only in a sentence-final position, as Bolinger's generalisation in (51) predicts.

(55)



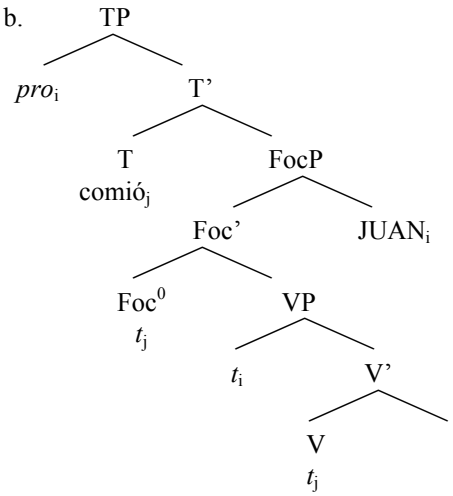
To illustrate, consider (56). The focalised subject *Juan* moves to the specifier of the FocP from its VP-internal position. The V *comió* 'ate' has to raise to T to check T's strong [+V] features. The Head Movement Constraint requires, however, V to move

[23] The existence of a FocP internal to TP has also been reported in typologically different languages like Hungarian and Basque (Horvath 1986), Chadic (Afroasiatic) (Tuller, 1992), Kikuyu (Bantu) (Clements, 1985) and Malayalam (Jayaseelan, 2001).

in a successive cyclic fashion, thus forcing *comió* to first move from V to Foc and finally from Foc to T.

(56) a. Comió $[JUAN]_{Foc}$
ate John
'JOHN ate'

b.



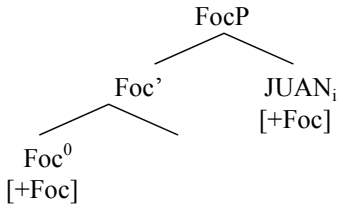
An obvious question is how the nominative case of the subject *Juan* gets checked, as it does not raise to [Spec,TP]. Belletti & Shlonsky (1995) propose that a phonetically null pronoun, *pro*, in [Spec,TP] can check the [NOM] case feature of the postverbal subject. Note that, incidentally, the presence of *pro* in [Spec,TP] is related to the pro-drop parameter, i.e., possibility of (i) null subjects and (ii) VS order. I will return to this issue in Chapter 4[24].

Belletti & Shlonsky's (1995) analysis is independently supported by, at least, another study of a language which is typologically different from Romance languages. Ndayiragije (1999) proposes an identical analysis for Kirundi, a Bantu SVO language in neutral focus contexts, where the OVS order biases for a focused subject interpretation. This order also derives from the existence of a functional Foc^0 head located between TP and VP, whose Specifier is to the right. The nominative subject feature can be also checked via a null pronoun *pro* in [Spec,TP], as Kirundi is a pro-drop language.

[24] Note that I will not make any predictions as to whether these properties cluster together in L2A (for a discussion, see classic studies like Liceras, 1989 for L2 Spanish and White, 1985, 1986 for L2 English).

Note that presentationally focalised constituents must end up in a [Spec,Head] configuration, (57), to satisfy the Focus Criterion, (42)[25]. As mentioned above, [Spec,FocP] is to the right of Foc^0 in Spanish so that focused elements can surface in sentence-final position, in accordance with Bolinger's generalisation, (51).

(57)



On these assumptions, it follows that feature checking triggers movement of the focused constituent *Juan* to [Spec,FocP], similarly to what occurred with contrastive focus. The strong focus head, Foc^0, contains an uninterpretable [+Foc] feature, which needs to be checked against the interpretable [+Foc] feature of its specifier. Foc^0 therefore attracts the [+Foc] subject *Juan* to [Spec,FocP]. Both features agree and the uninterpretable feature gets deleted. The interpretable feature proceeds to spell-out and is sent to PF. The derivation converges at LF.

Contrary to what occurs in contrastive environments, the verb does not end up in Foc^0 in presentational contexts. In other words, the verb is not required to surface left-adjoined to the focused element, as the contrasts in (58Bi,ii) show.

(58) A: ¿A quién dio Pedro dinero?
To who gave Peter money?
'Who did Peter give money to?'
B: (i) Pedro dio dinero A MARÍA
'Peter gave money to Mary'
(ii) *Pedro dinero dio A MARÍA

In the present work, I will adopt Belletti & Shlonsky (1995) and Ndayiragije's (1999) analyses over Zubizarreta's (1998) as the former (i) can account for the Spanish data and (ii) are more precise regarding the exact landing site of the focalised constituent.

The analysis outlined so far suggests that contrastive focus is determined by a Foc^0 head that merges with TP, while presentational focus is determined by a Foc^0 head

[25] Recall that contrastively focalised elements must also satisfy the Focus Criterion.

that merges with VP. In other words, TP-external focus is interpreted as contrastive, whereas TP-internal focus is interpreted as presentational.

To conclude, contrastive and presentational focus differ interpretively and also syntactically with respect to the Focus Criterion: (i) the functional head Foc^0 is phonologically empty, though in contrastive contexts it hosts the raised verb (in Spanish). The locus of contrastive focus is the left periphery of the sentence (CP domain), whereas presentational focus surfaces in sentence-final position (TP domain). The specifier is to the left of Foc^0 in contrastive configurations, whereas it is to its right in presentational configurations.

2.2.5 Parameterisation of the focus head, Foc^0

It is clear from previous sections that contrastively focused elements appear in the left periphery of the sentence in Spanish, yet presentationally focused elements appear in sentence-final position. In this section, I present an analysis of the locus of contrastive vs. presentational focus in Greek and English. I will argue that Spanish, Greek and English differ parametrically with respect to the strength of the focus head. In other words, the strength of Foc^0 is parameterisable cross-linguistically.

2.2.5.1 Contrastive focus: feature strength

Recall that contrastive focus in Spanish is a left peripheral phenomenon, i.e., contrastively focused elements raise to [Spec,FocP], located between CP and TP.

English typically marks contrastive focus prosodically (in situ) (Kiss, 1995, 1998). Consider the contrastive discourse in (59). Although the focused object *Casablanca* in (59Bi) remains in situ, it is interpreted as being contrastively focused (i.e., *John saw Casablanca yesterday and not Terminator*), as *Casablanca* bears focal stress. Clefting can also be used for contrastive purposes in English, as (59Bii) shows (Kiss, 1998). Note that contrastively focused constituents cannot appear in the left periphery on their own, (59Biii), nor can they satisfy the Focus Criterion, i.e., the focused element *Casablanca* and the verb *saw* cannot appear in a Spec-H configuration in left peripheral positions, as in (59Biv).

(59) A: Which film did John see yesterday, Casablanca or Terminator?
B: (i) John saw **Casablanca** yesterday
(ii) It was **Casablanca** that saw John yesterday
(iii) * **Casablanca** John saw yesterday
(iv) ***Casablanca** saw John yesterday

Kiss (1998) argues that cleft constructions in English, e.g., (59Bii), are an instantiation of a contrastive FocP, where the head Foc^0 attracts the focalised element *Casablanca* to the left periphery of the sentence, (60).

(60) $[_{TP}$ It was $[_{FocP}$ **Casablanca**$_i$ $[_{CP}$ that $[_{TP}$ John saw t_i yesterday evening]]]]

In functionalist approaches it has been known for a long time (e.g., Quirk *et al*., 1985) that there are several devices in English to express contrastive focus (and also emphasis), such as clefting, (60) above, pseudo-clefting, (61), and other contrastive devices, (62).

(61) What Peter saw was **Casablanca**
(62) The thing that Peter saw was **Casablanca**

However, English clefting crucially differs from Spanish contrastive focus in several respects[26]:

(i) In English, the contrastively focused constituent *Casablanca* cannot appear on its own in the left periphery, (59Biv). In Spanish, it must appear in the left periphery.
(ii) The English (but not the Spanish) contrastive FocP can appear in situ, (59Bi).

[26] Spanish can also mark contrastive focus via clefting (i,a) and pseudo-clefting, (i,b) (Goldsmith, 1986).
(i) a. Fue **Casablanca** lo que Juan vio ayer
Was Casablanca it that John saw yesterday
'It was Casablanca that John saw yesterday'
b. Lo que Juan vio ayer fue **Casablanca**
It that John saw yesterday was Casablanca
'What John saw yesterday was Casablanca'

(iii) In English, a Spec-H configuration cannot be created to satisfy the Focus Criterion, (59Biv). Spanish requires a Spec-H configuration to satisfy the Focus Criterion.

(iv) The English focus head cannot attract the verb, (59Biv), whereas the Spanish focus head must do so.

(v) The English cleft construction requires a TP merging with the FocP, but the Spanish contrastive construction does not.

It could be also argued that constructions like (63) below are an instantiation of the Focus Criterion in English, as the fronting of *never* triggers inversion of the auxiliary *have*, both surfacing in what appears to be a Spec-H configuration (i.e., the focused constituent *never* tises to a left-peripheral position and it attracts the finite verb *have*, creating *never-have*).

(63) $[_{XP}$ Never$_i$ have$_j$] $[_{TP}$ I t_j t_i seen such a large amount of money]

If we want to maintain this, it should follow that any contrastively focused constituent in English could appear in a Spec-H configuration in a left peripheral position. Note, however, that such configuration is only possible with negative operators, (63), but never with other fronted constituents like adverbs (64a), indirect objects (64b), direct objects (64c) and adjuncts (64d).

(64) a. *$[_{XP}$ Sometimes$_i$ have$_j$] $[_{TP}$ I t_j t_i seen such a large amount of money]
b. *$[_{XP}$ Mary$_i$ will$_j$] $[_{TP}$ I t_j give t_i money tomorrow]
c. *$[_{XP}$ Money$_i$ will$_j$] $[_{TP}$ I t_j give Mary t_i tomorrow]
d. *$[_{XP}$ Tomorrow$_i$ will$_j$] $[_{TP}$ I t_j give money to Mary t_i]

It is crucial to realise that *never* in (63) is an emphatic element, not a contrastively focused element. In other words, for *never* to be contrastively focused, it would require a universe of discourse with a set of (at least) two elements (e.g., *often*, *sometimes*, *rarely* and *never*) and a contrastive question like (65A). As the reply in (65B) shows, *never* cannot appear in a left peripheral position to mark contrastive focus. If *never* is to be used contrastively, it must appear *in situ*, (65C), and it receives prosodic prominence.

(65) A: How often have you bought 'The Guardian': often, sometimes, rarely or never?
B: ***Never** have I bought 'The Guardian'
C: I have **never** bought 'The Guardian'

Zubizarreta (1998) proposes that some fronted constituents (in this case, (63)), receive an emphatic, rather than a contrastively focused, reading. Similarly to what occurs with Focus Phrases, the functional head $Emph^0$ projects its own X-bar structure, Emphatic Phrase, EmphP. Constituents specified for [+Emph] end up in [Spec,EmphP] and the strong $Emph^0$ head attract the auxiliary verb, triggering subject-verb inversion. This creates a *pseudo* Focus-Criterion configuration, (66a). A non-emphatic reading would not entail movement, (66b).

(66) a. $[_{EmphP}$ Never$_i$ have$_j$] $[_{TP}$ I t_j t_i seen such a big amount of money]
b. $[_{TP}$ I have never seen such a big amount of money]

In sum, as contrastive focus cannot appear in a Spec-H configuration to satisfy the Focus Criterion, English selects other devices to mark it (i.e., prosody, clefting and pseudo-clefting). This amounts to saying that, although contrastive focus appears cross-linguistically, each language selects different mechanisms to express it (Focus Criterion in Spanish, prosody and clefting in English).
Consider now Greek. Like Spanish, Greek resorts to the left periphery to mark contrastive focus syntactically, in compliance with the Focus Criterion (Agouraki, 1990; Tsimpli, 1990, 1995). In (67Bi), the focused indirect object *Tis Marias* 'to Mary' appears in the left periphery and not in its canonical sentence-final position, (67Bii). (Examples adapted from Tsimpli, 1995).

(67) A: Whom did you give the book yesterday, Maria or Yani?
B: (i) **Tis Marias** edhosa to vivlio
the.GEN Maria gave.1S the.ACC book
'It is to Maria that I gave the book'
(ii) *Edhosa to vivlio **tis Marias**

It is difficult to see, however, whether the verb *edhosa* 'I gave' in (67Bi) is in a Spec-H agreement with *Tis Marias*, since the subject is phonetically null (i.e., it is a *pro*, as Greek is a pro-drop language) and could be located either pre-verbally or

postverbally. (68) confirms that the verb appears in a Spec-H configuration (*To Petro – simbathi*), as the overt subject *i Maria* 'Mary' appears postverbally, (68Bi), and not preverbally, (68Bii), suggesting that the Focus Criterion in Greek requires the Foc^0 to be lexically filled by the verb *simbathi* 'likes', similarly to what occurs in Spanish.

(68) A: Who does Maria like, Petro or Yani?
B: (i) **To Petro** simbathi i Maria
the.ACC Petro likes the.NOM Maria
'It is Petro that Maria likes'
(ii) ***To Petro** i Maria simbathi

To summarise, the functional head Foc^0 in contrastive focus environments is specified as [+strong] both in Greek and Spanish, triggering obligatory movement of the focalised constituent to the left periphery. Foc^0 is specified as [–strong] in English, as focalised constituents are typically marked prosodically (in situ) or via clefting, but never via the required Spec-H agreement of the Focus Criterion. Movement in English must therefore be covert, i.e., at LF, as some authors suggest for *in situ* contrastive readings (Tsimpli, 1995).

2.2.5.2 Presentational focus: feature strength

Recall that presentationally focused constituents in Spanish must appear in sentence-final position (Bolinger's generalisation). However, they appear in situ in English and Greek.

Consider the English example in (69Bi), where the presentationally focused subject *Peter* can only appear in situ, (69Bi), never in sentence-final position, (69Bii).

(69) A: Who told the story to Mary?
B: (i) $[PETER]_{Foc}$ told the story to Mary.
(ii) *Told the story to Mary $[PETER]_{Foc}$

Note that in (70Bi) the focused object *Casablanca* must also appear in situ, as sentence-final positions are barred, (70Bii)[27].

(70) A: What film did John see yesterday?
B: (i) John saw [CASABLANCA]$_{Foc}$ yesterday
(ii) *John saw yesterday [CASABLANCA]$_{Foc}$

Like English, Greek marks presentational focus in situ (Kiss, 1998; Tsimpli, 1990, 1995)[28]. The question in (71A) requires an answer with a presentationally focused indirect object *ston Petro* 'to Peter' in situ. (Examples adapted from Tsimpli, 1995:188).

(71) A: Who did they lend the book to?
B: Dhanisan to vivlio [STON PETRO]$_{Foc}$
lent.3P the book to.the Petro
'They lent the book TO PETER'

Note that it is difficult to see whether the indirect object in (71B) is in situ (as the canonical place for indirect objects in Greek is a sentence-final position) or in sentence-final position (i.e., in a presentationally focused position). (72) offers a clear-cut case, where the question biases for a response with a presentationally focused direct object *to biblio* 'the book' in situ, (72Bi), and not in sentence-final position, (72Bii).

[27] In English (a language with dative alternation), presentationally focused indirect objects can optionally appear either to the right of the verb or in sentence-final position. These cases are not therefore to be considered an instantiation of Bolinger's generalisation, (51).
(i) A: Who did Peter tell the story to?
B: (a) Peter told (MARY) the story (TO MARY)

[28] Tsimpli's (1990, 1995) analysis fails to distinguish between contrastive and presentational focus, as she argues that focused elements raise to the left periphery (overt raising in the syntax) but, sometimes, they remain in situ (covert raising at LF). Kiss' (1998) seminal work on contrastive vs. presentational focus reanalyses Tsimpli's (1995) work. Kiss clearly distinguishes between two types of focus in Greek (and in other languages): *contrastive focus* (overt raising to Spec,FocP in the left periphery) and *presentational focus* (an *in situ* phenomenon, as the focalised element does not raise to any functional projection). I follow Kiss (1998) in assuming that presentational focus in Greek is marked *in situ*, while contrastive focus is a left peripheral phenomenon (as in Spanish).

(72) A: What did they lend to Petro?
B: (i) Dhanisan [TO VIVLIO]$_{Foc}$ ston Petro
lent.3P the book to.the Petro
'They lent THE BOOK to Peter'
(ii) *Dhanisan ston Petro [TO VIVLIO]$_{Foc}$

In short, Greek requires presentationally focused constituents to remain in situ, as movement of the focused constituent to a TP-internal [Spec,FocP] position is barred.
To summarise, the interpretive distinction between *contrastive* vs. *presentational* focus holds crosslinguistically. However, the feature strength of contrastive vs. presentational Foc^0 varies crosslinguistically in Spanish, Greek and English (Table 2) in the following respects:

(i) *Contrastive focus*.
a. A [+strong] focus feature forces the contrastively focused element to raise overtly to [Spec,FocP] in the left periphery (Spanish and Greek). Focus is therefore marked configurationally.
b. A [–strong] feature does not require the focused element to move and hence it remains *in situ*. Contrastive focus is marked prosodically in this case (English). Feature checking can occur covertly.

(ii) *Presentational focus*.
a. A [+strong] focus feature forces the presentationally focused element to move to a TP-internal position, [Spec,FocP]. Recall that Spec is to the right of Foc^0 so that focalised elements can appear in sentence-final position (Spanish). As a result, focus is marked configurationally.
b. A [–strong] feature does not trigger movement but requires the focused element to remain in situ (Greek and English)[29, 30]. Presentational focus is not configurational in these languages.

[29] In chapter 4 I will discuss in detail how the [+Foc] feature gets checked when the focalised element remains *in situ* both in Greek and English.
[30] Note that in *Government and Binding Theory* (Chomsky, 1981), it was believed that *move α* could apply freely if no constraint was violated, i.e., there could be optional movement. In the *Minimalist Program* (Chomsky, 1995, 1998, 1999, 2000), movement is a last-resort, non-optional operation. Therefore, our proposal entails that focus movement is not optional, but it is rather triggered (i) by discursive factors and (ii) to satisfy the quasi-morphological requirements of functional heads for feature checking purposes.

Table 2: Feature strength of the Foc^0 head

	Contrastive contexts	Presentational contexts
Spanish	[+strong]	[+strong]
Greek	[+strong]	[–strong]
English	[–strong]	[–strong]

The parametric [±strong] variation proposed here for the functional head Foc^0 is similar to the standard [±strong] distinction of the functional head T^0. It is well known that in verb-raising languages like Spanish, Greek and Italian, T^0 is [+strong], attracting V^0 to T^0. T^0 is [–strong] in English, forcing the verb to remain in situ.

The cross-linguistic differences in Table 2 will serve as one of the bases for the experimental design of Chapter 5 and Chapter 7.

2.2.6 Cross-linguistic evidence for Foc^0

In previous sections, I have assumed that the head Foc^0 is phonetically empty in several languages (Spanish, Greek, Hungarian, Italian, Romanian) in presentational focus environments. However, in contrastive environments some of these languages (Spanish, Greek, Hungarian) require the focus head Foc^0 to be overtly realised by the raised inflected verb.

Other languages select a focus head with phonetic material as well. For example, Polinsky & Potsdam (2001) show that in Tsez, a Caucasian language from the Nakh-Daghestanian family, focus is overtly marked by the morpheme *–kin*. In (73) the presence of the suffix *–kin* in the indirect object, *kidbe-r-kin* 'to the girl', biases for a focused interpretation of the indirect object. In short, *–kin* can be considered as the spellout of the feature [+Foc] in the functional head Foc^0.

(73) Uz-a gagali KIDBE-r-kin tel-si
boy-ERG flower.ABS girl-DAT-FOC give-PAST
'The boy gave the flowers TO THE GIRL.'

In Berber (a dialect of Arabic), the morpheme *ay-* corresponds to the spellout of the feature [+Foc] in Foc^0 in contrastive environments (Ouhalla, 1991). (74) is felicitous

where the object *Mohand* (i) is part of a set of entities known to both the speaker and the hearer and (ii) it is being contrasted against all the members of such set.

(74) **Mohand** ay-zri-gh
Mohand FOC-saw-1.SG
'It is Mohand that I saw'

Yoruba has a similar device to Berber. In (75) the copular verb *ni* 'to be' acts as the overt realisation of the contrastive focus head Foc^0 (Bisang & Sonaiya, 2000).

(75) **Týsa** ni Ayo
teacher be Ayo
'Teacher, that is what Ayo is.'

In Quechua (Camacho, 1999) *–mi* is the overt realisation of the contrastive focus head Foc^0, as (76) shows.

(76) **Taytan**-mi qu-n wasi-ta churi-n-man
father-3d-FOC gave-3p house-ACC son-3p-DAT
'It was the father who gave a house to his son'

Note that, incidentally, in the contrastive environments of Berber (74), Yoruba (75) and Quechua (76), the verb surfaces to the right of the focalised constituent in the left periphery. In other words, the focused phrase is displaced to [Spec,FocP] and Foc^0 attracts the verb, creating a Spec-H configuration in satisfaction of the Focus Criterion, (42).

In sum, on the basis of these cross-linguistic observations it is at least conceivable to suppose the existence of an independent functional category, Foc^0, which projects a Focus Phrase, FocP. If this can be sustained, the functional focus head may be part of UG, though languages vary with respect to the parameterisation of its strength.

2.3 Summary of chapter 2

In this chapter I illustrated cases where learners' convergent knowledge is constrained by principles of UG in typical poverty-of-the-stimulus scenarios. I also illustrated how

the strength of the focus head is differently parameterised in Spanish, Greek and English (the languages under investigation in the current study).

Chapter 3. POSSIBLE PATTERNS OF L2 ULTIMATE ATTAINMENT AND L2/L3 INFLUENCE

In this chapter, I present possible patterns of (i) L2 ultimate attainment (convergent/divergent intuitions) and (ii) of L1/L2 influence. These patterns will help understand the findings of the experimental chapters (Chapter 5 and Chapter 7).

3.1 Convergent vs. divergent L2 intuitions

A recent controversy in L2A research concerns the extent to which native intuitions differ from non-native intuitions in end-states (advanced and near-native levels of proficiency). Two (apparently) contradictory findings pervade the literature:

(i) Some studies report that the intuitions of advanced L2 learners *converge* with natives' in cases where the constructions under investigation are underdetermined by the L2 input and are not instantiated in their L1, posing a typical poverty-of-the-stimulus problem for the learner (e.g., Kanno, 1997, 1998a, 1998b; Marsden, 1998, 2001a, 2001b; Pérez-Leroux & Glass, 1997, 1999). In these cases, it is claimed that UG constrains learners' native-like representations since their knowledge cannot derive from either their L1 or L2 input.

(ii) By contrast, some studies report that their intuitions *diverge* from natives' (even after long immersion in the target language) due to L1-L2 differences. That is, post-childhood end-state grammars are characterised by optionality (Parodi, 2001a, 2001b, 2000; Papp, 2000; Robertson, 2000; Sorace, 1993a, 1993b), impaired functional features (Beck, 1998; Eubank, 1996; Liceras & Díaz, 1999; Parodi & Tsimpli, submitted 2002; Tsimpli & Roussou, 1990), persistent selective fossilisation with functional features (Franceschina, 2001;

Hawkins, 2000, 2001a; Hawkins & Chan, 1997) and deficits in the morphophonological module (Lardiere, 2000; Prévost & White, 2000).

The first type of studies investigates constructions governed by principles of Universal Grammar (UG), which (i) appear in typologically-unrelated languages, (ii) are claimed to be part of the speakers' genetic endowment and (iii) are therefore constrained by the design of natural languages.

The second type of studies focuses on properties that are allowed by UG but are constrained by functional features which are language-specific. It is argued that divergent intuitions (indeterminacy and optionality) are the result of parametric differences between L1 and L2.

Consider the case of optionality. It has been reported that optionality occurs in the acquisition of, e.g., Spanish L2 verb movement (Guijarro-Fuentes & Clibbens, 2001); Spanish L2 core vs. non-core unaccusatives (Montrul, 2002); German verb raising (Beck, 1998); Hungarian L2 focus movement (Papp, 2000); Spanish L2 clitics (Parodi, 2001a, 2001b; Parodi & Tsimpli, submitted 2002); English L2 articles (Robertson, 2000); Italian L2 auxiliary choice in clitic climbing constructions with unaccusatives (Sorace, 1993b) and Chinese L2 postverbal arguments with unaccusatives (Yuan, 1999).

Optionality can be defined as the coexistence in the learner's interlanguage of two phonological forms (π_1, π_2) for one logical form (λ_1) (Sorace, 2000b), as (77) shows[31].

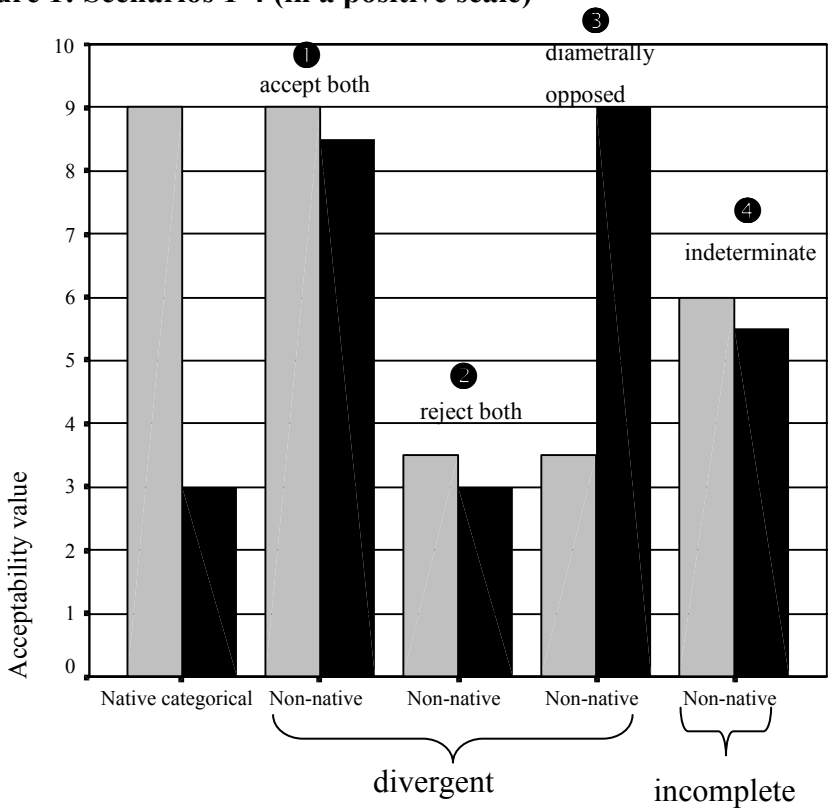
(77) Optionality in L2 grammars:

$$\lambda_1, \left\{ \begin{matrix} \pi_1 \\ \pi_2 \end{matrix} \right\}$$

The scenario in (77) needs qualification. Sorace (1993a) proposes that optionality is one case of three possible representation types in L2A. Representations can be (i) *native-like*, when the learner's representation converges with the native representation; (ii) *divergent*, when the learner's representation diverges from the native representation (optionality is a possibility here); (iii) *incomplete*, when learners show indeterminate intuitions. Papp (2000), building on work by Sorace (1993a), presents a working definition of optionality, Figure 1.

[31] π_1 and π_2 make use of the same lexical resources.

Figure 1: Scenarios 1-4 (in a positive scale)



(Source: Papp, 2000:181, her figure 1)

In Figure 1, the light bars represent the grammatical construction and the dark bars the ungrammatical construction. Value 10 corresponds to a completely acceptable sentence, whereas 0 indicates a completely unacceptable sentence. Intermediate values correspond to varying degrees of (un)acceptability. Natives prefer the grammatical construction (henceforth *a*) around 9 and disprefer the ungrammatical construction (henceforth *b*) at around 3. This difference must be statistically significant for the construction to be *categorical* in the native grammar[32]. Papp (2000)

[32] Although only native categorical constructions are relevant for the present study, it is essential to distinguish between *optional* and *categorical* rules in native grammars. Optional constructions in native grammars are those that are equally accepted by natives, as in (i), where the presence/absence of the complementiser *that* is truly optional in native English.

(i) a. Mary thinks that he has money.
b. Mary thinks he has money.

However, the presence of overt/null pronouns, (ii), and SV/VS alternations, (iii), (both standardly associated with the pro-drop parameter in Spanish) have been traditionally assumed to be optional. But, as I will show in this study, the presence/absence of a null pronoun (as well as the different word order distributions) have different interpretive differences, i.e., they are *categorical* rules. Papp (2000) calls this type of rules *pseudo-optional* as they appear optional on the surface, though they are clearly not.

(ii) a. Él tiene dinero. (overt pronoun)
b. Tiene dinero. (null pronoun)
'He/Ø has money'

discusses four possible scenarios regarding learners' representations. She distinguishes between divergent representations (scenarios 1-3) and incomplete representations (scenario 4). In scenario (1) learners' acceptance of both *a* and *b* leads to optionality. Only if learners were accepting *a* but rejecting *b*, would their intuitions then be native-like. In scenario (2) they reject both. In (3) they behave in a manner diametrically opposed to natives, accepting *b* and rejecting *a*. In (4) they show indeterminate (incomplete) intuitions, as they accept both constructions around the mean (chance level).

Papp's (2000) classification raises a series of questions.

(i) The use of a positive scale from 0 to 10 makes it difficult to see acceptance versus rejection rates, as categorical constructions imply that the a should be accepted, yet b rejected. The use of a positive-negative Likert scale yields a clearer picture, as shown in

(ii) Figure 2.

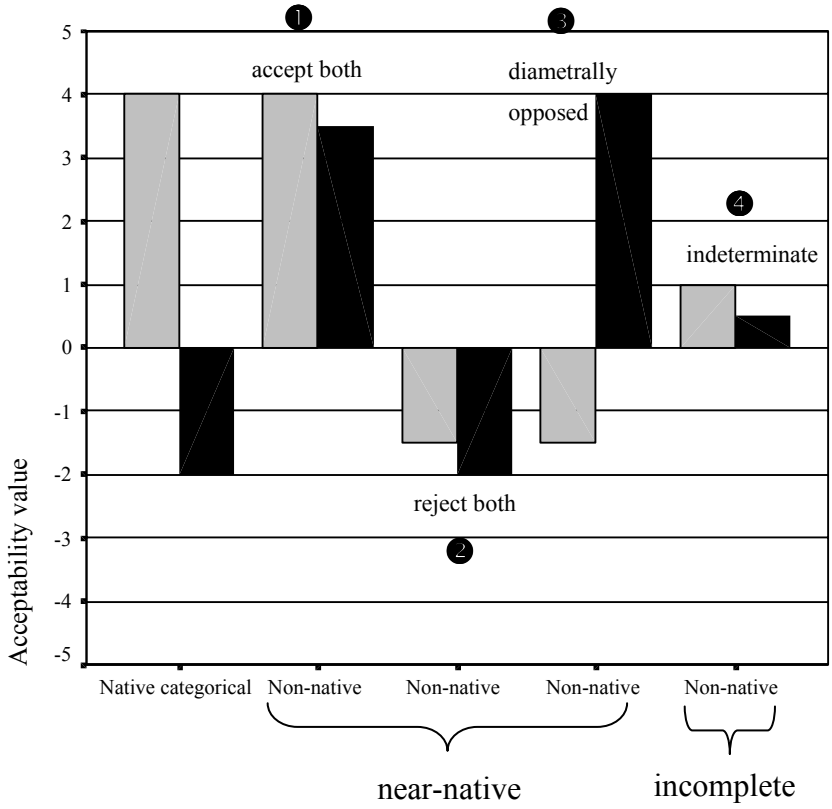
(iii) Papp (2000) analyses similarities/differences within groups only, not between groups, i.e., what counts in her analysis is whether *a* is similar to/different from *b* (within-group analysis), but not whether natives' *a* is similar/different to learners' *a* (and natives' *b* is similar/different to learners' *b*) (between-group analysis).

Assimilating a modified version of previous research (Papp, 2000; Sorace, 1993a, 1996) into a method for investigating the different types of knowledge in L2A, in particular optionality and near-nativeness (two types of divergence), the following would seem to be the minimum criteria needed in L2A studies:

(i) Likert-type scales with negative values and positive values need to be used. Positive values would correspond to grammaticality and negative values to ungrammaticality. This would indicate whether natives and learners accept or reject the construction under investigation.

(iii) a. Una mujer gritó. (SV order)
b. Gritó una mujer. (VS order)
'A woman shouted/Shouted a woman'

Figure 2: Scenarios 1-4 (in a negative-positive scale)



(Source: adapted from Papp, 2000:181, her figure 1)

(ii) We need grammaticality judgement tasks containing paired sentences, where *a* represents the grammatical construction and *b* the ungrammatical one. This would show a clear picture as to whether the rule is *categorical* (*a* is positively accepted but *b* is negatively accepted) or *optional* (both *a* and *b* are positively accepted to the same extent).

(iii) Native controls are needed for comparison purposes. Their performance would be compared to learners' performance. This is essential since, as Papp (2000) and Hertel (2000) argue, some supposedly categorical rules in the theoretical generative literature are judged as being optional by native speakers.

(iv) Suppose we conduct L2A studies where non-native grammars are compared with native grammars. In native grammars which contain *categorical* rules, *a* must be preferred (preferably positive value) and *b* dispreferred (preferably,

though not necessarily, negative value). There must be a significant difference between *a* and *b* for the construction to be categorical. If learners accept both *a* and *b* to the same statistical extent, we can safely conclude that the native categorical rule corresponds to a non-native optional rule. If, however, learners significantly prefer *a* to *b*, we can safely assume that the native categorical rule corresponds to a non-native categorical rule.

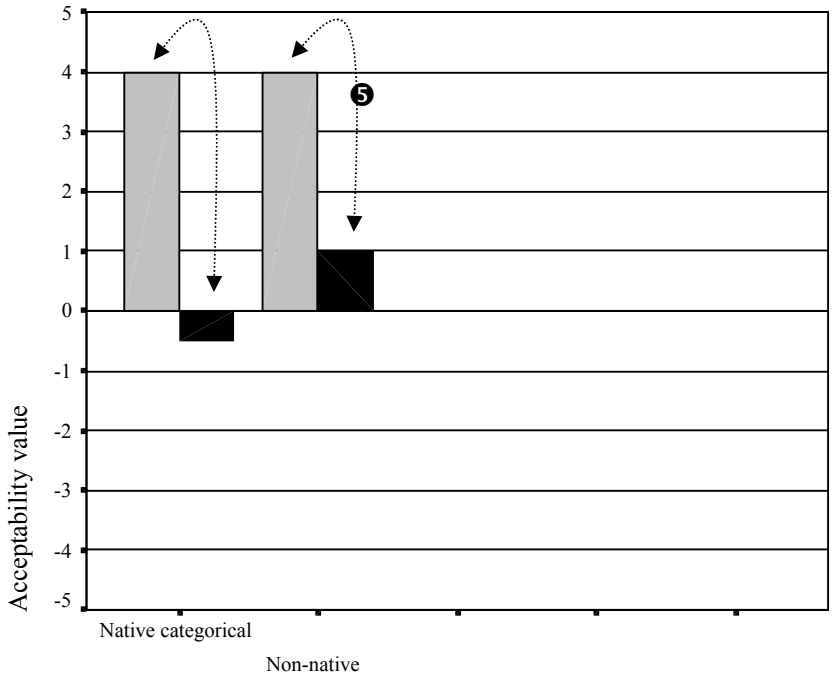
(v) Suppose again we conduct L2A studies where non-native grammars are compared with native grammars. In native grammars which contain *optional* rules (both *a* and *b* positively accepted) the focus of research would then be whether learners prefer *a* over *b* or vice versa. Showing that learners positively accept both *a* and *b* with optional constructions, as natives do, leads to ambiguity as it could imply that either (i) learners are aware of the optional status of the rule in the native grammar, or (ii) learners cannot decide the status of the rule due to ambiguous, non-robust input.

(vi) Within-group analyses need to be undertaken in conjunction with between-group analyses at the 0.05 level of statistical significance, as standardly assumed in linguistics.

The reason for the above criteria, (i)-(vi), will become obvious in what follows. Suppose an additional scenario like number (5) in Figure 3, which Papp (2000) does not discuss. Natives prefer *a*, but reject *b*, as expected for categorical rules[33]. The dotted arrow indicates that there is a within group difference between *a* and *b*, which is statistically significant. Though learners accept both *a* and *b*, sentence *a* is statistically preferred over *b*. The dotted arrow indicates, once again, a within-group significant difference. No between-group differences are detected in this scenario, i.e., natives' *a* is statistically similar to learners' *a*. The same applies to *b*. We can safely conclude that scenario (5) represents a typical case where learners show native-like intuitions.

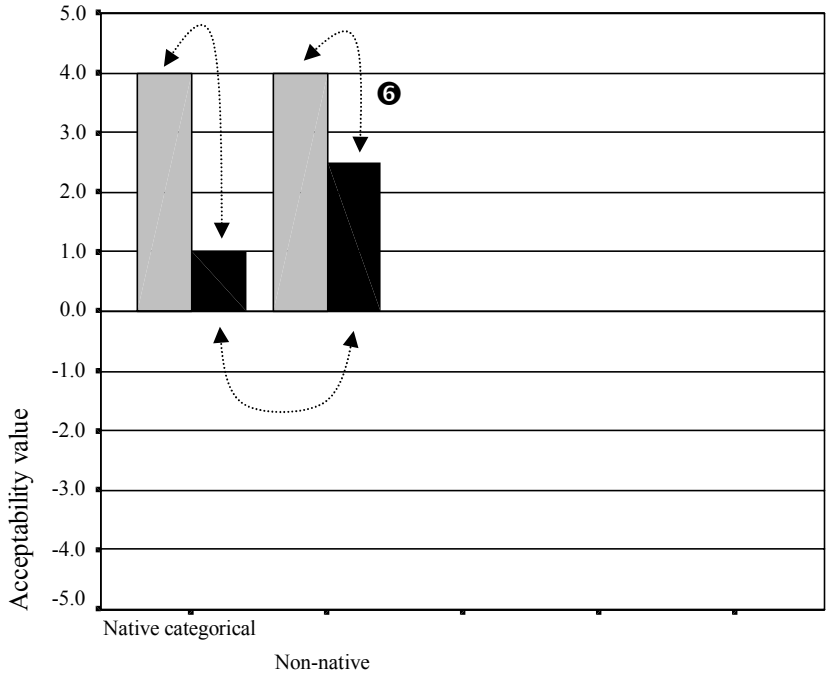
[33] Note that sentence *a* represents any type of grammatical sentence, whereas sentence *b* represents the ungrammatical counterpart.

Figure 3: Native-like representation



Consider now scenario (6), Figure 4. Even though natives accept now both *a* and *b*, a within-group analysis reveals that sentence *a* is significantly preferred over *b*, as expected for categorical rules. Learners show a similar within-group behaviour, significantly accepting *a* over *b*. But, crucially, there is an important difference between this scenario and the previous one. Here, there is a between-group difference between the natives and the learners, as the lower arrow shows. In other words, natives' *b* is significantly different from learners' *b* (though natives' *a* is similar to learners' *a*). As I will show later, an analysis of current L2A literature reveals that between-group differences (natives–learners) seldom occur when learners judge the grammatical sentence, *a*, as both groups (natives and learners) accept it to the same statistical extent. Differences typically occur with the ungrammatical sentence, *b*, as natives show sensitivity to its ungrammatical status, while learners may not.

Figure 4: Near-native representation



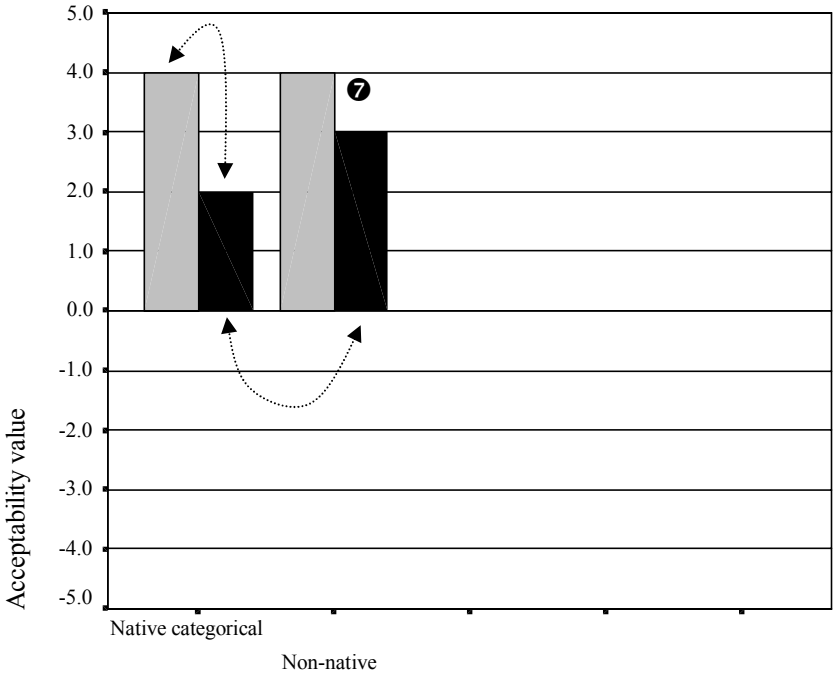
Given this type of scenario, (6), a dilemma arises. A within-group analysis supports the native-like argument, since learners significantly prefer *a* to *b*, as natives do. However, a between group analysis reveals that learners differ from natives with respect to *b*. Papp (2000) implicitly assumes that (6) represents a case of native-like competence, since her analysis implicitly assumes that the relevant factor is whether learners distinguish between the grammatical vs. ungrammatical condition[34]. It would

[34] Papp (2000) certainly performs only within-group comparisons. For example, in her figure 3 (p. 190) a within-group analysis reveals that the Hungarian natives distinguish between 'a' (the grammatical sentence obeying the Focus Criterion) and 'b' (the ungrammatical sentence violating the focus criterion; see her p. 184 for details of the sentences). The most advanced learners also distinguish between 'a' and 'b'. She claims that 'the near-native [=most advanced] speakers … give significantly strong native-like categorical judgements'. But note that, while a visual inspection of figure 3 reveals that the acceptance rates of 'a' are very similar between the natives and the learners, the natives prefer 'b' at around just above 4 (in a 0-10 scale), but the learners prefer it at slightly less than 6. This could be a potential case of between-group difference (though Papp does not present any statistical analysis to (dis)confirm this). Still, she assumes that these are cases of learners behaving in a native-like way.
Further note that she makes the same assumptions for her figure 5 (p. 192), where both the natives and the most advanced learners prefer the grammatical 'a' (no movement of the focused infinitive in Hungarian) at around 8. However, the 'b' sentence (movement of the focused infinitive) is preferred by natives at just below 6, while the most advanced learners prefer it at around 4. This is another potential candidate of between-group differences, though Papp considers it a case of learners behaving in a native-like way: 'Near-native (=most advanced) learners make the same judgements [as natives do], showing evidence of a categorical rule in their grammar.' (p. 191-2).

seem that the term native-like is not appropriate for this scenario, (6), since the term implies identical behaviour both *within* and *between* groups. I will discuss this apparent contradiction later.

In scenario (7)[35], Figure 5, natives again accept both sentences, though *a* is preferred over *b*. Learners accept both *a* and *b* to the same statistical extent, that is, there is no within-group difference. A between-group analysis reveals that natives' *b* and learners' *b* differ significantly, though natives' *a* and learners' *a* do not differ significantly. This scenario is clearer than the previous one, as learners are showing optional intuitions, i.e., they are equally accepting *a* and *b*.

Figure 5: Optional representation



Papp's (2000) scenario (4) on page 48 is a clear-cut case of indeterminate intuitions, as learners (i) do not distinguish between *a* and *b* (within-group), but natives do, and (ii) learners differ from natives (between-group) in both *a* and *b*. This scenario will

In short, scenario (6), which I present in Figure 4 above, may be mistinterpreted by researchers as a case of native-like representations when, in fact, it is more similar to cases of near-native representations (I will provide a clearer working definition of the term 'near-native' in the following pages).

[35] Scenario (7) here corresponds to Papp's (2000) scenario (1).

not be considered further, as it is irrelevant for the analysis of results in our experimental section.

Recent L2A studies treat both scenarios (5) and (6) as representing native-like competence, e.g., Papp (2000), Parodi (2001a,b), Pérez-Leroux & Glass (1997, 1999) Sorace (1993a), Yuan (1999), White (2002). These studies consider that the only prerequisite for native-like competence is when learners prefer *a* to *b*, as natives do (within-group analysis). However, between-group differences/similarities are typically overlooked. This is certainly White's (2002) position. She argues that trying to compare learners' performance on a given type of construction, say construction *b*, against natives' performance on *b* leads to a 'comparative fallacy'. What is crucial, in her view, is that learners distinguish between the grammatical *a* and the ungrammatical *b*, as natives do, irrespective of whether learners' *a* (or *b*) is statistically similar/different to natives' *a* or *b*. In other words, White considers that only within group similarities/differences should be taken into account to describe learners' intuitions. If learners are shown to distinguish between *a* and *b*, as natives do, she argues that this is an indication of learners' sensitivity to UG. While at this stage it is premature to discuss the implications of White's (2002) approach in terms of sensitivity to UG, I will proceed to present a statistical definition of convergence vs. divergence, which will help us understand the results in the current study.

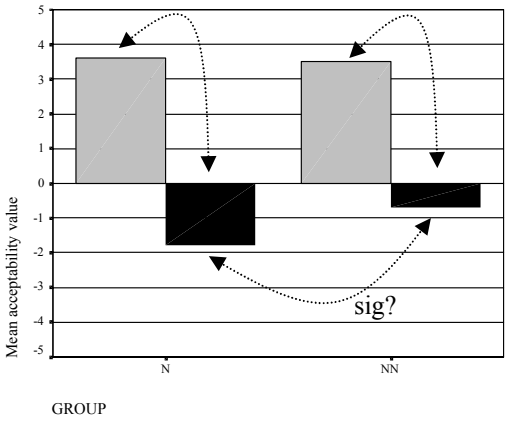
To illustrate, consider Figure 6a-d. These figures have been adapted from several studies that used near-native learners (Figure 6a,b) and advanced learners (Figure 6c,d). Values have been converted so as to represent them in a positive-negative Likert scale (–5 … +5). All of them show a familiar trend, similar to scenarios (5) and (6) above: they belong to categorical rules in the natives' grammar.

Figure 6a corresponds to Sorace's (1993) study of Italian natives and French native learners of Italian judging auxiliary change (*essere/habere* 'be/have') under clitic climbing with unaccusatives. As the arrow indicates, natives prefer *a* (auxiliary *essere*) over the ungrammatical *b* (auxiliary *habere*) to a significant extent, as expected. The same occurs for the learners. But, crucially, Sorace's (1993) study does not state whether natives' *b* differs from learners' *b* (between-group analysis). Figure 6b corresponds to Papp's (2000) study of Hungarian natives and French native learners of Hungarian judging I-to-C raising in negative adverbial focus constructions. The same dilemma arises: it is not stated whether natives' *b* differs from learners' *b*. The same occurs in Figure 6c, corresponding to Pérez-Leroux & Glass' (1999) study

of Spanish natives and English native learners of Spanish judging null pronouns in bound-variable and focused contexts. Figure 6d corresponds to Hertel's (2000) study of Spanish natives and English natives learning Spanish judging VS order with unaccusatives and unergatives. The same pattern emerges, as above, but Hertel (2000) acknowledges that there is a significant different between natives' *b* and learners' *b*. Despite this difference, she still assumes that learners show native-like representations.

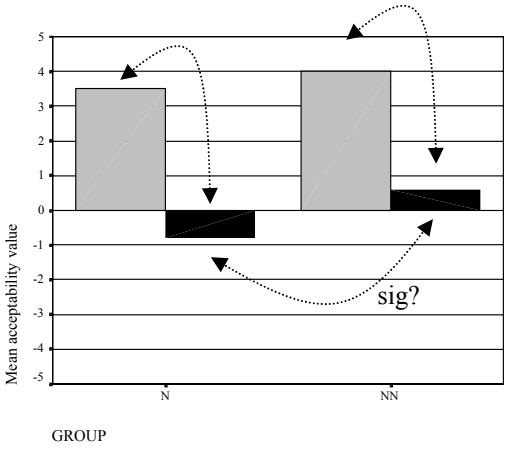
Figure 6: Native-like or near native representations?

a.



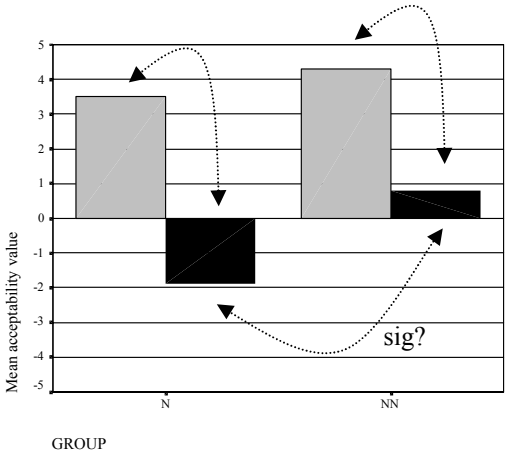
(Adapted from Sorace, 1993a, fig. 2)

b.



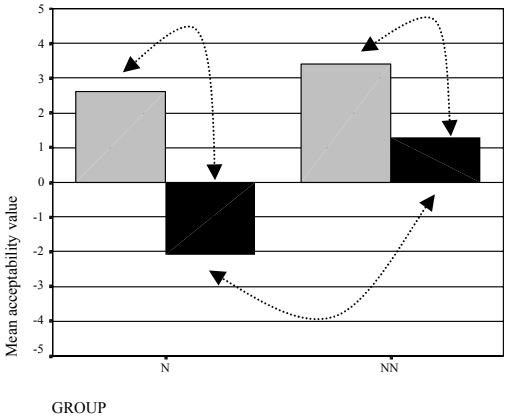
(Adapted from Papp, 2000, fig. 3)

c.



(Adapted from Pérez-Leroux & Glass, 1999, fig. 1)

d.



(Adapted from Hertel, 2000, fig. 4)

The four scenarios presented in Figure 6 correspond to scenario (6) in Figure 4 above, as both natives and learners show a similar within-group behaviour, though there is

one between-group difference. Given the dilemma scenario (6) poses, I propose a modified working definition of divergent representations in L2A, which will help us understand the results in the current study. I follow Sorace (1993a) and Papp (2000) in assuming that learners' knowledge of language can be of three types: *native-like*, *divergent* and *incomplete*. However, some refinements are in order. In principle, two options are available to learners: non-native intuitions can either converge with or diverge from native intuitions. Within these two options, other possibilities arise, as follows:

(i) *Convergent* representations occur when learners' intuitions converge with natives'. Both natives and learners accept *a* over *b*. This is a within group analysis. But, crucially, no between group differences between natives and learners are detected. The expected trend is *native-like* representations, as in scenario (5).

(ii) *Divergent* representations can be of three types, depending on the degree of within-group/between-group differences:

   a. *Near native* representations correspond to scenario (6), where a within-group analysis reveals that both groups behave similarly, but, crucially, the between-group analysis yields one difference between the natives and the learners.

   b. *Optional* representations correspond to scenario (7) (Papp's (2000) scenario (1)), where learners accept both *a* and *b* (no within-group difference). Crucially, natives' *b* differs from learners' *b* (between-group difference).

   c. *Indeterminate intuitions* correspond to Papp's (2000) scenario (4). Learners accept both *a* and *b* (no within-group difference) typically around the mean. This implies that natives' *a* is more accepted than learners' *a* and natives' *b* is more rejected than learners' *b*.

The above discussion in schematised in Figure 7.

Figure 7: Knowledge of native categorical constructions in advanced L2A

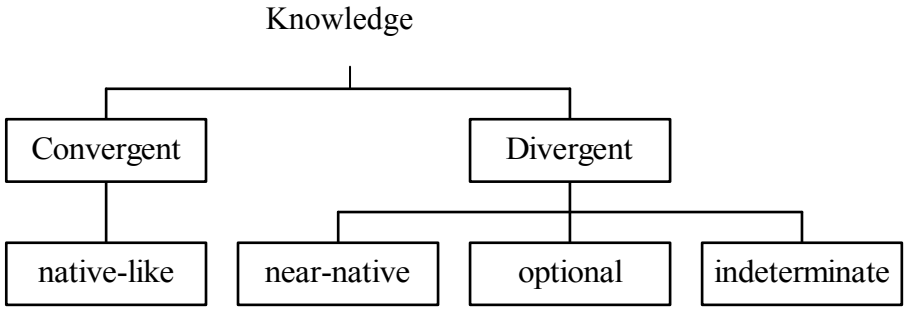


Figure 7 can be further refined in statistical terms. Consider Table 3, representing again the four possible types of mental representations. The grammatical sentence *a* is statistically compared against the ungrammatical sentence *b*. For example, '*a*>*b*' means that *a* is more accepted than *b*, the difference being significant at the 0.05 level.

Table 3: Statistical definition of L2 intuitions

	within groups		**between groups**	
Representation	**N**	**NN**	**N**	**NN**
native-like ❺	*a*>*b*	*a*>*b*	*a* = *a* *b* = *b*	
near native ❻	*a*>*b*	*a*>*b*	*a* = *a* *b* < *b*	
optional ❼	*a*>*b*	*a*=*b*	*a* = *a* *b* < *b*	
indeterminate ❹	*a*>*b*	*a*=*b*	*a* > *a* *b* < *b*	

Note: N=natives; NN=non natives
a=grammatical sentence
b=ungrammatical sentence

Table 3 is explained as follows:

(i) *Native-like* representations (scenario 5). A within-group analysis results in both the native group (N) and the non-native group (NN) rating *a* as being

more acceptable than *b*. A between-group analysis results in N's *a* being equal to NN's *b*. Likewise, N's *b* has to be equal to NN's *b*.

(ii) *Near-native* representations (scenario 6). A within-group analysis results in both the native group (N) and the non-native group (NN) rating *a* as being more acceptable than *b*. A between-group analysis results in N's *a* being equal to NN's *a*. However, N's *b* is less accepted than NN's *b*.

(iii) *Optional* representations (scenario 7). A within-group analysis results in N preferring *a* to *b*, but it requires NN to prefer *a* and *b* equally. A between-group analysis results in N's *a* being equal to NN's *a*. However, N's *b* is less accepted than NN's *b*.

(iv) *Indeterminate* representations (scenario 4). A within-group analysis requires N to prefer *a* to *b*, yet NN to prefer *a* and *b* equally. A between-group analysis requires N's *a* to be more accepted than NN's *a* and N's *b* to be less accepted than NN's *b*.

There are more possible combinations than those presented in Table 3. However, I will not discuss them as they are irrelevant for the purposes of the present study.

Certainly, defining convergence/divergence in distributional and statistical terms is not the same thing as explaining convergence/divergence from a linguistic perspective. Being clear about the status of distributional properties is, however, an important first step. Linguistic-theoretic explanations are still murky, though some suggestive attempts have been put forth. For example, it is generally assumed that near-native, optional intuitions may be caused by L1 featural influence (e.g., Beck, 1998; Eubank, 1996, *inter alia*). Their implications will be discussed in later chapters (especially, Chapter 7).

3.2 The nature of L1/L2 influence on L3 acquisition

In previous sections I have argued that Spanish, Greek and English parametrically differ with respect to the strength of the focus head. In the experimental section of our study (Chapter 5 and Chapter 7), I will test whether Greek and English learners of Spanish are sensitive to the feature strength of Foc^0 in Spanish. Recall that Spanish is the L2 for the English group, but the L3 for the Greek group (English being their L2).

Third language acquisition (L3A) is an under-researched area and it does not seem to have given rise to much interest in the generative paradigm. L3A raises questions that any theory of acquisition needs to answer: (i) do we have to assume that there must be transfer from either L1 or L2? (ii) if so, what properties/features are involved in transfer? (iii) if not, are there universal properties that are acquirable irrespective of L1s and L2s? (iv) are some features more amenable to transfer from the L1 than from the L2? (v) what is the nature of the initial state: is it L1 or L2? Some of these questions will be addressed in the experimental section of our study (Chapter 5 and Chapter 7). An overview of the literature on L3A reveals that:

(i) Most, if not all, L2A studies in journals like *Second Language Research*, *Studies in Second Language Acquisition* and *Language Learning* deal with the acquisition of second languages. There is, however, a shortage of studies dealing with L3A of syntax from a generative perspective.

(ii) Whereas there is disagreement in the L2A generative literature as to the extent of featural transfer from L1 to L2, there are no studies on feature transfer in L3A.

In this section, I review a series of studies on $L1/L_{n-1}$ transfer on the L_n, most of which deal with lexical transfer[36].

3.2.1 Singleton (1987)

Singleton (1987) conducted a case study based on Philip, an adult native speaker of English who is fluent in several languages: French (learned during trips to France), Spanish (learnt during a three-year stay in Spain), Irish and Latin (learnt formally at school). No objective proficiency measures for Philip's languages are provided, though.

Philip was hypothesised to supplement his deficient linguistic knowledge in French (the target language of the study) by drawing on knowledge from other languages, mainly from Spanish, due to psychotypological reasons (Kellerman, 1979)[37].

[36] L_n refers to the last language acquired. L_{n-1} refers to the language acquired before the last. In this study, L_n will typically correspond to the target language.

Production data were collected during interviews. The first two interviews were in French. In the first interview, Philip engaged in spontaneous conversation. In the second, data were elicited via description tasks. In the third interview, Philip was played his own recordings (interview 1 and 2) and asked to engage in self-observation at points where his French was defective.

Results support the psychotypological hypothesis that Spanish is the priviledged source of lexical transfer into the target language, French, although other languages are also present (79% Spanish > 72% English > 54% Latin > 46% Irish). In Philip's words:

> '"With regard to French, I often 'Frenchify' a Spanish or Latin word which I suspect might fit, and less regularly, a Latin word is called upon to do service in Spanish."' (Singleton, 1987:331).

Singleton's (1987) main claim, that learners with several non-native languages may draw linguistic knowledge from any of the acquired languages, suggests that the L1 may not necessarily be the primary source of lexical transfer (although note that English L1 is the second source of transfer in the above scale).

3.2.2 Klein (1995)

Klein (1995) is, to my knowledge, the only study based on the Principles & Parameters framework investigating the interaction of previous languages (L1 and L2) over the latest language acquired (L3, L4, … L_n). She tested whether there is a syntactic acquisition enhancement of MLs (Multilinguals: L3 or L4 learners) over ULs (Unilinguals: L2 learners)[38].

The aspect of language under investigation is preposition stranding. English offers two options: pied-piping (PiP) and preposition stranding (PS). In (78), the entire PP *for whom* has been fronted, leaving behind a trace (*t*), whereas in (79) only the DP 'who' has been fronted and the preposition 'for' remains stranded *in situ*.

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[37] Psychotypology refers to the relatedness between the learner's L1 and the target language. Such relatedness is imposed by the learner, i.e., how close/distant the learner perceives the L1 and the target language to be. This perceived distance between two languages will influence the extent to which the learner transfers from one language to the other

[38] Klein's (1995) terminology is confusing. Her *unilinguals* are learners of English as an L2. *Unilingual* must be interpreted here as having *only one* L2 and *multilingual* has having *more than one* L2.

(78) *PiP*: [$_{PP}$For whom$_i$] are you waiting [$_{PP}$ t_i]?

(79) *PS*: [$_{DP}$Who$_i$] are you waiting [$_{PP}$ for [$_{DP}$ t_i]]?

The unmarked option in English is PS. Klein postulates the existence of a "stranding parameter". In (79), languages like English, Dutch and Scandinavian require the nominal complement of a preposition to check case against the preposition[39], thus setting the parameter to [+stranding]. In languages where the case feature of the nominal is not checked against the case of the preposition, (78), the parameter is set to [–stranding].

The task of English learners with L1s lacking PS is to acquire the feature value associated with English prepositions, i.e., they must realise that English typically sets the parameter to [+stranding].

Klein (1995) hypothesised that (i) while MLs would show a higher degree of stranding knowledge, thus accelerating their parameter setting to the [+stranding] English value, ULs would show a lower level of lexical knowledge, delaying their parameter setting; (ii) there would be no differences between MLs and ULs in the route of acquisition of the preposition stranding parameter, as they will both exhibit a null-preposition stage. In other words, *rate* of acquisition is speeded up by knowledge of several languages (MLs) over one language (ULs), though *route* of acquisition is invariant for both groups.

The subjects consisted of 15 native speakers of English acting as control, 17 ULs studying English as an L2, and 15 MLs studying English as an L3 or L_n. The last two served as the experimental groups. None of the learners' L1s allowed preposition stranding (Haitian Creole, Hebrew, Italian, Polish, Russian and Spanish amongst others).

A grammaticality judgement task tested learners' sensitivity to the preposition stranding (PS) setting of the parameter (there were other sentences testing subcategorisation knowledge, but these are irrelevant for our analysis). Results (Figure 8) indicate that MLs (69%) are significantly more sensitive to the [+stranding] setting of the parameter than ULs (54%), i.e., when presented with an (ungrammatical) interrogative construction like (80), MLs are more accurate than ULs

[39] As Klein (1995) uses the *Government and Binding* framework, she argues that the preposition case-marks and properly governs the trace.

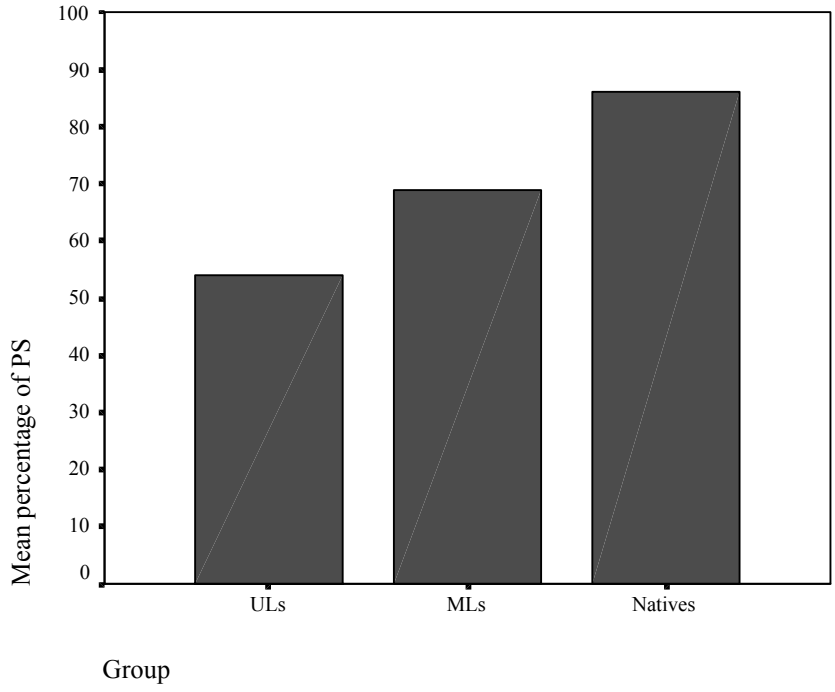
at inserting the correct preposition, e.g., *for*, in sentence-final position rather than in sentence-initial position, in compliance with the [+stranding] setting of the parameter.

(80) *Who are you waiting?

In grammatical sentences containing preposition stranding, none of the learners or natives inserted a preposition to the left of the *wh*- operator. Klein (1995:450) concludes that:

> 'The question of whether the MLs were actually better at setting the parameters involved here than were the ULs must be answered with a cautious "no"; what they appeared to be doing was setting them faster. That is, they were learning the lexicon more quickly than were the ULs.'

Figure 8: Mean percentage of PS by group



(Source: based on Klein, 1995:438, table 1)

One of the major drawbacks in Klein's study is that the experimental subjects' L1 and L2 included a wide range of languages, amongst others, Haitian Creole, Italian, Russian, Polish and Spanish. The sampling of subjects was not consistent either. This led Klein to comment extensively on individual results. I think that in order to obtain externally valid results, (i) subjects should have been classified into subgroups

according to L1; (ii) a larger and homogeneous sample should have been used for each L1; (ii) proficiency scores should have been provided.

There are other possible scenarios which may explain the results in Figure 8: (i) one of the L2/L3/L4 of the MLs might have contained the same parameter setting as English, [+stranding], hence their rapidity of acquisition; (ii) MLs might have been more proficient in English than ULs; (iii) MLs could have been exposed to English before a sensitive/critical period, i.e., before puberty[40].

In sum, Klein's study does not settle the issue of $L1/L_{n-1} - L_n$ transfer, as both groups (ULs and MLs) are capable of resetting the parameter to the English value. The study only suggests that the feature [+stranding] associated with certain functional categories (prepositions) is acquired more rapidly by MLs than ULs.

3.2.3 Dewaele (1998, 2001)

Dewaele (1998) investigates lexical interaction in L3A, in particular, *lexical inventions*[41] under Green's (1986) psycholinguistic model of language activation. This approach was originally designed for L2A, though Dewaele applies it to L3A. Briefly, the model proposes that bilinguals (and, hence, trilinguals) do not switch a particular language on or off during language production, but rather exhibit three different levels of activation:

(i) The highest level of activation occurs when a language is *selected* and controls the speech output, i.e., the selected language would normally be the target language (French in Dewaele's study).

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[40] Hawkins (2000), Hawkins & Chan (1997) and Tsimpli & Roussou (1990) claim that learners who have acquired their L2 after a critical period (or after puberty) may show persistent representational problems in near-native stages despite long immersion in the L2. Near-nativeness can be due to a difference in functional parameterisation between the L1 and L2 features. Klein (1995:435) claims hat 'most of the MLs had learned their (first) nonnative language at a young age'. The only hint she provides about the ULs age of onset is that 'Almost all of the learners … began acquiring English as early adolescents.' (Klein, 1995:435). However, she does not present tables with subjects' information such as age, sex, age of first exposure to English, proficiency level, etc.

[41] 'When confronted with an information gap for a particular lemma [a word's semantic and syntactic information] in his/her IL, the speaker may, intentionally or unintentionally, retrieve the necessary morphophonological information corresponding to the conceptual information but attached to a lemma which belongs to another language. The result will be a lexical invention with clear interlingual influences.' (Dewaele, 1998:475).

(ii) A language is *active* when it plays a role in the ongoing processing (working in parallel to the *selected* language) but has no access to the out-going speech channel.

(iii) A language is *dormant* when it has the lowest level of activation.

The study explored two groups of subjects with different linguistic configurations, as shown in Table 4.

Table 4: Dewaele's (1998) subjects

	L1	**L2**	**L3**
Group 1 (N=32)	Dutch	French	English
Group 2 (N=7)	Dutch	English	French

Both groups shared the same L1 (Dutch), and although their L2/L3 were identical, they differed in the order of acquisition (group 1 acquired French as an L2 and English as an L3, whereas group 2 acquired English as an L2 and French as an L3). Three production tasks in the form of interviews were conducted in French (the target language of the study), each one decreasing in degree of formality. The overall results suggest that:

(i) French lexical inventions deriving from L1 *Dutch* is higher for group 1, 15%, whose French is L2, than for group 2, 9%, whose French is L3.

(ii) French lexical inventions deriving from *English* is higher for group 2, 22%, whose English is L2 than for group 1, 7%, whose English is L3.

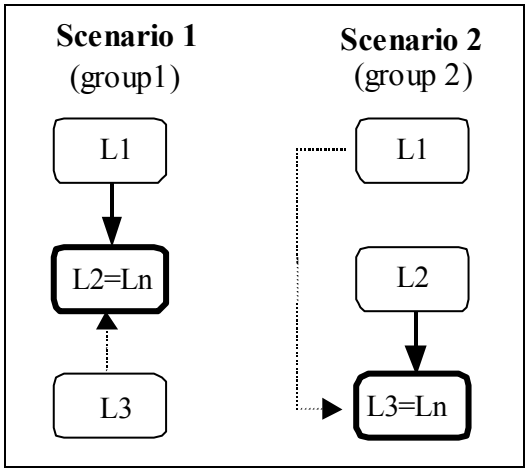
In other words, the L2 is the most activated language if the L3 is the target language (L_n); otherwise, the L1 is the most activated language if the L2 is the L_n. We can generalise these findings by proposing that the source language of lexical inventions is the language acquired immediately before L_n, as Figure 9 illustrates, where the darker arrows represent a higher degree of language activation and, hence, of lexical

For example, one of the subjects with Dutch L1 wonders whether the word 'ping-pong' exists in the target language, French (it does). He wants to repeat the more French-like word 'tennis de table', but produces the unattested 'table de tennis' which happens to be the word order of his L1 Dutch, 'tafeltennis'.

transfer towards the L_n. The dashed arrows represent a lower degree of activation, indicating the dormant language. It should be stressed that this model acknowledges the interaction of *all* languages with the L_n, though the degree of activation between them varies.

The fundamental idea behind Figure 9 is that in L2A the L1 is highly (though not necessarily always) transferred to the L2. However, in L3A the L2 is highly transferred to the L3 (though there exists the possibility of transfer from L1 to L3). In other words, it is not always the case that the L1 is the privileged source of transfer in L3A.

Figure 9: L1-L2-L3 interactions



(Source: based on Dewaele, 1998)

A major drawback in Dewaele's (1998) study is the unequal number of subjects in each group (N=32 in group 1 versus N=7 in group 2). It could therefore be argued that the findings shown in scenario 2 are not externally valid due to the small number of subjects in group 2.

Dewaele's (1998) results are nevertheless empirically testable in other linguistic domains. As stated above, these findings are based on (i) a psycholinguistic framework and (ii) lexical acquisition. It is a matter of empirical debate whether in (generative) syntax acquisition the L2 parametric setting is the most likely to be transferred to the L3. I will consider this issue in the experimental sections of our study (Chapter 5 and Chapter 7).

Dewaele (2001) conducted a second study using a smaller set of subjects from his first study just reviewed (Dewaele, 1998). The subjects' linguistic configuration and the

tests employed remained the same, though the number of subjects was different. Results again support the idea presented in Figure 9

3.2.4 Hufeisen (1999)

Hufeisen (1999) investigates (i) how multilinguals evaluate various aspects of their multilingualism when three or more languages are involved and (ii) whether multilinguals confuse or mix their languages in production.

The participants were 115 university students, all of them multilinguals with different L1 and L2/(L3)/(L4) backgrounds. They were asked to fill in an informal questionnaire where they had to comment on their linguistic experiences (such as interference between their different languages, easiness/difficulty when learning several languages, etc).

Results support the view that in L3A there are abundant instances of lexical transfer from the L2, yet little influence from the L1. These are some illustrations:

One subject with L1 English, L2 French, L3 German shows lexical interferences between his L2 and L3, producing instances like *Wenn die DM tark ist, sind die prix in Deutschland hoch* ('When the German mark is strong the (in French:) prices are high in Germany') and *Fünzig Prozent für chaque Gebrauch* ('Fifty percent for (in French:) each use'). Another subject with L1 English, L2 German, and L3 French mostly transferred from his L2 onto his L3, producing *grün* (German for 'green') instead of 'vert'. Another participant with L1 English, L2 French and L3 Japanese comments that when he was learning Japanese, he often used French vocabulary. Another subject with L1 Serbo-Croat, L2 Russian, L3 French, L4 English and L5 Japanese, comments that the transfer occurs mainly from the foreign languages into the target language, almost never from his mother tongue.

Hufeisen's (1999) study faces several drawbacks: (i) it only uses introspective data, collected in an 'informal' way, never using more stringent techniques such as grammaticality judgement tests, reaction-time experiments, controlled picture descriptions, etc; (ii) the learners do not form a homogeneous group: there are many different L1s, no proficiency results are shown, it is not known whether some learners were first exposed to the target language before or after puberty, etc.

To conclude, Hufeisen's (1999) findings support Dewaele's (1998, 2001) assumption that lexical transfer operates from L2 to L3. Similar results were found in a study of

Finns learning Swedish as an L2 and English as an L3 (Wickström, 1980) and in a study of Kirundi natives learning French as an L2 and English as an L3 (Sikogukira, 1993). In sum, these studies support the idea that lexical transfer occurs between the most recently acquired language (L_{n-1}) and the language being acquired (L_n). The direction of transfer is, therefore, $L_{n-1} - L_n$.

3.2.5 Other studies

In this section we briefly review two studies dealing with language acquisition in multilinguals, as they give us a general overview of inter-linguistic influence in the multilingual mind, which will be relevant for the understanding of the experimental results (Chapter 5 and Chapter 7).

Rivers (1979) reports on her experiences as a learner of Spanish as a sixth language (her native language being English, and non-native languages French, Latin, Italian and German). Overall, transfers into Spanish occur from her most proficient language (German) and not from the most typologically related language to Spanish, i.e., from Italian. German happens to be the language acquired before Spanish, so Rivers concludes that the pattern of language transfer seems to be $L_{n-1} - L_n$ (i.e., the most recently acquired language influences the language being acquired).

Hoffman & Widdicombe (1999) report on the linguistic strategies (especially code-switching[42]) used by Robin, a trilingual child from birth (English from his English mother, Italian from his Italian father and French from the larger community they live in, Paris). Spontaneous conversation data reveal that French is typically (but not always) the dominant language when code-switching. Hoffmann & Widdicombe (1999:58) conclude that 'language dominance does not apparently depend on length of exposure, but may depend on the people, context or topic habitually associated with a particular language.'

3.2.6 Conclusion on L1/L2 influence on L3

From the above studies the following can be concluded:

[42] Code-switching is defined as the 'variety of instances in the individual's speech which reflect the use, or activation, of more than one linguistic system during a single discourse event.' (Hoffman & Widdicombe, 1999:52).

(i) Most of the studies reviewed were conducted using different linguistic frameworks from the P&P model, apart from Klein's (1995). Generalisations across frameworks prove to be difficult to make.

(ii) There is no general consensus as to whether the L1 or L2 is the privileged source of transfer in the L3. L1 and L2 influence on L3 pervades all linguistic levels (phonology, morphology, lexicon and syntax), although evidence suggests that lexical transfer tends to occur mostly from L2 to L3 (or, more generally, from L_{n-1} to L_n) (Dewaele, 1998, 2001; Hufeisen, 1999; Sikogukira, 1993; Wickström, 1980).

(iii) None of the above studies use an impartial measure of the learners' proficiency in the target language.

(iv) Most of the studies do not use strict sampling techniques, resulting in heterogeneous groups of learners. Basic variables are not controlled either (such as learners' age, length of exposure, proficiency, L1 or L2 backgrounds, etc).

The shortcomings presented in (i-iv) will be avoided in the experimental section of our study (Chapter 5 and Chapter 7).

3.3 Summary of chapter 3

In this chapter I first discussed the differences between convergent vs. divergent intuitions in L2A. I later assessed several studies on the L1/L2 influence on L3 which suggest that lexical transfer tends to occur from L2 to L3.

In the following chapters, I will illustrate the two constructions under investigation: pronominal subjects and Subject-Verb word order, Table 5.

Table 5: Constructions under investigation

	Pronouns (chapters 2 and 3)	**Word order** (chapters 4 and 5)
Principles	Overt Pronoun Constraint	Unaccusative Hypothesis
Parameters	Contrastive Focus Constraint	Presentational Focus

In Chapter 4 I will discuss how the distribution of overt and null pronominal subjects is constrained by universal principles like the Overt Pronoun Constraint (OPC) and, at the same time, by parameterisable discursive features like the Contrastive Focus Constraint (CFC). Chapter 5 tests whether the knowledge of advanced learners of L2 and L3 Spanish is convergent in OPC contexts yet divergent in CFC contexts, as previous research suggests.

In Chapter 6 I show how the distribution of SV and VS with unaccusatives and unergatives is constrained by universal principles like the Unaccusative Hypothesis (UH) and, at the same time, by discourse parameterisable features like presentational focus. Chapter 7 tests whether learners' knowledge is convergent in UH contexts yet divergent in presentational focus contexts.

Finally, Chapter 8 presents a general conclusion drawn from the results and some implications for current L2 research.

Chapter 4. THE DISTRIBUTION OF NULL AND OVERT PRONOMINAL SUBJECTS

4.1 Introduction

Recall from Chapter 3 that recent L2A studies report that at advanced levels of proficiency L2 learners can show convergent (native-like) intutions (e.g., Hertel, 2000; Hirakawa, 1999, 2001; Kanno, 1997; Marsden, 1998, 200a, 200b; Pérez-Leroux & Glass, 1997, 1999). However, other studies report that learners only show divergent intuitions and their grammars are characterised by fossilisation/representational deficits despite long immersion in the L2 (Hawkins, 2000; Hawkins & Chan, 1997; Papp, 2000; Robertson, 2000; Sorace, 1993, 2000, amongst others). Interestingly, these claims appear to follow from the researchers in question focussing on different types of property within UG. Studies like those of Kanno and Pérez-Leroux & Glass focus on universal principles (POS phenomena), whereas studies of the second type have focussed on properties which UG allows to vary (within limits) and attribute lack of native-like competence to L1 influence on the L2. An interesting question is whether this is the expected pattern in L2A: that advanced L2 speakers will always show convergent intuitions where principles are involved, but divergent intuitions on language-specific differences.

In this chapter, I investigate the distribution of overt/null pronominal subject in [+pro-drop] languages by focusing on a universal principle and a language-specific property in the acquisition of non-native (L2 and L3) Spanish, viz., the Overt Pronoun Constraint, OPC (Montalbetti, 1984, 1986) and the Contrastive Focus Constraint (CFC). The OPC holds crosslinguistically and is claimed to be a universal invariant of UG, whereas the CFC is language-specific and is amenable to parameterisation.

The chapter is divided as follows. First, I consider the (apparent) distribution of overt and null pronominal subjects in Spanish. Then, I will argue that overt and null pronouns are not in free distribution due to two constraints: the OPC and the CFC. I will show that, while the distribution of overt/null pronouns in OPC contexts is constrained configurationally, their distribution in CFC cases is constrained by

discursive factors, namely, overt pronouns are allowed in contrastive focused positions, whereas null pronouns are not. Finally, I review a series of L2 studies on OPC and CFC.

As will be seen, early accounts of the acquisition of overt and null pronominal subjects in L2A failed to observe that overt/null pronouns are not in free variation and that there are constraints determining when each can appear. It was only in the second half of the 90s that L2A studies started to appear taking account of such restrictions, like the Overt Pronoun Constraint (OPC) and the Contrastive Focus Constraint (CFC).

4.2 The (apparent) free distribution of overt and null pronominal subjects

It is well known that in null-subject languages like Spanish (e.g., Brucart, 1987; Demonte, 1994; Luján, 1999; Zagona, 2002) and Greek (e.g., Alexiadou & Anagnostopoulou, 1998a; Dimitriadis, 1996; Efthimiou, 1999), overt pronominal subjects (e.g., *él* 'he', *ella* 'she'; *aftos* 'he', *afti* 'she') can be either phonetically overt, (81a) and (82a), or phonetically null, (81b) and (82b) in tensed clauses. However, in non null-subject languages like English (e.g., Chomsky, 1981; Rizzi, 1997) overt pronouns are required, (83a), as null pronouns are ungrammatical, (83b)[43].

(81) a. Él/ella tiene poco dinero (Spanish)
b. *pro* tiene poco dinero

(82) a. Aftos/afti ehei liga lefta (Greek)
b. *pro* ehei liga lefta

[43] Haegeman (1990) discusses exceptional cases where pronominal subjects can be dropped in English, as is the case of 'diary contexts' like (i), where the understood *pro* is normally 'I'.

(i) *pro* went to the shop. *pro* bought a beer.

However, null pronouns in English only occur in matrix finite clauses, never in embedded finite clauses, (ii).

(ii) She thinks [**pro* went to the shop]

In pro-drop languages, null subjects are allowed in both matrix and embedded finite clauses, (iii).

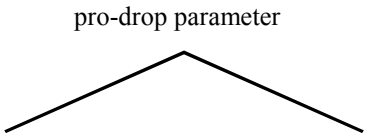
(iii) Ella cree que [*pro* fui a la tienda]

The appearance of null subjects in 'diary contexts' in English will not be discussed any further, as they are irrelevant for the experimental section of the current study. The reader is referred to Haegeman (1990) and Nuñez del Prado & *al.* (1994).

(83) a. He/she has little money (English)
b. * *pro* has little money

Building on work by Perlmutter (1971), several authors (e.g., Chomsky, 1981; Jaeggli, 1982 and Rizzi, 1982) proposed what in the generative tradition is known as the *pro*-drop parameter (or null subject parameter)[44]. Languages like Spanish and Greek, which allow the pronominal subject to be dropped in finite clauses, are classed as [+pro-drop] languages, while languages like English, which do not, are referred to as [–pro-drop] languages. Apart from the optional/obligatory character of overt pronominal subjects, the parameter comprises a set of properties (namely, SV/VS word order alternations and the possibility of extracting a subject across overt complementizers in [+pro-drop languages] –referred to traditionally as '*that*-trace effects'). These properties, although apparently unrelated, are claimed to cluster together in such a way that the appearance of one property implies the appearance of the others, as Figure 10 shows.

Figure 10: The pro-drop parameter properties



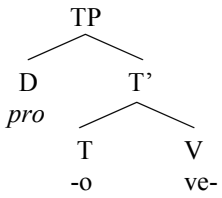
[+pro-drop] languages	**[–pro-drop languages]**
(i) null pronominal subjects allowed	(i) null pronominal subjects not allowed
(ii) SV inversion allowed	(ii) SV inversion not allowed
(iii) that-trace violation allowed	(iii) that-trace violation not allowed

Properties (i) and (ii) are the focus of the current study. In particular, I will show how learners of Spanish acquire the distribution of (i) overt/null pronouns and (ii) SV/VS order. I will not, however, get into the traditional debate of whether these properties cluster together in L2A (for a discussion, see Liceras, 1989 and White, 1985, 1986).
Rizzi (1997a:273) argues that both licensing (84a) and identification (84b) principles regulate the occurrence of *pro*.

(84) a. *pro* is licensed by X^0 |…| under agreement or government
b. *pro* inherits features from licensing X^0

To illustrate (84), consider example (85), where the subject *pro* occupies its canonical position, [Spec, TP], which is governed by T^{45}. The [+D] and [+AGR][46] features of the functional head T licence the null pronoun.

(85) a. *pro* veo
'I see'

b.


Whether a head can license *pro* is a language-specific property (i.e., amenable to parameterisation). In Spanish and Greek, T^0 is a proper licensor, whereas in English it is not.

As for identification mechanisms, Rizzi (1997a) and most traditional analyses in the literature (e.g., Chomsky, 1981; Demonte, 1994) assume that *pro* is identified by the phi-features of T by virtue of (84b). The intuition is that verbal paradigms which are morphologically rich can identify the person and number features of *pro*, as in Spanish and Greek. English, however, is morphologically poor, as the contrasts in (86) show[47].

[44] The pro-drop parameter is one of the most documented parameters in the theoretical generative literature (see, amongst others, Chomsky, 1981; Haegeman, 1994; Rizzi, 1997a) as well as the L2 literature (e.g., Davies, 1996; Hilles, 1986; Liceras, 1989; Molina Valero, 1997; Phinney, 1987; Roebuck *et al*, 1999; Ruíz de Zarobe, 1998; White, 1986).

[45] In this analysis, I am abstracting away from two technical details for expository purposes, namely, (i) that the subject is base-generated in [Spec,VP], as standardly assumed by the VP-internal subject hypothesis (SIH); (ii) the inflected verb raises from V^0 to T^0, as Spanish is a verb-raising language where the strong T attracts V. For details, see Demonte (1994), Herschensohn (2000) and Zagona (2002).

[46] [AGR]reement is the phonological realisation of phi-features, which consist of *person, number, gender* (Chomsky, 1995:35). For Rizzi (1997a) [AGR] consists of *person* and *number* only.

[47] It is well known that Chinese-type languages are morphologically poor but, nonetheless, license a *pro* via topic-chains. For a discussion on the Morphological Uniformity Hypothesis, see Huang (1989), Jaeggli & Safir (1989).

(86)		*English*	*Spanish*	*Greek*
	[1SG]	I see	(yo) veo	(ego) vlepo
	[2SG]	you see	(tú) ves	(esi) vlepeis
	[3SG]	he sees	(él) ve	(aftos) vlepei
		she sees	(ella) ve	(afti) vlepei
		it sees		
	[1PL]	we see	(nosotros) vemos	(emei) vlepoume
			(nosotras) vemos	
	[2PL]	you see	(vosotros) veis	(esei) vlepete
			(vosotras) veis	
	[3PL]	they see	(ellos) ven	(aftoi) vlepoun
			(ellas) ven	(afte) vlepoun

Given these assumptions, the featural configuration of *pro* can be identified and interpreted as [3S±M] in (87a,b)[48].

(87) a. *pro* tiene poco dinero (Spanish)
b. *pro* ehei liga lefta (Greek)
'He/she has little money'

The category *pro* can have several interpretations in Spanish (Demonte, 1994). It can be used referentially and thus have argumental value, as in (88), where *pro* is bound by and refers to its antecedent *Pedro*.

(88) A: ¿Qué ha comido Pedro$_i$?
'What has Peter eaten?'
B: *pro*$_i$ ha comido patatas
pro has eaten potatoes
'He has eaten chips

pro can also have a bound-variable reading (Montalbetti, 1986), which I will discuss in detail in the next section. The value of *pro* in these cases depends on the value of the quantifier *nadie* 'nobody', (89).

[48] For a detailed discussion on identification mechanisms in Catalan and Spanish, see Picallo (1994).

(89) Nadie$_i$ dice que *pro*$_i$ tiene poco dinero.
Nobody says that *pro* has little money
'Nobody says that he has little money'

pro can sometimes lack both argumental value and θ-role, particularly with verbs like *parecer* 'to seem/to appear' and with meteorological verbs like *llover* 'to rain', which cannot assign an external θ-role to their subject (Demonte, 1994). In (90) *pro* acts as a semantically empty expletive, like English *it* and *there*.

(90) a. *pro* parece que Pedro ha comido patatas
pro seems that Peter has eaten potatoes
'It seems that Peter has eaten chips'
b. *pro* está lloviendo
pro is raining
'It is raining'

pro can also have an arbitrary interpretation (Suñer, 1983). In (91) *pro* refers to an unknown, arbitrary entity. Grammatically, it carries [3PL] features and can be glossed as 'somebody' or 'people' in English.

(91) *pro*$_{arb}$ llaman a la puerta
pro knock.3PL to the door
'Someone is knocking at the door'
(lit: 'They are knocking on the door')

The current study focuses on *pro* when it has (i) a referential/deictic interpretation, (88B), and (ii) a bound-variable interpretation, (89). The rest of the interpretations (ii)-(iii) will not be discussed any further.

An examination of the early Principles & Parameters literature on the null subject parameter (e.g., Chomsky, 1981; Jaeggli, 1982; Rizzi, 1982) leads to the assumption that overt and null pronouns are in free alternation. However, there are several constraints on their distribution.

4.3 Constraints on pronominal subjects

Hernanz and Brucart (1987) show that overt and null pronouns are not always in free alternation in Spanish. In particular, a null pronominal subject (*pro*) is barred from certain constructions: (i) when it is the second term of a comparison, as in (92b); (ii) when it appears in coordinated structures, as in (93b); furthermore, (iii), *pro* is never possible as the complement of a preposition (Luján, 1999:1277), as in (94b).

(92) Luis tiene más paciencia que {yo/**pro*}
Luis has more patience than I/*pro*
'Luis is more patient than I'

(93) {Él/**pro*} y yo visitaremos el MIT
He and *pro* will visit the MIT
'He and I will visit MIT'

(94) Hablan de {él/**pro*}
Speak.3PL of he/*pro*
'They talk about him'

The consequence of (i-iii) is that overt and null pronouns are not in free alternation. To take this claim further, I will now focus on two specific constructions constraining the overt/null distribution, namely, the Overt Pronoun Constraint (OPC) and the Contrastive Focus Constraint (CFC)[49].

4.3.1 Overt Pronoun Constraint

As I briefly mentioned in Chapter 2, in null subject languages, an overt pronoun in subject position cannot function as a bound variable with a quantified expression or operator as antecedent if the overt/null alternation obtains (Montalbetti, 1984, 1986). This restriction is expressed in (95).

[49] There are certainly other interpretational constraints on null/overt subjects, e.g., the Principle of Non-Coreference (PNC). The reader is referred to Lasnik (1976, 1989), Luján (1987, 1999) and Rizzi (1997a) for further details.

(95) Overt Pronoun Constraint (OPC)
Overt pronouns cannot link to formal variables iff the alternation overt/empty obtains.
(Montalbetti, 1984:94).

Consider the case of null-subject languages like Spanish and Greek, (96a) and (96b), where the overt pronoun *él*/*aftos* 'he' and the null pronoun *pro* could potentially be in free alternation[50]. However, the context in (96) crucially biases for a bound interpretation only[51]: the OPC disallows *él*/*aftos* from taking the bound variable reading, i.e., the overt pronoun cannot be bound by the quantifier phrase (QP) *cada estudiante*/*o kathe mathitis* 'each student' (Luján, 1999; Montalbetti, 1984, 1986; Rigau, 1986)[52]. Only *pro* can act as a bound variable here as the alternation overt/null obtains. Note that in English, (96c), the QP *each student* can indeed bind the overt pronoun *he* as there is no overt/null alternation in English.

(96) The government has published a report about students' financial situation. The report concludes that...
a. cada estudiante$_i$ dice que {*él$_i$/*pro*$_i$} tiene poco dinero. (Spanish)
b. o kathe mathitis$_i$ lei {*aftos$_i$/*pro*$_i$} ehi liga lefta. (Greek)
c. each student$_i$ says that {he$_i$/**pro*$_i$} has little money. (English)

The claim here is that the overt-pronoun-as-bound-variable reading is disallowed (not that an overt pronominal subject cannot occur in the embedded clause). Thus, the LF representation of (96a,b) is (97).

(97) (Each x: x a student) x says that x has little money

There are, however, contexts where the overt/null alternation does not obtain. Recall from our earlier discussion that only overt pronouns can be the object of a preposition. (98) is a case in point. The overt pronoun *él* 'he' is required as it is the object of the

[50] Note that the majority of examples I will discuss in this chapter relate to overt/null pronouns in subject position, as it is well known that overt nominative pronouns permit a null counterpart in Spanish and Greek, whereas objective or oblique pronouns do not (e.g., Campos, 1991; Montalbetti, 1984, 1986)
[51] A different context could bias towards a referential interpretation (i.e., the overt pronoun takes a referent from the context). This will be dealt with in the next section (CFC contexts).
[52] The overt pronoun *él* 'he' in this context is neutralised with respect to gender, i.e., it is specified as [±masculine] (see Nuñez Cedeño, 1999 for Spanish and Santana-Lario, 1994 for English). The quantifier *cada estudiante* 'each student' is also specified as [±masculine].

preposition *de* 'of/about'. A null pronoun is not allowed. In these contexts, the overt pronoun can have two readings: as a bound variable, [*nadie*$_i$ … *él*$_i$] and as a referential pronoun, [*Juan*$_j$ … *él*$_j$].

(98) John$_j$ told the students that teachers$_k$ are gossiping a lot lately. Nevertheless, …
… nadie$_i$ dice que los profesores$_k$ hablan de {él$_{i/j}$/**pro*$_{i/j}$}
'Nobody says that the teachers are talking about him'

The evidence in (96) and and (98) clearly shows that the OPC is limited to contexts where the overt/null alternation obtains.

In short, (99a) is allowed in non null-subject languages like English and in null-subject languages if the overt/null alternation does not obtain. By contrast, (99b) is permitted only in null-subject languages like Spanish and Greek whenever the overt/null alternation obtains.

(99) a. [QDP$_i$ … [overt$_i$]]
b. [QDP$_i$ … [null$_i$]]

The OPC is claimed to be a universal invariant because it is instantiated in both typologically related and unrelated null-subject languages: Spanish (e.g., Alonso-Ovalle & D'Introno (2000), Campos (1991), Fernández-Soriano (1989, 1993), Luján (1987, 1999), Montalbetti (1984, 1986), Picallo (1994), Rigau (1986, 1988), Satterfield (2001)); Portuguese, Italian and Greek (Montalbetti, 1984), Catalan (Picallo, 1994; Rigau, 1986, 1988); Chinese (Xu, 1986); Japanese and Korean (Kanno, 1997, 1998); Arabic-Tarifit (Ouhalla, 1988) and Persian (Youhanaee, *p.c.*): (100)-(104).

(100) Dare$_i$ ga [*pro*$_i$/kare$_{*i}$ ga sore o mita to] itta no (Japanese)
who$_i$ NOM pro$_i$/he$_{*i}$ NOM that ACC saw that said Q
'Who said that he saw that?'

(101) Motwun$_i$ salam-un [pro$_i$/ku-ka$_{*i}$ pikonha-ta-ko] malhay-ss-ta (Korean)
every$_i$ person-TP *pro*$_i$/he$_{*i}$-NOM tired-DECL-that say-PAST-DECL
'Everyone said that he is tired'

(102) Shuei$_i$ renwei [*pro*$_i$/ta$*_i$ congming] (Chinese)
who$_i$ thinks pro$_i$/he$*_i$ smart
'Who thinks that he is smart?'
(Source: examples after Kanno, 1997)

(103) Kurizzn$_i$ y-nna qa [*pro*$_i$/nnta$*_i$ ur y-ssin ad y-ghnni. (Arabic-Tarifit)
everyone$_i$ 3.M.SG-said that *pro*$_i$/he$*_i$ neg 3.M.S-know to 3M.S-sing
'Everyone said that he does not know how to sing'
(Source: Ouhalla, 1988)

(104) Hichkasi fekr ne-mikonad [ke *pro*$_i$/u$*_i$ gonahkar ast] (Persian)
anybody$_i$ think not-does that pro$_i$/he$*_i$ guilty is
'Nobody thinks that he is guilty'
(Source: Dr Manijeh Youhanaee (p.c.))

The universality of the OPC is therefore a testing-ground in non-native language acquisition for the claim that UG constrains adult L2 grammatical mental representations. In the first experimental section of this study (Chapter 5), I will test whether L2 and L3 learners of Spanish show convergent intuitions in OPC contexts despite the fact that the OPC is instantiated in the L1 of the first group of learners (Greek natives) but not in the L1 of the second group (English natives).

The second pronominal constraint under investigation is the Contrastive Focus Constraint, CFC.

4.3.2 Contrastive Focus Constraint

From the evidence presented in the previous section (OPC contexts), it follows that the string [QP…overt] is not ungrammatical *per se* in null subject languages. What is not allowed is a bound *interpretation* between the quantifier and the overt pronoun, [QP$_i$…overt$*_i$]. I have made no claims about the possibility of having an overt pronoun bound by a previous discourse constituent other than a QP. In other words, the construction [QP$_i$…overt$_j$] is not constrained by the OPC, as the pronoun has a disjoint reading (i.e., it refers to somebody else but the QP).

The CFC context, (105), biases for a disjoint interpretation where the overt pronoun *él*/*aftos* 'he' is coreferential with one of the previous discourse R-expressions (*Mr López*), and not with the QP (*cada estudiante*/*o kathe mathitis*).

(105) Mr López$_j$ and Ms García$_k$ work at the university and at a famous publishers. However...

a. cada estudiante$_i$ dice que {él$_j$/**pro*$_j$} tiene poco dinero. (Spanish)

b. o kathe mathitis$_i$ lei {aftos$_j$/**pro*$_j$} ehi liga lefta. (Greek)

c. each student$_i$ says that {he$_j$/**pro*$_j$} has little money. (English)

Although there is a potential alternation between an overt pronoun and *pro* in Spanish and Greek, (105a,b), the CFC environment in (105) biases for an interpretation where an overt pronoun is used for contrastive purposes (Fernández-Soriano, 1989, 1993; Luján, 1999; Pérez-Leroux & Glass, 1997, 1999; Picallo, 1994; Rigau, 1996, 1988). The inclusion of two referential antecedents (which stand in contrast in the discourse) requires one of them to be focused contrastively via a phonologically overt pronoun, hence the obligatory presence of the overt pronominal subject *él*/*aftos* 'he' (or perhaps *ella*/*afti* 'she', depending on whether we want to contrastively focus on *Mr López* or *Ms García*).

A null pronoun *pro* (i) would fail to mark contrastive focus, as focused elements must be phonetically realised[53] and (ii) it would not be properly identified, as it can be bound by both R-expressions: *Mr López* and *Ms García*. Since a phonetically null pronoun, *pro*, clearly lacks phonetic material, neither of the discourse referents can be contrastively focused if *pro* were to be used[54].

The LF reading in contrastive contexts is different from OPC contexts, as shown in (106), which has to be interpreted as *Each student says that he (=Mr López, and not Ms García) has little money.*

(106) (Each x: x a student) x says that he has little money

[53] Recall that in chapter 1 I presented evidence arguing that, while topics can be phonetically empty, focused constituents must be phonetically overt.

[54] Note that a null pronoun would also violate the identification principle (Rizzi, 1997a), as shown in (84b) due to the fact that *pro* can refer to either *Mr López* or *Ms García*. The presence of an overt pronoun is also obligatory in cases where INFL fails to identify *pro*. Consider (i), where the imperfective morphological marker *–aba* can be interpreted as [1S] or [3S].

(i) Paseaba por la calle
Walked.1S/3S for the street
'I/He/She walked along the street'

The only way to avoid ambiguity in these cases is to use an overt pronoun, as in (ii).

(ii) Él paseaba por la calle

For further discussion, see Lozano (2002b).

To summarise our argument, contrastively focused-subject contexts in null subject languages permit the string in (107a) but disallow (107b), whereas only (107a) is allowed in non-null subject languages (due to the fact that these languages do not permit a null subject in tensed clauses).

(107) a. [DP_j … DP_k … [QP_i … [$overt_j$]]]
b. [DP_j … DP_k … [QP_i … [$null_{*j}$]]]

4.4 Pronominal subjects and focus

In this section I argue that, while the distribution of overt/null pronominal subjects in CFC contexts is determined by discourse constraints (topic/focus), their distribution in OPC contexts is purely formal (i.e., configurational).

Let us first consider overt/null alternations in contexts governed by topic and focus. In particular, I will analyse cases where the pronoun is used referentially. It is widely acknowledged in the generative literature that null pronouns are typically interpreted as topics in Spanish, as they encode continuity in the discourse. By contrast, overt pronouns are interpreted as focus, as they typically express new (or contrastive) information (e.g., Fernández-Soriano, 1989, 1993; Luján, 1999; Pérez-Leroux & Glass, 1997, 1999; Picallo, 1994; Rigau, 1986, 1988).

Consider a short piece of dialogue, (108), where speaker A states something about *Juan* 'John'. As a result, *Juan* becomes known (topicalised) information for speaker B. Speaker B's reply contains more information about *Juan*. Crucially, the presence of a null pronoun (*pro*) referring to *Juan* is required, as it marks continuity in the discourse, (108Bi). An overt pronoun (*él* 'he'), (108Bii), would be pragmatically infelicitous as it would be interpreted as focus, i.e., new (or contrastive) information.

(108) A: ¡$Juan_i$ tiene una casa en Miami y otra en las Canarias!
'John has a house in Miami and another one in the Canary Islands!'
B: (i) Sí, la verdad es que [pro_i]$_{Top}$ tiene mucho dinero.
Yes, the truth is that *pro* has much money
'Yes, the truth is that he has a lot of money'
(ii) Sí, la verdad es que [*el_i]$_{Top}$ tiene mucho dinero.

Note that topicalised null pronouns do not necessarily have to refer to an extrasentential referent, as in (108Bi). They can also have an intrasentential antecedent. Consider (109), where speaker A's question about the object (*qué* 'what') biases for a reply where the object would be new (presentationally focused) information and the rest of the information would be known (topicalised) information. Indeed, speakers B's reply in (109Bi) contains a presentationally focused object, *el premio* 'the prize'[55]. The rest of the information is topicalised: since *Juan* is known information (it has already been mentioned in the discourse), a topicalised null subject (*pro*) is expected, (109Bi). Note that the embedded *pro* is coreferential with its antecedent (*Juan*), which is in the matrix clause. By contrast, the presence of an overt pronoun (*él* 'he') in (109Bi) is ungrammatical, as it would convey new (focalised) information.

(109) A: ¿Qué$_j$ cree Juan$_i$ que ganará en el concurso?
'What does John believe he will win in the contest?'
B: (i) Juan$_i$ cree [que [*pro*$_i$]$_{Top}$ ganará [EL PREMIO$_j$]$_{Foc}$]
'Juan believes that he will win the prize'
(ii) Juan$_i$ cree [que [*él$_i$]$_{Top}$ ganará [EL PREMIO$_j$]$_{Foc}$]
(Source: examples from Pérez-Leroux & Glass, 1997)

Consider now a case of pronominal contrastive focus with a referential reading (CFC contexts). Recall from our discussion in Chapter 2 that contrastive focus appears in those contexts where one element (out of a finite set of elements known to the speaker and hearer) is focused for contrastive purposes. In (110A) speaker A frames the discourse around two entities, *Juan* 'John' and *María* 'Mary'. Speaker B asks which of them has more money. Speaker A's reply is expected to contain an overt pronoun, (110Ai), to mark contrastive focus[56]. In this case, *él* 'he' is used to refer to *Juan* (alternatively, *ella* 'she', could have also been used to refer to *María*). The use of *pro* is infelicitous, (110Aii), as a null pronoun would encode continuity and not contrastive focus.

[55] Recall that presentational focus is presented in CAPITALS.
[56] Recall that contrastive focus is presented in **bold**.

(110) A: ¡Juan$_i$ tiene una casa en Miami y María$_j$ tiene un chalet en las Canarias!
'John has a house in Miami and Mary has a villa in the Canary Islands!'
B: Pero, en realidad, ¿quién tiene más dinero, él$_i$ o ella$_j$?
'But, in reality, who has more money, he or she?
A: (i) La verdad es que [**él**$_i$]$_{Foc}$ tiene más dinero.
'The truth is that he has more money'
(ii) La verdad es que [****pro***$_i$]$_{Foc}$ tiene mucho dinero.

From the evidence presented in (110), it may be supposed that contrastively focused overt pronouns can only refer to extrasentential antecedents. This is not necessarily the case, as they can also have an intrasentential antecedent. Consider (111), where speaker A's question frames the discourse about two subjects, *Juan* and *María*. Speaker B's reply requires a contrastively focused overt pronominal subject, *él* 'he', (111Bi), whose antecedent *Juan* appears in the matrix clause. Note that the use of a null pronoun, (111Bii), would fail to convey contrastive focus, as argued above.

(111) A: ¿Quién$_{i/j}$ cree Juan$_i$ que ganará el premio, él$_i$ o María$_j$?
'Who does John believe will win the prize?'
B: (i) [Juan$_i$ cree [que [**él**$_i$]$_{Foc}$ ganará el premio]]
'John believes that he will win the prize'
(ii) [Juan$_i$ cree [que [****pro***$_i$]$_{Foc}$ ganará el premio]]
(Source: examples from Pérez-Leroux & Glass, 1997)

Contrary to what occurs with the referential reading (CFC contexts), the overt/null alternation with a bound-variable reading (OPC contexts) is not constrained by focus, but rather by structural/configurational considerations. To illustrate, consider an OPC context, (112), where speaker A frames the discourse around three entities, i.e., *the government*, *a report* and *students' financial situation*. These three elements are therefore known (topicalised) information. Speaker B's question about the object, *what*, biases speaker A to reply with a focused object, (112Ai). Note that the focused object is the whole clause *que cada estudiante dice que tiene poco dinero* 'that each student says that he has little money'. The context is manipulated in such a way that the empty subject *pro* in the embedded clause can only refer to the quantifier *cada estudiante*. Crucially, it is interpreted as topic, since it refers to the quantifier *cada estudiante*, which has been just mentioned in the matrix clause. As a result, *pro* marks continuity in the discourse.

(112) A: The government has published a report about students' financial situation.
B: What does the report conclude?
A: (i) El informe concluye [que cada estudiante$_i$ dice que [*pro*$_i$]$_{Top}$ tiene poco dinero]$_{Foc}$
'The report concludes that each student says that he has little money'
(ii) El informe concluye [que cada estudiante$_i$ dice que [él$_{*i}$]$_{Top}$ tiene poco dinero]$_{Foc}$

The evidence in (112) may seem to suggest that, as null pronouns can be used as topics in OPC contexts, topic/focus constraints govern the overt/null alternation in OPC contexts. If this is correct, we would expect *all* overt pronouns to be interpreted as (contrastively) focused in OPC contexts. However, consider (113). The context biases for a bound-variable reading again. We would typically expect a null pronoun to take the bound-variable reading. However, as a null pronoun is not allowed as the object of a preposition, the overt/null alternation does not obtain, rendering the interpretation in (113a) ungrammatical. This entails that an overt pronoun must be used, (113b). Crucially, note that, as the overt pronoun *él* 'he' refers to an entity previously mentioned in the discourse, *nadie* 'nobody', it has to be interpreted as topic.

(113) Se dice que los profesores están rumoreando mucho últimamente. No obstante, …
'It is said that teachers are gossiping a lot lately. Nevertheless, …'
(a) nadie$_i$ dice que los profesores hablan de [**pro*$_i$]$_{Top}$
'Nobody says that the teachers are talking about him'
(b) nadie$_i$ dice que los profesores hablan de [él$_i$]$_{Top}$

The evidence in (113) suggests that an overt pronoun with a bound-variable reading (OPC contexts) is not necessarily interpreted as contrastively focused. Further evidence comes from (114a-d), which presents a matrix clause with a quantifier (*ningún estudiante* 'no student'), a pronoun (*pro*/*él*/*ella*) in the medial embedded clause and a pronoun (*pro*/*él*/*ella*) in the most embedded clause. These sentences are more 'complex' than the OPC sentences discussed so far, in the sense that there are two loci where overt/null pronominal subjects can appear (medial and most embedded subject position). The context, (114), presents two entities (*la directora* 'the headmistress' and *el director* 'the headmaster'), which stand in contrast. Let us analyse each sentence in turn.

(114) Se rumorea que la directora$_k$ ha dicho que el director$_j$ es muy culto. No obstante,…
'It is rumoured that the headmistress has said that the headmaster is very literate. However, …'

(a) ningún estudiante$_i$ dice [que *pro*$_{i/*j}$ piensa [que él$_{i/j}$ es inteligente]]
(b) ningún estudiante$_i$ ella$_k$ él$_{*i/j}$
(c) ningún estudiante$_i$ él$_{*i/j}$ él$_{*i/j}$
(d) ningún estudiante$_i$ ella$_k$ *pro*$_{i/*j}$
'no student says that *pro*/he/she thinks that *pro*/he/she is intelligent'

(i) In (114a), the null pronoun in the medial clause can be interpreted as a bound variable (*pro*$_i$) only. Note that *pro* cannot be used referentially in this context, as the context biases for a contrastive interpretation and a null pronoun cannot be used for contrastive purposes. The overt pronoun in the most embedded clause can have two readings, as a bound variable (*él*$_i$) and as a referential pronoun (*él*$_j$). That an overt pronoun can have a bound-variable reading is surprising since it would seem to violate the OPC in (95)[57]. Crucially, the bound-variable reading entails that the overt pronoun is interpreted as unfocused (i.e., topic), as it refers to an entity previously mentioned in the discourse (*ningún estudiante*)[58]. By contrast, the referential reading (*él*$_j$) implies that the pronoun receives a contrastive reading, as one of the R-expressions stands in contrasts (in this case, *el director* vs. *la directora*).

(ii) In (114b), the overt pronoun (*ella*$_k$) has a referential reading (it refers to *la directora*) and it must be interpreted as contrastively focused (*la directora* vs. *el director*). The most embedded overt pronoun can only have a referential reading (*él*$_j$) and it must be interpreted as contrastively focused (*el*

[57] Montalbetti (1986) provides evidence and technical explanations for this apparent anomaly in 'complex' OPC sentences. However, I will not discuss them in further detail since they are irrelevant for the current study, where I will use only 'simple' OPC sentences (as in (96)) in the experimental section. Recall that the OPC correctly predicts that only null pronouns can be interpreted as bound variables in 'simple' sentences. The reader is referred to Montalbetti (1984, 1986) for further details.

[58] Recall that what I have been claiming earlier is that overt pronouns have a contrastive reading when used referentially. It is important to realise that the same line or argumentation does not apply now to pronouns used as bound-variables: an *overt* pronoun can be (exceptionally) used as bound variable and receive a *topicalised* interpretation. In other words, both overt and null pronouns can be interpreted as topics in bound-variable readings. However, only null pronouns can be interpreted as topics in referential readings, since overt pronouns are interpreted as contrastively focused.

director vs. *la directora*). A bound-variable interpretation ($él_{*i}$) is not permitted, as predicted by the OPC[59].

(iii) In (114c) both overt pronouns have a referential reading ($él_j$) and receive a contrastive interpretation (*el director* vs. *la directora*). Note that neither of the overt pronouns can have a bound-variable reading ($él_{*i}$) as predicted by the OPC.

(iv) In (114d) the overt pronoun receives a referential reading ($ella_k$) and is interpreted as contrastively focused (*la directora* vs. *el director*). In accordance with the OPC, the null pronoun receives a bound-variable reading (pro_i). As expected, the null pronoun cannot receive a referential, contrastive reading (pro_{*j}) as phonologically null pronouns can only encode continuity in the discourse (they are topics, not foci).

The evidence presented so far indicates that the distribution of overt/null pronouns is governed by:

(i) discursive constraints involving topic and focus when the pronoun takes a referential reading (e.g., CFC contexts). Overt pronominal subjects receive a contrastive focus interpretation, but null pronouns receive a topic interpretation[60].

[59] It may seem surprising that *él* in this sentence cannot have a bound-variable reading, while it can in the previous sentence, (114a). After all, both *él* in (114a) and *él* in (114b) appear in the same structural configuration (most embedded clause). This is another indication of the configurational nature of OPC. Montalbetti (1986) discusses these cases at length. He argues that the crucial factor for the most embedded overt pronoun to have a bound-variable/referential interpretation is whether the intermediate embedded pronoun is overt or null. The reader is referred to Montalbetti (1984, 1986) for details.

[60] Note that the acquisition of discursive constraints (or lack thereof) would have been clearer if non-contrastive referential uses had been investigated. In such contexts, [DP_i … $overt_{*i}$/$null_i$], a null pronoun is required to correfer with a previous R-expression (DP), given the fact that a null pronoun in these contexts signals topic continuity. This type of contexts were included in test #1 (Chapter 5) as distractors (*not* as target stimuli) because they raise two immediate problems:

(ii) formal/configurational constraints when the pronoun takes a bound-variable reading (e.g., OPC contexts). Both null and overt pronouns can take a topic interpretation, since the crucial factor is the configuration in which the pronoun appears (whether the overt/null alternation obtains and, in the case of 'complex' structures, whether the medial embedded pronoun is overt or null).

Note that, in contrast to OPC cases, the linguistic literature does not report CFC cases as being part of a universally invariant principle (e.g., Fernández-Soriano, 1989, 1993; Luján, 1999; Pérez-Leroux & Glass, 1997, 1999; Picallo, 1994; Rigau, 1996, 1988). Recall from our discussion in Chapter 2 that the topic/focus contrast is parameterised cross-linguistically via a repertoire of different mechanisms, e.g., phonologically, morphologically and syntactically (e.g., different word orders, clefting, etc). The use of an overt (vs. null) pronoun in contrastive CFC environments is language-specific and, hence, amenable to parameterisation. As argued earlier for CFC contexts, contrastive focus can be expressed with a unstressed overt pronoun, (115a). Other mechanisms are available in Spanish: a stressed overt pronoun (115b), a stressed overt pronoun in a cleft construction, (115c) or even a cleft construction with a stressed overt pronoun in sentence-final position, (115d).

Assuming that both groups of learners are reacting to the OPC due to its claimed universality (i.e., by accepting a null pronoun correferring with a matrix quantifier, [QP_i … $null_i$], but rejecting an overt pronoun, [QP_i … $overt_{*i}$]), and not due to the fact that there is simply a previous quantifier in the matrix clause (or any other configurational reasons), it is necessary to use the relevant experimental design. A method used to discard this unwanted effect is the design of a counterbalancing technique where an overt pronoun is grammatical and a null pronoun is ungrammatical. CFC contexts are the optimal counterbalancing technique in these cases. CFC contexts employ pronouns with a disjoint reading such that an overt pronoun is coreferential with only one (out of two) previous R-expressions (DP_j … DP_k) and not with the matrix quantifier. The resulting context is [DP_j, DP_k … QP_i … $overt_j/null_{*i}$], where the overt pronoun is used for contrastive focus purposes in Spanish. The expectation (which is supported in Chapter 5) is that natives (as well as learners) will prefer an overt pronoun to a null one in CFC context, but a null pronoun to an overt one in OPC contexts. Thus, we can be safely reject the assumption that learners accept null pronouns indiscriminately whenever a quantifier expression appears in the matrix clause. Previous research has used similar counterbalancing techniques (see, e.g., Kanno, 1997; Marsden, 1998; Pérez-Leroux & Glass, 1997).

Since one of the issues in the current study is *focus* (rather than lack of it, i.e., *topic*), CFC contexts are ideal candidates to test contrastive focus in Spanish. Given the fact that use of null pronouns would mark *topic*, I will not include them in the experimental section of this study (Chapter 5).

(115) Mr López$_j$ and Ms García$_k$ work at the university and at a famous publishers. However...
a. cada estudiante$_i$ dice que {**él**$_j$/**pro*$_j$} tiene poco dinero.
b. cada estudiante$_i$ dice que {**ÉL**$_j$/**pro*$_j$} tiene poco dinero.
c. cada estudiante$_i$ dice que es {**ÉL**$_j$/**pro*$_j$} el que tiene poco dinero.
c. cada estudiante$_i$ dice que el que tiene poco dinero es {**ÉL**$_j$/**pro*$_j$}.

Given the same context, English pronouns can be construed as unstressed overt pronouns, (116a), stressed overt pronouns, (116b) or can appear in cleft constructions, (116c).

(116) a. Each student$_i$ says that he$_j$ has little money.
b. Each student$_i$ says that HE$_j$ has little money.
c. Each student$_i$ says that it is HE$_j$ who has little money.

By contrast, most languages do not appear to have a repertoire of mechanisms to distinguish between pronoun-as-bound-variable readings vs. pronoun-as-referential readings (Pérez-Leroux & Glass, 1997; 1999). In Spanish and Greek, null pronouns take the variable reading, providing some structural conditions are met: overt pronouns may take the variable reading either in those cases where the overt/null alternation does not obtain, or in 'complex' configurations where the medial pronoun is null and bound by the matrix quantifier. In English, overt pronouns can have both variable and referential readings.

Our discussion leads to the conclusion that *referential* pronouns in subject position are interpreted as (i) contrastively focused when they are overt, and (ii) topicalised when they are null. Table 6 represents this contrast.

Table 6: Referential pronouns and focus: contrastive readings (CFC contexts)

Native Spanish		**Native Greek**		**Native English**	
Realisation	**Focus**	**Realisation**	**Focus**	**Realisation**	**Focus**
pro	[–Foc]	*pro*	[–Foc]	he	[–Foc]
él	[+Foc]	aftos	[+Foc]	he	[+Foc]

The classification proposed in Table 6 will be used in the first experimental section of the current study (Chapter 5). The pronominal presence/absence of focus will help us compare the learners' behaviour against the Spanish native norm.

To finalise our discussion on the overt/null pronominal subject distribution, the next section provides evidence regarding their syntactic representation in Spanish native grammars. Following our discussion in Chapter 2, I will argue that, while overt focused referential pronominal subjects appear in left peripheral positions (CP-domain), topicalised null pronominal subjects remain in situ.

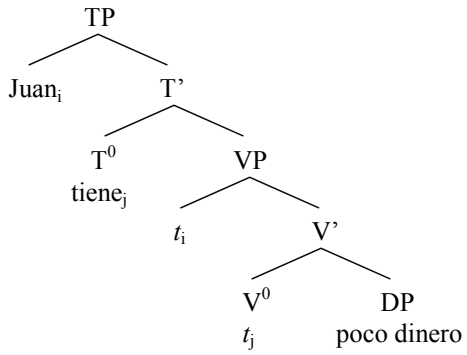
4.5 The syntax of null and overt pronominal subjects

Recall from Chapter 2 that SVO is the required word order for neutral contexts in Spanish. To illustrate, consider (117A), where an all-focus question, *¿Qué pasa?* 'What is happening?' requires a reply where all the information is new. Only SVO is allowed, (117Bi). Other word orders are barred, (117Bii-v).

(117) A: ¿Qué pasa?
'What is happening?'
B: (i) [$_{TP}$ Juan tiene poco dinero] (SVO)
'John has little money'
(ii) *[$_{TP}$ Tiene poco dinero Juan] (VOS)
(iii)*[$_{TP}$ Tiene Juan poco dinero] (VSO)
(iv)*[$_{TP}$ Poco dinero tiene Juan] (OVS)
(v) *[$_{TP}$ Poco dinero Juan tiene] (OSV)

The derivation for (117Bi) is presented in (118), where, following the standard assumptions discussed in Chapter 2, the subject is base-generated in [Spec,VP] and then raises to [Spec,TP] to check its nominative case. The verb is based-generated in V and then is attracted to the strong T. The resulting word order is SVO, (118).

(118) SVO in neutral contexts



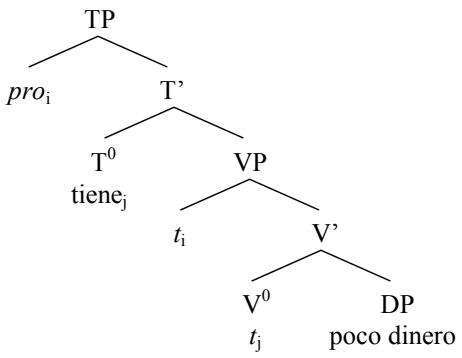
Consider now an instance of SVO where a null pronominal subject takes a referential reading, (119Bi), and a bound-variable reading, (119Bii). In (119) speaker A's question biases for a neutral focus reply. In (119Bi) the null pronoun receives a referential reading, as it refers to the matrix R-expression *Juan* 'John'. It is interpreted as [–Focus] (i.e., topic) since it encodes continuity in the discourse. The configuration in (119Bii) is identical to OPC contexts (see (96), p. 78). The null pronoun receives a bound-variable reading, as it refers to the matrix quantifier *nadie* 'nobody'. It is interpreted as [–Focus] (i.e., topic) since it encodes continuity in the discourse.

(119) A: ¿Qué pasa?
'What is happening?'
B: (i) Que Juan$_i$ dice que [$_{TP}$ [*pro*$_i$]$_{Top}$ tiene poco dinero] (SVO)
That John says that *pro* has much money
'John says that he has a lot of money'
(ii) Que nadie$_i$ dice que [$_{TP}$ [*pro*$_i$]$_{Top}$ tiene poco dinero] (SVO)
That nobody says that *pro* has much money
'Nobody says that he has a lot of money'

In short, in (119Bi,ii) we have two null topicalised pronominal subjects in [Spec,TP]. Recall from our discussion in Chapter 2 that only focalised elements are displaced (either to the left periphery in the case of contrastive focus, or to a locus between TP and VP in the case of presentational focus). Topicalised elements, however, remain in

situ[61]. As a result, the derivation for both topicalised pronominal subjects in (119Bi,ii) is (120). Following standard assumptions presented in Chapter 2, the subject, *pro*, is base-generated in [Spec,VP] and then raises to [Spec,TP] to check nominative case. The verb *tiene* 'has' is base-generated under V and then is attracted to the strong T (recall that Spanish is a verb-raising language).

(120) SVO in neutral contexts (pronominal subject)



The evidence presented in (117), (118), (119) and (120) (as well as in Chapter 2), leads to the conclusion that null pronominal subjects in OPC contexts are interpreted as topics and, as such, they appear in [Spec,TP].

Let us consider now CFC contexts. It is clear from Chapter 2 that contrastive focus is a syntactic phenomenon with two distinctive surface effects: (i) the focused constituent moves to the left periphery (CP domain); (ii) the verb ends up to the right of the focused constituent, so as to satisfy the Focus Criterion. To illustrate, consider (121A), where speaker A's question frames the discourse around *dinero* 'money' and *deudas* 'debts'. In the expected reply, (121Bi), the contrastively focused object *dinero*[62] appears in sentence-initial position, immediately followed by the inverted verb *tiene* 'has', while the subject remains in situ. The resulting surface word order is OVS. Recall that, since Spanish is an SVO language in neutral (unfocused) contexts, SVO is not allowed in contrastive focus environments, (121Bii). VOS is not allowed either, (121Biii).

[61] Topicalised elements can also appear in the left periphery under certain conditions. These cases are different from the cases we are exploring here, since the former require (i) overt movement of the topic phrase to the front of the sentence and (ii) 'comma' intonation (as discussed in section 2.2.1 (p. 10)) but the latter appear in situ. See Rizzi (1997b) and Valenzuela (2002, 2003) for further details on left-peripheral topics.

[62] Recall from chapter 1 that contrastive focused elements appear in **bold**.

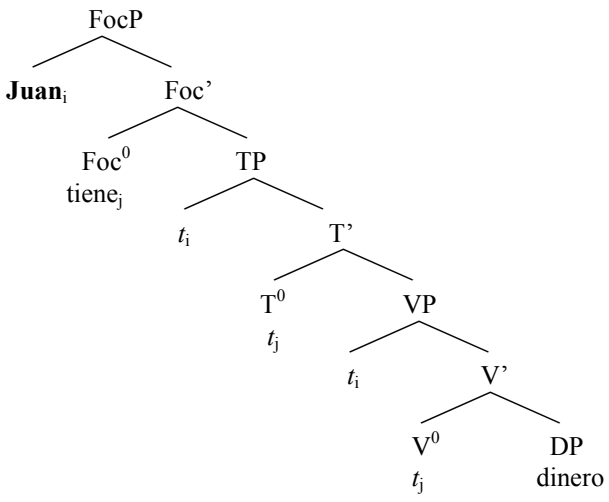
(121) A: ¿Qué tiene Juan, dinero o deudas?
'What does John have, money or debts?'
B: (i) [**Dinero**$_i$]$_{Foc}$ tiene$_j$ Juan t_j t_i (OVS)
'It is money that Juan has'
(ii) *Juan tiene [**dinero**]$_{Foc}$ (SVO)
(iii)*Tiene [**dinero**$_i$]$_{Foc}$ Juan (VOS)

In cases where the subject is contrastively focused, (122A), the resulting surface word order is SVO, (122Bi), as the subject has raised from [Spec,TP] to [Spec,FocP] and the verb raises from T to Foc. Any other word orders like VOS or VSO, (122Bii,iii), are not allowed.

(122) A: ¿Quién tiene dinero, Juan o María?
'Who has money, John or Mary?'
B: (i) [**Juan**$_i$]$_{Foc}$ tiene$_j$ t_i t_j dinero (SVO)
'It is John who has money'
(ii) *Tiene dinero [**Juan**]$_{Foc}$ (VOS)
(iii)*Tiene [**Juan**]$_{Foc}$ dinero (VOS)

The contrastive focus SVO word order in (122Bi) is similar (on the surface) to the canonical SVO for neutral contexts, (117Bi). However, both differ in their derivations. The derivation of the contrastively focused subject in (122Bi) is presented in (123).

(123) SVO in contrastively focused contexts



Following standard assumptions, the subject in (123) is based-generated in [Spec,VP] and then raises to [Spec,TP]. The verb is base-generated in V and then raises to T. So far, the derivation is similar to neutral contexts like (118). But, crucially, the contrastively focused subject now raises to [Spec,FocP] to check its interpretable [+Foc] feature against the uninterpretable feature of the focus head, Foc^0, as argued in Chapter 2. Finally, the verb raises from T^0 to Foc^0 to satisfy the Focus Criterion. The resulting surface word order is SVO.

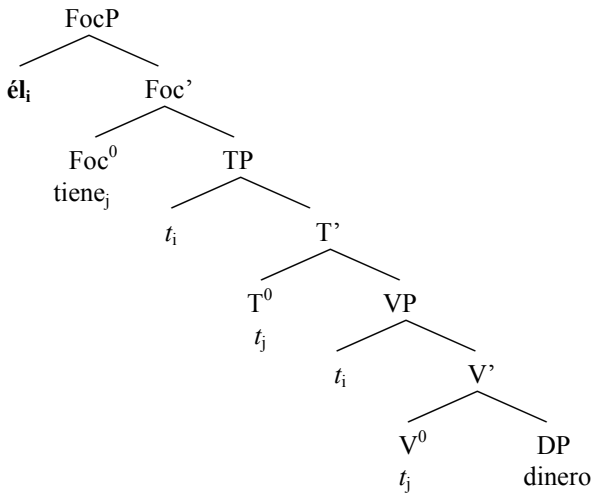
In short, the resulting surface word order for both neutral and contrastive focus contexts is SVO. However, their derivations are different.

Consider now the case of pronominal subjects in contrastively focused environments, (124). Suppose that in a short conversation, speaker A states that *Juan* 'John' and *María* 'Mary' are ostentatious. The focus of the conversation is therefore set on a limited set of entities, namely, *Juan* and *María.* Speaker B wants to know which one of them has money, either *él* 'he' or *ella* 'she'. Speaker A's reply, (124Ai) must contain a phonologically overt pronominal subject (e.g., *él* 'he') for contrastive purposes (Luján, 1999; Picallo, 1994; Rigau, 1986, 1988). Recall that a null pronoun is not allowed, (124Aii), since (i) contrastive information must logically be phonologically overt and (ii) null pronouns are interpreted as topics, as they encode continuity in the discourse. The resulting word order for (124Ai) is SVO, similarly to what occurred with full referential subjects as in (122Bi) above.

(124) A: Dicen que Juan y María son muy ostentosos.
'They say that John and Mary are very ostentatious'
B: Pero, ¿quién tiene dinero, él o ella?
'But, who has money, he or she?'
A: (i) [**ÉI**]$_{Foc}$ tiene dinero (SVO)
(ii) [***pro***]$_{Foc}$ tiene dinero
'It is he who has money'

From our discussion, it follows that the contrastively focused pronominal subject *él* 'he' in (124Ai) must end up in the same configuration as the contrastively focused referential subject *Juan* in (123). The focused subject *él* raises from [Spec,TP] and the verb raises from T^0 to Foc^0. The resulting word order is SVO, (125).

(125) SVO in contrastively focused contexts (pronominal subject)



To summarise our discussion, null pronominal subjects in OPC contexts appear in a [Spec,TP] configuration, as they are interpreted as topics. However, overt pronominal subjects in CFC contexts appear in a [Spec,FocP] configuration, as they are interpreted as contrastive focus.

4.6 A review of the L2 literature on pronouns

From the second half of the 1980s until the late 1990s, the generative literature saw an increase in studies on the acquisition of the pro-drop parameter and its clustering properties in L2A, namely, overt/null subjects, SV/VS word order and that-trace effects (e.g., Davies, 1996; Hilles, 1986; Liceras, 1989; Molina Valero, 1997; Phinney, 1987; Ruíz de Zarobe, 1998; White, 1985, 1986, *inter alia*). As most of these studies were conducted under the Government and Binding (GB) framework, their predictions were not fine-grained enough with regard to L1 feature transfer, as the feature-driven model of acquisition was implemented later in the Minimalist Program, MP (e.g., Chomsky, 1993, 1995, 1998, 1999, 2000). The main focus of L2A studies was whether the acquisition of one property (overt/null pronominal subjects) would automatically trigger the acquisition of the clustered properties. The two key findings were:

(i) Native speakers of a [+pro-drop] language like Spanish learning a [–pro-drop] language like English tend to (incorrectly) accept more null subjects in

their L2 as a result of L1 parametric value transfer. This tendency decreases as proficiency level increases (Davies, 1996; Hilles, 1986; Phinney, 1987; Molina Valero, 1997; Ruíz de Zarobe, 1998; White, 1985, 1986). In short, Spanish learners of English license (ungrammatical) null subjects in their early stages of acquisition.

(ii) By contrast, native speakers of a [–pro-drop] language like English learning a [+pro-drop] language like Spanish recognise from the earliest stages of acquisition that overt pronouns are optional in Spanish (Al-Kasey & Pérez-Leroux, 1998; Liceras, 1989; Lozano, 2002a; Phinney, 1987; Roebuck *et al.*, 1999). In short, English learners of Spanish license (grammatical) null subjects from their early stages of acquisition.

Even though the findings of some studies in (i)-(ii) seem to indicate that learners end up eventually mastering the distribution of null/overt pronouns in their respective L2s, this does not imply that learners' mental representation should necessarily be native-like. Tsimpli & Roussou's (1990) seminal work claims that Greek learners of English misanalyse overt pronominals such as *I*, *you*, etc. as verbal agreement markers. While (on the surface) these learners appear to have acquired that English is a [–pro-drop language], they misanalyse the L2 input in order to make it conform (as far as possible) to the parametric values of their L1. This entails that learners' deficits are representational. The authors further claim that parameter resetting is not possible after a critical period[63]. Liceras & Díaz (1999) found similar results for L2 Spanish. They tested natives of several languages: [–pro-drop] French[64], English and German; and [+topic-drop] Chinese and Japanese. They found that:

> 'adult non-native speakers do not set the Spanish [+pro-drop] option of the pro-drop parameter because they are not sensitive to the abstract [+/–strong] features of the functional categories. What these learners actually do is re-structure the L1 grammatical representation and identify null subjects via the person markers of the Spanish verb, the Spanish subject pronouns or null topics.' (Liceras & Díaz, 1999:18).

[63] I will assess Tsimpli & Roussou's (1990) claims in the discussion section of chapter 5.

[64] While Liceras & Díaz (1999) argue that French is a [+pro-drop] language, most generative syntactitians consider French to be a [–pro-drop] language. Whatever the parametric nature of French with respect to its pro-drop setting, Liceras & Díaz' claim is irrelevant for the argument at stake.

In sum, while it has been known for a long time that English learners of Spanish can acquire the overt/null pronoun alternation from the earliest stages of acquisition, it is unclear from early studies whether learners' knowledge of the overt/null distribution ends up converging with or diverging from the native norm.

More recent studies suggest that, while it is known that advanced learners of Spanish show convergent behaviour in pronominal contexts constrained by the design of UG (OPC), there are indications that learners may show divergent intuitions in contexts where the L1 parametric value differs from the L2 parametric value (CFC).

The distribution of null/overt pronouns in OPC and CFC contexts has been investigated in L2A only in the past few years. I will review and assess L2 studies on OPC and CFC in L2A.

4.6.1 Pérez-Leroux and Glass (1997, 1999)

Pérez-Leroux & Glass (1997) investigated adult acquisition of the distribution of overt/null pronominal subjects in L2 Spanish by English natives. Subjects had had a minimum of 7 years of exposure to Spanish and were considered very advanced (n=12) or near natives (n=4). A control group (n=18) of Spanish natives also participated in the study.

The authors tested learners' sensitivity to the OPC and the CFC. As for the OPC condition, recall from our previous discussion that overt pronouns cannot be bound by QPs in null-subject languages. The authors predicted that English natives would be sensitive to OPC constructions in L2 Spanish due to its claimed universality. In particular, learners were expected to prefer [QP_i … $null_i$] over [QP_i … $overt*_i$].

Learners had to read eight short stories in English and then translate the final sentence into Spanish (4 sentences biased for the grammatical [QP_i … $null_i$] joint interpretation and the other 4 for the [QP_i … $overt_j$] disjoint interpretation), as the contrasts in (126)-(127) show.

(126) *OPC condition: [QP_i ... $null_i$]*

The Spanish class has decided to have a pot-luck party at the end of the semester. It will be a time to celebrate.

To translate: Each student said that he would bring something to eat.

Prompt: Cada estudiante…

Expected target translation: Cada estudiante$_i$ dijo que *pro*$_i$ traería algo para comer.

(127) *CFC condition: [QP$_i$ ... overt$_j$]*

My friends are all excited about the US Open Tournament. The player that is most on their mind is Pete Sampras$_j$. They've barely mentioned Stefan Edberg$_k$ and Andre Agassi$_m$.

To translate: Everybody thinks that he will win.

Prompt: Todo el mundo…

Expected target translation: Todo el mundo$_i$ cree que **él$_j$** ganará.

The expected target translation in (126) would require a null subject (*pro*) since the context biases for a bound-variable interpretation where the pronoun must be coreferential with the QP (*cada estudiante* 'each student'), in accordance with the OPC. In (127), by contrast, the overt pronominal subject *él* 'he' is expected since the context biases for a focused interpretation: the R-expression *Pete Sampras* stands in contrast against *Stefan Edberg* and *Andre Agassi*. By virtue of the CFC, a phonologically overt pronoun (*él* 'he') is required so that *Pete Sampras* can be contrastively focused[65].

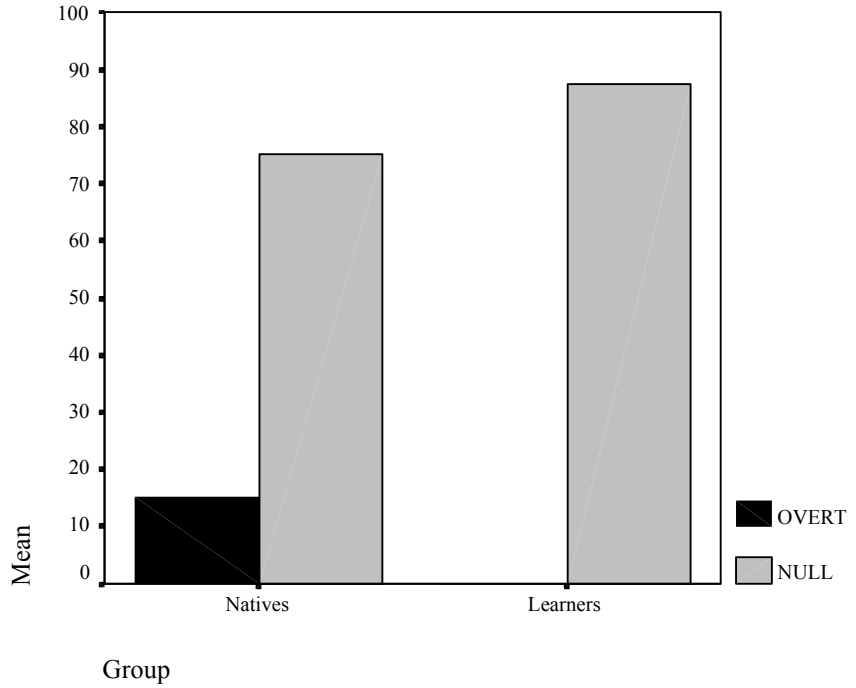
While Pérez-Leroux & Glass (1997) discuss their results in terms of whether learners obey the OPC, I will assess them in terms of our earlier discussion in Chapter 3 and early in this chapter, i.e., whether learners' intuitions are (i) native-like with respect to OPC constructions (which are governed by UG), but (ii) divergent with respect to CFC constructions (which are governed by a language-specific feature, namely, focus).

Figure 11 represents the OPC results. As predicted by the OPC, natives categorically[66] produce more null pronouns (75%) than overt pronouns (15%). Learners also show a categorical distinction, producing null pronouns (87%) but no overt pronouns (0%). Although Pérez-Leroux & Glass do not provide significance values, it can be safely assumed that the 75%-15% difference for the natives, as well as the 87%-0% difference for the learners, is big enough to be significant at the 0.05 level. In other words, the within-group analysis reveals that learners show a native-like behaviour. This is expected since the OPC is claimed to be an invariant of UG.

[65] Although Pérez-Leroux & Glass (1997) use the term 'disjoint condition' for those contexts where an overt pronoun is required for contrastive purposes, I term this condition 'CFC condition', as the overt pronoun must be used to mark contrastive focus, as argued earlier in this chapter.

[66] Note that I use the term 'categorical' to refer to a rule in the native grammar where the grammatical sentence is statistically preferred over the ungrammatical sentence, as discussed earlier in Chapter 3.

Figure 11: Production rates of overt/null pronominal subjects in OPC contexts



(Source: Pérez-Leroux & Glass, 1997:159, adapted from their table 1)

Pérez-Leroux & Glass do not provide between-group comparisons, i.e., they do not discuss whether natives' grammatical null pronoun (75%) is statistically similar/different to learners' grammatical null pronoun (87%). Likewise, it is not known whether natives' ungrammatical overt pronoun (15%) is similar/different to natives' ungrammatical overt pronoun (0%). While it is difficult to decide on the basis of percentages alone whether there are any significant between-group differences/similarities, the profiles in Figure 11 seem to suggest that learners do not substantially differ from natives[67]. If this is the case, we can safely conclude that advanced learners' intuitions of OPC in L2 Spanish are native-like.

The authors indeed conclude that: 'These results indicate a sensitivity to OPC effects in the grammar of highly fluent L2 speakers of Spanish.' (Pérez-Leroux & Glass, 1997:159). This suggests that learners can acquire the semantics of pronoun alternations in a pro-drop language like Spanish. Crucially, OPC effects are not

[67] In the first experimental section of the current study (chapter 3), I will avoid Pérez-Leroux & Glass (1997) shortcomings in data analysis by presenting statistical analysis for OPC contexts that confirm the fact that learners are behaving in a native-like fashion, both in within-group and between-group analyses.

instantiated in English (since English does not allow null pronouns), hence language transfer cannot be contemplated.

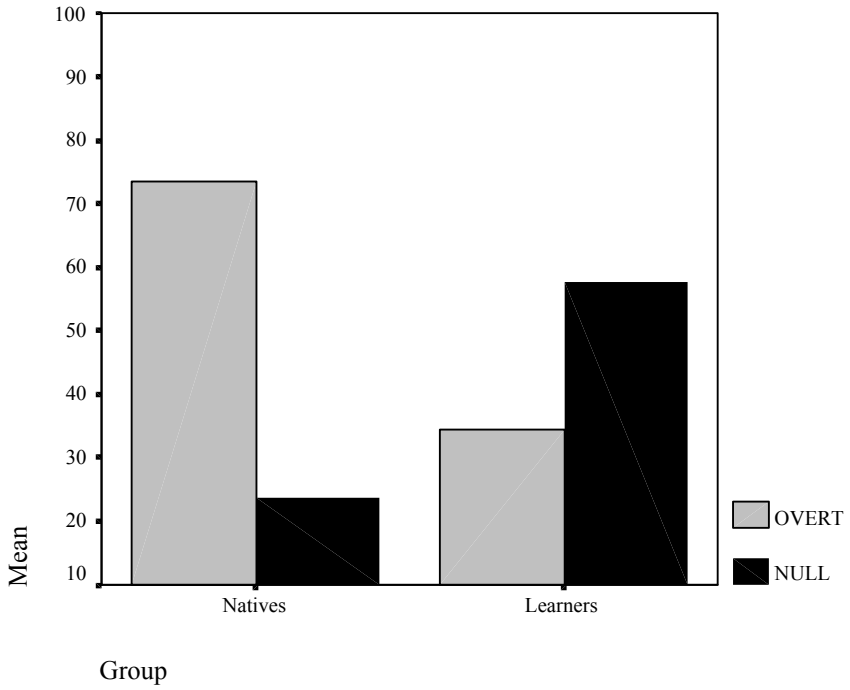
It is, therefore, plausible to propose that the results could have been due to two factors: (i) the proposed universality of the OPC, as the authors claim, or (ii) the native-like performance of highly proficient (and near-native) learners of L2 Spanish. The possibility that lower proficiency-level learners may not be sensitive to OPC effects cannot be excluded. In order to discard this possibility, Pérez-Leroux & Glass (1999) decided to replicate their 1997 experiment. This time the experimental group consisted of a larger number of subjects that were divided into three levels of proficiency (elementary, n=39; intermediate, n=21; advanced, n=18). Results confirm the results from their 1997 study, showing that the three groups of learners produce more grammatical null subjects than ungrammatical overt subjects in the OPC condition. This supports the claim that 'OPC is operative at all stages in the acquisition of Spanish.' (Pérez-Leroux & Glass, 1999:235).

In the CFC condition (Figure 12), Pérez-Leroux & Glass (1997) found that natives behave according to the theory, as they produce more grammatical overt pronouns (74%) than ungrammatical null pronouns (24%). By contrast, learners produce more ungrammatical null subjects (58%) than grammatical overt subjects (34%). In other words, learners show a diametrically opposed pattern to natives, allowing a high proportion of ungrammatical null subjects in contrastively focused environments. This difference causes learners' intuitions to diverge from natives'[68]. This clearly suggests that learners' intuitions are more similar to what Papp's (2000) calls 'diametrically opposed' intuitions, scenario (3), which I discussed in Chapter 3.

In sum, learners' intuitions in CFC contexts appear to be divergent. More precisely, they seem to be diametrically opposed to natives'. In the first experimental section of the current study (Chapter 5), I will test whether learners' intuitions converge with natives' in OPC contexts, but diverge from natives' in CFC contexts.

[68] Once again, while the results suggests that learner show divergent representations, Pérez-Leroux & Glass (1997) do no provide within-group analysis for each construction (overt vs. null pronoun).

Figure 12: Production rates of overt/null pronominal subjects in CFC contexts



(Source: Pérez-Leroux & Glass, 1997:159, adapted from their table 1)

In the light of both OPC and CFC findings, the authors conclude that:

> 'The overall data … confirm previous findings that adult learners of a pro-drop language are able to match native patterns of use of the overt/null pronoun alternations.' (Pérez-Leroux & Glass, 1997:161).

In my view, this assertion needs clarification by suggesting that, in the light of the OPC vs. CFC results, learners' sensitivity to the overt/null pronoun alternation is native-like in OPC contexts, while their intuitions clearly diverge from natives' in CFC contexts[69].

[69] Pérez-Leroux & Glass (1997) conducted a second test where the distribution of overt and null pronouns was constrained by presentational focus contexts. I will not discuss their results as the focus of the current chapter is whether learners are sensitive to the distribution of overt and null pronouns in neutral focus contexts (OPC) and in contrastive focus contexts (CFC).

4.6.2 Kanno (1997, 1998a)

Kanno (1997) investigates whether English learners of L2 Japanese show knowledge of the OPC, even though it is not instantiated in the learners' L1 English. 28 English native speakers learning Japanese at the University of Hawaii participated in the study. They were in their fourth semester of Japanese as a foreign language, although the author acknowledges that 'No "objective" measure of my subject's overall proficiency in Japanese is available' (Kanno, 1997:269)[70]. The control group consisted of 20 Japanese native speakers.

Subjects were tested on OPC contexts like (128). In Japanese, like in Spanish, an overt pronoun (*kare* 'he') cannot be bound by a preceding variable[71, 72], in accordance with the OPC. In order to ensure that learners are not rejecting the overt *kare* 'he' at random, Kanno used referential contexts, where the overt *kare* is bound by a preceding Referring DP (RDP) like *Tanaka-san* 'Mr Tanaka', (129). At the same time, the use of a null pronoun is also allowed. If learners accept *kare* to be bound by the RDP *Tanaka-san*, they will be (correctly) showing no prohibition against the presence of an overt pronoun in the embedded clause.

(128) OPC condition [QDP_i … $null_i$/$overt_{*i}$]
Dare$_i$ ga [{*pro*$_i$/kare$_{*i}$} ga kuruma o katta to] itta no
who$_i$ NOM *pro*$_i$/he$_i$ NOM car ACC bought that said Q
'who said that he bought a car?'

(129) Referential condition [RDP_i … $null_i$/$overt_i$]
Tanaka-san$_i$ wa [{*pro*$_i$/kare$_i$} ga kaisya de itiban da to] itte-iru
Tanaka-Mr$_i$ Top *pro*$_i$/he$_i$ NOM company is best is that saying
'Mr Tanaka says that he is the best in the company'

[70] Kanno (1997:269) states that, as her learners were in the fourth semester in Japanese in an American university, they had not been exposed to passives and causatives. It can, therefore, be safely assumed that their proficiency level is not advanced yet.

[71] Note that the quantifying expression in this case is not a QP, but rather a *wh*- operator. Recall that Montalbetti's (1984, 1986) OPC correctly predicts that an overt pronoun cannot be bound by a quantifying expression if the overt/null alternation obtains. Both *wh*-operators and QPs are standardly considered to be quantifying expressions.

[72] Noguchi's (1997) explanation of OPC effects in Japanese differs from Montalbetti's (1984, 1986) generalisation. The former claims that Japanese overt personal pronouns cannot be bound variables as they are nouns (Noguchi terms them N-pronouns). Whether overt personal pronouns in Japanese are N-pronouns or not is irrelevant for the point Kanno (1997) makes, as the crucial issue is whether learners of Japanese are sensitive to a poverty-of-the-stimulus phenomenon, namely, the OPC.

An interpretation task was administered to subjects. Although the instructions were written in English, the test items were written in standard Japanese script. Subjects were asked to decide on the interpretation of the overt/null pronominal subject of the embedded clause. For example, in (130) below subjects were asked about the interpretation of the null pronoun in the embedded clause. There were two possible choices: (*a*) the same as the matrix subject (i.e., the same as *dare* 'who'); (*b*) another person. The instructions also indicated that both (*a*) and (*b*) could be chosen simultaneously.

(130) CONTEXT: Dare$_i$ ga [kare$_{*i}$ ga kuruma o katta to] itta no
who$_i$ NOM he$_i$ NOM car ACC bought that said Q
'Who said that he bought a car?'
QUESTION: Who do you suppose bought the car? (in English)
ANSWER: (a) same as *who*
(b) another person

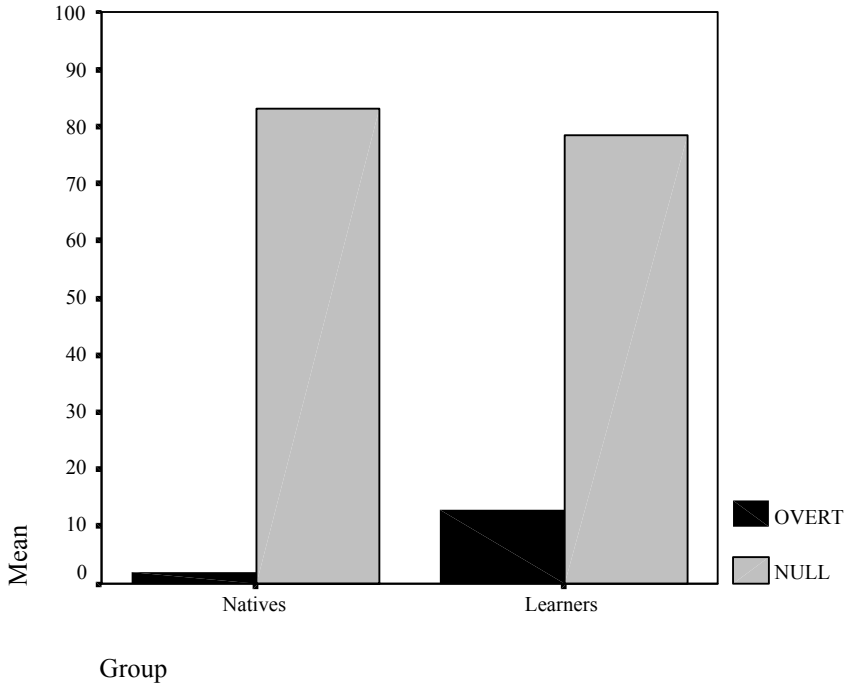
The rationale of the tests was that, if learners relied on their L1 English, they would perform similarly with both OPC and RDP sentences since there is no distinction in English between overt and null pronominal subjects. However, if learners showed (i) a preference for null pronouns over overt pronouns in OPC contexts, and (ii) no preference for either a null or overt pronoun in RDP contexts, this would indicate that they are sensitive to the OPC.

Acceptance rates for the OPC condition (Figure 13 below) indicate that Japanese natives show a very low acceptance rate (2%) for the ungrammatical overt pronoun as the variable bound by the QP. They prefer a null pronoun (83%) instead. This is the expected outcome, as the OPC predicts. Learners also show a strong distinction, dispreferring overt pronouns (13%), and clearly preferring null pronouns (78%). This indicates the the grammatical vs. ungrammatical sentences in OPC contexts are categorical rules in both native and non-native grammars of Japanese.

While Kanno (1997) does not present within-group results in terms of statistical significance, it can be safely assumed that the clear-cut differences for both natives and learners indicate that learners are showing a native-like behaviour with respect to OPC constructions. This is the expected outcome under the assumption that UG and, in particular, OPC, constrains natives and learners' knowledge of the distribution of

overt and null pronominal subjects. This assumption is confirmed by Kanno's statistical analysis of between-group differences/similarities. Kanno (1997:273) found that 'the difference between the two groups [for each of the conditions] was not significant at the 0.01 level [p=1.0]'.

Figure 13: Acceptance rates of overt/null pronominal subjects in OPC contexts

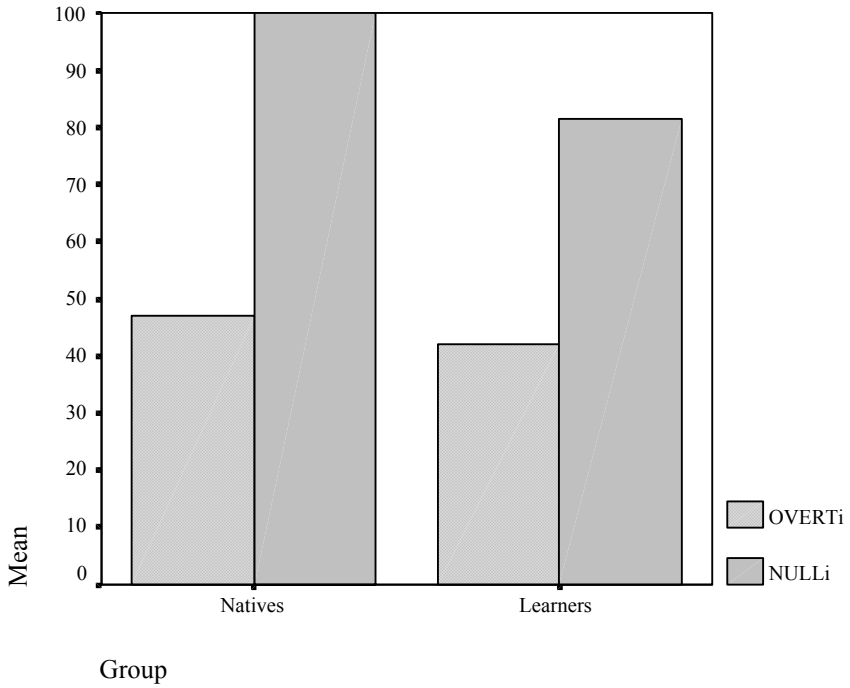


(Source: Kanno 1997, adapted from her tables 1 and 3)

These results cannot be due to the learners' L1, since the OPC is not operational in English. Kanno (1997) analysed the learners' L2 Japanese textbooks and could not find any instances of structures relating to the OPC either. To further ensure that learners rejected the ungrammatical condition, [QP_i … $overt_{*i}$], due to the OPC and not to their L1 English, Kanno (1997) administered to the learners an additional small-scale test in English (all the test items were in English, the learners' L1). They preferred [QP_i … $overt_i$] at an 85% rate in their L1 English (where the construction is grammatical). This contrasts with their preference of the equivalent (ungrammatical) Japanese construction, [QP_i … $overt_{*i}$], at a 13% rate. Thus, L1 transfer was discarded as an explanation.

The results for the RDP condition are presented in Figure 14[73]. Kanno shows that a between-group analysis reveals that 'the responses of the L2 learners were very similar to those of the Japanese native speakers' (Kanno, 1997:273).

Figure 14: Acceptance rates of overt/null pronominal subjects in RDP contexts



(Source: Kanno 1997, adapted from her tables 2 and 4)

The small differences in Figure 14 between natives and learners were not significant (p=1.0). This implies that natives and learners are showing a similar behaviour, i.e., learners are showing native-like (convergent) intuitions.

Kanno does not discuss within-group results. However, the profiles in Figure 14 suggest that natives strongly prefer a RDP as the antecedent of a null pronoun (100%) over an overt pronoun (47%). Learners show a similar pattern, preferring null pronouns (82%) over overt pronouns (42%). If this analysis is correct, we can confirm that learners are showing a native-like behaviour.

While the OPC results fall within Kanno's (1997) predictions (i.e., that learners would be sensitive to the OPC as it is part of UG), the RDP results do not support the predictions. Recall that, according to Kanno, the choice of either null or overt

[73] Note that the two interpretations (overt and null) in Figure 14 are grammatical, that is why the bars for each condition are presented in light colour.

pronouns in RDP contexts should be an optional rule (at least in Japanese native grammars). Also recall from our discussion in Chapter 3 that optional rules (as opposed to categorical rules) are those where *both* constructions are accepted to the same statistical extent within the same group. This is not what we find in Kanno's (1997) results, as both the native group and the learner group strongly prefer a null pronoun over an overt pronoun in RDP contexts.

I suggest that Kanno's (1997) RDP results could (in principle) undermine the claim made for the OPC contexts. A comparison of the profiles in Figure 13 and Figure 14, as well as their related results, clearly reveals that both natives and learners' behaviour is very similar, insofar as they prefer a null pronoun over an overt pronoun, irrespective of context type (OPC/RDP). This could be interpreted as a sign of learners' (and natives') grammars biasing for a null pronoun interpretation in all contexts. A way of eliminating this possibility would be to design referential contexts where an overt pronoun would be categorically preferred over a null pronoun in native grammars. If learners present a native-like pattern (preferring overt to null pronouns), it can then be safely assumed that the preference of null over overt pronouns in OPC contexts is not due to random behaviour. In the first experimental section of the current study (Chapter 5), I present an experimental design that eliminates the possibility of natives (and learners) biasing towards a null pronoun interpretation in all contexts.

To sum up Kanno's (1997) OPC and CFC results, findings indicate that both native speakers of Japanese and English learners of Japanese obey the OPC. In the words of Kanno (1997:279): 'In the absence of any alternative explanation for the performance of my subjects, I conclude that their compliance with the Overt Pronoun Constraint constitutes evidence for continued access to UG.' The same conclusion was reached in two similar studies by Kanno (1998a, 1998b)[74], in Lozano (2002b) and in Marsden (1998), who replicated Kanno's (1998b) study in order to overcome its drawbacks[75].

[74] Kanno's three studies (1997, 1998a, 1998b) use the same set of data and learners. For expository purposes, I have just reviewed the first one only.

[75] For a debate on the implications of Kanno's (1997) findings regarding the OPC, see Kellerman & Yoshioka (1999), Marsden (2001a, 2001b) and Sheen (2000).

4.6.3 Marsden (1998)

Marsden's (1998) unpublished MA dissertation is an improved replication of Kanno's (1998b) study. It is a cross-sectional study which investigates 'whether those [learners] with the most exposure apply the OPC with the greatest frequency.' (Marsden, 1998:21). The experimental group consisted of English native learners of L2 Japanese. They were divided into three groups according to length of instruction and exposure to Japanese: group #1 (2 years of instruction, no naturalistic exposure), group #2 (4 years of instruction, no naturalistic exposure), group #3 (completed university degree courses, naturalistic exposure in Japan and use of Japanese professionally). The control group consisted of Japanese natives.

Marsden's (1998) study tries to show that the 'poverty of stimulus' argument (i.e., the OPC phenomenon in Japanese) supports the Full-Access/Full-Transfer theory (Schwartz & Sprouse, 1996), which claims that learners' initial-state interlanguage grammar (ILG) corresponds to their L1 steady-state grammar. ILGs will restructure towards the native norm providing there is enough L2 positive evidence. Therefore, English learners of Japanese are expected to violate OPC in their earlier stages of acquisition, though 'more exposure to Japanese will result in more frequent operation of OPC' (Marsden, 1998:23). Two hypotheses were formulated as follows:

(i) H_1: Low proficiency learners will allow both interpretations (joint and disjoint[76]) with overt pronouns: [QP_i … $overt_{*i/j}$]. While the disjoint interpretation, [QP_i … $overt_j$], would indicate sensitivity to the OPC, the ungrammatical joint interpretation, [QP_i … $overt_{*i}$], would violate the OPC as a result of learners transferring the equivalent L1 English interpretation (where overt pronouns are bound by quantifiers). This assumption was made on the basis that the learners' L1 steady state (S_s) is equivalent to their L2 initial state (S_i), thus assuming that S_s=S_i (Schwartz & Sprouse, 1996).

(ii) H_2: More advanced learners will be more likely to allow only the disjoint interpretation for the overt pronoun: [QP_i … $overt_j$], thus obeying the OPC. This assumption was made on the basis that 'the more L2 input the learner

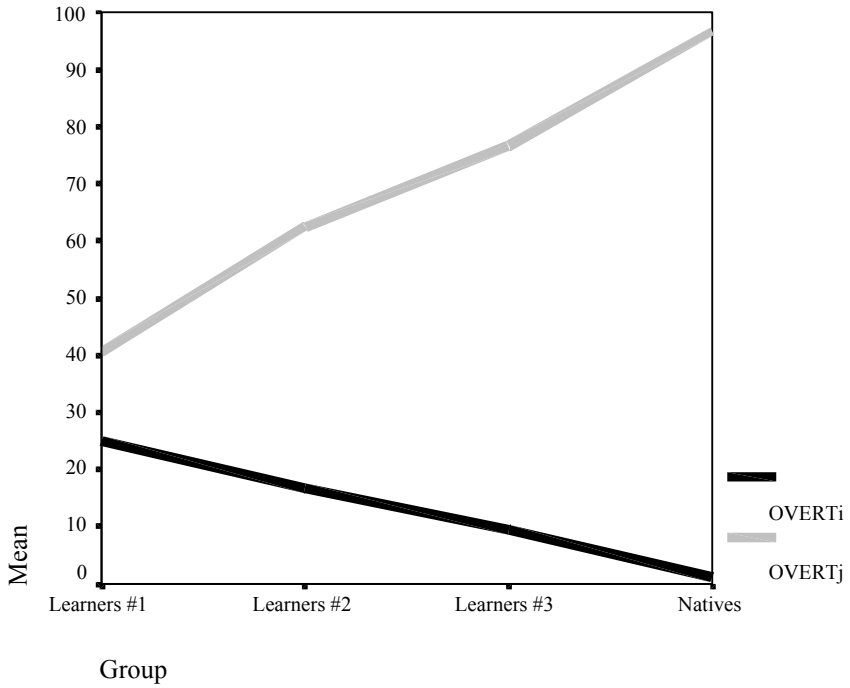
[76] The joint interpretation refers to cases where the pronoun is bound by the quantifier [QP_i … $pronoun_i$]. The disjoint interpretation refers to cases where the pronoun is bound by a referential expression in the preceding context: [RDP_j … QP_i … $pronoun_j$].

has, the more completely the L1-influenced Interlanguage grammar will be restructured in line with the L2' (Marsden, 1998:24).

The OPC methodology and test items used were similar to Kanno's (1998b), as shown earlier in (128)-(129). Marsden (1998) included a larger amount of target stimuli (22 in total), of which 4 were distractors.

Results in Figure 15 show the acceptance rates of overt pronouns in (i) the ungrammatical joint interpretation, [QP_i … $overt_{*i}$] (represented by the dark line) and (ii) the grammatical disjoint interpretation, [QP_i … $overt_j$] (light line).

Figure 15: Acceptance rates of overt pronouns in joint and disjoint conditions



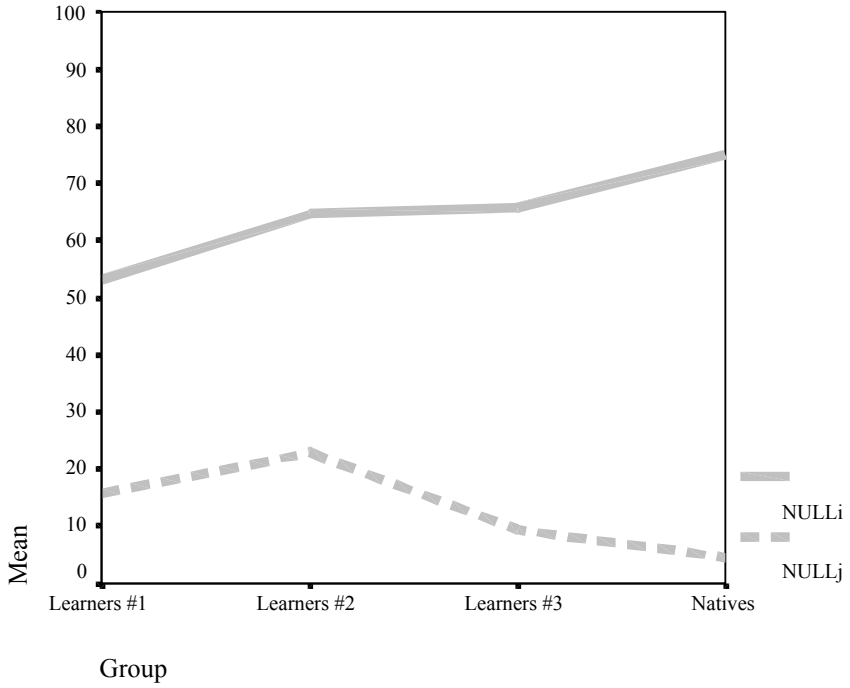
(Source: Marsden 1998, adapted from her table 1)

As predicted by H_1, learners #1 are the most influenced by their L1, highly accepting a bound interpretation (25%), which implies a violation of the OPC. As length of exposure increases (groups #2 and #3), two trends can be observed, namely, (i) learners' OPC violations decrease (17% and 9% respectively) towards the native norm (2%); (ii) OPC compliance steadily increases (40%, 63%, 77%) towards the native norm (nearly 97%). This confirms H_2. Note, however, that these results crucially

differ from Pérez-Leroux & Glass (1999) findings, as they found that English learners of Spanish are sensitive to the OPC at *all* stages of acquisition.

Figure 16 below shows the results for the null pronouns: [QP_i … $null_{i/j}$]. Learners were expected to accept the joint interpretation (the null pronoun with a QP as antecedent, as the OPC predicts). The disjoint interpretation (the null pronouns with a RDP as antecedent) is also possible. Note that both constructions are represented with light bars, as both are grammatical.

Figure 16: Acceptance rates of null pronouns in joint and disjoint conditions



(Source: Marsden 1998, adapted from her figure 2)

As predicted, learners' acceptance of the joint interpretation, [QP_i … $null_i$], increases with exposure (53%, 65% and 66% respectively) towards the native norm (75%). This supports H_2, as learners' awareness of OPC develops over time.

The dotted line represents the disjoint interpretation, [QP_i … $null_j$], which is also grammatical. Marsden (1998) acknowledges that the results for the disjoint interpretation are not as predicted, since its acceptance was expected to be higher for all groups.

However, taken as a whole, the results for both null and for overt pronouns clearly indicate learners' sensitivity to OPC, as they correctly accept the null pronoun to be

interpreted as coreferential with the QP, yet they prefer the overt pronoun to be coreferential with an extrasentential referential expression (RDP). In other words, learners' interlanguage grammars (ILGs) converge with native grammars.

Marsden (1998:47) concludes that results in the two conditions indicate that 'OPC operates with less frequency in less advanced JFLers' [Japanese Foreign Language learners], and with greater frequency in more advanced JFLers' Interlanguage.'

In order to discard any hypothetical L1 transfer[77], Marsden (1998) carried out a small-scale test (as Kanno (1997, 1998a, 1998b) did), whereby learners were administered a test in their L1 (English), containing overt pronouns with two interpretations: [QP_i … $overt_{i/j}$]. As OPC effects are not instantiated in English due to the obligatory presence of overt pronouns, the two interpretations would be possible in English. Results show that 'there is no strong preference for either an intrasentential [i.e., joint interpretation] or extrasentential [i.e., disjoint interpretation] antecedent for the [overt] embedded subject pronoun.' (Marsden, 1998:56). This confirms that L1 transfer can be discarded as the only source of learners' behaviour in L2 Japanese.

Overall, Marsden's (1998) results are very similar to the study it tried to replicate (Kanno, 1998b), suggesting that sensitivity to OPC increases with proficiency level and length of exposure to the L2, even though it is not instantiated in either (i) their L2 input or instruction[78], or (ii) their L1 grammar.

4.6.4 Conclusion on the literature review

It seems clear from the studies just reviewed that L2 learners' knowledge of a poverty-of-the-stimulus phenomenon (OPC) is constrained by UG. These studies also show that learners' knowledge of OPC ends up converging with the native form. In other words, learners can achieve native-like competence at advanced levels of proficiency.

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[77] Recall that, by hypothesis, transfer is discarded from L1 English since OPC is not instantiated in English.

[78] Learners could have received in-class positive evidence or instruction on OPC. However, Marsden (1998:27) reports that she did not find any instances of OPC phenomena/constructions in Japanese L2 textbooks. Furthermore, she asked Japanese L2 teachers about such construction and none of them had ever taught it. Kanno (1998) and Lozano (2002b) report similar findings for Japanese and Spanish textbooks respectively.

Further evidence for the claimed universality of the OPC comes from learnability theory. OPC constructions show a very-low frequency in the input[79]. They represent a typical case of a poverty of the stimulus (POS) phenomenon, since the ungrammatical construction [QP_i … $overt_{*i}$] is not present in the Spanish input. (It is widely acknowledged that input in the form of positive evidence alone does not contain ungrammatical expressions.) Therefore, OPC knowledge must be part of UG principles (see Pérez-Leroux & Glass (1997) and Schwartz (2000) for discussion in L2A).

There are, however, some results in need of an explanation in these studies. In particular, learners' intuitions of constructions like CFC and RDP may diverge from natives'. While this observation is a step further in our understanding of the distribution of overt and null pronouns in L2A, it falls short from providing a linguistic explanation of why learner's ILGs should diverge from natives' grammars when the pronouns have a referential interpretation, but converge when they have a bound-variable interpretation. In the first experimental section (next chapter), I propose that a mismatch in the feature setting between the learners' L1 and L2 may be responsible for the observed divergent behaviour in referential contexts.

4.7 Summary of chapter 4

I this chapter I examined the (apparent) free distribution of overt and null pronominal subjects in two null subject languages (Spanish and Greek). Evidence from a non-null subject language (English) was also presented.

It was shown that the overt/null distribution in null subject languages is constrained by (i) UG (OPC contexts), where only a null pronoun can be interpreted as a bound variable, and (ii) discursive factors deriving from the parameterisable feature focus, where an overt pronoun is required for contrastive purposes. I then showed that, while null pronouns appear in [Spec,TP] when unfocused, overt pronouns appear in [Spec,FocP] when contrastively focused.

[79] At least, this must be true of L2A since there is empirical evidence that OPC constructions are never explained in textbooks (Kanno, 1997; Lozano, 2002; Marsden, 1998, 2001; Pérez-Leroux & Glass, 1997, 1999). I also conducted searches on two Spanish corpora (Real Academia Española, corpus CREA and CORDE). The searches generated no hits on OPC-related constructions. Therefore, instruction or positive evidence can be discarded as a source of knowledge of OPC.

With regard to the languages under investigation in this study, Greek behaves similarly to Spanish in both OPC and CFC contexts, while English differs from Spanish as it is a non-null subject language.

I finally reviewed some L2 studies on the acquisition of pronominal subjects in OPC and CFC/Referential environments. They suggest that learners show convergent intuitions in OPC contexts, as their knowledge is constrained by principles of UG. By contrast, learners' intuitions appear to be divergent in CFC/Referential contexts. This fact lacks a linguistic explanation in the L2 literature.

In the following chapter, I test whether learners of Spanish show convergent intuitions in contexts governed by UG (OPC environments), while they show divergent intuitions in cases where functional features diverge between the L1 and L2. I will discuss the findings on convergence/divergence with respect to current theories of L2A.

Chapter 5. EXPERIMENTAL STUDY #1: OVERT/NULL PRONOMINAL SUBJECTS

5.1 Introduction

In the light of the studies reviewed, two main research questions arise: where UG-constrained pronominal constructions (like the OPC) differ between the L1 and the L2, will learners show convergence with Spanish native grammars? On the other hand, where language-specific pronominal constructions (like the CFC) differ between the L1 and the L2, will this be a potential source of divergence?

In this chapter, I report on an experimental study that tested the knowledge of English and Greek learners of Spanish with respect to overt/null pronominal subject alternations, both in OPC and CFC contexts. Following the findings of previous studies on pronoun acquisition (Kanno, 1997, 1998a, 1998b; Marsden, 1998, 2001a, 2001b; Pérez-Leroux & Glass, 1997, 1999) I hypothesised that learners would show a native-like (convergent) behaviour in OPC contexts, as the distribution of overt and null pronouns is constrained by principles of UG. However, it was predicted that learners would show divergent behaviour with respect to Spanish natives in CFC contexts, as the overt/null alternation is constrained by discursive factors, in particular, by the fact that in pro-drop languages (Spanish and Greek) referential overt pronouns must be interpreted as contrastively focused in CFC environments, whereas in English they can be interpreted as contrastively focused or as topicalised. This derives from the fact that, while the Foc^0 head is strong in Spanish and Greek, forcing the overt pronoun to raise to the CP domain, Foc^0 is weak in English, forcing the overt pronoun to remain in situ. This parametric difference between Spanish/Greek and English (Table 7) will result in (i) Greek learners of Spanish showing convergent intuitions with the Spanish native group, but (ii) the English learners of Spanish showing divergent intuitions.

Table 7: Parameterised Foc^0: contrastive focus

	L1	L2	L3
Greek group	Greek [+strong]	English [–strong]	Spanish [+strong]
English group	English [–strong]	Spanish [+strong]	

The results support the predictions. The major finding was near-nativeness (a type of divergent knowledge) by the English learners of Spanish in CFC contexts. Some implications are drawn in the light of recent theories on divergence.

To get our argument on a concrete footing, the two main research questions are whether learners will show (i) *convergent* intuitions in contexts governed by UG (OPC), but (ii) *divergent* (near-native, optional or indeterminate) intuitions in contexts governed by L2[80] F(unctional) F(eature)s (F_{L2}), whose parametric value differs in the L1 (F_{L1}). These questions are expressed in the form of two hypotheses, (131) and (132).

(131) H_1: *Neutral focus contexts (OPC)*:
In contexts constrained by UGprinciples (OPC), all advanced learners will show convergent (native-like) intuitions irrespective of whether the construction under investigation is instantiated in their L1.

(132) H_2: *Contrastive focus contexts (CFC)*:
In contexts constrained by parameterised FFs (CFC), advanced learners will show (i) convergent intuitions if the strength values of F_{L1} and F_{L2} coincide, but (ii) divergent (near native, optional or indeterminate) intuitions if the strength values of F_{L1} and F_{L2} differ.

[80] For clarity purposes, L2 (rather than L_n) will be used as the default term to refer to second (L2) and third language (L3), unless otherwise stated.

5.2 Method

5.2.1 Subjects

A total of 51 subjects participated in the first test[81], as shown in Table 8. The control group (Spanish natives, n=11) served as a baseline to compare the learners' results against. The experimental groups (learners) consisted of Greek natives (n=20) and English natives (n=20). The Spanish control group consisted of peninsular Spanish natives (mainland Spain) and South-American Spanish-speaking natives (Argentina, Mexico and Venezuela). The English native group consisted of British English native speakers. These were undergraduates at the University of Essex (UK), where they were tested. The Greek native group consisted of Greek natives studying Spanish at several institutions in Athens, where data were collected (University of Athens, Estudio Español and Centro de Lengua Española). Only learners with a proficiency level of ≥80% (advanced) were included in the study.[82]

Table 8: Subjects

Group	Number	Language configuration		
Spanish natives	n=11	L1 Spanish		
English natives	n=20	L1 English	L2 Spanish	
Greek natives	n=20	L1 Greek	L2 English	L3 Spanish

5.2.2 Instrument

I used an acceptability judgement test (AJT) (see appendix 8.1.6, p. 264 and appendix 8.1.7, p. 267). Its design follows the same principles of the AJT that will be used in test #2 (word order). Subjects had to judge whether a given sentence was more or less *acceptable* (as opposed to *grammatical*). Each stimulus consists of a context, (133),

[81] The actual screening procedure was the following: the total number of usable collected tests from the learners was 122. However, 71 had to be discarded as they did not meet several criteria (their proficiency level was below the required 80% minimum, or the tests had not been completed properly, or the subject gave the same answers for each stimulus, or some subjects knew other languages apart from English and Spanish). The 35 remaining questionnaires were used for the current study as they satisfied the aforementioned criteria.

followed by two replies, (133a) and (133b)[83], each representing a different pronoun type (overt vs. null). Each target sentence is accompanied by a 5-point Likert rating scale. Value +2 corresponded to *completely* acceptable and value –2 *completely* unacceptable.

(133) El señor López y la señora García trabajan en la universidad y en una famosa editorial. No obstante…
(a) cada estudiante dice que él tiene poco dinero. –2 –1 0 +1 +2
(b) cada estudiante dice que tiene poco dinero. –2 –1 0 +1 +2

'Mr López and Ms García work at the university and at a famous publishers. However…
(a) each student says that he has little money
(b) each student says that has little money'

AJTs containing five-point, negative-positive Likert scales have been previously used in L2A research (e.g., Hertel, 2000; Montrul, 1999; Yuan, 1999), yielding satisfactory results for the hypotheses under investigation. The use of negative-positive scales gives subjects the choice of totally rejecting a sentence (most extreme negative values) or totally accepting it (most extreme positive values). Other intermediate values correspond to degrees of (un)grammaticality. Recall from our discussion in Chapter 3 that the advantage of using this type of scale is essential in L2A studies dealing with divergence, as learners have a range of choices between what is totally acceptable and totally unacceptable, as opposed to traditional grammaticality judgement tests, which force non-native grammars to be either grammatical or ungrammatical (see, e.g., Christie & Lantolf (1992), Cowart (1997) Schütze (1996) for the advantages of AJTs).

The use of paired sentences, representing acceptability vs. unacceptability, is an added advantage in L2A, as the learners' IL may allow for both constructions in cases of optionality, in which case we would expect two positive values. This method is useful for investigating optionality of the type we discussed in Chapter 3.

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[82] The Spanish placement test used was the University of Wisconsin Placement Test, Form 96M (University of Wisconsin, 1998). An extra placement test in English, the Oxford Placement test (Allan, 1992), was administered to Greek natives to ensure that their level of competence in English was advanced. The threshold level that was considered to represent advanced proficiency was ≥80%, i.e., all learners were within the 80%-100% range of proficiency in our study.

[83] Both target sentences (*a* and *b*) would be grammatical in adult Spanish if no context was provided. In these cases, the context biases for either an overt or null pronoun, depending on the context.

The AJT test consisted of twelve target stimuli (OPC contexts: 6 stimuli; CFC contexts: 6 stimuli). Twelve extra distractor stimuli were added. They contained other pronominal constructions unrelated to either OPC or CFC. Two training stimuli were placed at the beginning of the test. Two extra distractors were placed at the end of the test to control for tiredness effects on subjects (see 8.1.6, p. 264 and 8.1.7, p. 267).

A pilot test (8.1.5, p. 261) was used with natives to select a representative set of 'core' quantifiers, which would allow for a bound-variable interpretation with null pronouns. It contained 34 sentences with the four universal quantifiers: *todo el mundo* 'everybody', *cada X* 'each X', *nadie* 'nobody' and *ningún X* 'no X'. After an item analysis was performed, natives gave the best ratings to only three universal quantifiers, namely, *cada X* 'each X', *nadie* 'nobody' and *ningún X* 'no X'. Results from the pilot test therefore suggest that these three quantifiers are the best target stimuli for the final version of the test, where each quantifier was used twice (as each condition contained 6 stimuli; see Table 9).

Table 9: quantifiers in each condition

OPC contexts	**CFC contexts**
QP_i … $overt_{*i}$	**QP_i … $overt_j$**
cada X_i … $él_{*i}$	cada X_i … $él_j$
$nadie_i$ … $él_{*i}$	$nadie_i$ … $él_j$
ningún … $él_{*i}$	ningún … $él_j$
cada X_i … $ella_{*i}$	cada X_i … $ella_j$
$nadie_i$ … $ella_{*i}$	$nadie_i$ … $ella_j$
ningún … $ella_{*i}$	ningún … $ella_j$
QP_i … $null_i$	**QP_i … $null_{*j}$**
cada X_i … pro_i	cada X_i … pro_{*j}
$nadie_i$ … pro_i	$nadie_i$ … pro_{*j}
ningún … pro_i	ningún … pro_{*j}
cada X_i … pro_i	cada X_i … pro_{*j}
$nadie_i$ … pro_i	$nadie_i$ … pro_{*j}
ningún … pro_i	ningún … pro_{*j}

In order to avoid unwanted test effects, several measures were taken. The type of pronominal subject in the embedded clause was either an overt third person pronoun (50% of the time *él* 'he' and 50% *ella* 'she'), or a null pronoun *pro*. Furthemore, order-of-presentation effects were controlled for by using (i) an overt pronoun 50% of the time in sentence *a*, and 50% of the time in sentence *b* (logically, the same applies to null pronouns) and (ii) two versions of the test with the *same* sentences but different sequential order: test 1 version 1 (8.1.6, p. 264) and test 1, version 2 (8.1.7, p. 267). The sequential order in both versions was randomised following Cowart's (1997) 'blocking' procedure. Vocabulary was also controlled, including beginners' vocabulary only (González et al., 1995) so that learners could clearly understand the sentences. The target sentence length was also controlled. It never exceeded eight words.

The setting for the AJTs was the classroom. While the ideal setting would be the linguistic laboratory (e.g., Cook, 1986; Hulstijn, 1997; Seliger & Shohamy, 1989), some steps were followed in order to make sure that the protocol followed was as similar as possible for all groups: subjects were informed that (i) they could withdraw from the test at any time; (ii) they were told that the tests were not going to be marked and were not part of any assessment or coursework; (iii) it would be difficult to identify them on the basis of the results, as only their initials were used for case-labelling each subject.

Each test contained written instructions, which subjects read before commencing the test (see appendix 8.1.4, p. 260). The instructions (i) highlighted that the researcher was interested in the participant's opinion regarding a set of sentences which tested how people learn Spanish; (ii) contained explicit instructions as to how to complete the test; (iii) detailed what the value scale (–2 … +2) meant, giving some examples; (iv) emphasised that any combination of numbers was possible (i.e., sentence *a* could be +2 and sentence *b* –1, or sentence *a* +1 and sentence *b* +2, etc.); (v) subjects were asked to do the test as quickly as possible as the researcher was interested only on their *first* intuition.

Subjects had to do three practice sentences (included before the actual test started). These sentences contained very basic and obvious grammatical errors in Spanish. In this way, we ensured that learners understood the nature of the task, i.e., we expected that learners would certainly give a negative value to some sentences containing errors which are typically studied in beginner courses. At the same time, we also

expected learners to rate positively their grammatical counterparts. Subjects who performed as expected in these practice sentences were considered to have understood the nature of the test and were consequently included in the final analysis (providing they met the minimum requirements of proficiency and language brackground, as argued above (see footnote 82)). As an additional measure to control for presentational effects, two extra distractors were inserted before (and two after) the actual target stimuli.

5.2.3 OPC contexts

I first analysed pronominal results for OPC contexts and later for CFC contexts. First, Table 10 schematises the 2x3 factorial design for *OPC* contexts. The first factor is pronoun type. This is a variable with two levels (overt/null). The second factor is L1, with three levels (English/Greek/Spanish). Each cell represents the expected outcome in pronominal interpretation, assuming that learners are constrained by UG (OPC), i.e., all groups are expected to (i) reject an (incorrect) overt pronoun with a bound-variable reading, but (ii) accept a (correct) null pronoun with a bound-variable reading, as the OPC would predict. If this is the case, H_1 would be supported.

Table 10: OPC contexts: pronoun type x group

		pronoun	
		overt$_{*i}$	null$_i$
L1	English	overt$_{*i}$	null$_i$
	Greek	overt$_{*i}$	null$_i$
	Spanish	overt$_{*i}$	null$_i$

5.2.4 CFC contexts

Table 11 schematises the 2x3 factorial design for *CFC* contexts. The first factor is pronoun type, with two levels (overt/null). The second factor is L1, with three levels (English/Greek/Spanish). Once again, each cell represents the expected outcome, assuming that learners are constrained by functional features (in particular, the strength of the focus head, Foc^0). All groups are expected to (i) accept a (correct)

overt pronoun with a contrastive focus reading[84], but (ii) reject an (incorrect) null pronoun with a contrastive-focus reading. Crucially, the English group may diverge here from the Spanish natives, possibly accepting a null pronoun with a contrastive reading. If this is the case, H_2 would be supported.

Table 11: CFC contexts: pronoun type x group

		pronoun	
		$overt_j$	$null_{*j}$
L1	English	$overt_j$	$null_j$
	Greek	$overt_j$	$null_{*j}$
	Spanish	$overt_j$	$null_{*j}$

In some L2 studies, different tasks have been used to test knowledge of OPC vs. CFC. However, when making between-task comparisons, authors often make the assumption that the difference (or similarity) between one task and the other is due to different (or similar) representations of grammatical knowledge. They do not discard the possibility that, perhaps, differences (or similarities) arise due to the different nature of the tasks involved. In the words of Pérez-Leroux & Glass (1999:243):

> 'Ideally, these two contexts [OPC vs. CFC] should be further investigated using the same task in both domains, in order to eliminate the possibility that the difference in results reflects the different nature of the task rather than different properties of grammar'.

In the current study I attempted to avoid the drawback by using the same 2x3 design in both OPC contexts and CFC contexts, as just explained above. In this way, we can safely compare results across contexts.

[84] It may be argued that, since English does not instantiate a strong contrastive focus head in the left periphery, English learners of Spanish may not be sensitive to the contrastive focus pronominal interpretation, [QP_i … $overt_j$]. It must be said that in most of the studies that use AJTs with a grammatical/ungrammatical choice, learners tend to show sensitivity to the grammatical option. But, crucially, they tend to diverge from natives in the *ungrammatical* option (e.g., Kanno, 1997; Papp, 2000; Pérez-Leroux & Glass, 1997, 1999; Sorace, 1993). I believe this is an issue worth exploring in more detail. However, due to limitations of space, I will leave this issue for future research.

5.3 Data analysis

The normality of distribution was assumed, as the Kolmogorov-Smirnov one-sample fit test indicates that our sample's distribution is not significantly different from the normal distribution (p>.05 for each condition in each group). See appendix 8.2 (p. 281) for full details of the Z values.

Data were coded in Excel (v. 2000). The values of the six stimuli for each condition were averaged for each subject. Averages were then coded and analysed in the statistical package SPSS (v. 9.0), as shown in appendix 8.2.1 (p. 281).

The hypotheses require two types of analyses: (i) *within groups* and (ii) *between groups*. A mixed two-way ANOVA[85] checked the main effect of pronoun type, the main effect of L1 and the interaction of the two factors, *pronoun type* x *L1*. Further analyses were performed to check which pairs were significant: a paired-samples t-test for the within-group comparisons and a between-group one-way ANOVA with post-hoc Scheffe for the between-group comparisons.

5.4 Results

Before presenting the actual results, I summarise the predictions. Both *within*- and *between*-group analyses will be used in OPC and CFC contexts:

(i) *OPC contexts.* Both groups of learners are expected to show convergent intuitions, as H_1 predicts.

   a. *Within-group analysis*. Assuming H_1 to be correct, each group is expected to significantly prefer the grammatical condition (bound-variable reading with null pronoun) to the ungrammatical condition (bound-variable reading with overt pronoun). This would confirm that learners' knowledge is guided by UG (OPC).

   b. *Between-group analysis*. Assuming H_1 to be correct, both groups of learners would behave identically to the native group for each condition. In other words, the English and Spanish groups would not differ in their acceptance of, first, the grammatical condition and,

[85] Note that SPSS calls this type of ANOVA 'GLM [i.e., ANOVA] repeated measures'.

second, the ungrammatical condition. The same expectation applies to the comparison between the Greek and Spanish groups.

(ii) *CFC contexts*. H_2 predicts differences between the natives and the learners, i.e., learners' intuitions should diverge from natives'. Recall from our discussion in Chapter 3 that three types of divergent intuitions possible: near native, optional and indeterminate. Let us explore them.

a. *Within-group analysis*. We would expect the Spanish native group to prefer an overt pronoun significantly more than a null pronoun, as contrastively focused subjects require an overt pronoun in Spanish. If learners' intuitions are near-native, we would expect them to behave similarly to natives in a within-group analysis (differentiating beween the grammatical and ungrammatical constructions). However, if learners' intuitions are optional[86], learners would be expected to prefer both an overt and a null pronoun to the same statistical extent.

b. *Between-group analysis*. If the learners' intuitions are near-native, we would expect learners' grammatical overt pronoun not to differ significantly from natives' grammatical overt pronoun. However, we would expect learners' ungrammatical null pronoun to differ from natives' ungrammatical overt pronoun, as natives would tend to disprefer a null pronoun while English natives would tend to prefer it.

5.4.1 OPC results

I present the OPC results first. The context (OPC, where a pronoun is bound by a quantifier) is a constant. The pronoun type (overt/null) and the L1 (English/Greek/Spanish) are the independent variables. Descriptives are presented in Table 12.

[86] Indeterminate intuitions are also a possibility here. However, I will not discuss them as (i) they typically appear in advanced learners when judging a native *optional* rule (or in beginner/intermediate learners, as a result of restructuring) and (ii) they do not appear in the results of the current study Recall from our earlier discussion that only *categorical* rules are tested in the current study.

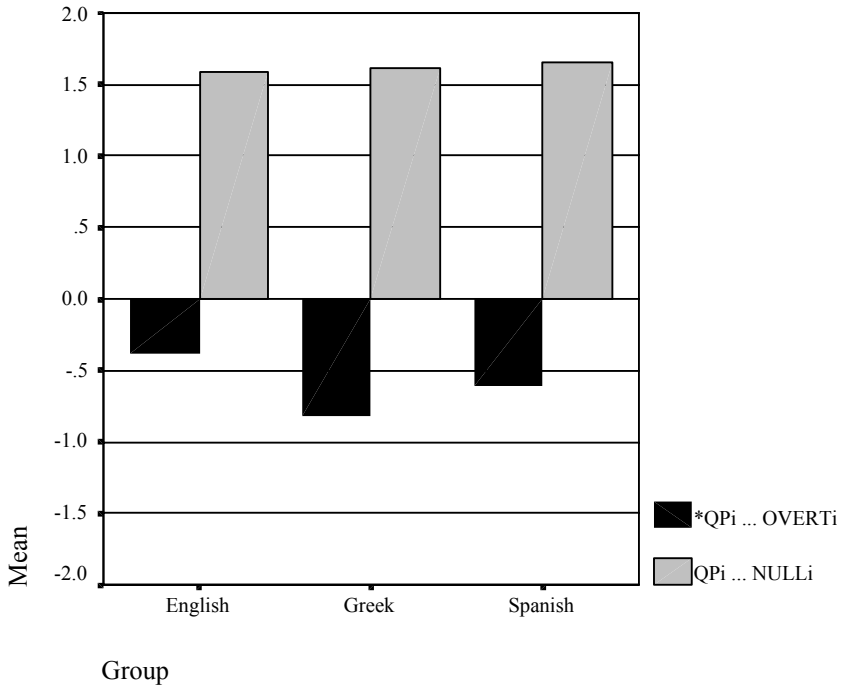
Table 12: Descriptives for OPC contexts

Descriptive Statistics

	L1	Mean	Std. Deviation	N
*QPi ... OVERTi	English	-.3840	.7083	20
	Greek	-.8250	.7691	20
	Spanish	-.6073	.5792	11
QPi ... NULLi	English	1.5910	.4341	20
	Greek	1.6165	.4867	20
	Spanish	1.6509	.5082	11

As the bar chart in Figure 17 shows, there are two constructions in the OPC condition —the grammatical condition [QP_i … $null_i$], where the null pronoun in the embedded clause is bound by a quantifier in the matrix clause, and the ungrammatical condition [QP_i … $overt_{*i}$], where the overt pronoun is bound by a quantifier. The Y axis scale represents the mean acceptance rate for each group in the Likert scale (from –2 to +2). The X axis represents each group.

Figure 17: OPC contexts: acceptance rates of overt and null pronominal subjects



A repeated measures, two-way ANOVA (*pronoun type* x *L1*) reveals a highly significant main effect of pronoun type ($F(1,48)=312.06$, $p<.01$), a non-significant main effect of L1 ($F(2,48)=1.24$, $p=.30$) and no interaction of pronoun type by L1 ($F(2,48)=1.47$, $p=.24$). Further statistical details can be checked in the appendices (section 8.2 and following, p. 281).

Further *within-group comparisons* with a paired-samples t-test confirm that there is a highly significant difference between the grammatical [QP_i … $null_i$] and the ungrammatical [QP_i…$overt*_i$] condition for the Spanish native group ($t(10)=-7.86$, $p<.01$). This clearly indicates that overt and null bound-variable pronouns do not alternate freely in native Spanish grammars, i.e., natives treat the constructions categorically. The difference between the grammatical and ungrammatical conditions is also significant for the English group ($t(19)=-10.97$, $p<.01$) and the Greek group ($t(19)=-12.50$, $p<.01$). These results indicate that each group strongly prefers a null pronoun to an overt pronoun with a bound-variable reading in OPC contexts (i.e., each group treats these constructions as categorical rules). This is predicted by H_1.

Between-group comparisons were also conducted to test each group of learners for each construction against the native norm. As stated above, the main effect of L1 is not significant. A one-way between-group ANOVA with post-hoc Scheffe confirms this. Each pronoun type was compared against the native norm, i.e., the grammatical condition of the English group, [QP_i … $null_i$], was compared against the grammatical condition of the native group, [QP_i … $null_i$]; similarly, the ungrammatical condition of the English group, [QP_i … $overt*_i$], was compared against the ungrammatical condition of the native group, [QP_i … $overt*_i$]. The same comparisons were performed for the Greek group.

The acceptance of the grammatical condition does not differ between groups: (i) English and Spanish groups ($p=.94$), (ii) the Greek and Spanish groups ($p=.98$). In other words, the three groups prefer [QP_i … $null_i$] to the same extent. Similarly, the acceptance of the ungrammatical condition does not differ between groups: (i) English and Spanish groups ($p=.71$), (ii) the Greek and the Spanish groups ($p=.72$). This amounts to saying that the three groups prefer [QP_i … $overt*_i$] to the same extent. These results are predicted by H_1.

The lack of L1 main effect is confirmed by eta squared ($\eta^2=.05$), which implies that only 5% of the variation between groups is due to L1. If we compare this with the

variation within groups (η^2=.87), it can be safely assumed that 87% of the variation within groups is due to pronoun type, as expected.

To summarise, each group significantly prefers the [QP_i … $null_i$] interpretation to the [QP_i … $overt_{*i}$] interpretation in OPC contexts, as expected. This supports H_1. Both groups of learners behave identically to the Spanish group (both for the grammatical *and* ungrammatical condition). This supports H_1 again.

5.4.2 CFC results

The context (CFC, where a pronoun is bound by an R-expression) is a constant. The pronoun type (overt/null) and the L1 (English/Greek/Spanish) are the independent variables. Descriptives are presented in Table 13.

Table 13: Descriptives for CFC contexts

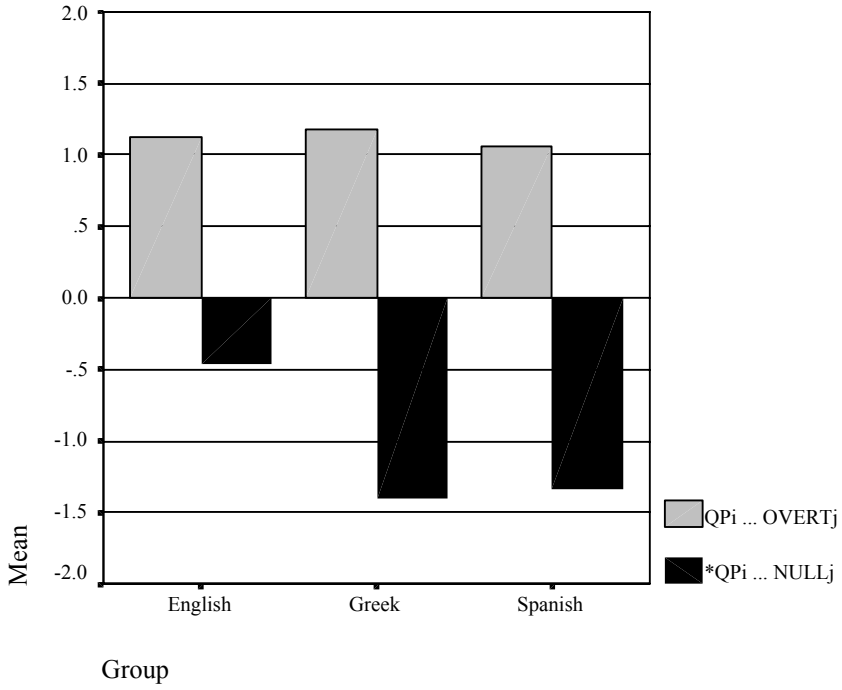
Descriptive Statistics

	L1	Mean	Std. Deviation	N
QPi ... OVERTj	English	1.1250	.7966	20
	Greek	1.1835	.9709	20
	Spanish	1.0600	.8440	11
*QPi ... NULLj	English	-.4665	1.0108	20
	Greek	-1.3995	.8729	20
	Spanish	-1.3345	.5210	11

The two constructions in the CFC condition are the grammatical construction [QP_i … $overt_j$], where the overt pronoun in the embedded clause is bound by an R-expression in the preceding discourse, and the ungrammatical condition [QP_i … $null_{*j}$], where the null pronoun is bound an R-expression[87], as Figure 18 shows.

[87] Note that, crucially, the experimental design is biased in such a way that in OPC contexts *null* pronouns are grammatical, while in CFC contexts *overt* pronouns are grammatical. As learners accept the null pronoun in OPC but accept the overt pronoun in CFC in our study (as Spanish natives do), we can discard the possibility that they may be accepting/rejecting pronouns at random, as was the case in Kanno's (1997) study.

Figure 18: CFC contexts: acceptance rates of overt and null pronominal subjects



A repeated measures, two-way ANOVA (*pronoun type* x *L1*) shows a highly significant main effect of pronoun type ($F(1,48)=111.10$, $p<.01$), a significant main effect of L1 ($F(2,48)=4.71$, $p=.01$) and a marginally significant interaction of pronoun type by L1 ($F(2,48)=2.62$, $p=.08$). Further statistical details can be checked in the appendices.

Further *within-group comparisons* with a paired-samples t-test confirm that there is a highly significant difference between the grammatical [QP_i … $overt_j$] and the ungrammatical [QP_i…$null_{*j}$] condition for the Spanish native group ($t(10)=7.83$, $p<.01$). This indicates that overt and null referential pronouns do not alternate freely in CFC contexts in native Spanish grammars, i.e., natives treat the constructions as a categorical rule. The difference between the grammatical and ungrammatical conditions is also significant for the English group ($t(19)=4.65$, $p<.01$) and the Greek group ($t(19)=7.69$, $p<.01$). These results indicate that each group categorically prefers an overt pronoun to an null pronoun with a contrastive reading in CFC contexts. Note that this is the expected outcome for the Greek group (as H_2 predicts). However, H_2 predicts the English group to perform 'worse' by showing divergent intuitions. As can be observed in Figure 18, the English group does indeed seem to perform slightly

differently from the Spanish group in the ungrammatical condition. Between-group comparisons are therefore needed.

Between-group comparisons were also conducted to test each group of learners for each construction against the native norm. Recall that the main effect of L1 is significant. In order to check every comparison, a one-way between-group ANOVA with post-hoc Scheffe was performed. Each pronoun type was compared against the native norm, i.e., the grammatical condition of the English group, [QP_i … $overt_j$], was compared against the grammatical condition of the native group, [QP_i … $overt_j$]; similarly, the ungrammatical condition of the English group, [QP_i … $null_{*j}$], was compared against the ungrammatical condition of the native group, [QP_i … $null_{*j}$]. The same comparisons were performed for the Greek group.

The acceptance of the grammatical condition does not differ between groups: (i) English and Spanish groups (p=.98), (ii) the Greek and Spanish groups (p=.93). In other words, the three groups prefer [QP_i … $overt_j$] to the same extent. As for the acceptance of the ungrammatical condition, the English group differs from the Spanish group (p=.038). However the Greek group does not differ from the Spanish group (p=.98). This means that, while the Greek group prefers [QP_i … $null_{*j}$] to the same extent as Spanish natives do, the English group does not. In other words, while the English group rejects the ungrammatical [QP_i … $null_{*j}$] condition, their rejection rates are milder than those of natives. This is predicted by H_2, as the parametric value of Foc^0 in contrastive focus cases does not differ between Greek and Spanish, but it does between English and Spanish.

Note that the pronoun type main effect is relatively big (η^2=.70), which implies that 70% of the variation within groups can be accounted for by pronoun type.

To summarise, each group significantly prefers the grammatical [QP_i … $overt_j$] interpretation to the ungrammatical [QP_i … $null_{*j}$] interpretation in CFC contexts. Crucially, the English group significantly differs in the ungrammatical condition from the Spanish group, while the Greek group does not.

5.5 Discussion

5.5.1 OPC contexts

The OPC results are compatible with previous findings (Kanno, 1997, 1998; Marsden, 1998, 2001a, 2001b; Pérez-Leroux & Glass, 1997, 1999). As predicted by H_1, within-group analyses reveal that Greek speakers behave like Spanish natives, discriminating between grammatical and ungrammatical OPC constructions, as they prefer a null pronoun with a bound variable interpretation but reject an overt pronoun a pronoun with the same interpretation. Since such constructions are operative in Greek, it could be argued that Greek speakers' knowledge of the OPC derives from their L1. But, crucially, English learners also behave like Spanish natives, even though the OPC is not operative in English. In short, within-group comparisons confirm that both groups of learners show convergent knowledge of the OPC.

As for between-group comparisons, it was found that the Greek group does not differ from the Spanish group (in either the grammatical or ungrammatical construction). The same applies to the English group. This supports the predictions made by H_1.

Recall that OPC constructions are (i) never explained in textbooks and (ii) they represent a typical poverty of stimulus phenomenon. The most viable explanation is to propose that OPC results favour an approach to L2A where learners' knowledge is constrained by UG (i.e., the design of natural languages[88]), as predicted by H_1.

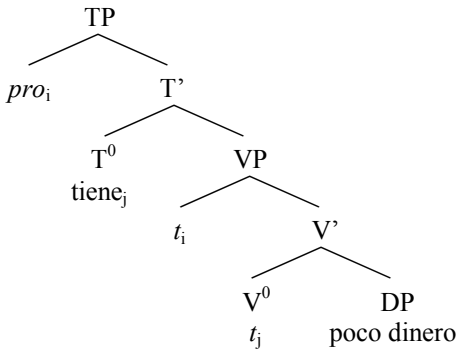
Though OPC results are suggestive, it is important to highlight that OPC represent only a small domain of L2A: 'It seems likely that, at best, UG is responsible for only a small portion of the many phenomena that arise when an adult attempts to learn a second language' (Kanno, 1997:280).

Finally, note that, as Schwartz and Sprouse (2000) argue, any theory of grammar needs to account for POS phenomena, as they are theory-independent. This serves as an 'antidote' to changes in generative theory. Despite the changes in generative theory during the past 20 years or so, it seems that innate principles of UG (whatever their formulation) can be invoked to account for the learners' subtle knowledge of POS phenomena with respect to pronominal subject distributions.

[88] In the final conclusion (chapter 6) I will discuss in more detail the issue of 'design' and language as an 'optimal design' to satisfy legibility conditions in the context of L2A.

If these findings are along the right lines, it can be assumed that learners' representation of null pronouns in OPC contexts is similar to natives', as (134) shows.

(134) Pronominal subjects in neutral focus contexts (OPC): Spanish natives and learners

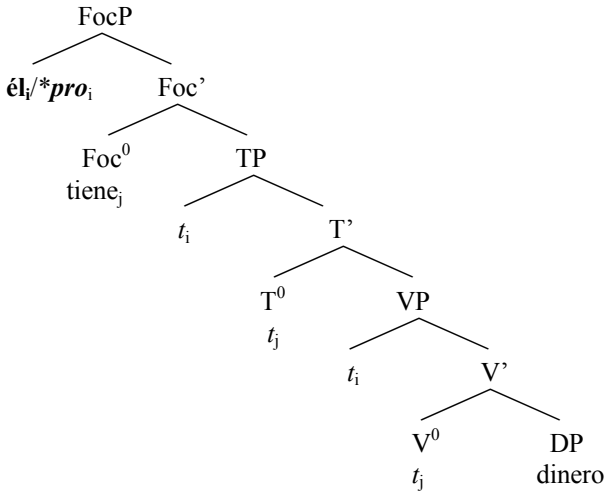


As we will see in Chapter 7, learners also seem to show convergent intuitions in verbal contexts governed by UG (i.e., in the distribution of SV and VS word orders governed by the U(naccusative) H(ypothesis)). I leave further discussion of this issue pending until Chapter 7.

5.5.2 CFC contexts

Greek learners of Spanish show native-like (i.e., convergent intuitions), as both within-group and between-group analyses reveal that their behaviour is similar to the Spanish native norm. This is predicted by H_2, since in both Spanish and Greek native grammars (i) null referential pronouns are used to encode continuity (i.e., topicalised information) in the discourse, while (ii) overt referential pronouns mark contrastive focus. If this analysis is correct, we would expect Greek learners of Spanish to raise the contrastively focused overt pronominal subject (*él* 'he') from [Spec,TP] to [Spec,FocP], so that it can check its interpretable [+Focus] feature against its uninterpretable counterpart in Foc^0, as shown in (135). Note that this assumption entails that the verb also raises from T^0 to Foc^0, as argued in Chapter 2.

(135) Contrastively focused pronominal subject: Greek and Spanish natives

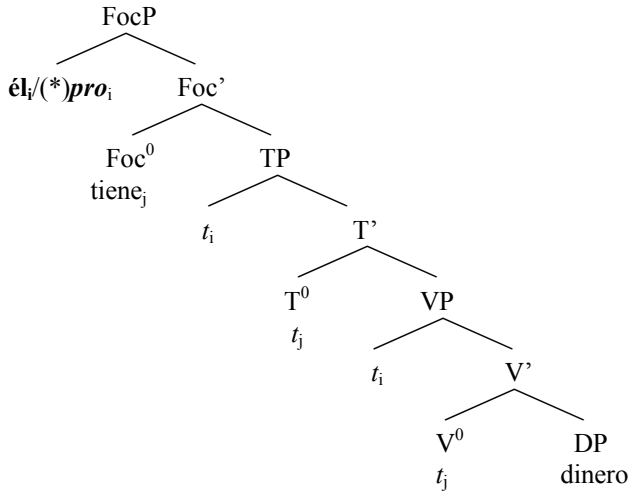


The analysis in (135) implies that, if the Greek group shows convergent intuitions, they should allow an overt referential pronominal subject in [Spec,FocP], but disallow a null pronoun in [Spec,FocP]. This explanation is plausible if we follow the line of argumentation maintained in the current study: (i) recall from Chapter 4 that referential overt pronouns are interpreted as contrastively [+Focus] in Spanish, while null pronouns are interpreted as [–Focus], that is, as topics; (ii) as I also argued in Chapter 2, contrastively focused constituents raise to the left periphery, whereas topicalised constituents remain in situ. These two generalisation correctly describe the behaviour of Greek native learners of Spanish with respect to the distribution of overt and null referential pronouns.

Consider now the case of English natives. Between-group analyses in CFC contexts revealed that, while they show convergent (native-like) intuitions with respect to the grammatical construction (overt pronoun), they show divergent (near-native) intuitions with respect to the ungrammatical constructions (null pronoun). In other words, English natives correctly recognise that an overt referential pronominal subject marks contrastive focus in L2 Spanish. However, their behavior with respect to null pronouns is divergent. While they correctly reject ungrammatical *pro* to encode contrastive focus, their rejection rates are significantly weaker than those of Spanish natives (i.e., they accept more *pro* than Spanish natives in contexts where its interpretation is infelicitous). Recall from our discussion in Chapter 4 that *null* pronouns can be only interpreted as topics (they encode continuity in the discourse), not as foci (they cannot be used either contrastively or presentationally, since focused

or new information must be phonetically overt). This suggests that (136) could be a likely representation for these cases: the overt focused pronoun is correctly attracted by the strong focus head to [Spec,FocP]. Learners also show awareness of the strong focus head attracting a null pronoun to [Spec,FocP].

(136) Contrastively focused pronominal subject: English natives



It could be argued that, contrary to what H_2 predicts, a within-group analysis reveals that English natives significantly distinguish between the grammatical (overt) and ungrammatical (null) condition in L2 Spanish. However, this result confirms previous findings of early L2 studies on the pro-drop parameter (Liceras, 1989, Phinney, 1987), which found that the null-subject property is acquired earlier than the other two properties (SV/VS alternations and that-trace effects[89]). While our study did not make any predictions regarding whether the overt/null alternation in CFC contexts can become native-like in L2 end-state grammars, Al-Kasey & Pérez-Leroux (1998) and Pérez-Leroux and Glass (1999), found that native-like use of null referential pronominals can be achieved as proficiency level increases.

To summarise, Greek natives are sensitive to the strong setting of the focus head in Spanish, since the strength of the focus head is similar in Greek and Spanish. The result is Greek learners of Spanish showing native-like intuitions. This is predicted by H_2. English natives are also sensitive to the strong setting, since they accept a contrastively focused subject. But, crucially, they differ from natives in the

ungrammatical construction, as they do not reject a null pronoun as strongly as Spanish natives do.

It is clear from CFC results that English natives show a poorer mastery of the overt/null alternation than in OPC contexts. This finding is supported by the studies reviewed in the previous chapter (Kanno, 1997; Pérez-Leroux & Hertel, 1997, 1999; Marsden, 1998) and, in particular, Polio's (1995) findings that learners show native-like competence when the overt/null alternation is purely formal, but show deficits when it is regulated by discursive factors (focus).

There is evidence in he L1A literature that English children can master pronominal formal constraints from the early stages of acquisition, yet pragmatic constraints are acquired at a later stage (Thornton & Wexler, 1999). To illustrate, consider the examples below. Given an appropriate context for (137a), Principle B of binding theory disallows a referential pronoun to be interpreted as coreferential with its antecedent within the same clause. While this is true for native grammars, child grammars allow a coreferential interpretation, (137b). By contrast, children do not produce a bound-variable reading between a pronoun and its antecedent within the same clause[90], (138b), similarly to what occurs in native grammars, (138b). On the basis of this evidence, Thornton & Wexler conclude that formal constraints (bound-variable interpretation) are in place before pragmatic constraints (coreferential interpretation)

(137) a. The boy$_i$ hit him$_{*i}$ (adult steady-state grammar)
b. The boy$_i$ hit him$_i$ (child grammar)

(138) a. Every boy$_i$ hit him$_{*i}$ (adult steady-state grammar)
b. @ Every boy$_i$ hit him$_i$ (unattested in child grammar)

The observations for L1A lead me to believe that one of the crucial question for current L2A research is to discover whether discursive constraints lead to divergence, whereas formal constraints lead to convergence, in cases where similar constructions are regulated by the discourse vs. UG respectively. Although there is some suggestive

[89] The results in chapter 5 (word order alternation) confirm this, as learners of Spanish show more difficulties mastering the SV/VS alternation than the overt/null pronoun alternation in contexts governed by focus.

[90] The symbol '@' stands for unattested construction.

evidence that this may be the case in L2A (e.g., Al-Kasey & Pérez-Leroux, 1999; Pérez-Leroux & Glass, 1999; Polio, 1995), I leave this question pending until the discussion in the second experimental section (Chapter 7), where results on SV/VS alternations also suggest that learners show divergent intuitions when discursive constraints are involved, yet they show convergent intuitions when formal constraints are operative. I will then engage in discussion of two types of divergence (near-nativeness vs. optionality), by assessing the advantages and disadvantages of current theories on L2 deficits, namely, the Missing Surface Inflection Hypothesis (Prévost & White, 200), Valueless Features (Eubank, 1996) and the Local Impairment Hypothesis (Beck, 1998).

5.5.3 The role of input

Note that our results on OPC and CFC would pose a problem for probabilistic approaches to language acquisition, which claim that L2 language acquisition consists of analysing sequences in the input and abstracting their regularities from the distributional properties of lexical items (e.g, Ellis, 1996a, 1996b). In particular, MacWhinney (1996:736) claims that 'In general, the stronger and more reliable syntactic patterns are learned first.'

By contrast, generative approaches claim the opposite, i.e., that some distributional properties of lexical items that are underdetermined by the input can be mastered by L2 learners (e.g., Lozano, 2002b; Pérez-Leroux & Glass, 1999; Kanno, 1997).

Consider the alternation of overt and null subjects in OPC and CFC contexts, (139), (140). Supposedly, the sequences the learners hear in the input are the same in (139a) and (139b). The same holds for (140a) and (140b). Crucially, the interpretation of the pronoun in the *a* sentences is constrained by OPC, while its interpretation in the *b* sentences is constrained by CFC. An input-driven model of acquisition (à la MacWhinney) would predict that the *b* sentences should be acquired first, as it can be safely assumed that pronouns are more frequently used with a referential interpretation (CFC) than with a bound-variable interpretation (CFC).

(139) a. …nadie$_i$ dice que *pro*$_i$ tiene dinero… (OPC context)

b. …nadie$_i$ dice que *pro*$_{*j}$ tiene dinero… (CFC context)

(140) a. …nadie$_i$ dice que él$_{*i}$ tiene dinero… (OPC context)
b. …nadie$_i$ dice que él$_j$ tiene dinero… (CFC context)

Examples like (139a) and (140a) are less frequent in the Spanish input (Pérez-Leroux & Glass, 1999), as they involve the binding of a pronoun to a quantifier (OPC contexts). By contrast, (139b) and (140b) are more frequent in the input, as they involve the binding of a pronoun to a referential expression (CFC contexts) for contrastive purposes.

A purely probabilistic approach would wrongly predict no differences in the learners' behaviour in OPC contexts vs. CFC contexts since they predict that L2 acquisition consists of learning 'the word's sequential position relative to other words in the learner's stock of known phrases' (Ellis, 1996a:92). However, his is contrary to the observations reported in this study, where learners show native-like knowledge of OPC, yet near-native knowledge of CFC (at least, in the case of the English group).

5.6 Conclusion

By themselves, these findings are relatively modest, in particular, the CFC results, as it has been known for several decades that the L1 is the privileged source of transfer in L2A (Towell & Hawkins, 1994). But our proposal goes beyond this well-known fact. I maintain that UG constrains adult L2 grammatical representations with respect to UG principles like the OPC, as predicted by H_1. However, knowledge of CFC constructions can be influenced by L1 FFs, as predicted by H_2. In light of these considerations, it seems reasonable to conclude that the L1 is *one* of the keys to representational deficits at advanced levels of proficiency.

While the results presented here are an attempt to argue that both UG and the L1 can be the source of knowledge in adult language learning, their validity is certainly subject to methodological limitations. Only interpretational tasks (AJTs) were used, which says nothing of the learners' production of pronominal subjects. There are, however, production data on OPC and CFC constructions, which also support the claim that UG constrains the interpretation of pronominal subjects in OPC contexts (Pérez-Leroux & Glass, 1997).

5.7 Summary of chapter 5

The present study examined the interpretation of overt and null pronouns in OPC and CFC contexts by learners of Spanish as an L2 and L3. OPC constructions are determined by universal principles, whereas CFC constructions are determined by a language-specific feature, namely, the strength of the focus head. Results suggest that learners of Spanish obey the OPC whether it is operational in their L1 (Greek) or not (English). It was concluded that the universality of the OPC leads learners to show convergent representations in end-states. By contrast, learners' knowledge of the CFC is conditioned by the strength value of Foc^0 in their L1, which can cause divergence if the L1 feature value do not match the L2 value.

Chapter 6. THE DISTRIBUTION OF SV AND VS WORD ORDER

6.1 Introduction

While in neutral focus contexts SV is the canonical word order in Spanish, VS order can result from at least three kinds of syntactic operation: (i) postverbal subjects with unaccusative verbs, (ii) movement of the focused subject triggered by the [+Foc] feature (Bolinger's generalisation) and (iii) operator movement in *wh*- questions[91]. We will only discuss (i) and (ii), as they are relevant for the experimental section of our study.

The aim of this chapter is to decide (i) whether SV and VS are in free alternation and (ii) whether knowledge of such an alternation by adult learners of Spanish converges with or diverges from native knowledge.

The chapter is organised as follows: first, I show evidence that the distribution SV and VS is not in free alternation, but is constrained by (i) universal principles of UG (Unaccusative Hypothesis and Uniformity of Theta Assignment Hypothesis) and (ii) discursive constraints (governed by the presence/absence of the functional feature [+Foc]). Second, I review studies of Spanish L2 word order acquisition. Results show that SV and VS alternations are acquirable, at least in contexts determined by UG.

In traditional generative accounts of the pro-drop parameter (e.g., Chomsky, 1981; Rizzi, 1982), SV and VS orders (the second property of the parameter) were supposed to alternate freely. However, in the following sections I provide evidence against the apparent free distribution of SV and VS in Spanish.

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[91] *Wh*- operator movement triggers SV inversion in Spanish. It occurs when the [+wh] head C^0 attracts a [+wh] interrogative operator to [Spec,CP] for feature-checking purposes. Some authors (e.g., Puskas, 1997; Rizzi, 1997) claim that *wh*- movement and contrastive focus movement are an instantiation of the more general operator movement, as both interrogative operators and focused constituents convey new information and also both of them trigger SV inversion, as shown in (iA,B). I will not pursue this issue as it is irrelevant for our experimental section. (See Marcos (1993) for an experimental study of SV interrogative inversion in Spanish L2 acquisition).

(i) A: ¿**Qué**$_i$ comió$_j$ Pedro t_j t_i, patatas o pizza? (OVS)
'What did Peter eat, chips or pizza?'
B: **Patatas**$_i$ comió$_j$ Pedro t_j t_i (y no pizza) (OVS)
'It is chips that Peter ate (not pizza)'

6.2 The (apparent) free alternation of SV and VS

One of the difficulties that English and Greek learners of Spanish face is how to discriminate the rules that govern the (apparent) free distribution of Subject-Verb (SV) and Verb-Subject (VS) order with intransitive verbs. The primary linguistic data the learners encounter contain seemingly optional alternations, (141) and (142), which represent a typical poverty-of-the-stimulus phenomenon, as the input does not contain relevant information about constraints on such alternations.

(141) a. Una mujer gritó. (SV)
A woman shouted
b. Gritó una mujer. (VS)
Shouted a woman

(142) a. Un vecino vino. (SV)
A neighbour arrived
b. Vino un vecino. (VS)
Arrived a neighbour

Recall from our discussion in Chapter 2 that Spanish is (i) an SVO language in neutral focus contexts and (ii) a Topic-first/Focus-last language in presentational focus contexts (Bolinger's generalisation). The next sections deal with intransitive verb word order in neutral vs. presentational focus contexts.

6.3 Neutral focus contexts: SV and VS distribution

In neutral contexts, the typical word order in Spanish is SV(O). Consider the case of a monotransitive verb like *ganar* 'to earn'. In (143A) the 'out-of-the-blue' question *¿Qué pasa?* 'What is happening?' requires a reply where the information is all-focus (i.e., the whole answer is new information). The expected word order is SVO, (143Bi). Other possible orders are barred, (143Bii-vi).

(143) A: ¿Qué pasa?
'What is happening?'
B: (i) [Juan gana mucho dinero]$_{Foc}$ (SVO)
John earns much money
'John earns a lot of money'
(ii) *[Juan mucho dinero gana]$_{Foc}$ (SOV)
(iii) *[Gana Juan mucho dinero]$_{Foc}$ (VSO)
(iv) *[Gana mucho dinero Juan]$_{Foc}$ (VOS)
(v) *[Mucho dinero Juan gana]$_{Foc}$ (OSV)
(vi) *[Mucho dinero gana Juan]$_{Foc}$ (OVS)

Intransitive verbs like *gritar* 'to shout' also require SV in neutral contexts. Consider an all-focus question like (144A), *¿Qué pasó anoche en la calle?* 'What happened last night in the street?'. The expected reply is SV, (144Bi), and not VS, (144Bii).

(144) A: ¿Qué pasó anoche en la calle?
'What happened last night in the street?'
B: (i) [Una mujer gritó]$_{Foc}$ (SV)
'A woman shouted'
(ii) *[Gritó una mujer]$_{Foc}$ (VS)

From the data presented in (143) and (144), it appears that neutral environments require SV(O) in Spanish with (in)transitive verbs. There are, however, intransitive verbs like *venir* 'to arrive' that do not follow the SV(O) generalisation. The all-focus question in (145A) requires the verb *vino* 'arrived' to project its sole argument to its right, i.e., the expected response is not SV order, (145Bi), bur rather VS order, (145Bii).

(145) A: ¿Qué pasó anoche en la fiesta?
'What happened last night at the party?'
B: (i) *[La policía vino]$_{Foc}$ (SV)
'The police arrived'
(ii) [Vino la policía]$_{Foc}$ (VS)

The asymetry of *gritar*-type verbs vs. *venir*-type verbs can be accounted for by the Unaccusative Hypothesis.

6.3.1 The Unaccusative Hypothesis (UH)

Verbs are typically divided into transitives (monotransitives and ditransitives) and intransitives, depending on the number of arguments they project. *Monotransitive* verbs project two arguments (subject and complement), (146a), *ditransitives* project a subject and two objects, (146b), and *intransitive* verbs project only one argument, (146c).

(146) a. [John] dislikes [Mary] (monotransitive)
b. [John] sent [Mary] [a parcel] (ditransitive)
c. [John] cried (intransitive)

Perlmutter (1978) observed that the surface subject of certain intransitive verbs is base-generated in object position. Burzio (1986) refined Perlmutter's observation by proposing the Unaccusative Hypothesis, UH[92] (also known as the split-intransitivity hypothesis). The UH is a proposed invariant universal that splits intransitives into unergatives and unaccusatives. The resulting argumental classification of verbs is shown in (147).

(147) Argumental classification of verbs:
(a) 2+ arguments: *transitives*
(b) 1 argument: (i) *unergatives*
(ii) *unaccusatives*

UH stipulates a clear-cut distinction between unergatives and unaccusatives on the basis of the sole argument they project, i.e., the subject:

(i) The subject of unergatives (a) is typically theta-marked as [AGENT], (b) is base-generated preverbally in the canonical subject position, i.e., [Spec,VP][93] and (c) is case-marked [NOM].

[92] The origins of the UH are controversial. For a different view of its genesis, see Pullum (1988).
[93] It is standardly assumed that subjects are base-generated VP-internally in [Spec,VP] and then raise to [Spec,TP] to check nominative case (VP-internal subject hypothesis).

(ii) The subject of unaccusatives (a) is theta-marked as [THEME], (b) is base-generated postverbally in the canonical object position, i.e., [V,Comp] and (c) is also case-marked [NOM].

Table 14 summarises the three properties of unergatives vs. unaccusatives.

Table 14: Unaccusative Hypothesis

Verb	**θ-role**	**Base-generates**	**Case**
Unergative	[AGENT]	subject position [Spec,VP]	[NOM]
Unaccusative	[THEME]	object position [V,Comp]	[NOM]

To illustrate, consider the English example in (148). I take it as uncontroversial that in (148a) the transitive verb *break* projects an [AGENT] subject, *the girl*, and a [THEME] object, *the window*. The same verb, *broke*, may be used unaccusatively in (148b), where it only projects an argument, the subject *the window*[94].

(148) a. $[\text{The girl}]_{\text{AGENT}}$ broke $[\text{the window}]_{\text{THEME}}$ (transitive)
b. $[\text{The window}]_{\text{THEME}}$ broke (unaccusative)

Prima facie, it may be controversial to propose that *the window* in (148b), which is occupying the canonical subject position, is theta-marked as [THEME]. The Uniformity of Theta Assignment Hypothesis (UTAH, Baker, 1988) can account for this fact. UTAH stipulates that a particular thematic role uniformly maps to the same syntactic position at D-Structure (i.e., before spell-out).

(149)				
a.	*Syntactic relation*:	S	V	O
b.	*Thematic relation*:	[AGENT]		[THEME]
c.	*Sentence:*	The girl	broke	the window

[94] It is also uncontroversial that *the window* in (148b) is the subject of *broke*, as shown by a straightforward S-V agreement test in (i).
(i) a. The window breaks easily
b. The windows break easily

In (149), the theta-role [AGENT] is mapped onto Subject position, whereas [THEME] is mapped onto Object position. In (150), by contrast, the [THEME] *the window* still base-generates in object position, although it surfaces in subject position[95].

(150) a. *Syntactic relation*: S V O
b. *Thematic relation*: [THEME]
c. *Sentence:* The window$_i$ broke t_i

In short, UTAH predicts that agents are mapped onto subject position and themes onto object position before spell-out[96]. In English, themes must surface in subject position after spell-out, as shown in (150), whereas in Spanish it need not be due to case-checking purposes.

To illustrate, consider (151b). The uninterpretable [ACC] feature of the transitive verb *broke*/*rompió* gets checked against the uninterpretable [ACC] feature of the accusative pronoun *them*, hence the ungrammaticality of the nominative *they* in (151b). However, if *broke*/*rompió* is used intransitively, (152b), it cannot check accusative case against its argument[97], as the ungrammatical accusative *them* shows. Only a nominative subject like *they* is allowed.

(151) a. The girl broke the windows
b. The girl broke *they/them

(152) a. The windows broke
b. They/*them broke

The postverbal argument of Spanish unaccusatives is also nominative, not accusative, as the contrasts between the nominative pronoun *yo* and the accusative *me* shows, (153).

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[95] Note that a simple semantic test for agentivity shows that the subject *the window* in (150) is [THEME] and not [AGENT], as (i) shows.
(i) A: Who broke the window?
B: (a) [The girl]$_{AGENT}$ broke the window
(b) ??[The window]$_{AGENT}$ broke the window

[96] Before proceeding any further, it is important to note that the notion of [THEME] is a general label that emcompasses different though related semantic processes (see Cifuentes Honrubia, 1999, for a discussion). In the words of Sorace: 'This generalization, while true, conceals the fact that 'theme' is an overgeneral label for arguments undergoing a variety of 'affecting' processes.' (Sorace, 1993a:31)

[97] For a different view, see Belletti (1987).

(153) A las doce llegué *yo*/**me*
At the twelve arrived I
'I arrived at twelve o'clock'

The discussion so far poses an immediate question: why must the argument of unaccusatives typically surface in subject position in English, (152b), yet it can remain in situ in Spanish, (153)?

It is standardly assumed that the uninterpretable [NOM] feature of T requires an uninterpretable [NOM] feature in [Spec,TP] for feature-checking purposes. The solution is then straightforward: the [NOM] feature of T attracts the [NOM] feature of the postverbal argument *they*, forcing it to raise from its base-generated object position, [V,Comp], to the subject position, [Spec,TP]. In other words, feature checking forces the postverbal argument argument of English unaccusatives to raise to subject position. This accounts for the grammaticality of the strict SV word order of English unaccusatives and the ungrammaticality of VS. At least, this is the case for English.

Consider now the English transitive/unaccusative alternation, (154) and their Spanish and Greek equivalents, (155) and (156).

(154) a. [The girl] broke [the window] (transitive)
b. *Broke [the window] (unaccusative)
c. [The window$_i$] broke t_i (unaccusative)

(155) a. [La niña] rompió [la ventana] (transitive)
b. Se rompió [la ventana] (unaccusative)
c. [La ventana$_i$] se rompió t_i (unaccusative)

(156) a. [To koritsi] espase [to parathiro] (transitive)
b. Espase [to parathiro] (unaccusative)
c. [To parathiro$_i$] espase t_i (unaccusative)

As just argued, the subject of English unaccusatives must surface preverbally, (154c), as it cannot remain postverbally, (154b), for feature-checking reasons. Spanish and Greek unaccusatives allow (in principle) the subject *la ventana*/*to parathiro* 'the window' to remain either postverbally in its base-generated position, (155b) and

(156b), or in preverbal, subject position, (155c) and (156c), though their interpretation is different, as will become clear.

Note that (155b) and (156b) pose a problem for the analysis presented so far for English unaccusatives. The subject *la ventana*/*to parathiro* appears postverbally in object position, and not in subject position, i.e., in [Spec,TP]. An obvious question is how does its [NOM] case feature get checked in postverbal position.

Recall from Chapter 4 that in pro-drop languages like Spanish and Greek, a phonetically null pronominal *pro* is allowed in [Spec,TP], which can check the [NOM] feature of the postverbal *la ventana*/*to parathiro*, thus resulting in VS order (e.g., Demonte, 1991; Hertel, 2000; Rizzi, 1982, 1997a; Zagona, 2002).

(157) *pro*$_i$ se rompió la ventana$_i$
pro REFL broke the window
'The window broke'

(158) *pro*$_i$ espase to parathiro$_i$
pro broke the window
'The window broke'

A small subset of English unaccusatives (e.g., *arrive*, *come*, *stand*) also allows its postverbal argument to check case in situ. Consider (159a), where the expletive *there* appears in [Spec,TP] to (i) check nominative case against T and (ii) to satisfy the Extended Projection Principle (PPP), as English sentences require a phonologially overt subject in [Spec,TP]. In (159b) the argument *four men* has raised to [Spec,TP] to check its [NOM] case feature against T.

(159) a. There$_i$ arrived four men$_i$
b. Four men$_i$ arrived t_i

The discussion so far can be summarised as follows:

(i) The subject of *unergatives* base generates preverbally, in subject position. The resulting word order is SV for Spanish, English and Greek.

(ii) The subject of *unaccusatives* base generates postverbally, in object position, and then must raise to subject position to check nominative case (in English

only). The resulting word order is (a) SV in Spanish, Greek and English, though (b) Spanish and Greek also allow *pro*$_i$VS$_i$, as the nominative case of the subject is checked via the null pronoun.

We are now in a position to discuss the derivation of unergatives vs. unaccusatives in neutral focus contexts, i.e., those contexts serving as a reply to an all-focus question like *¿Qué pasó?* 'What happened?'. Recall that English, Spanish and Greek unergatives require SV, (160Bi), (161Bi) and (162Bi) respectively.

(160) A: 'What happened last night in the street?'
B: (i) [A woman shouted]$_{Foc}$ (SV)
(ii) *[Shouted a woman]$_{Foc}$ (VS)

(161) A: ¿Qué pasó anoche en la calle?
B: (i) [Una mujer gritó]$_{Foc}$ (SV)
(ii) *[Gritó una mujer]$_{Foc}$ (VS)

(162) A: Ti sinaini hthes to vradi sto dromo?
B: (i) [Mia ginaika fonaxe]$_{Foc}$ (SV)
(ii) *[Fonaxe mia ginaika]$_{Foc}$ (VS)

English unaccusatives also require SV in neutral focus contexts, (163Bi), yet Spanish and Greek unaccusatives only permit VS in these contexts, (164Bii) and (165Bii), as the Unaccusative Hypothesis predicts[98].

[98] Pinto (1997) also shows evidence that in neutral focus contexts, (i), Italian unergatives require SV order while unaccusatives require VS order. By contrast, in presentational focus contexts, (ii) VS order is required for both unergatives and unaccusatives. This corroborates the assumptions I have made about Spanish in relation to focus in the previous sections.

(i) A: Che cosa ha successo?
'What has happened?'
B: Kasparov ha sorriso
'Kasparov has laughed'
B': È arrivato Kasparov
'Has arrived Kasparov

(ii) A: Qui ha sorriso/è arrivato?
'Who has laughed/has arrived?'
B: Ha sorriso Kasparov
'Has laughed Beatrice'
B': È arrivato Kasparov
'Has arrived Beatrice'

(163) A: 'What happened last night at the party?'
B: (i) [The police arrived]$_{Foc}$ (SV)
(ii) *[Arrived the police]$_{Foc}$ (VS)

(164) A: ¿Qué pasó anoche en la fiesta?
B: (i) *[La policía vino]$_{Foc}$ (SV)
(ii) [Vino la policía]$_{Foc}$ (VS)

(165) A: Ti sinaini hthes to vradi sto parti?
B: (i) *[I astinomia eftase]$_{Foc}$ (SV)
(ii) [Eftase i astinomia]$_{Foc}$ (VS)

Let us describe now the derivation of unergatives vs. unaccusatives. Consider unergatives first. Following standard assumptions (e.g., Haegeman & Guéron, 1999; Herschensohn 2000; Pollock, 1989) the English unergative *shouted* in (166) base-generates in V, where it remains. (Note that English is a non-verb raising language as the weak [V] feaure of T cannot attract *shouted* to it.)

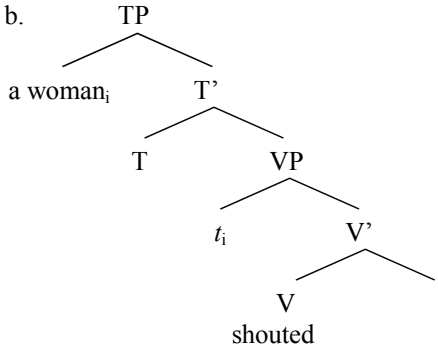
But note that Pinto (1997:199ff) proposes that Italian VS order is also possible in neutral focus contexts with certain types of unergatives due to the presence of a loco/temporal argument, [+LOC], (whether such argument is overtly realised or not), as in (iiiB). This allows VS order. Absence of such a component in the argumental structure of the verb results in obligatory SV order with unergatives, (iiiB').

(iii) A: Che cosa ha successo?
B: LOC ha telefonato Kasparov / Kasparov a telefonato a Dante
'Has phoned Kasparov / Kasparov has phoned Dante'
B': * ~~LOC~~ e impallidito Berlusconi / Berlusconi e impallidito
'Turned pale Berlusconi / Berlusconi turned pale'

In short, the presence of a locative argument in Italian verbs allows unergative VS order in neutral focus contexts. This does not necessarily invalidate our analysis, since (i) SV is allowed with Spanish (and Italian) unergatives in neutral focus contexts irrespective of either the covert presence or the absence of the locative component, i.e., SV is an option with unergative verbs in neutral focus contexts; (ii) the target sentences which we designed in the experimental sentences do not contain any locative arguments but simply the verbal external argument (i.e., the subject); see Table 28, p. 200"

(166) a. [A woman shouted]$_{Foc}$

b.

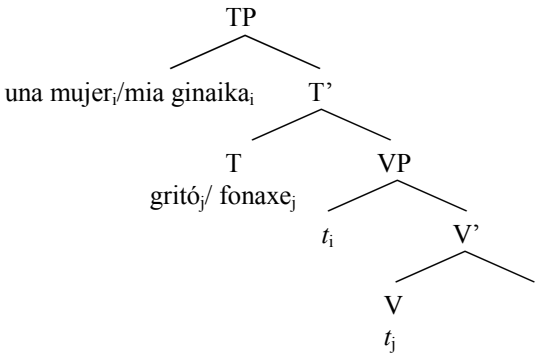


The subject *a woman* in (166) generates VP-internally in [Spec,VP], as is standardly assumed, and then raises to [Spec,TP] to check its [NOM] case feature. The resulting word order is SV.

Consider now Greek and Spanish. Following standard assumptions for null-subject languages (e.g., Demonte, 1994; Pollock, 1989; Zagona, 2002), the verb *gritó*/*fonaxe* 'shouted', (167), raises from V to check T's strong [V] feature, as Spanish and Greek are verb-raising languages. The subject *una mujer*/*mia ginaika* generates VP-internally and then raises to [Spec,TP] to check its nominative case against T. The resulting word order is SV.

(167) a. [Una mujer gritó]$_{Foc}$

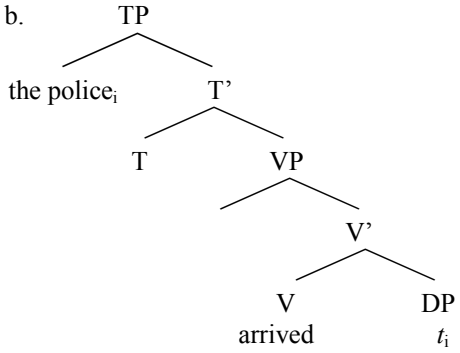
b.



Consider unaccusatives now. In (168) the English unaccusative *arrived* is base-generated in V, where it remains, as T is weak in English. The subject *the police* generates VP-internally in object position, [VP,Comp], as required by UH. It then raises to [Spec,TP] to check its [NOM] case feature. The resulting word order is SV.

(168) a. [The police arrived]$_{Foc}$

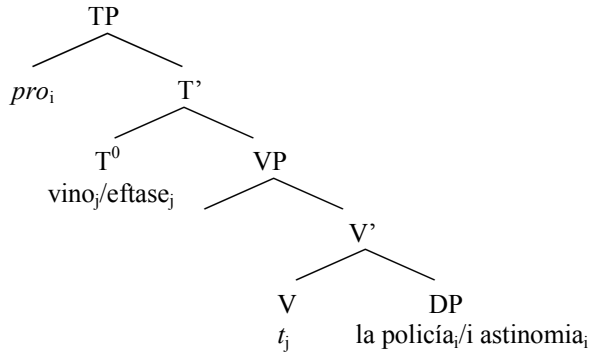
b.



Spanish and Greek unaccusatives are derived differently. In (169) the verb *vino*/*eftase* 'arrived' raises to check T's strong [V] feature, as these are verb-raising languages. The subject *la policía*/*i astinomia* generates postverbally, as the UH stipulates (e.g., Alexiadou & Anagnostopoulou, 1999; Rizzi, 1997a; Zagona, 2002). Recall that a null expletive, *pro*, can check the subject's nominative case with unaccusative verbs, so that the subject is not forced to raise to [Spec,TP]. The resulting word order is VS[99].

(169) a. [Vino la policía]$_{Foc}$

b.



The expletive construction *pro*$_i$-V-S$_i$ with unaccusatives is the default option in Spanish and Greek in neutral focus contexts. One possible reason for this is the idea that merge is more economical than move. English has to move the subject to [Spec,TP] to check case because it lacks *pro*. However, it is important to note that

[99] Note that SV is possible in Spanish with unaccusatives when the verb is presentationally focused. Recall that in focused environments, the focused element appears in sentence-final position, (iB), as Bolinger's generalisation predicts. By contrast, presentationally focused elements in Greek appear sentence initially, (iB').

(i) A: 'What about the police?'
B: La policía [VINO]$_{Foc}$ (SV)
B': [EFTASE]$_{Foc}$ i astinomia (VS)

The exact derivation of (i) is not within the scope of our study, as only focused subjects will be relevant for the experimental section (chapter 5).

expletive-V-S constructions are also allowed with English unaccusatives. If the argument that merge is more economical than move is correct, it would predict that in an all-focus question, (170A), a reply with an overt expletive *there* in [Spec,TP], (170Bi), would be preferred to an overt subject in [Spec,TP]. This prediction is unsustained, as both (170Bi,ii) are acceptable in English[100].

(170) A: What happened?
B: (i) There arrived a man
(ii) A man arrived

To summarise our discussion so far, the word order distribution of Spanish, Greek and English in neutral contexts is presented in Table 15.

Table 15: Word order in neutral contexts

	Unergatives	**Unaccusatives**
English	SV	SV
Greek	SV	VS
Spanish	SV	VS

So far, the evidence presented to support UH in neutral focus contexts comes from English, Greek and Spanish data only. Further evidence from other typologically (un)related languages will be presented to support the claimed universality of UH.

6.3.2 Cross-linguistic evidence for UH

Crosslinguistically, each language varies in the degree unaccusatives are (morpho)syntactically marked. Several syntactic diagnostics can be applied to differentiate between unergatives and unaccusatives. These diagnostics will serve as the basis for determining which set of unaccusatives will be tested in the experimental section (Chapter 7).

Word order is a key diagnosic for unaccusativity, as just discussed. In [+pro-drop] languages with a standard SV(O) order like Spanish (e.g., Zagona, 2002) and Greek (e.g., Alexiadou & Anagnostopoulou, 1998b) the subject remains in postverbal

[100] For a discussion, see Belletti (1987) and Rizzi (1997b):

position with unaccusatives, (171a) and (172a), yet not with unergatives, (171b) and (172b).

(171) a. Vino [la policía]
Arrived the police
'The police arrived'
b. *Gritó [una mujer]
Shouted a woman
'A woman shouted'

(172) a. Irthan [pedia]
came children
'Children came'
b. *Epezan [pedhia]
played children
'Children played'
(Source: Alexiadou & Anagnostopoulou, 1998b)

Other null-subject languages like Italian, (173) and Romanian, (174), also require the subject of unaccusatives to appear in object position.

(173) Sono arrivati [tre studenti]
Are arrived three students
'Three students have arrived'
(Source: Sorace, 1993a)

(174) Mi se pare [un freamăt] în ondaie
me REFL appear a murmur in room
'I seem to hear a murmur in the room'
(lit: 'A murmur in the room appears to me')
(Source: Myhill, 1987)

In [–pro-drop] languages like English the argument of unaccusatives cannot remain in object position, but perforce has to raise to subject position, (175), as argued earlier.

(175) [The police$_i$] arrived t_i

Recall that a small subset of English unaccusatives allow its argument to remain in situ, providing expletive *there*-insertion takes place in [Spec,Tp], (176)[101]. Absence of expletive *there* implies raising of the argument from postverbal to preverbal position, (177). By contrast, unergatives do not typically allow *there*-insertion, (178)[102].

(176) a. There appeared [a ghost] behind the window
b. There stands [a man] by the bus stop
c. There came [a strange noise] from the Linguistics department

(177) a. [A ghost]$_i$ appeared t_i behind the window
b. [A man]$_i$ is standing t_i by the bus-stop
c. [A strange noise]$_i$ came t_i from the Linguistics department

(178) a. *There shouted [a woman] in the street
b. *There cried [a boy] in the playground
c. *There jumped [the cat] out of the window

Expletive constructions are constrained by definiteness effects. While a [–definite] postverbal subject is allowed in (176) above, a [+definite] subject is typically disallowed, (179) (see Belletti, 1987 and Rizzi, 1997b, for a discussion).

(179) a. *There appeared [the ghost] behind the window
b. *There stands [the man] by the bus stop
c. *There came [the strange noise] from the Linguistics department

Note that inversion is a productive phenomenon in present-day English, typically with unaccusatives expressing change of locatoin (*come, go*), (180), though some unergatives may also allow inversion (for a discussion, see Levin & Rappaport-Hovav, 1995)

(180) a. Along came a man

[101] Note that, as predicted by the UH, the postverbal argument in expletive *there*-constructions is the subject, as a simple S-V agreement tests shows in (i) and (ii).
(i) a. There stands a statue
b. There stand two statues
(ii) a. There comes the train
b. There come two trains

b. Off went the bell
c. Pop goes the weasel

In one dialect of Belfast English, Henry (1995) reports on the possibility of using overt postverbal subjects with unaccusative imperatives, (181), and not with other transitive verbs, (182). Henry's findings corroborate again the assumption, maintained here, that unaccusative subjects originate in postverbal position.

(181) a. Leave you now!
b. Arrive you before 6 o'clock!
c. Be going you!

(182) a. *Read you that book!
b. *Eat you up!
c. *Always laugh you at his jokes!

A second key diagnostic for unaccusativity is auxiliary selection. Languages with auxiliary alternation in perfective tenses select *have* with unergatives and *be* with unaccusatives, as used to be the case in Early Modern English (Radford, 1997). Unaccusatives selected *be*, (183), while unergatives selected *have*, (184).

(183) a. I here *am* come by chance.
(Source: Love's Labour's Lost (Act 5, Scene 2))
b. Thou runaway, thou coward, *art* thou fled?
(Source: A Midsummer Night's Dream (Act 3, Scene 3))
c. Russell, *am* I not fallen away vilely since this last action?
(Source: Henry IV (Act 3, Scene 3))

(184) a. I *have* not forgotten what the inside of a church is made of.
(Source: Henry IV (Act 3, Scene 3))
b. I *have* spoke with her.
(Source: The Merry Wives of Windsor (Act 5, Scene 3))
c. Who *hath* bound him here?
(Source: The Comedy of Errors (Act 5, Scene 1))

[102] Unergatives may allow there-insertion in presentational constructions, e.g., There walked (danced, staggered…) into the room a lonely handsome stranger.

Modern Spanish does not permit AUX choice for perfective forms, i.e., *all* verbs select AUX *haber* 'have' and not *ser* 'be' (185a,b). The same holds for Greek, (186a,b) (Alexiadou & Anagnostopoulou, 1998b).

(185) a. La mujer **es*/*ha* gritado
The woman is/has shouted
'The woman has shouted'
b. La mujer **es*/*ha* venido
The woman is/has arrived
'The woman has arrived'

(186) a. O Janis **einai/ehi* perpatisi
The Janis is/has walked
'John has walked'
b. O Janis **einai/ehi* erthi
The Janis is/has come
'John has come'

Note that old Spanish unaccusatives selected AUX *ser* 'be', (187) (Cifuentes Honrubia, 1999), similarly to what occurs in Early Modern English.

(187) Ya son llegados, ya son idos
Already are.3P arrived, already are.3P gone
'They have come and gone'

German also shows AUX-selection effects. Whereas transitives (188) and unergatives (189) select AUX *haben* 'have', unaccusatives (190) select *sein* 'be' (Fagan, 1992).

(188) Ich *habe* sie gesehen
I have her seen
'I have seen her'

(189) *Hast* du in der Nacht gut geschlafen?
Have you in the night good slept?
'Did you sleep well at night?'

(190) a. Ich *bin* in die Stadt gegangen
I am to the city gone
'I have gone to the city'
b. Der Schnee *war* schon geschmolzen
The snow was already melted
'The snow had already melted'

Italian unaccusatives also select *essere* 'be', (191) (Burzio, 1986; Sorace, 1993a, 1993b).

(191) Mario **ha/è* venuto
Mario *has/is* arrived
'Mario has arrived

The choice of auxiliary is not an arbitrary property of unaccusatives, since this phenomenon appears crosslinguistically to varying degrees in other languages, e.g., French (Burzio, 1986; Sorace, 1993a, 1993b), German and Dutch (Haegeman, 1994), Sardinian (Jones, 1994), Danish (Spencer, 1991). Cross-linguistically, auxiliary selection supports again the universality of the UH.

Japanese also displays unaccusativity. Japanese is an SOV language, that is, S and O are adjacent (Hirakawa, 1999). Consider (192). It would be difficult to decide *a priory* what the adverb *takusan* 'a lot' modifies, as both the S and O of *yon* 'read' have been dropped (Japanese allows both subject drop and object drop whenever they are topics). The interpretation for Japanese native speakers would be clear: *takusan* can only modify the VP-internal argument, i.e., the object (i.e., that *somebody read a lot of things*, not that *a lot of people read something*).

(192) Takusan yon-da
A lot read-PAST
'He/she/they/etc read a lot (of things)'
(Source: Hirakawa, 1999:91)

Takusan would then be predicted to modify the VP-internal (subject) argument of unaccusatives. (193) confirms it, as *takusan* modifies the null subject (e.g., *people*).

(193) Takusan tui-ta
a lot arrive-PAST
'A lot (of people) arrived'

As the subject of unergatives is VP-external, *takusan* is not predicted to modify it, as the contrast of interpretation in (194) show.

(194) Takusan nai-ta
a lot cry-PAST
* 'A lot of people cried'
'I/you/he/she/we/they cried a lot'
(Source: Hirakawa, 1999:92)

Other (morpho)syntactic properties characterise unaccusatives cross-linguistically. In transitive/unaccusative alternations, the transitive construction is Ø-marked in Spanish (195a) and Turkish (196a), while unaccusative constructions are morphologically marked by the reflexive clitic *se* in Spanish, (195a), and *–il–* in Turkish (196a). Burzio (1986) analyse these markers as the morphological realisation of the suppressed agentivity.

(195) a. El ladrón rompió la ventana (transitive)
'The thief broke the window'
b. La ventana *se* rompió (unaccusative)
The window REFL broke
'The window broke

(196) a. Hırsız pencere-yi kır-dı (transitive)
thief window-ACC break-PAST
'The thief broke the window'
b. Pencere kır-ıl-dı (unaccusative)
window break-PASS-PAST
'The window broke'
(Source: Montrul, 1999:194)

Both Turkish and Spanish, although typologically unrelated, mark the transitive-unaccusative distinction morphologically. This argument has been used to support again the universality of the UH:

> 'While the unaccusative/unergative distinction exists universally, languages vary with respect to the degree of syntactic and morphosyntactic differentiation between unaccusatives and unergatives.' (Montrul, 1999:192).

Another piece of evidence for the unaccusative/unergative distinction not mentioned in the literature is the semantic parallelism[103] between unaccusatives/unergatives in typologically-unrelated languages like Japanese vs. English and Spanish, as shown in Table 16 overleaf.

It is a matter of empirical research whether *all* the aforementioned (morpho)syntactic and semantic properties apply to *all* unaccusatives crosslinguistically (for a discussion, see López Meirama, 1997). What is important to realise is that, although languages differ cross-linguistically in the extent to which they overtly mark unaccusativity, there are clear coincidences amongst them (e.g., AUX choice, reflexive clitics, cliticisation facts, semantic correlations, participial absolute constructions, participial adjective constructions, similarity with passives, etc). This indicates that the unaccusative/unergative contrast encompasses a wide range of typologically unrelated languages, supporting the universality of the UH.

Table 16: Cross-linguistic semantic parallelisms

Unaccusatives			**Unergatives**		
Japanese	**English**	**Spanish**	**Japanese**	**English**	**Spanish**
takeru	burn	quemarse	oyogu	swim	nadar
otiru	fall	caerse	naku	cry	llorar
sinu	die	morirse	asobu	play	jugar
tuku	arrive	llegar	hasiru	run	correr
wareru	break	romperse			

6.3.3 Classification of unaccusatives

In the generative literature, unaccusatives are not consistently classified from a semantic and syntactic viewpoint, as different authors offer different methods of

labelling, basing their classifications on different assumptions. I will quickly review some classifications offered in the literature so as to finally provide a core set of unaccusatives which will serve as the basis for the experimental test (Chapter 7).

There have been several attempts to classify unaccusatives. Hatcher (1956) offered the first semantic classification. De Miguel's (1993) classification takes into consideration two different, though complementary, aspects: θ-role structure and the semantics of the verb. López Meirama (1997) classifies unaccusatives according to their thematic behaviour. Montrul (1999) considers that the internal semantic constitution of unaccusatives can be represented in an X-bar fashion, not only at the phrasal, but also at the subphrasal level. Sorace (1993a, 1993b), building on work by Burzio (1986), distinguishes between syntactic and semantic aspects of unaccusativity:

> 'It is clear that purely syntactic approaches … fail to crosslinguistically distinguish the whole class of unergative verbs from the whole class of unaccusative verbs … Purely semantic approaches, on the other hand, tend to have a lower degree of generality, compensated by a more detailed analysis of individual phenomena.' (Sorace, 1993a:30)

Sorace (1993a:32) proposes the *unaccusative hierarchy*, as shown in Table 17[104]. This classification rests on two major pillars, (i) syntax: unpaired vs. paired unaccusatives, (ii) semantics: unpaired vs. paired unaccusatives, which are subdivided into semantic categories (change of location, change of condition, etc).

[103] *Semantic parallelisms* refer to the fact that unaccusative verbs in Japanese and English tend to have a semantically equivalent verb in Spanish (*tuku, arrive, llegar*). The same applies to unergatives (*naku, cry, llorar*).

[104] For the most recent treatment of the Unaccusative Hierarchy, see Sorace (2000a).

Table 17: Sorace's (1993a) Unaccusative Hierarchy

Verb type		French AUX	Italian AUX	Dimension	Diachronic
Unpaired unaccusatives				Concrete, movement	- open to *habere*
Change of location	*andare, venire; aller, venir*	être	essere		
Change of condition	*crescere, ingrassare; coître, grossir*	être/avoir	essere		
Continuation of condition	*sopravvivere, durare; survivre, durer*	avoir	essere		
Existence of a condition	*essere, esistere, sembrare; être, exister, sembler*	avoir	essere	Abstract, staticity	+ open to *habere*
Paired unaccusatives					
With transitive alternant	*aumentare, migliorare; augmenter, ameliorer*	avoir	essere		
With unergative alternant	*correre, rotolare; courir, rouler*	avoir	essere		

(Source: Sorace, 1993a: 32)

Table 17 can be applied to Spanish unaccusatives. Some unaccusatives like *mejorar* 'to improve' can pair with a transitive alternant, (197). Others like *correr* pair with an unergative alternant, (198).

(197) a. El gobierno ha mejorado los impuestos
'The government has improved taxes'
b. Los impuestos han mejorado
'Taxes have improved'

(198) a. Juan corrió la maratón
'John ran the marathon'
b. Juan corrió
'John ran'

Unpaired unaccusatives are further divided into four groups, based on the semantics of the verb. The core of unaccusativity lies on *change of location* unaccusatives. This is reflected in Spanish unaccusatives such as *venir* 'to come/arrive'. This group selects subjects in postverbal position in neutral focus contexts, as (199) shows.

(199) a. Vino la policía
Came the police
'The police arrived/came'
b. Llegó un hombre
Arrived a man
'A man arrived'

The second group corresponds to unaccusatives expressing *change of condition*, like *crecer* 'to grow', (200a) and *nacer* 'to be born', (200b).

(200) a. Han crecido las flores
Have grown the flowers
'The flowers have grown'
b. Han nacido muchos niños este año
Have born many children this year
'Many children have been born this year'

The third type expresses *continuation of a condition*, like *durar* 'to last', *sobrevivir* 'to survive', (201).

(201) La fiesta duró tres días
'The party lasted for three days'

The last type expresses *existence of a condition*, like *existir* 'to exist', *hay* 'there is/are', (202).

(202) a. Existen muchas teorías lingüísticas
Exist many theories linguistic
'There exist many linguistic theories'
b. Hay tres exámenes en septiembre
is three exams in september
'There are three exams in September'

Table 17 also incorporates auxiliary choice in French and Italian, which, recall from the previous section, is a syntactic diagnostic for unaccusativity in Italian (and, to a lesser extent, in French). Italian unaccusatives take *essere* 'be' in the perfective forms,

whereas only a subset of French unaccusatives do so, following the trend in romance languages to generalise from Latin *habere* 'have' to all types of verbs (unaccusatives and unergatives, as well as transitives). Spanish has completely generalised to *haber* 'have' in the formation of perfective tenses with all types of verbs.

Sorace (1993a) argues that the subset of unaccusatives that (i) do not show alternation and (ii) express motion and change of location, are considered to be at the core of unaccusativity. For example: *venir* 'to come', *llegar* 'to arrive'. Other authors agree with the idea of 'core-unaccusativity' in Spanish (De Miguel, 1993; López Meirama, 1997; Montrul, 1999). Montrul (2002) presents evidence from Reaction-Time experiment on sentence processing. She favours the psychological existence of the Unaccusativity Hierarchy, as Spanish natives display significantly shorter reaction times for core unaccusatives than for less core unaccusatives.

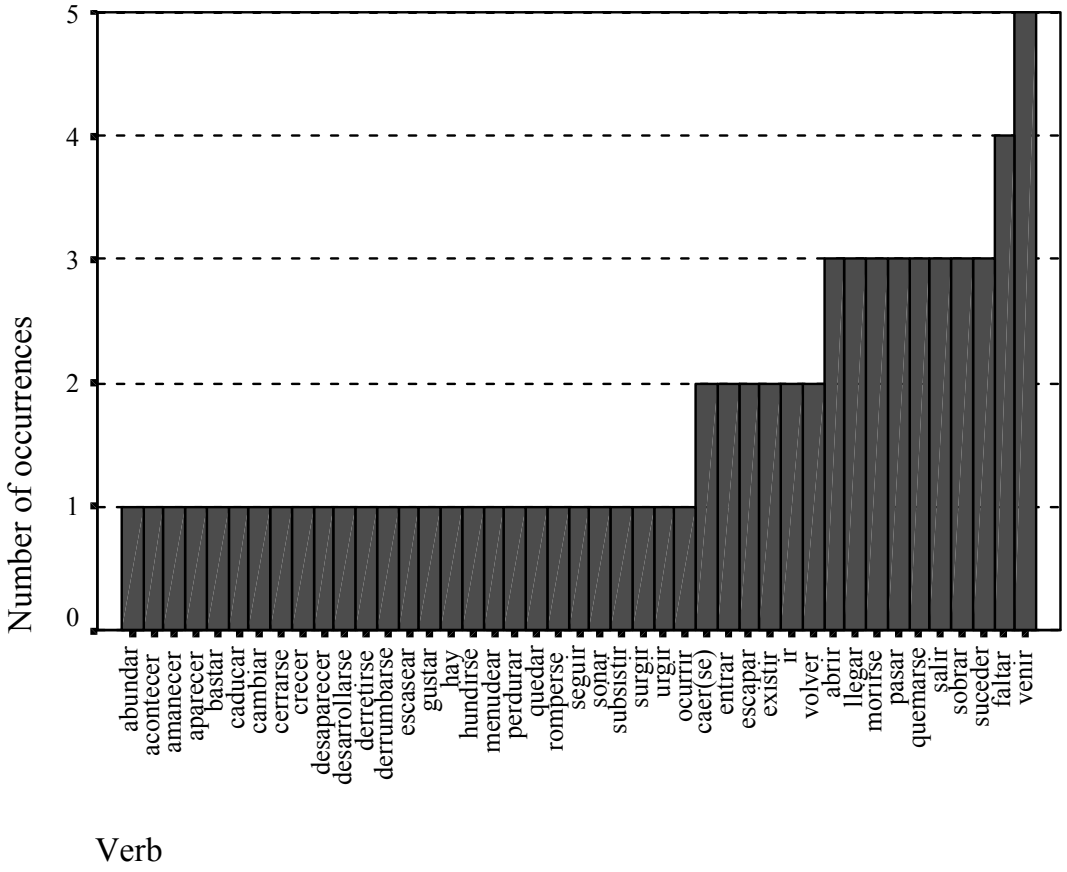
6.3.4 A list of core unaccusatives in Spanish

So far, I have discussed the properties of unaccusatives cross-linguistically, although I have not yet arrived at a set of core unaccusatives in Spanish, which will become the target items for the experimental section (Chapter 7).

The choice of unaccusatives for our experimental section is based on Sorace's (1993a, 1993b) classification. The reason for this choice lies in two facts: (i) Italian (the language Sorace analyses) and Spanish (the language to be used in the experimental section of our study) share core syntactic and semantic similarities for unaccusatives (except auxiliary selection, as argued earlier); (ii) Sorace's *unaccusativity hierarchy* offers, for the purposes of our study, a detailed (semantic and syntactic) classification of unaccusatives in the generative literature.

Following work on Spanish unaccusatives (Batchelor & Pountain, 1992; Butt & Benjamin, 1988; De Miguel, 1993; Hertel & Pérez-Leroux, 1988; López Meirama, 1997; Montrul, 1999), I present an inventory of unaccusatives in Figure 19. The *x* axis shows each unaccusative verb and the *y* axis shows the number of occurences of each of them in the literature just mentioned (e.g., if one of the above researcherw considers *venir* 'to arrive' as an unaccusative verb, then the *number of occurrences* for *venire* in the table will be 1. If another researcher does the same, the number of occurrences will therefore be 2). This provides us with a clearer picture of which unaccusatives are regarded as 'core unaccusatives' by most researchers.

Figure 19: A core set of Spanish unaccusatives



As can be observed, there is consensus amongst researchers to regard verbs of motion as true accusatives (two occurences or higher): *venir* 'to come', *llegar* 'to arrive', *pasar* 'to pass', *entrar* 'to come in', *salir* 'to leave' *escapar* 'to scape', *volver* 'to return'. As just discussed above, Sorace (1993a) also considers that the notion of *change of location* to be at the root of unaccusativity. A subset of these verbs will be use in the second experimental section of our study (Chapter 7).

Let us turn now to word order in presentational contexts.

6.4 Presentational focus contexts: SV and VS distribution

Consider now presentational focus contexts where a question like *Who shouted?* or *Who arrived*? requires a focused subject as an answer.

Consider English first. It is clear from Chapter 2 that English marks presentational focus prosodically rather than syntactically. Recall that the presentationally focused subject of unergatives is base-generated preverbally in [Spec,VP] and then raises to [Spec,TP] to check case and focus, giving rise to SV, (203). The postverbal unaccusative subject must raise from [Comp,V] to [Spec,TP] for nominative and focus feature checking purposes, also giving rise to SV order (204Bi). In short, English word order is strictly SV for both types of verbs in presentational contexts.

(203) A: 'Who shouted last night in the street?'
B: (i) [A WOMAN]$_{Foc}$ shouted (SV)
(ii) *Shouted [A WOMAN]$_{Foc}$ (VS)

(204) A: 'Who arrived last night at the party?'
B: (i) [THE POLICE]$_{Foc}$ arrived (SV)
(ii) *Arrived [THE POLICE]$_{Foc}$ (VS)

Recall from Chapter 2 that Spanish marks presentational focus syntactically (via movement). The focused subject must appear in sentence-final position as Bolinger's generalisation predicts, i.e., the informational packaging of Spanish sentences is Topic-first/Focus-last. As a result, the expected word order in presentational contexts with focused subject is VS, both for unergatives, (205), and unaccusatives, (206).

(205) A: ¿Quién gritó anoche en la calle?
B: (i) *[UNA MUJER]$_{Foc}$ gritó (SV)
(ii) Gritó [UNA MUJER]$_{Foc}$ (VS)

(206) A: ¿Quién vino anoche a la fiesta?
B: (i) *[LA POLICÍA]$_{Foc}$ vino (SV)
(ii) Vino [LA POLICÍA]$_{Foc}$ (VS)

Recall that Greek marks presentational focus in situ. The *surface* word order for presentationally focused subjects in Greek is similar to English (though their derivations differ, as I will discuss later). A question about the subject, (207A) and (208A), requires a focused subject in sentence-initial position, (207Bi) and (208Bi), and not in sentence-final position, (207Bii) and (208Bii).

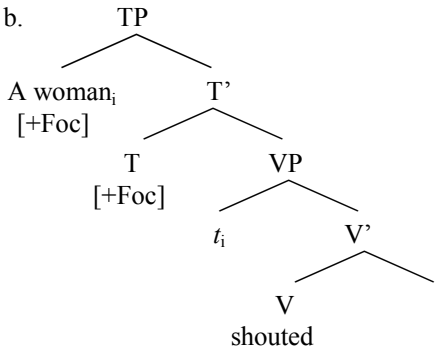
(207) A: Pios fonaxe hthes to vradi sto dromo?
'Who shouted last night in the street?'
B: (i) [MIA GINAIKA]$_{Foc}$ fonaxe (SV)
'A woman shouted'
(ii) *Fonaxe [MIA GINAIKA]$_{Foc}$ (VS)

(208) A: Pios eftase hthes to vradi sto parti?
'Who arrivated last night at the party?'
B: (i) [I ASTINOMIA]$_{Foc}$ eftase (SV)
'The police arrived'
(ii) *Eftase [I ASTINOMIA]$_{Foc}$ (VS)

To summarise, English and Greek are SV languages in presentational contexts, while Spanish is VS. This parametric difference stems from different derivations. Let us explore them in more detail.

The English SV order in presentational contexts is derived differently from the SV order of neutral contexts. Consider unergatives first. In (209) the English unergative *shouted* base-generates in V, where it remains, as English is a non-verb raising language (the weak [V] feaure of T cannot attract *shouted* to it). The subject *a woman* generates VP-internally in [Spec,VP], as is standardly assumed, and then raises to [Spec,TP] to check its [NOM] case feature. So far, this derivation is identical to the derivation presented for neutral contexts in the previous section.

(209) a. [A WOMAN]$_{Foc}$ shouted

b.


Now an explanation of how the focus feature of the subject *a woman* is checked is in order. In presentational contexts requiring a focused subject, the subject is assigned the interpretable feature [+Foc] in [Spec,TP], as there is no syntactic movement (triggered by focus) in English. An obvious question is how the focus feature gets

checked in that position, since the feature [+Foc] of focalised elements must get checked via Spec-H agreement to satisfy the Focus Criterion, as argued in Chapter 2.

If we want to maintain that the focus feature is checked via the required Spec-H agreement of the Focus Criterion, we need to postulate that (i) the subject *a woman* is specified with an interpretable [+Foc] feature, (ii) a functional head with an uninterpretable [+Foc] feature must be present and (iii) both the interpretable and the uninterpretable feature must be in a Spec-H configuration. These requirements are necessary if the the interpreable [+Foc] feature of the specifier (subject) is to be matched against the uninterpretable feature of its functional head so that the derivation is to proceed to LF for convergence.

In cases like this, where the focalised subject, e.g., *a woman*, appears in [Spec,TP], Hill (2002) and Zubizarreta (1998) propose a syncretic solution: apart from its typical features like tense and aspect, the functional head T^0 carries an uninterpretable [+Foc] feature. The specifier, [Spec,TP], hosts the focalised element carrying the interpretable [+Foc] feature, which merges with T^0. Note that, incidentally, the interpretable [+Foc] feature of the subject in the specifier, [Spec,TP] and the uninterpretable [+Foc] feature of he head T^0 would agree and delete, in satisfaction of the Focus Criterion.

Further note that [Spec,TP] would still contain its typical features such as a nominative case feature, a number feature, a person feature, etc. This is a syncretic solution, as there is no need to stipulate the existence of an extra projection (FocP) merging with TP to account for in-situ focus. Feature syncretism is desirable for economy reasons[105].

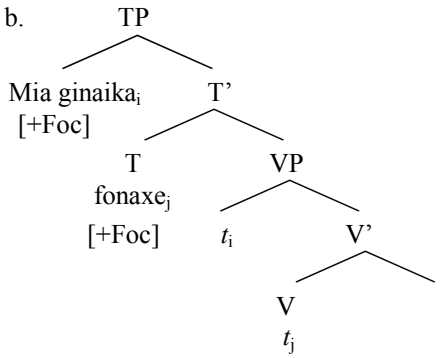
Consider now Greek, where the unergative verb *fonaxe* 'shouted' in (210) is base-generated in V and then raises to T to checks T's strong [V] feature (recall that Greek is a verb-raising language, like Spanish). The subject *mia ginaika* 'a woman' is based-generated VP internally in [Spec,VP], as is standardly assumed. It then raises to to [Spec,TP] to check nominative case and, also, to check its interpretable [Focus] feature against the uninterpretable [Focus] feature in T. This is a feature-checking syncretic solution, as in English.

---

[105] Chomsky (1995, 1998) also tends towards syncretism. He argues that functional heads are syncretic categories projecting multiple specifiers, each specifier hosting a feature. In this case, the [+Foc] feature of the subject would be located in one of the multiple specifiers of T^0. The Spec-H requirement of the Focus Criterion would still be created.

(210) a. [MIA GINAIKA]$_{Foc}$ fonaxe

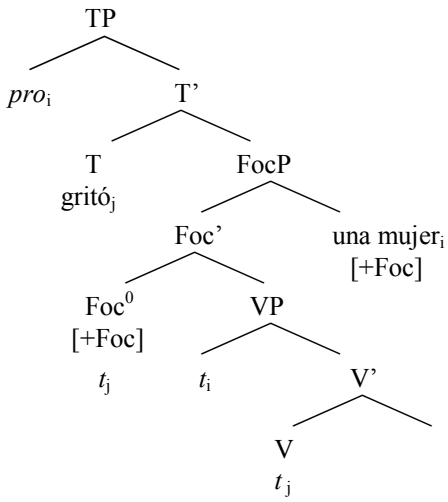
b.



Consider now the Spanish unergative counterpart, (211). The verb *gritó* 'shouted' cyclically raises (via Foc^0) to check T's strong [V] feature, as Spanish is a verb-raising language. The subject *una mujer* generates VP-internally. As it is specified with an interpretable [+Foc] feature, it must end up in a Spec-H configuration to satisfy the Focus Criterion. Recall from Chapter 2 that Belletti & Shlonsky (1995) solve this problem in presentational focus environments by proposing a FocP merging with VP. The uninterpretable [+Foc] feature of the focus head Foc^0 forces the interpretable [+Foc] feature of the subject *una mujer* to raise to [Spec,FocP] to end up in a Spec-H configuration, thus satisfying the Focus Criterion.

(211) a. Gritó [UNA MUJER]$_{Foc}$

b.



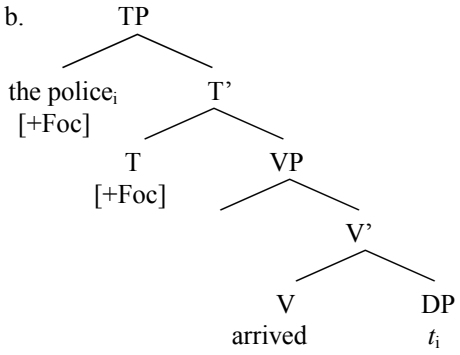
Recall that a null pronoun, *pro*, in [Spec,TP] can check the subject's nominative case. The resulting word order is VS.

Consider unaccusatives now. In (212) the English unaccusative *arrived* base-generates in V, where it remains (recall that English is a non-verb raising language).

The subject *the police* generates postverbally, as the UH predicts. It then raises to [Spec,TP] to check nominative case. Once again, this derivation is identical to the derivation presented for neutral contexts in the previous section.

(212) a. [THE POLICE]$_{Foc}$ arrived

b.

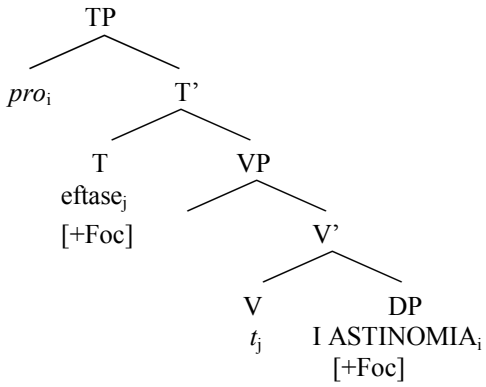


The derivation to check the interpretable [+Foc] feature of the presentationally focused subject *the police* is identical to the derivation for unergatives presented above, i.e., via syncretism (Hill, 2002; Zubizarreta, 1998). The functional head T^0 carries an uninterpretable [+Foc] feature. The subject *the police* in [Spec,TP] carries an interpretable [+Foc] feature. The interpretable [+Foc] feature of the subject in the specifier, [Spec,TP] and the uninterpretable [+Foc] feature of he head T^0 end up in a Spec-H configuration, in satisfaction of the Focus Criterion. Features agree and delete and the derivation converges at LF.

The Greek unaccusative *eftase* 'arrived' in (213) is base-generated in V and then raises to T, as is the case in verb-raising languages. The subject *i astinomia* 'the police' is based-generated VP internally in [V,Comp], as is standardly assumed for unaccusative verbs (e.g., Alexiadou & Anagnostopoulou, 1999). It then remains *in situ*, where it checks focus. Recall from our earlier discussion that in null-subject languages like Greek (and Spanish), a null pronominal *pro* in [Spec,TP] can check the nominative case of the unaccusative postverbal subject in [V,Comp], so that the postverbal subject is not forced to raise to check case.

(213) a. Eftase [I ASTINOMIA]$_{Foc}$

b.



I will follow theoretical analyses (Kiss, 1998; Tsimpli, 1990, 1995) and the bulk of evidence presented so far in assuming that in Greek presentational focus is checked *in situ* (while contrastive focus is clearly a left-peripheral phenomenon). This entails that the presentationally focused subject of Greek unaccusatives checks focus postverbally[106]. However, it is not clear in the generative literature how or where the focus feature gets checked. There are two possibilities:

(i) The [+Foc] feature of the postverbal subject *i astinomia* gets checked covertly (at or before LF), as I have implicitly assumed in (213). In other words, satisfaction of the Focus Criterion does not take place in the overt syntax.

(ii) It can be conjectured that V^0 carries an uninterpretable [+Foc] feature that gets checked against the interpretable [+Foc] feature of the subject *i astinomia*. A Spec-H configuration is thus created, in satisfaction of the

[106] At this point, note that the generative theory predicts that presentationally focused elements in Greek check focus *in situ* (Kiss, 1998; Tsimpli, 1990, 1995), as I have assumed throughout. In particular, these linguists propose that Greek has no designated structural position for presentational focus. This amounts to saying that, theoretically, the subject of unaccusatives should be able to check focus in its postverbal position, [V,Comp], as I have assumed in (213). This stems from the standard assumption that (i) Greek unaccusative subjects are base-generated postverbally and (ii) their nominative case is checked by *pro* in [Spec,TP] (Alexiadou & Anagnostopoulou, 1999). However, my two Greek native informants allow presentationally focused subjects with unaccusatives to appear both in postverbal position, as just shown in (213), and in preverbal position (*I ASTINOMIA eftase*). There seems to be a tendency for them to check presentational focus in the *canonical* subject position, i.e., subjects check focus in [Spec,TP] irrespective of verb type (likewise, objects check focus in their *canonical* position, [V,Comp]). Whether my native informants' judgements represent the Greek native norm or not, the argument that presentational focus in Greek is *not* configurational still holds, as there is no designated structural position for presentationally focused elements.

> Focus Criterion. Presumably, presentationally focused objects in Greek must check focus in a similar fashion, as they remain *in situ*, [V,Comp].

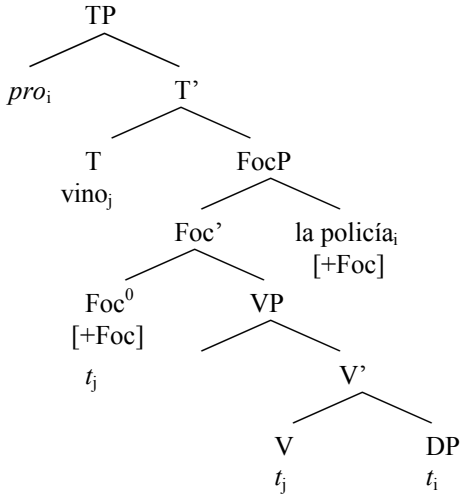
Whether the domain of focus cheking in presentational environments with Greek unaccusative subjects is [Spec,T] or [V,Comp], it does not affect the main argument in the current study, namely, that the Greek focus head is (i) weak in presentational contexts (as the focalised element is not attracted to an intermediate focus projection between TP and VP, but rather remains *in situ*), yet (ii) strong in contrastive contexts (as the focalised element is attracted to a left-peripheral focus projection outside TP)[107].

Consider now Spanish unaccusatives, (214), where the verb *vino* 'arrived' cyclicly raises to check T's strong [V] feature, as Spanish is a verb-raising language. The subject *la policía* generates postverbally, as the UH stipulates. As it is specified with an interpretable [+Foc] feature, it must end up in a Spec-H configuration to satisfy the Focus Criterion. Once again, Belletti & Shlonsky's (1995) solution can explain the data. The FocP merges wih VP. The uninterpretable [+Foc] feature of the focus head Foc^0 forces the interpretable [+Foc] feature of the subject *la policía* to raise to [Spec,FocP] to end up in a Spec-H configuration, thus satisfying the Focus Criterion. A null pronoun, *pro*, can check the subject's nominative case, so that it is not forced to raise to [Spec,TP]. The resulting word order is VS.

[107] It should be noted that that the generative literature on Greek (e.g., Alexiadou & Anagnostopoulou, 1999; Agouraki, 1990; Kiss, 1998; Tsimpli, 1990, 1995) does not discuss cases where presentational focus *and* unaccusatives are involved, as most of the analyses presented discuss focus and transitive verbs only. Further theoretical and empirical research on the effects of presentational focus with Greek unaccusatives is needed. I therefore leave this issue open for future research.

(214) a. Vino [LA POLICÍA]$_{Foc}$

b.



To summarise, the word order distribution of Spanish, Greek and English in presentational contexts is shown in Table 18.

Table 18: Word order in presentational contexts

	Unergatives	**Unaccusatives**
English	SV	SV
Greek	SV	VS
Spanish	VS	VS

6.5 Conclusion on neutral vs. presentational contexts

Table 19 summarises our discussion so far: (i) *Neutral contexts.* Spanish and Greek behave alike: SV for unergatives and VS for unaccusatives. English is strictly SV; (ii) *Presentational contexts*: English and Greek behave alike with unergatives: SV, but Spanish is VS[108]. English is SV with unaccusatives, but Spanish and Greek are VS.

[108] Note that in this chapter I have not dealt with word order in *contrastive* focus contexts, as it will not be relevant for the experimental section in chapter 5.

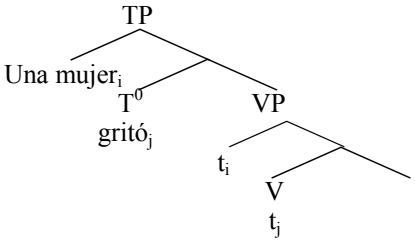
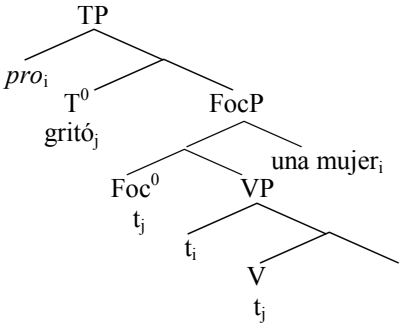
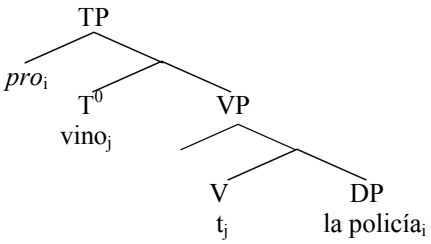
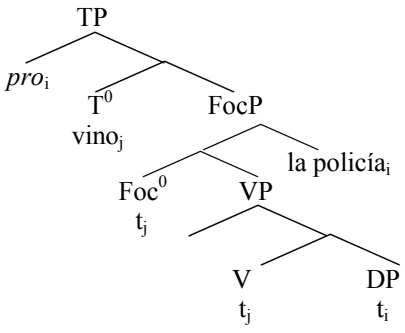
Table 19: Verb type, focus and word order

Verb	Focus	Question	Answer	Order
Unerg	**Neutral**	What happened?	A woman shouted	SV
	(All focus)	Ti sinaini?	Mia ginaika fonaxe	SV
		¿Qué pasó?	Una mujer gritó	SV
	Presentational	Who shouted?	A WOMAN shouted	SV
	(Focused Subject)	Pios fonaxe?	MIA GINAIKA fonaxe	SV
		¿Quién gritó?	Gritó UNA MUJER	VS
Unac	**Neutral**	What happened?	The police arrived	SV
	(All focus)	Ti sinaini?	Eftase i astinomia	VS
		¿Qué pasó?	Llegó la policía	VS
	Presentational	Who arrived?	THE POLICE arrived	SV
	(Focused Subject)	Pios eftase?	Eftase I ASTINOMIA	VS
		¿Quién llegó?	Llegó LA POLICÍA	VS

Table 20 (next page) summarises the derivations of Spanish unergatives vs. unaccusatives in neutral vs. presentational contexts. This summary will be relevant for the discussion in the experimental section (Chapter 7).

We are now in a position to review the L2 literature on the acquisition of unaccusatives.

Table 20: Summary of unergative and unaccusative representations in Spanish

	Neutral	**Presentational**
Unergatives	(215) A: ¿Qué pasó? 'What happened?' B: [Una mujer gritó]$_{Foc}$ 'A woman shouted' 	(216) A: ¿Quién gritó? 'Who shouted?' B: Gritó [UNA MUJER]$_{Foc}$ Shouted a woman 'A woman shouted' 
Unaccusatives	(217) A: ¿Qué pasó? 'What happened?' B: [Vino la policía]$_{Foc}$ Arrived the police 'The police arrived' 	(218) A: ¿Quién vino? 'Who arrived?' B: Vino [LA POLICÍA]$_{Foc}$ Arrived the police 'The police arrived' 

6.6 A review of the L2 literature on unaccusatives

This section presents an analysis of recent L2A work on unaccusativity. However, in the field of third language acquisition (L3A) there is a gap in the literature. I intend to bridge this gap in L3A by conducting an experimental study (Chapter 7) to test

whether Spanish L2/L3 learners' knowledge of unaccusativity is convergent/divergent in both in neutral and presentational contexts as none of the studies about to be reviewed distinguished neutral vs. presentational contexs, except Hertel's (2000).

The purpose of this literature review is to illustrate and discuss whether L2 learners show convergent or divergent representations of split-intransitivity (i.e., unaccusatives vs. unergatives) with respect to native speakers. It will be shown that some L2 learners are sensitive to split-intransitivity (i.e., the Unaccusative Hypothesis), since they differentiate between unergatives and unaccusatives.

6.6.1 De Miguel (1993)

De Miguel (1993) investigates SV and VS orders with unaccusative verbs in Spanish L2A, as Burzio's (1986) UH predicts. It was hypothesised that Spanish natives would prefer VS order with unaccusatives, but prefer SV with other verb types (unergatives and transitives).

Before proceeding, it is important to highlight a key assumptions in De Miguel's (1993) study, which will later help understand her conclusions. She does not consider unaccusative VS to be part of the pro-drop parameter. She argues that, as unaccusative inversion depends on the semantics of the verb, inversion is not amenable to parameterisation. However, in recent minimalist proposals (e.g., Chomsky, 1995, 1998) the functional features of the lexicon are responsible for cross-linguistic parametric variation. Therefore, De Miguel arguments would not totally disagree with recent minimalist assumptions.

Two groups participated in the study. The experimental group consisted of 13 L1 American English learners of L2 Spanish in Madrid. Six Spanish natives acted as the control group. The learners had been learning Spanish for approximately 2½ - 3 years and were considered to be at an advanced level of proficiency, although De Miguel does not provide proficiency scores to support this assumption.

Two tests were administered: (i) a production test: a written composition about a film the students had watched recently; (ii) a grammaticality judgement test (GJT) consisting of 24 written sentences containing both SV and VS orders with unaccusatives, unergatives and transitives. The sentences were not presented in

context, i.e., it is difficult to see whether learners where reacting to word orders in neutral or presentational focus environments[109].

Let us consider the production task first. Results indicate that learners do not produce VS constructions except for a small set of unaccusatives, as Table 21 shows.

Table 21: Production task: VS rates

Verb	**No. of productions**	**No. of learners**
Gustar 'to please'	9	6
Haber/existir 'to exist'	6	4
Ser/estar 'to be'	3	3
Quedar 'to remain'	1	1
Salir 'to leave'	1	1
Cambiar 'to change'	1	1
Acontecer 'to happen'	1	1
Llegar 'to arrive'	1	1
Visitar 'to visit'	1	1
Desarrollarse 'to develop'	1	1

(Source: adapted from De Miguel, 1993:183, her table 1)

Note that most of the verbs in the table are typically considered unaccusatives (*haber/existir* 'to exist', *quedar* 'to remain', *salir* 'to leave', *llegar* 'to arrive', etc) except *gustar* 'to like/please' and *visitar* 'to visit' (both being transitives in Spanish). This result would suggest that learners show productive knowledge of the VS with unaccusatives constructions, probably due to Burzio's (1986) UH generalisation. However, De Miguel does not seem to consider these results as evidence of such knowledge, as she claims that learners *also* accept VS with unergatives and transitives in the GJT.

Consider the GJT. Results in Table 22 indicate that learners are more tolerant with unaccusative VS order (above 92%) than with transitive VS (58% and below) and

[109] I assume that sentences presented in an 'out-of-the-blue' context are typically interpreted as neutral focus as the whole sentence is all-focus (new information). Consequently, De Miguel's (1993) results

unergative VS (66% and below)[110]. As expected, Spanish natives show high tolerance to VS with unaccusatives (100% except for *adelgazar* 'to slim', 40%) and zero tolerance to VS order with transitives and unergatives (0%, except for *nadar* 'to swim', 50%).

Table 22: GJT task: VS acceptance rates

Verb type	Learners	Natives
Unaccusative (VS)		
Seguir 'to continue'	92%	100%
Quedar 'to remain'	100%	100%
Pasar 'to pass'	92%	100%
Derrumbarse 'to collapse'	92%	100%
Volver 'to return'	92%	100%
Venir 'to arrive'	92%	100%
Adelgazar 'to slim'	93%	40%
Brotar 'to spring'	92%	100%
Entrar 'to enter'	92%	100%
Transitive (VS)		
Leer 'to read'	58.3%	0%
Guardar 'to hide'	33.3%	0%
Escuchar 'to listen'	16.6%	0%
Unergative (VS)		
Nadar 'to swim'	66.6%	50%
Protestar 'to protest'	58.3%	0%
Telefonear 'to phone'	83.3%	0%

(Source: adapted from De Miguel, 1993:185, her table 2)

De Miguel (surprisingly) claims that these results cannot be taken as evidence to support the claim that L2 learners are sensitive to VS constructions with unaccusatives because they *also* accept VS with transitives and intransitives. However, I believe that, contrary to De Miguel's claim, her results support the idea

will apply to neutral contexts only, which, recall from the previous sections, are governed by UG (in particular, by Burzio's (1986) UH)).

that learners are sensitive to the unaccusative (vs. unergative/transitive) distinction as the high acceptance of unaccusative VS (versus low acceptance of unergative/transitive VS) precisely shows. Otherwise, we would expect higher acceptance rates of VS with unergatives and transitives. Also note that learners tend towards the end of the native speakers' scale more with unaccusatives than with other constructions.

In the GJT, subjects were also asked to correct SV to VS for those sentences that did not 'look' grammatical, as shown in Table 23.

Table 23: GJT: Correction rates from SV to VS

Verb type	Learners	Natives
Unaccusative		
Venir 'to come'	25%	33%
Amanecer 'to dawn'	67%	100%
Llegar 'to arrive'	92%	83%
Faltar 'to lack'	75%	100%
Crecer 'to grow'	8%	83%
Transitive		
Tirar 'to throw'	0%	0%
Comer 'to eat'	0%	0%
Unergative		
Hablar 'to speak'	0%	0%
Quejarse 'to complain'	0%	0%

(Source: adapted from De Miguel, 1993:188, her table 3)

Once again, the correction rates support the idea, contrary to De Miguel's claim, that learners show awareness that the word order with unaccusatives is not SV but rather VS (highest correction rate 92%, lowest 8%)[111], yet they consider that the typical order is SV (0% of correction) for the rest of the verbs (transitives and unergatives).

[110] Except for *telefonear* 'to phone', 83%.

[111] Note that natives did not correct *venir* 'to come' from SV to VS as much as expected (only 33% of the time). The majority of studies consider *venir* as the prototype of unpaired unaccusative (recall from Figure 19, p. 160).

De Miguel (1993:186) concludes that 'the non native's behaviour is not due to parameter setting but to learning, or bad learning, as a result of imprecise teaching [of constructions admitting VS order]'. She further notes that:

> 'The conclusion of this study is that in order to teach (and to learn) unaccusative constructions allowing inversion, it is necessary to complement the theory by establishing a semantic classification of verbs, which will allow to recognise the syntactic behaviour of verbs.' (De Miguel, 1993:190)

As argued earlier in this chapter (p. 159), for our experimental study I have proposed such a semantic classification based on Sorace's (1993a) Unaccusativity Hierarchy.
De Miguel's (1993) claim that unaccusatives are not given attention in Spanish language teaching can be sustained. An analysis of Spanish grammar books shows how little attention unaccusatives receive in Spanish L2 teaching. For example, Butt & Benjamin (1988:394-400) discuss SV/VS orders in terms of focus, yet do not mention unaccusatives. Turk & Zollo (1993) do not mention unaccusatives either. Batchelor & Pountain's (1992:172) briefly mention that VS order is possible with certain verbs (like *faltar* 'to lack', *sobrar* 'to be left', etc). These are unaccusative verbs, though the authors do not recognise them as such.
However, I believe that De Miguel's (1993) results crucially show that English learners of Spanish at (supposedly) high-intermediate/advanced levels of proficiency do show sensitivity to UH, as they produce and prefer VS order with unaccusatives more than with any other verb type.

6.6.2 Sorace (1993a)

Sorace (1993a) investigates several properties of unaccusativity in L2 Italian. Recall that in Italian, unaccusatives take AUX *essere* 'be' in perfective constructions, whereas unergatives take AUX *habere* 'have'. This is a categorical rule in Italian native grammars with core unaccusatives, as the contrasts in (219) reveal.

(219) **Categorical**: $AUX_{be/*have}$ + V
   a. Mario *è* andato a casa
   b. *Mario *ha* andato a casa
      'Mario is/has gone home'

Unaccusatives can optionally select either *essere* or *habere* with modal verbs such as *potere* 'to be able to'. This is an optional rule in Italian native grammars, as the contrasts (220) in show.

(220) **Optional**: $AUX_{be/have}$ + MODAL + V
   a. Maria non ha potuto venire alla mia festa
   b. Maria non è potuta venire alla mia festa
      Maria not has/is can come to-the my party
      'Maria has not been able to come to my party'

Another optional rule concerns the optionality of AUX choice in constructions where there is no clitic climbing. In (221), the unaccusative verb can equally select *essere* or *habere* providing the clitic *ci* 'there' remains after the infinitival unaccusative.

(221) **Optional**: $AUX_{be/have}$ + MODAL + V + CLITIC
   a. Alla mia festa, Maria non *ha* potuto andar*ci*
   b. Alla mia festa, Maria non *è* potuta andar*ci*
      To-the my party, Maria not is/has can come- there
      'To my party, Maria has not been able to come'

In cases where the clitic has climbed to the left of the AUX, Italian native grammars are categorical: *essere* is selected, not *habere*, as the contrasts in (222) show.

(222) **Categorical**: CLITIC $AUX_{be/*have}$ + MODAL+ V
   a. Alla mia festa, Maria non *ci è* potuta venire
   b. *Alla mia festa, Maria non *ci ha* potuto venire
      To-the my party, Maria not there is/has can come
      'To my party, Maria has not been able to come'

The subjects used in the study consisted of 44 learners in total, divided into two experimental groups plus a native control group, as summarised in Table 24. Both the French non-native speakers (FNNS) and the English non-native speakers (ENNS) were learners of Italian. The learners had had an average 9-year exposure to Italian and were living in Italy or with Italians, and were therefore considered near-natives. An Italian native speaker group (INS) served as control.

Table 24: Groups in Sorace (1993a)

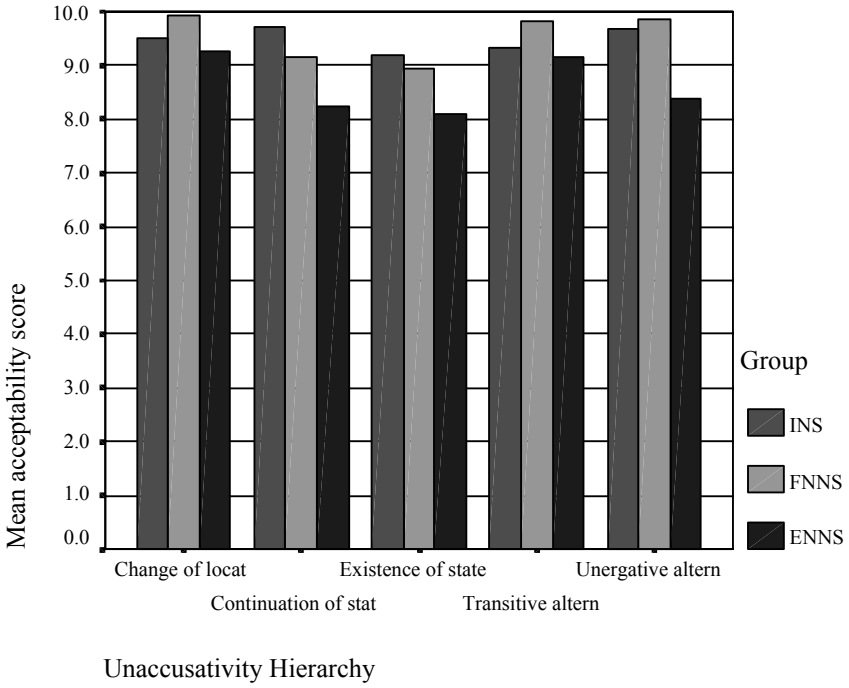
Group	N	L1	L2
FNNS	20	French	Italian
ENNS	24	English	Italian
INS	36	Italian	

Sorace (1993a) hypothesised that (i) learners would show sensitivity to the Unaccusativity Hierarchy (see Table 17, p. 157), preferring AUX *essere* with unaccusatives, as Burzio's (1986) Unaccusativity Hypothesis predicts; (ii) learners would show a difference in mental representation between natives and learners on the basis of (a) categorical vs. optional constructions with unaccusatives and (b) the extent to which unaccusativity is manifested in the learners' L1.

The methodology adopted was a Magnitude Estimation Technique (MET), which is a type of GJT, though subjects have to associate numerical judgements with isolated sentences (see Sorace 1996 for further details). 48 sentences contained, amongst other properties being tested, unaccusative constructions with both auxiliaries: *essere* (grammatical constructions, as in (219a)) and *habere* (ungrammatical constructions, as in (219b)). The *essere* versions were all grammatical, though the *habere* versions ranged from grammatical to ungrammatical, depending on the categorical/optional nature of the construction, as shown in (219)-(222).

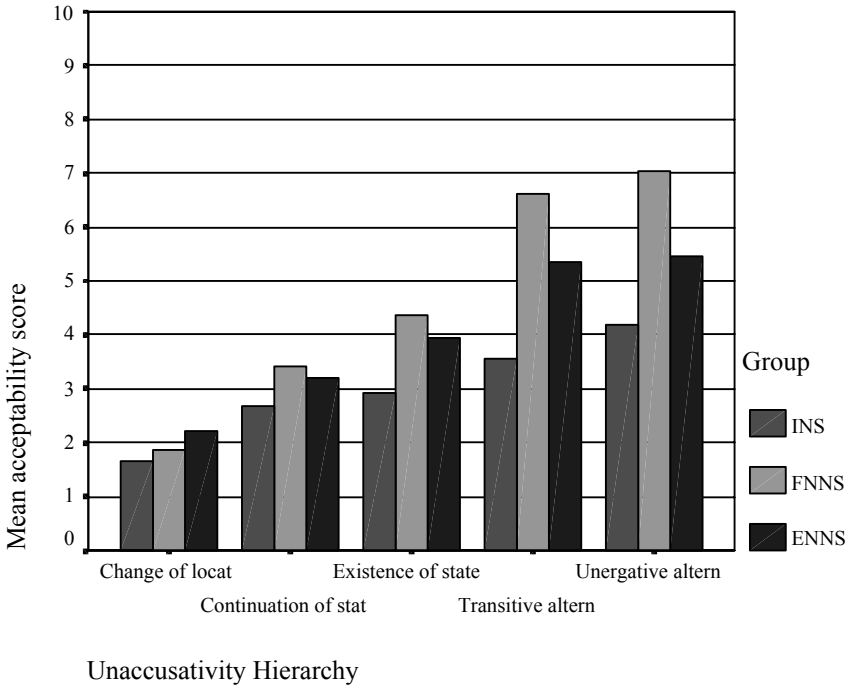
Let us first discuss findings regarding categorical auxiliary choice in sentences like (219). Results indicate that, although learners' intuitions are generally different from native Italian intuitions, both groups of learners are sensitive to the semantic classification of unaccusatives along the Unaccusativity Hierarchy. In particular, whereas their acceptance rates of grammatical *essere* were above 80% (Figure 20) their acceptance of ungrammatical *habere* is low with core unaccusatives (around 20%) and increases with periphery unaccusatives (around 60%) (Figure 21).

Figure 20: Grammatical AUX *essere* with unaccusative verbs



Source: adapted from Sorace (1993a:37, her table 1).

Figure 21: Ungrammatical AUX *habere* with unaccusatives



Source: adapted from Sorace (1993a:37, her table 1).

Overt unaccusativity is instantiated in French to a lesser extent than in Italian, whereas it is not instantiated in English. It could thus be argued that the French group showed knowledge of Italian unaccusativity due to the fact that unaccusatives are instantiated in their L1 French. Yet the English group also shows knowledge of it though unaccusativity is not instantiated in their L1 English (at least, its morphosyntactic manifestations are not very regular or salient; see Levin & Rappaport-Hovav, 1995). This yields indirect support to (i) the universality of the Unaccusativity Hypothesis, and to (ii) the Unaccusativity Hierarchy proposed by Sorace (1993a, 1993b), since both groups of learners prefer AUX *habere* more with periphery unaccusatives (e.g., *correre* 'to run', *augmentare* 'to augment') than with core unaccusatives (e.g., *venire* 'to come', *rimanere* 'to remain'). In Sorace's words:

> 'the judgements of both native and non-native speakers about violations of *essere*-selection with unaccusative verbs is conditioned by the position of the verbs along the unaccusative hierarchy.' (Sorace, 1993a:38).

Let us turn now to the categorical vs. optional construction results. With respect to the categorical construction containing clitic climbing, (222), Italian natives significantly prefer grammatical auxiliary *essere* (86%) to ungrammatical *habere* (32%), as expected. French native speakers also differentiate significantly between the grammatical and ungrammatical auxiliary (85% vs. 43%). However, English natives accept both the grammatical and ungrammatical construction to the same extent (63% vs. 66%). Sorace (1993a) concludes that French natives' intuitions are similar to Italian native intuitions, whereas English natives' judgements are indeterminate, as they cannot distinguish between the grammatical and ungrammatical construction.

With respect to optional constructions with modal and no clitic, (220), and with modal and clitic, (221), Italian natives accept both (93% vs. 97% for the former and 82% vs. 88% for the latter). French native intuitions diverge with respect to Italian natives', as they reject *essere* but prefer *habere* (38% vs. 94% for the former and 41% vs. 78% for the latter). English native spakers show indeterminate intuitions once again, as they cannot decide between the two auxiliaries, accepting both sentence types above chance level (72% vs. 70% and 68% vs. 62%).

The overall pattern reveals that English subjects show indeterminate intuitions about categorical and optional constructions, whereas French subjects show native-like

intuitions with categorical constructions, yet divergent intuitions with optional constructions.

To summarise, learners are sensitive to the Unaccusativity Hierarchy. This is expected under the assumption that Burzio's Unaccusativity Hypothesis is operational in L2A. However, learners can show native-like or near-native (divergent/incomplete) intuitions depending on the categorical status of the construction and depending on the learners' L1.

Sorace's (1993a) findings support the idea that learners' knowledge is constrained by UG in cases like (219). However, it is not entirely clear why their representations should converge or diverge with native intuitions in constructions like (220)-(222). One of the claimed sources of such divergence is the L1. But this needs qualification. To start with, note that Sorace's (1993a) study was conducted in a pre-Minimalist framework. She argues that:

> 'The incomplete grammar, lacking a given L2 property *P*, would lead to … indeterminate judgements about *P* … whereas the divergent grammar, since it incorporates an alternative representation of *P*, would lead to determinate judgements that are consistently different from native judgements.' (Sorace, 1993a: 24).

A minimalist approach to L2A would envisage Sorace's (1993a) conclusion in the form of features. The above statement amounts to saying that in cases where a given feature in the learners' L1, $[F_{L1}]$, differs from the same feature in their L2, $[F_{L2}]$, near-native (divergent/incomplete) representations[112] are expected to occur. In our experimental study, I will approach this issue under a feature-based model of acquisition in the light of recent findings on featural deficits (e.g., Beck, 1998; Eubank, 1986; Hawkins, 2000; Hawkins & Chan, 1997).

6.6.3 Balcom (1997)

In English, the transitive verb *sink* in (223a) selects a postverbal object argument, *the submarine*. When used unaccusatively, the object of *sink* surfaces as the subject, (223b). In passive constructions, (223c), the subject is also claimed to base-generate

[112] Recall from our discussion in chapter 1 that I use terminology differently in these cases, i.e., divergent (near-native/optional/indeterminate).

in object position (see, e.g., Borsley, 1999; Haegeman & Guéron, 1999; Radford, 1997). Recall that these claims are predicted by UTAH (Baker, 1988).

(223) a. The enemy sank the submarine
b. The submarine$_i$ sank t_i
c. The submarine$_i$ was sunk t_i

The passive-unaccusative similarity is precisely the focus of Balcom's (1997) study. She investigated the extent to which English L2 learners produce passive morphology with unaccusative verbs. Building on work by Zobl (1989), Balcom discusses inappropriate use of passive morphology in English (i.e., AUX *be* + past participle, 'pp' henceforth), as (224) shows.

(224) The most memorable experience of my life *was happened* 15 years ago
(Source: Zobl, 1989)

38 Chinese native learners of L2 English participated in the study. Their TOEFL mean score was 578, which means that they were linguistically ready to enter an English-speaking university. Two different methods were used: an acceptability task (grammaticality judgement test, GJT) and a production task (a cloze passage). In the GJT subject marked as grammatical/ungrammatical/not sure a series of sentences: 20 were grammatical and 15 were ungrammatical. The latter contained inappropriate use of *be* + pp, (225).

(225) *The door *was closed* smoothly because Mary had remembered to oil the hinges

In the cloze passage subjects were presented with a passage containing 39 blanks immediately followed by the base form of the verb in brackets, as in (226). Both the GJT and the cloze passage contained the same set of unaccusatives.

(226) The Great Fire _____ (*take place*) in St John's on July 8, 1892. It _____ (*begin*) in Timothy O'Briens stable, at the corner of Freshwater and Pennywell. The fire _____ (*happen*) because a lit pipe _____ (*fall*) into the hay…

The GJT results indicate that the acceptance of *be* + pp differs among verb classes, ranging from 4% to 71%. There is a statistically significant difference in acceptance of *be* + pp with unaccusative constructions (high acceptance) vs. other verbal constructions (low acceptance).

The cloze passage results also suggest that subjects produce more passive morphology with unaccusatives than with other verb types, though its frequency is not as high as in the GJT.

Balcom (1997) concludes that Chinese learners of English tend to accept and produce ungrammatical unaccusative constructions with *be* + p.p., even though such constructions are not instantiated in their L1. It is therefore reasonable to assume that knowledge of unaccusativity by Chinese learners of English is constrained by Burzio's (1986) UH and Baker's (1988) UTAH.

There is at least another study showing circumstantial evidence about the use of AUX *be* with unaccusatives in L2 English. Ruiz de Zarobe (1998), in a study investigating the properties of the pro-drop parameter by Spanish natives learning English, shows instances where subjects produced sentences like (227a), where the AUX *be* is used with the unaccusative *arrive* (although it is not in pp form). As we have already clarified, auxiliary choice in perfective forms is barred in Spanish (where the suitable AUX is *haber* 'have', like in English). Cases like (227a) cannot be attributed to L1-L2 transfer, but rather to the hypothetical universal existence of unaccusativity.

(227) a. English: *Today *are* arrive the books
b. cf. Spanish: Hoy *han* llegado los libros
Today have arrived the books
'The books have arrived today'

This finding is further validated by Sorace's (1993) study of French and English natives learning L2 Italian:

> 'The fact that both subject groups –irrespective of the auxiliary system in their native language– are sensitive to the Unaccusative Hierarchy also confirms the 'naturalness' of the connection between *essere* ['be'] and unaccusativity.' (Sorace, 1993a:39).

However, it is not entirely clear why learners use passive morphology (i.e., AUX 'be') with unaccusatives. Oshita (2000) critically reviews some proposals put forth in the

L2A literature and argues that such usage should be regarded as the overt marking of the object DP movement.

6.6.4 Hertel and Pérez-Leroux (1999)

Hertel and Pérez-Leroux' (1998) pilot study investigates the learnability of SV and VS orders with unergatives and unaccusatives. They assume that (i) availability of positive evidence underdetermines what the learner must acquire (poverty-of-the-stimulus phenomenon), as the input contains SV and VS alternations; (ii) instruction is insufficient, as only interrogative inversion is explained in textbooks[113].

In particular, their study tries to ascertain whether Spanish L2 learners' knowledge of verb classes is constrained by the semantics of the verb, i.e., whether they prefer VS with unaccusatives yet SV with unergatives.

Two groups of learners participated in the study: 16 L1 English undergraduate students enrolled in a Spanish course at beginner's level and 5 L1 English graduate students at advanced level (though no proficiency scores are provided). 5 Spanish natives served as control. The methodology consisted of a GJT and an oral narration task.

In the GJT participants rated sentences on a 5-point Likert scale. Such sentences contained both SV and VS orders with both unergative and unaccusative verbs. (228) exemplifies such alternation with an unergative and (229) with an unaccusative[114].

(228) a. Cristina durmió bien anoche (unergative SV)
'Cristina slept well last night'

b. *Telefoneó Marcos anoche (unergative VS)
Phoned Marcos last-night
'Marcos phoned last night'

[113] Note that this assumption is supported by De Miguel's (1993) findings, as just discussed in section 6.6.1, p. 171.

[114] Note that the unaccusative sence in (229b) contains preverbal phonetic material. The presence of the adverb *sólo* 'only' requires a contrastive focus reading, i.e., 'It is only Sara and Miguel who left', instead of 'Sara and Miguel left'. I believe that the presence of such operators in the lef periphery (presumably in [Spec,FocP]) bias for a contrastive focus reading and not for a neutral focus reading, as Pérez-Leroux & Hértel (1999) assume (see López & Winkler, 2000, for a discussion on the operator *sólo* in Spanish).

(229) a. *Susana vino con su hermano (unaccusative SV)
'Susana arrived with her brother'
b. Sólo salieron Sara y Miguel (unaccusative VS)
Only left Sara and Miguel
'It is only Sara and Miguel who left'

The overall GJT within-group results shows that both groups of learners manifest preference for VS order with unaccusatives, as well as natives did. As for SV order, all groups preferred it with unergatives. These results support the initial research question, i.e., learners do favour SV order with unergatives but VS order with unaccusatives and, therefore, are sensitive to verb class at two levels of proficiency.
It is crucial to recall that English is a language where unaccusativity is not overtly marked (neither morphologically nor by optional inversion). This can serve as evidence to support again the idea that the UH is a proposed universal invariant.
In the oral narration task subjects retold a children's picture book, allowing for constructions containing VS order with unaccusatives. Overall results indicate that natives produced more VS constructions than the L2 grops and the advanced group produced more VS than the intermediate group. Inversion with unergatives was rare for all groups.
Pérez-Leroux & Hertel, 1999: 238) conclude that:

> Rather than full transfer of strict SVO order from English, learners seem to possess knowledge of L2 syntax-semantics correspondences that are not salient in the input, suggesting access to UG.

To summarise, English learners of Spanish are sensitive to lexical constraints. In particular, they prefer VS with unaccusatives but SV with unergatives, thus supporting Burzios's (1986) UH.

6.6.5 Montrul (1999)

Montrul (1999) investigates knowledge of the syntactic distribution of unaccusatives in L2 Spanish by English and Turkish natives at intermediate levels of proficiency. Some unaccusatives like *romper* 'to break' can alternate in transitivity, (230). Other unaccusatives like *morir* 'to die' are lexically paired with a transitive like *matar* 'to

kill', (231). However, a subset of unaccusatives like *aparecer* 'to appear' cannot lexically pair with a transitive, (232).

(230) Alternating in transitivity:
a. El ladrón rompió la ventana (transitive)
'The thief broke the window'
b. La ventana se rompió (unergative)
'The window broke'

(231) Lexically paired with a transitive:
a. El policía mató al ladrón (transitive)
'The police killed the thief'
b. El ladrón murió (unergative)
'The thief died'

(232) Lexically unpaired with a transitive:
a. *Aladino apareció al genio (transitive)
'Aladdin appeared the genius'
b. El genio apareció (unergative)
'The genius appeared'

A picture judgement task (PJT) was used. Subjects were presented with a picture (e.g., a thief breaking a window) containing two sentences: (a) *el ladrón rompió la ventana* 'the thief broke the window' (correct interpretation) and (b) *el ladrón hizo romper la ventana* 'the thief had the window broken' (incorrect interpretation). Each sentence had to be judged in a 7-point Likert scale (–3 very unnatural, +3 very natural). Results show that learners know that alternating unaccusatives alternate in transitivity and that lexically paired and unpaired unaccusatives do not. A considerable proportion of causative errors were accepted with unpaired unaccusatives, as in (233b), a well attested phenomenon in L1A.

(233) a. (Se) cayó la muñeca (unaccusative)
(REFL) fell the dolly
'The dolly fell down'
b. *El niño cayó la muñeca (causative)
'The boy fell the dolly'
(intended to mean 'The boy threw the dolly')

(233b) shows that learners are overgeneralising the transitive-intransitive alternations of (231) and (232) 'simply because the paired verbs should activate the causative counterpart stored in memory.' (Montrul, 1999: 216). Causative errors ocurred regardless of the learners' L1. The Spanish L2 input does not contain instances of this type of causatives either, as they are ungrammatical. Montrul (1999:214) concludes that L1A and L2A are 'guided by the interaction of input and universal components of language'.

Montrul's (1999) findings deny the influence of the learners' L1 with respect to causativity. However, she notes that the English group's performance was poorer than the Turkish group's in the overt marking of reflexive morphology (marker *se*[115] in example (233) above) due to the fact that, while Turkish overtly marks reflexivity with the morpheme *-il-*, English does not. In our study, I will assess, amongst other things, the extent of L1 influence in learners' knowledge of Spanish unaccusativiy (Chapter 7).

6.6.6 Hirakawa (1999)

Hirakawa (1999) investigates the acquisition of unaccusatives in L2 Japanese. It was hypothesised that learners would show sensitivity to the unaccusative/unergative distinction, as it is assumed that learners are guided by Burzio's (1986) UH and Baker's (1988) UTAH.

In particular, Hirakawa investigates learners' sensitivity to 'deep' unaccusativity[116]. Recall from examples (192)-(194) on page 153 (here repeated as (234)-(236)) that in Japanese the adverb *takusan* 'a lot' can apparently modify both the dropped subject and object of the transitive verb *yon* 'read'. For Japanese natives, however, *takusan* is interpreted as modifying the VP-internal argument, i.e., the object (i.e., that *somebody read a lot of things*, not that *a lot of people read something*).

[115] Burzio (1986) analyses the Spanish *se* reflexive as marking lack of agentivity.

[116] Hirakawa (1999) also investigates *surface* unaccusative effects like nominative case drop. However, I will not review this as the relevant information for our experimenal study in chapter 5 is whether learners are sensitive to *deep* unaccusativity, i.e., to Burzio's (1986) claim that the subject of unaccusatives originates in object position.

(234) Takusan yon-da
A lot read-PAST
'He/she/they/etc read a lot (of things)'
(Source: Hirakawa, 1999:91)

Takusan therefore modifies the VP-internal (subject) argument of unaccusatives, (235), which should be read as *takusan* modifying the null subject (e.g., *people*).

(235) Takusan tui-ta
a lot arrive-PAST
'A lot (of people) arrived'

As the subject of unergatives is VP-external, *takusan* cannot modify it, as the contrast of interpretation in (194) show.

(236) Takusan nai-ta
a lot cry-PAST
* 'A lot of people cried'
'I/you/he/she/we/they cried a lot'
(Source: Hirakawa, 1999:92)

As Table 25 shows, there were two experimental groups: (1) thirteen L1 English L2 Japanese students enrolled in an intensive Japanese course in Japan and (2) sixteen L1 Chinese L2 Japanese students enrolled in a Japanese university. Both groups were classified as having a high intermediate level of proficiency. The control group consisted of twenty L1 Japanese natives.

Table 25: Groups in Hirakawa (1999)

Group	N	L1	L2
English	12	English	Japanese
Chinese	16	Chinese	Japanese
Japanese	20	Japanese	

The method used was a truth-value judgement task (TVJT), where subjects were shown several pictures, each including a sentence below (containing *takusan* 'a lot'). For example, a picture showing a lot of people swimming contained the sentence *Takusan oyogimasita* 'A lot swam'. Subjects had to choose between two interpretations: 'Somebody swam a lot' (true interpretation) vs. 'A lot of people swam' (false interpretation). Each sentence presented was grammatical, though only one interpretation for each sentence was possible.

Results from the TVJT show that learners observed the unaccusative/unergative distinction since 'they allowed the subject of an unaccusative verb to be modified by *takusan* to a significantly greater extent than the subject of an unergative.' (Hirakawa, 1999:104). In other words, out of a maximum score of 5, the English group prefers *takusan* to modify the subject of unaccusatives (4.23) vs. unergatives (2.62). The same applies to the Chinese group (4.31 vs. 2.62). These results could not have been due to language transfer, since the different interpretation with quantifiers like *takusan* are not instantiated neither in L1 English nor in L1 Chinese. It was concluded that English and Chinese learners of Japanese show knowledge of the fact that the subject of an unaccusative originates in object position, as Burzio's (1986) UH predicts.

6.6.7 Hertel (2000)

Hertel (2000)[117] examines the acquisition of word order distribution with unergatives and unaccusatives by English learners of Spanish. She tested SV and VS constructions in three focus contexts: neutral, neutral with negative DPs, presentational and contrastive. Recall from our discussion in this chapter that in Spanish neutral focus contexts require SV with unergatives but VS with unaccusatives, as the UH predicts. Presentational focus contexts require VS both with unergatives and unaccusatives, as Bolinger's generalization predicts. We will analyse only neutral and presentional contexts, which will be relevant to understand our results in the experimenal section (Chapter 7).

[117] Hertel's (2000) study is an unpublished PhD thesis. The reader will be able to find identical results and conclusions in her forthcoming study, Hertel (submitted, 2002).

Four group of learners participated in the study. They were divided into four groups, according to proficiency level (19 beginners, 15 low-intermediate, 21 high-intermediate and 18 advanced). 16 Spanish natives acted as control.

The methodology used was a production task and a grammaticality judgement task, both yielding similar results. Due to space limitations, I will report only on the GJT, which yielded more stable results due to the nature of the task. Subjects were presented with contexts in which the narrator asks a question about something that happened in their absence. To illustrate, the neutral focus question *¿Qué pasó?* 'What happened?' in (237) biases for a VS answer, (237a). SV order is not allowed, (237b).

(237) You and your friend Sergio are at a party. Sergio leaves the room to get a drink. While he is gone, Sara, the life of every party, arrives. When Sergio returns he noices that everyone seems much more festive. Sergio asks you: ¿Qué pasó? You answer:

(a) Llegó Sara
arrived Sara
'Sara arrived

(b) *Sara llegó

Subjects had to rate the acceptability of SV and VS by using a 5-point Likert scale placed immediately after each sentence, ranging from –2 (totally unacceptable) to +2 (totally acceptable). Additionally, contexts were recorded in English and answers in Spanish. Subjects were played the recordings[118].

Let us consider neutral focus contexts first. Within-group results indicate that natives prefer VS wih unaccusatives (76%) over unergatives (29%), as predicted by the UH. The same holds for advanced learners (84% vs. 64%) and high-intermediate learners (59% vs. 40%). No significant differences were found for low intermediate and the beginner groups.

In presentational focus contexts, only the native group differentiated between VS with unaccusatives (81%) vs. unergatives (68%). This difference was not expected, as presentationally focused elements appear in sentence-final position, following

[118] Note that Hertel's (2000) claim is that different SV/VS alternations in Spanish mark the absence/presence of focus, i.e., focus is constrained syntactically, whereas in English it is constrained intonationally. It is plausible to suspect that the playing of recordings to subjects in Hertel's study might have biased learners' interpretation of focus, as they may have relied on intonation rather than on syntactic cues. In our experimental study a similar method to Hertel's (2000) was used, though we avoided the use of any recordings so as not to bias subjects' judgements on the acceptability of word order alternations.

Bolinger's (1954) generalisation. All groups of learners accepted both constructions to the same statistical extent, as expected: advanced (87% vs. 87%), high intermediate (46% vs. 51%), low intermediate (40% vs. 34%), beginners (26% vs. 29%). However, note that only the advanced group behaves in a native-like fashion, accepting both constructions to the same extent as natives.

Hertel's (2000) data analysis, however, raises serious doubts about learners' performance on SV order, as no results are presented for this condition. Consider the case of advanced learners, as we would expect them to show either convergent or divergent intuitions. With such a group, it is not sufficient to say that advanced learners prefer VS with unaccusatives over unergatives in *neutral* contexts. It has to be proven that learners reject SV with unaccusatives but prefer it with unergatives, if Burzio's UH is to be confirmed. Likewise, Hertel (2000) shows how in *presentational* contexts advanced learners have acquired the fact that VS is the preferred order for both unaccusatives and unergatives, as natives do. However, it needs to be proven that these learners reject SV, as natives would do, thus ensuring that they are not transferring from their L1 English, where presentational focus requires strict SV order. I will overcome this deficiency in the experimental section (Chapter 7) by discussing both SV and VS alternations.

To summarise, Hertel's (2000) results indicate that beginners accept all constructions, showing no evidence of having acquired the discursive constrains on SV/VS alternations in Spanish. This finding is supported by Oshita (2001), who claims that the unergative/unaccusative distinction may not exist at early stages of L2A, as both verb classes are represented as unergatives. This has been termed the 'unaccusative trap'.

Coming back to Hertel's (2000) overall findings, intermediate learners show a gradual increase of VS in unaccusative neutral contexts and in focused contexts with both verb types. Advanced learners show native-like intuitions, though they also overgeneralise VS to unergatives in neutral focus contexts. This last finding is corroborated by Yuan's (1999) study on English learners of Chinese, which reveals that the unaccusative/unergative distinction in L2 Chinese is acquired only at very advanced stages of proficiency.

6.6.8 Sorace & Shomura (2001)

Sorace & Shomura (2001) tested learners' sensitivity to the Unaccusative Hierarchy (also known as Split-Intransitivity Hierarchy)[119] in L2 Japanese. As Figure 22 shows, core unaccusatives typically denote change of location (as in Sorace, 1993a) and peripheral unaccusatives express states. Core unergatives indicate non-motional processes and peripheral unergatives express emission.

Figure 22: Unaccusative Hierarchy (Sorace & Shomura, 2001)

Unaccusative ⟵⟶ ***Unergative***

(core) (core)

change of location: arrive, come	**appearance:** appear, happen	**preexisting condition:** stay, continue	**state:** be, exist, lie	**emission:** flash, shine	**involuntary reaction:** shiver, tremble	**bodily function:** sweat, vomit	**motional process:** swim, walk	**non-motional process:** sing, play

(Source: Sorace & Shomura (2001), adapted from their Figure 1 and Appendix A).

Apart from the *takusan* test (see Hirakawa's (1999) review, section 6.6.6, p. 186), quantifier floating structures in Japanese are another test of unaccusativity. Consider core unergative verbs first. In (238), the DP *gakusei-ga* 'students' and its quanfier *sannin* 'three' must be adjacent as they have to c-command each other inside TP. This is known as lack of quantifier floating, –QF. By contrast, a quantifier inside the VP would be unable to c-command its DP, hence the ungrammaticality of the second quantifier. This is known as quantifier floating, +QF.

Consider now core unaccusative verbs. In (239), the quantifier is adjacent to its DP, so the relationship of mutual c-command obtains, similarly to what occurred with unergatives. Recall from our earlier discussion that the subject of unaccusatives is base-generated VP-internally and subsequently raises to [Spec,TP] to check nominative case, leaving behind a trace. A VP-internal quantifier would be also

[119] Their version of the hierarchy is a slightly modified version of Sorace's (1993a) original proposal, as presented in Table 17, p. 157.

allowed in these contexts, since it is in a relation of mutual c-command with the trace of the raised subject. In short, both –QF and +QF are possible with unaccusatives.

(238) *Unergatives: categorical native rule*

[$_{TP}$ Gakusei-ga (sannin) wazato [$_{VP}$ (*sannin) waratta]]
student-NOM (three) intentionally (*three) laughed
'Three students intentionally laughed'

(239) *Unaccusatives: optional native rule*

[$_{TP}$ Gakusei-ga$_i$ (sannin) Tokyo-ni [$_{VP}$ t_i (sannin) tsuita]]
student-NOM$_i$ (three) Tokyo-at t_i (three) arrived
'Three students arrived in Tokyo'

To summarise, quantifier floating represents a native categorical rule with unergatives (grammatical –QF vs. ungrammatical +QF), but a native optional rule with unaccusatives (grammatical –QF and +QF).

It was tested whether learners of L2 Japanese are sensitive to the unergative-unaccusative distinctions along the Unaccusative Hierarchy, as shown in Figure 22. It was hypothesized that learners' preference of grammatical –QF over ungrammatical +QF with unergatives would be stronger at the core than at the periphery. Similarly, learners' tolerance of both grammatical sentences (–QF and +QF) with unaccusatives would be greater at the core than at the periphery.

Two experimental groups participated in the study, postbeginners (n=29) and intermediate (n=31). A Japanese native group (n=12) served as control. The method employed was a magnitude estimation technique, as described in Sorace's (1993a) study (section 6.6.2, p. 175). Learners and natives were tested on their knowledge of quantifier floating (QF). For each unergative verb, subjects were presented with a grammatical sentence without QF, [–QF], and an identical (but ungrammatical) sentence with QF, [+QF]. Similarly, for each unaccusative verb, there was a grammatical [–QF] sentence and a grammatical [+QF] sentence.

Results[120] for unergative verbs reveal that the Japanese native group reject +QF structures and accept their –QF counterparts, treating the constructions as a categorical rule, as predicted by the theory. They show sensitivity to the Unaccusative

[120] For conciseness, I will not present Sorace & Shomura's (2001) results in a graphic format, as their study includes six graphs. I will merely report whether their results are statistically significant or not.

Hierarchy with unergatives, as the rejection rates of –QF sentences is higher at the core and decreases towards the periphery, though such difference is always statistically significant. The postbeginner group accepts equally grammatical –QF and ungrammatical +QF (with the exception of motional processes, where they significantly prefer the grammatical to the ungrammatical construction). The intermediate group significantly prefers grammatical –QF to ungrammatical +QF with non-motional process and motional process (which are at the core of unergativity). However, they do not significantly distinguish between grammatical and ungrammatical structures with peripheral unergatives. These results suggest that, while learners do not show a native-like behaviour with *all* unergatives along the scale, their sensitivity tends towards the native norm with core unergatives. As Sorace & Shomura (2001: 267) remark:

> 'Increase in proficiency and in the amount of exposure to Japanese determine an increase in the ability to perceive the differences among verb types, in the direction of the native pattern.'

Unaccusative results are less clear-cut. By hypothesis, Japanese natives were expected to prefer both –QF and +QF, as they are optional and grammatical constructions, though they would very mildly prefer –QF to +QF at the periphery. This is the result for unaccusatives denoting appearance and preexisting condition, which are neither at the core nor at the periphery. However, they significantly prefer –QF with statives (as would be expected, since statives are at the periphery) but *also* with change of location (which is unexpected, as these unaccusatives are at the core). The postbeginner group does not significantly differentiate between –QF and +QF, as expected, since both constructions are grammatical in native grammars. The intermedite group does not significantly differentiate between –QF and +QF (except for stative verbs, as would be expected).

As the authors point out, the postbeginners' behaviour can have two readings: their lack of preference between –QF and +QF with unaccusatives could be taken as an indication of their sensitivity to the optional status of the construction in Japanese native grammars. This indeterminate behaviour indicates that 'learners at this stage do not know the correct pattern of distribution of QF in Japanese.' (Sorace & Shomura, 2001:271). The intermediate learners overall behaviour tends towards the native norm, as (i) they differentiate between –QR and +QR with core unergatives and (ii)

they optionally allow –QR and +QR with most unaccusatives. These results lead the authors to conclude that:

> 'Knowledge of unergative verbs is acquired earlier than knowledge of unaccusative verbs. A potential explanation for this contrast is the nature of the evidence that learners receive. Unaccusative verbs in Japanese are characterized by syntactic optionality, whereas unergative verbs are not.' (Sorace & Shomura, 2001:271).

While Sorace & Shomura's (2001) results are not very indicative with respect to the learners' knowledge of unaccusativity, their study shows that knowledge of unergativity may develop earlier than knowledge of unaccusativity due to ambiguous input, as QF with unaccusatives represents an optional rule. Recall from our earlier discussion in Chapter 3 that learners' results on native optional rules can lead to ambiguous conclusions, as, for example, their optional behaviour can be interpreted as (i) knowledge of the optional status of the rule in native grammar, or (ii) indeterminacy. In the experimental section (Chapter 7), I will avoid this drawback, as the experimental design includes only categorical native rules.

Sorace & Shomura (2001) study additionally reveals that L2 Japanese learners' sensitiveness to the Unaccusative Hierarchy (which was originally proposed for a typologically different language, namely, Italian, though it also applies to all the main Western European languages that have auxiliary selection (see Sorace, 2000a)) starts developing at intermediate stages, while earlier stages are characterized by indeterminacy. As the authors suggest, knowledge of QF in Japanese is expected to be more native-like at advanced levels of proficiency.

6.6.9 Conclusion on the literature review

It seems clear from the studies just reviewed that L2 learners' knowledge of unaccusativity is constrained by UG, in particular, by Burzio's (1986) UH and by Baker's (1988) UTAH. In other words, learners are sensitive to the unaccusative vs. unergative distinction (at least, at advanced levels of proficiency).

Nevertheless, none of the above studies considers the distinction between neutral vs. presentational focus (apart from Hertel's (2000)). In the experimental section (next chapter), I will present an experimental design for both neutral and presentational contexts.

6.7 Summary of chapter 6

In this chapter I presented cross-linguistic evidence (from Spanish, English, Japanese, etc) to support the universality of the UH. I later proceeded to classify Spanish unaccusatives in a uniform fashion (based on work by Sorace, 1993a, 1993b, 2000a), so as to use such classification in the next chapter (experimental section on unaccusatives).

With respect to presentational focus, it was shown that the focus head is strong in Spanish, but weak in Greek and English. This results in different surface word orders, which will be exploited in the next chapter.

The final section of this chapter focused on L2A studies which support the claim that L2 learners distinguish between unergatives/unaccusatives, even though this distinction may not be overtly marked in their L1s. This cross-linguistic finding also corroborates the universality of Burzio's (1986) UH.

In the next chapter I test whether learners' knowledge is convergent when the distribution of SV/VS is constrained by UG (UH and UTAH) but divergent in cases where the strength of the focus head differs between their L1 and L2.

Chapter 7. EXPERIMENTAL STUDY #2: SV/VS WORD ORDER

7.1 Introduction

In this chapter, I report on an experimental study that tested the knowledge of English and Greek learners of Spanish with respect to unergative and unaccusative SV/VS alternations both in neutral and presentational focus contexts.

This chapter (word order) and Chapter 4 (pronouns) are very similar with respect to the hypotheses under investigation and the methodology (the design of sentences, instrument, counterbalancing techniques, etc). In this way, comparisons between the result of study #1 and study #2 with respect to convergent/divergent knowledge are more legitimate than if the two studies had used different methodologies.

Following the same line of argumentation from Chapter 5, it was hypothesised that learners would show a native-like (convergent) behaviour in neutral contexts, as the distribution of SV and VS is constrained by two principles of UG (The Unaccusative Hypothesis, UH, and the Uniformity of Theta Assignment Hypothesis, UTAH). By contrast, it was predicted that learners would show divergent behaviour with respect to Spanish natives in presentational focus contexts, as the SV/VS alternations are constrained by the functional head Focus, whose strength value differs between the learners' native language and their L2 Spanish[121], as shown in Table 26.

Table 26: Parameterised Foc^0: presentational focus

	L1	L2	L3
Greek group	Greek [–strong]	English [–strong]	Spanish [+strong]
English group	English [–strong]	Spanish [+strong]	

[121] For convenience, L2 will be used as the default acronym to refer to both L2 and L3.

The results support the hypotheses. The major finding was learners' optionality (a type of divergent knowledge) in presentational focus contexts. Some implications are drawn in the light of recent theories on optionality.

Recall from our earlier discussion in previous chapters that the two main research questions are whether learners will show (i) *convergent* intuitions in neutral focus contexts governed by UG, but (ii) *divergent* (near-native, optional or indeterminate) intuitions in contexts governed by L2 functional features (F_{L2}), whose parametric value differs from the L1 (F_{L1}).

We can relate these questions to the current study in the form of two hypotheses, which were presented in Chapter 5 in (131) and (132) and now are repeated below.

(240) H_1: *Neutral focus contexts*:
In contexts constrained by UG principles (UH & UTAH), all advanced learners will show native-like intuitions irrespective of whether the construction under investigation is instantiated their L1.

(241) H_2: *Presentational focus contexts*:
In contexts constrained by parameterised FFs, advanced learners will show (i) convergent intuitions if the strength values of F_{L1} and F_{L2} coincide, but (ii) divergent intuitions if the strength values of F_{L1} and F_{L2} differ.

7.2 Method

7.2.1 Subjects

As shown in Table 8, a total of 49 subjects participated in the second test[122]. The control group (Spanish natives, n=14) served as a baseline to compare the learners' results against. The experimental groups (learners) consisted of Greek natives (n=18) and English natives (n=17). The Spanish control group consisted of peninsular Spanish natives (mainland Spain) and South-American Spanish-speaking natives (Argentina, Mexico and Venezuela). The English native group consisted of British

[122] The actual number of usable collected tests from the learners was 96. However, 62 had to be discarded as they did not meet several criteria (their proficiency level was below the required 80% minimum or the tests had not been completed properly, or the subject gave the same answers for each stimulus, or some subjects knew other languages apart from English and Spanish). The 35 remaining questionnaires were used for the current study as they satisfied the aforementioned criteria.

English native speakers. These were undergraduates at the University of Essex (UK), where they were tested. The Greek native group consisted of Greek natives studying Spanish at several institutions in Athens (University of Athens, Estudio Español and Centro de Lengua Española), where they were tested. Similarly to what occurred in test #1, only learners with a proficiency level of ≥80% (advanced) were included in the study.[123]

Table 27: Subjects

Group	Number	Language configuration		
Spanish natives	n=14	L1 Spanish		
English natives	n=17	L1 English	L2 Spanish	
Greek natives	n=18	L1 Greek	L2 English	L3 Spanish

7.2.2 Instrument

The instrument employed was an acceptability judgement test (AJT) consisting of two versions (as I did for test #1): test 2, version 1 (8.1.9, p. 275) and test 2, version 2, (8.1.10, p. 278). Its design follows the same principles of the AJT used in test #1 (overt/null pronouns). Subjects had to judge whether a given sentence was more or less *acceptable* (as opposed to *grammatical*). Each stimulus consists of a context, (133), followed by two replies, (133a) and (133b)[124], each representing a different word order (SV vs. VS) Each target sentence is accompanied by a 5-point Likert rating scale. Recall from Chapter 5 that value +2 corresponded to *completely* acceptable and value –2 *completely* unacceptable.

[123] The Spanish placement test used was the University of Wisconsin Placement Test, Form 96M (University of Wisconsin, 1998). An extra placement test in English, the Oxford Placement test (Allan, 1992), was administered to Greek natives to ensure that their level of competence in English was advanced. The threshold level that was considered to represent advanced proficiency was ≥80%. In other words, learners were within the 80%-100% range of proficiency in our study.

[124] As in test #1, both target sentences (*a* and *b*) would be grammatical in adult Spanish if no context was provided. In these cases, the context biases for either SV or VS, depending on the question type and verb type.

(242) Tú estás en una fiesta con tu amiga Laura. Laura sale de la habitación y en ese momento llega la policía porque hay mucho ruido en la fiesta. Cuando Laura vuelve, te pregunta: '¿Quién llegó?' Tú contestas:
(a) La policía llegó. –2 –1 0 +1 +2
(b) Llegó la policía. –2 –1 0 +1 +2

'You are at a party with your friend Laura. Laura leaves the room and at that moment the police arrive because the party is too noisy. When Laura comes back, she asks you: 'Who arrived?' You answer:
(a) The police arrived
(b) Arrived the police'

The AJT test consisted of twenty four target stimuli (neutral contexts: 6 unergatives, 6 unaccusatives; presentational contexts: 6 unergatives, 6 unaccusatives). Two training stimuli were placed at the beginning of the test. Two distractors were placed at the end of the test to control for tiredness effects on subjects[125].

A pilot test containing 44 sentences was used with natives to select a representative set of what natives considered to be 'core' unaccusatives (see appendix 8.1.8, p. 270). A total of 8 unergatives and 8 unaccusatives were used in the pilot study, which was administered to Spanish natives in order to make subsequent refinements for the final test. The unergative verbs were: *estornudar* 'to sneeze', *bailar* 'to dance', *gritar* 'to shout', *dormir* 'to sleep', *reir* 'to laugh', *protestar* 'to protest', *llorar* 'to cry' and *nadar* 'to swim'. The unaccusative verbs were: *llegar* 'to arrive', *entrar* 'to enter/come in', *venir* 'to come', *volver* 'to come back', *escapar* 'to escape', *regresar* 'to return', *ir* 'to go' and *salir* 'to leave'.

After an item analysis was performed to the resuls of the pilot study, only 6 unergatives and 6 unaccusatives were selected as the 'best' candidates for unergativity/unaccusativity, since Spanish natives rated them as being the more

[125] Recall that test #1 included 50% of distractors and 50% of target stimuli. Originally, I intended to show results only for unaccusative verbs in order to test the first experimental hypotheses (H_1) . But in order to show that, for example, learners prefer VS to SV in neutral focus contexts with unaccusative verbs, it is also necessary to prove that learners show the opposite behaviour with unergative verbs in neutral focus contexts, i.e., that they prefer SV to VS. In this way, we can safely assume that learners are not behaving at random and that the experimental conditions in the test produce the expected results. As I will show later, results confirm that learners prefer unaccusative VS to SV (but unergative SV to VS) in neutral focus contexts, thus confirming H_1.

representative items for each verb type[126]: Table 9 lists 12 verbs used (6 unergatives and 6 unaccusatives). Each verb was used once.

Table 28: 6 items for each condition (after item analysis):

Unergatives	Unaccusatives
bailar 'to dance'	*entrar* 'to come in'
gritar 'to shout'	*llegar* 'to arrive'
dormir 'to sleep'	*salir* 'to leave'
reir 'to laugh'	*venir* 'to come'
llorar 'to cry'	*volver* 'to return'
estornudar 'to sneeze'	*escapar* 'to escape'

As in test #1, several measures were taken in order to avoid unwanted test effects:

(i) Order-of-presentation effects were controlled for by using (i) SV order 50% of the time in sentence *a*, and 50% of the time in sentence *b* and (ii) two versions of the test with the same sentences but different sequential order: test 2, version 1 (8.1.9, p. 275) and test 2, version 2, (8.1.10, p. 278).

(ii) The sequential order was randomised following Cowart's (1997) 'blocking' procedure. Vocabulary was also controlled, including beginners' vocabulary only (González et al., 1995) so that learners could clearly understand the sentences. The target sentence length was also controlled. It never exceeded six words.

(iii) Each test contained written instructions, which subjects read before commencing the test (see appendices). The instructions (i) highlighted that the researcher was interested on the participant's opinion on a set of sentences which tested how people learn Spanish; (ii) contained explicit instructions as to how complete the test; (iii) detailed what the value scale (–2 … +2) meant, giving some examples; (iv) emphasised that any combination of numbers was possible (i.e., sentence *a* could be +2 and sentence *b* –1, or sentence *a* +1 and sentence *b* +2, etc.); (v) subjects were

[126] *Protestar* and *nadar* were excluded from the unergative list and *regresar* and *ir* from the unaccusative list.

asked to do the test as quickly as possible as the researcher was interested only on their *first* intuition.

(iv) Subjects had to do three practice sentences (included before the actual test started). These sentences contained very basic and obvious grammatical errors in Spanish. In this way, I ensured that learners understood the nature of the task, i.e., it was expected that learners would certainly give a negative value to some sentences containing errors which are typically studied in beginner courses. At the same time, it was also expected learners to rate positively their grammatical counterparts. Subjects who performed as expected in these practice sentences were considered to have understood the nature of the test and were consequently included in the final analysis (providing they met the minimum requirements of proficiency and language brackground, as argued above (see footnote 82, p. 115)). As an additional measure to control for presentational effects, two extra distractors were inserted before (and two after) the actual target stimuli in the test (see appendices containing the tests (section 8.1.9, p. 275 and 8.1.10, p. 278).

7.2.3 Neutral focus contexts

Table 29 schematises the 2x3 factorial design for *unergative* verbs in neutral contexts. The first factor is unergative word order. This is a variable with two levels (SV/VS). The second factor is L1, with three levels (English/Greek/Spanish)[127]. Each cell represents the expected outcome in word order acceptability, assuming that learners are constrained by UG (UH and UTAH), i.e., all groups are expected to prefer SV to VS, as H_1 predicts.

[127] Recall from chapter 3 that I also used a design consisting of a two-level variable (pronoun: overt/null) by a three-level variable (L1: English/Greek/Spanish) in test #1.

Table 29: Neutral focus: unergative x group

		unergative	
		SV	VS
L1	English	SV	*VS
	Greek	SV	*VS
	Spanish	SV	*VS

Secondly, Table 30 schematises the 2x3 factorial design for *unaccusatives* in neutral contexts. As above, the first factor is unaccusative word order and the second factor is L1. Each cell shows the expected outcome in word order acceptability, assuming that learners are constrained by UG (UH and UTAH): all groups are expected to prefer VS to SV, as H_1 predicts.

Table 30: Neutral focus: unaccusative x group

		unaccusative	
		SV	VS
L1	English	*SV	VS
	Greek	*SV	VS
	Spanish	*SV	VS

7.2.4 Presentational focus contexts

The factorial design for presentational contexts was constructed similarly to the design presented above for neutral contexts, so as not to confound variables (Cowart, 1997). There are two factors for *unergatives* in presentational contexts: word order (SV/VS) by L1 (English/Greek/Spanish), Table 31. Each cell represents the expected outcome in word order acceptability, assuming that learners are constrained by the focus strength value from their L1. The English and Greek groups are expected prefer SV, reflecting the weak focus strength value of their L1, though the Spanish control is expected to prefer VS, reflecting the strong value of focus in Spanish.

Table 31: Presentational focus: unergative x group

		unergative	
		SV	VS
L1	English	SV	*VS
	Greek	SV	*VS
	Spanish	*SV	VS

The design for *unaccusatives* also contains two factors in presentational contexts: word order (SV/VS) by L1 (English/Greek/Spanish), Table 32. The English group will again prefer SV, while the Greek group will prefer VS, reflecting the focus strength value of their respectives L1s. The Spanish group will prefer VS, reflecting the strong value of Spanish[128].

Table 32: Presentational focus: unaccusative x group

		unaccusative	
		SV	VS
L1	English	SV	*VS
	Greek	*SV	VS
	Spanish	*SV	VS

7.3 Data analysis

Data were coded in Excel (v. 2000). The values of the six stimuli for each condition were averaged for each subject. Averages were then coded and analysed in the statistical package SPSS (v. 9.0), as shown in appendix 8.3 (page 292).

The normality of distribution was assumed, as the Kolmogorov-Smirnov one-sample fit test indicates that our sample's distribution is not significantly different from the normal distribution (p>.05 for each condition in each group). See appendix 8.3.3 (page 295)for full details of the Z values.

[128] Note that, although the surface unaccusative word order in Spanish and Greek are identical in presentational environments, their derivations are different, as explained in chapter 4 (section 6.4, p. 160).

The hypotheses require two types of analyses: (i) *within groups* and (ii) *between groups*. A mixed two-way ANOVA checked the main effect of word order, the main effect of L1 and the interaction of the two factors, *word order* x *L1*. Further analyses were performed to check which pairs were significant: a paired-samples t-test for the within-group comparisons and a between-group one-way ANOVA with post-hoc Scheffe for the between-group comparisons.

7.4 Results

Before reporting the results, I present an overview of the expected outcomes according to the theory. Both *within*- and *between*-group analysis will be used in neutral focus and presentational focus contexts:

(i) *Neutral contexts*. Learners are expected to show a similar behaviour to Spanish natives, as H_1 predicts.

   a. *Within-group analysis*. The assumption is that if H_1 is correct, we would expect each group to significantly prefer the grammatical condition to the ungrammatical condition. In other words, each group would prefer SV to VS with unergatives, but VS to SV with unaccusatives, assuming their knowledge is guided by UG (UH and UTAH).

   b. *Between-group analysis*. H_1 predicts that both groups of learners would behave identically to the native group, if the UH is to be supported. This entails that, for example, the English and Spanish group would not differ in their acceptance of, first, the grammatical condition and, second, the ungrammatical condition. The same expectation applies to the comparison between the Greek and Spanish groups.

(ii) *Presentational contexts*. If H_2 were to be supported, we would expect differences between the natives and the learners. This entails that the learners' intuitions should diverge from the natives'. From our discussion in Chapter 3, it follows that three types of divergent intuitions are possible in the learners: near native, optional and indeterminate. Let us explore them.

a. *Within-group analysis*. We would expect the Spanish native group to prefer VS significantly more than SV (with both unergatives and unaccusatives), as presentationally focused subjects appear in sentence-final position in Spanish, irrespective of verb type. If learners' intuitions are near-native, we would expect them to behave similarly to natives in a within-group analysis. However, if learners' intuitions are optional[129], learners would be expected to prefer both SV and VS to the same statistical extent.
b. *Between-group analysis*. If the learners' intuitions are near-native (or even optional), we would expect learners' grammatical VS not to differ significantly from natives' grammatical VS. However, we would expect learners' ungrammatical SV to differ from natives' ungrammatical SV, as natives would tend to disprefer SV while learners would tend to prefer it.

7.4.1 Unergatives, neutral focus context

Let us first analyse unergatives. The context (neutral) and the verb type (unergative) are constants. The word order (SV/VS) and the L1 (English/Greek/Spanish) are the independent variables. Descriptives are presented in Table 33.

A repeated measures, two-way ANOVA (word order by L1) reveals a highly significant main effect of word order ($F(1,46)=77.90$, $p<.01$), a significant main effect of L1 ($F(2,46)=5.10$, $p=.010$) and a significant interaction of word order by L1 ($F(2,46)=7.83$, $p<.01$). Further statistical details can be checked in the raw-data (appendix 8.3, p. 292*ff*). Results are graphically represented in Figure 23.

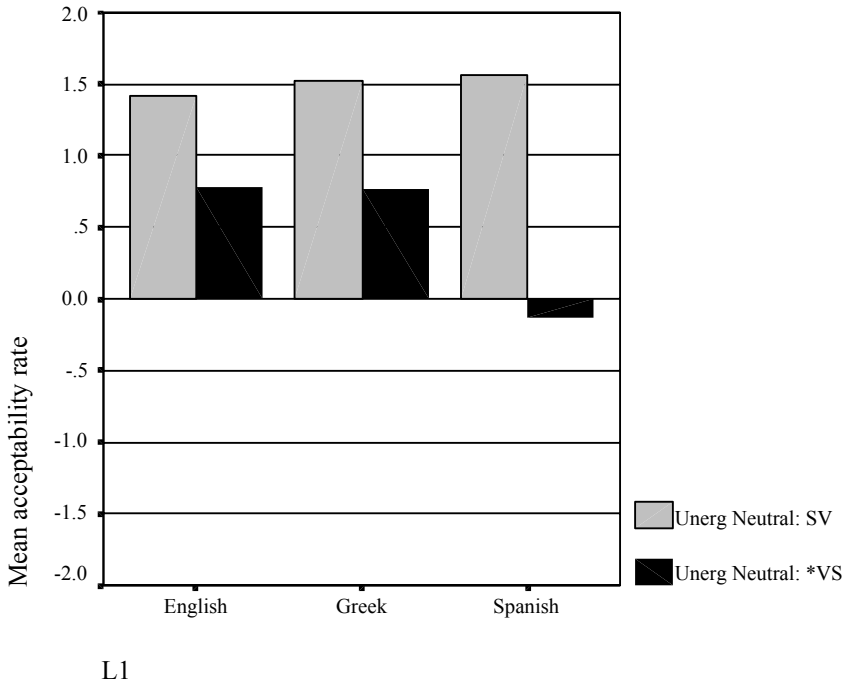
[129] As was the case in test #1, indeterminate intuitions are also a possibility here. However, I will not discuss them as they typically appear in learners when judging a native *optional* rule. Recall that only *categorical* rules are tested in the present study.

Table 33: Descriptives for unergatives in neutral contexts

Descriptive Statistics

	L1	Mean	Std. Deviation	N
Unerg Neutral: SV	English	1.4118	.3594	17
	Greek	1.5183	.3780	18
	Spanish	1.5593	.5906	14
Unerg Neutral: *VS	English	.7865	.6541	17
	Greek	.7689	.7532	18
	Spanish	-.1310	.5925	14

Figure 23: Unergatives, neutral focus context



As just stated, the main effect of word order is significant for each group. Further *within-group comparisons* with a paired-samples t-test confirm that there is a highly significant difference between the grammatical (unergative neutral: SV) and the ungrammatical (unergative neutral: VS) condition for the Spanish native group ($t(13)=7.63$, $p<0.01$). This clearly indicates that SV and VS do not alternate freely in native Spanish grammars, i.e., natives treat the constructions categorically. The difference between the grammatical and ungrammatical conditions is also significant for the English group ($t(16)=3.80$, $p<0.01$) and the Greek group ($t(17)=3.56$, $p<0.01$).

These results clearly indicate that each group categorically prefers SV to VS with unergatives in neutral contexts. This is the expected outcome predicted by H_1.

Between-group comparisons are also required, so as to test each group of learners against the native norm. As stated above, the main effect of L1 is significant. In order to check the direction of this difference, a one-way between-group ANOVA with post-hoc Scheffe was performed. Each word order was compared against the native norm, i.e., the grammatical condition of the English group (SV) was compared against the grammatical condition of the native group (SV); similarly, the ungrammatical condition of the English group (VS) was compared against the ungrammatical condition of the native group (VS). The same comparisons apply to the Greek group.

The acceptance of the grammatical condition (unergative neutral: SV) does not differ between groups: (i) English and Spanish groups (p=.66), (ii) the Greek and Spanish groups (p=.97). In other words, the three groups prefer SV with unergatives to the same extent. However, the acceptance of the ungrammatical condition (unergative neutral: VS) does differ between groups: (i) English and Spanish groups (p<.01), (ii) the Greek and the Spanish groups (p<.01).

Note that the L1 main effect for unergatives in neutral contexts is relatively small (η^2=.18), which implies that only 18% of the variation between groups is due to L1. If we compare this with the variation within groups (η^2=.63), it can be safely assumed that 63% of the variation within groups is due to word order.

To summarise, each group significantly prefers SV to VS with unergatives, as predicted. This supports H_1. Both groups of learners behave identically to the Spanish group (except for the ungrammatical condition[130]). This partially supports H_1.

7.4.2 Unaccusatives, neutral focus contexts

In this case, unaccusatives and neutral context are constants, the word order (SV/VS) and the L1 (English/Greek/Spanish) being the independent variables or factors. Table 34 shows the descriptive statistics.

[130] This is an unexpected finding (according to the UH hypothesis). A similar result is also reported in Hertel's (2000) study of English natives learning Spanish word order alternations with unergatives and unaccusatives. The possible implications of this finding will be discussed later.

Table 34: Descriptives for unaccusatives in neutral contexts

Descriptive Statistics

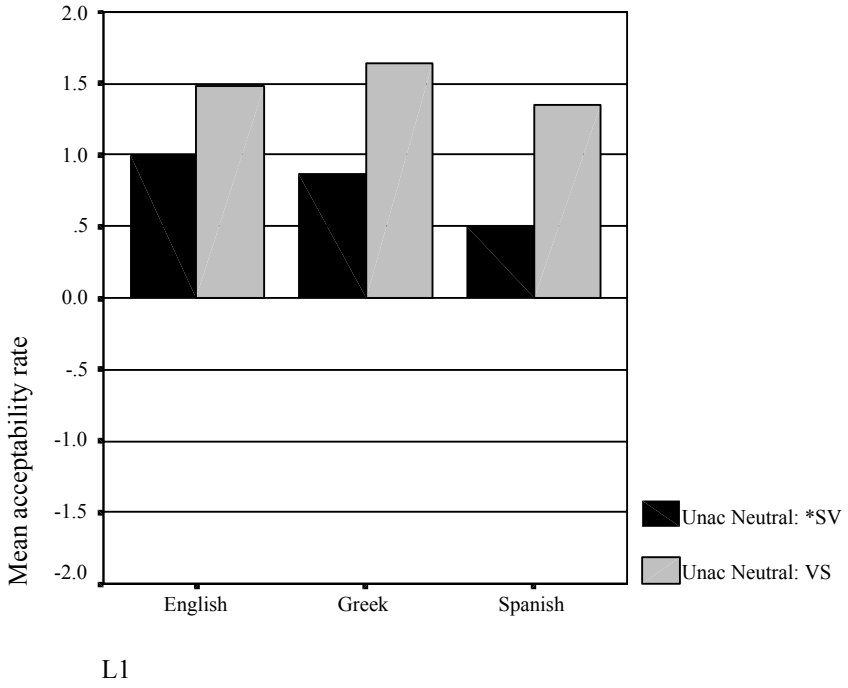
	L1	Mean	Std. Deviation	N
Unac Neutral: *SV	English	1.0000	.6160	17
	Greek	.8794	.6360	18
	Spanish	.5010	.9243	14
Unac Neutral: VS	English	1.4800	.5167	17
	Greek	1.6472	.3918	18
	Spanish	1.3571	.6060	14

A two-way ANOVA repeated measures (word order by L1) shows a highly significant main effect of word order ($F(1,46)=30.89$, $p<.01$), a non-significant main effect of L1 ($F(2,46)=2.68$, $p=.08$) and no interaction of word order by L1 ($F(2,46)=.81$, $p<.45$). Further details are presented in the appendices. Results are graphically represented in Figure 24 below[131].

The main effect of word order is significant for each group, as stated above. *Within-group comparisons* were performed with a paired-samples t-test, which confirms a significant difference between the grammatical and the ungrammatical condition for the Spanish native group ($t(13)=-2.88$, $p=.01$). This indicates that the alternation between SV and VS with unaccusatives in Spanish is not free, but rather categorical, VS being preferred over SV in native grammars. Learners also show sensitivity to this distinction, significantly preferring VS to SV: English group ($t(16)=-2.57$, $p=.02$) and Greek group ($t(17)=-4.26$, $p<.01$). This finding is the expected outcome of H_1.

[131] Note that the label 'ungrammatical' for starred constructions like unaccusative neutral *SV seems to be too strong. The generative theory predicts these cases to be ungrammatical indeed, though it is clearly the case that we are dealing here with pragmatic oddity rather than with true ungrammaticality, i.e., unaccusative SV with neutral word orders is not totally ungrammatical in Spanish, but rather is pragmatically odd (see Figure 24 and Figure 25, where the natives give positive ratings to both the grammatical and ungrammatical sentence)."

Figure 24: Unaccusatives, neutral focus context



The non-significant main effect implies that there are no *between-group* differences for either condition. In other words, the acceptance of the grammatical condition (unaccusative neutral: VS) does not differ between groups: (i) English and Spanish groups and (ii) Greek and Spanish groups. Learners therefore prefer the grammatical VS with unaccusatives to the same extent as natives do. The same holds for the acceptance of the ungrammatical condition (unaccusative neutral: SV): there are no between-group differences (English-Spanish, Greek-Spanish). In sum, all groups prefer the grammatical VS to the same extent and accept the ungrammatical SV to he same extent.

The above findings are corroborated by the eta square values, which can explain variation in a more straightforward fashion. Word order accounts for 40% of the variation within groups (η^2=.40), hence the significant main effect of word order. However, only 10% of the variation between groups (η^2=.10) can be accounted for by L1, hence the non-significant main effect of L1.

To summarise, within-group analyses reveal that each group significantly prefers VS to SV with unaccusatives, as predicted by H_1. Between-group analysis shows that both groups of learners behave identically to the Spanish group in the grammatical and ungrammatical conditions, supporting H_1.

7.4.3 Unergatives, presentational focus contexts

Given unergatives and presentational context as the constants, the word order (SV/VS) and L1 (English/Greek/Spanish) are the independent variables. Recall that in presentational contexts, VS is the preferred order (irrespective of verb type), in accordance with Bolinger's (1947) generalisation. Descriptives are shown in Table 35.

Table 35: Descriptives for unergatives in presentational contexts

Descriptive Statistics

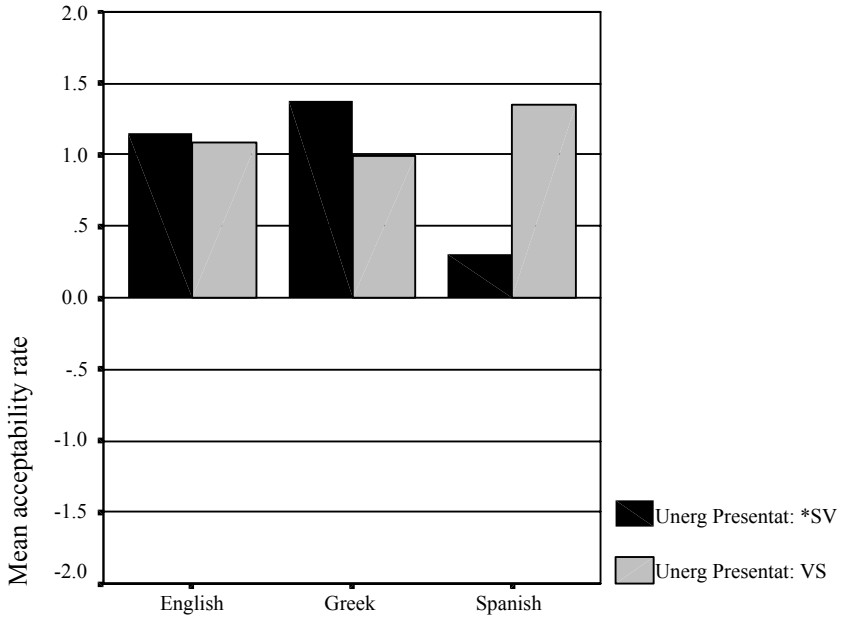
	L1	Mean	Std. Deviation	N
Unerg Presentat: *SV	English	1.1571	.5183	17
	Greek	1.3722	.6533	18
	Spanish	.3083	.7816	14
Unerg Presentat: VS	English	1.0876	.6595	17
	Greek	.9917	.6914	18
	Spanish	1.3574	.5149	14

A two-way ANOVA repeated measures (word order by L1) reveals a non-significant main effect of word order ($F(1,46)=1.91$, $p=.17$), a just about significant main effect of L1 ($F(2,46)=3.29$, $p=.046$) and a significant interaction of word order by L1 ($F(2,46)=8.50$, $p<.01$), as shown in Figure 25 below. Further details are presented in the appendices.

Further *within-group comparisons* (paired-samples t-test) reveal that the Spanish native group clearly differentiates between the grammatical and ungrammatical conditions, highly preferring the grammatical VS order to SV order ($t(13)=-4.20$, $p<.01$). This is expected since the strong presentational focus head in Spanish requires focalised elements to appear in sentence-final position. The English group does not distinguish between the grammatical and ungrammatical conditions ($t(16)=.33$, $p=.75$), accepting both constructions just above +1. The Greek group does not differentiate between the two conditions either ($t(17)=1.38$, $p=.18$), though their pattern is somewhat opposed to the Spanish trend. The former slightly (but not

significatively) prefers the ungrammatical SV to the grammatical VS. A possible explanation for this will be proposed later.

Figure 25: Unergatives, presentational focus context



Between-group comparisons (one-way between-group ANOVA with post-hoc Scheffe) show that for the ungrammatical condition (SV), the English group behaves differently from the Spanish group (p=.01) and the Greek group also behaves differently from the Spanish groups (p<.01). As Figure 25 shows, this implies that learners are tolerating the ungrammatical SV more than the Spanish natives do. This behaviour is predicted by H_2, as the weak focus head in Greek and English forces the focused subject to appear preverbally (i.e., SV order), but the strong focus head in Spanish forces it to appear postverbally (i.e., VS order).

The between-group comparisons for the grammatical condition (VS) show no differences between the acceptance rates of the English and Spanish groups (p=.51) and between the Greek and Spanish groups (p=.28). In other words, the learners are accepting the grammatical VS to the same extent as the natives do (see Figure 25): learners are accepting both the grammatical and ungrammatical condition (within-group analysis), yet the Spanish group clearly prefers the grammatical to the ungrammatical. Learners are accepting the grammatical condition (VS) to the same

extent as natives do. This implies that learners indeed simultaneously prefer both SV and VS with unergatives in presentational contexts. This implies that SV and VS are *optional* for learners. This finding will be discussed in detail later.

To summarise, within-group analyses reveal that learners' preference of both SV and VS with unergatives leads to optionality (a subtype of divergent representations). Between-group analyses show that both groups of learners behave differently from the Spanish group in the ungrammatical, but not in the grammatical condition, as learners seem to have acquired the strong value of the focus head in Spanish, while still retaining their L1 weak value.

7.4.4 Unaccusatives, presentational focus contexts

The dependent variables are word order (SV/VS) and L1 (English/Greek/Spanish). The constants are unaccusative and presentational focus context. As was the case for unergatives in presentational contexts, VS is also the preferred order with unaccusatives (Bolinger's (1947) generalisation). Descriptives are shown in Table 36.

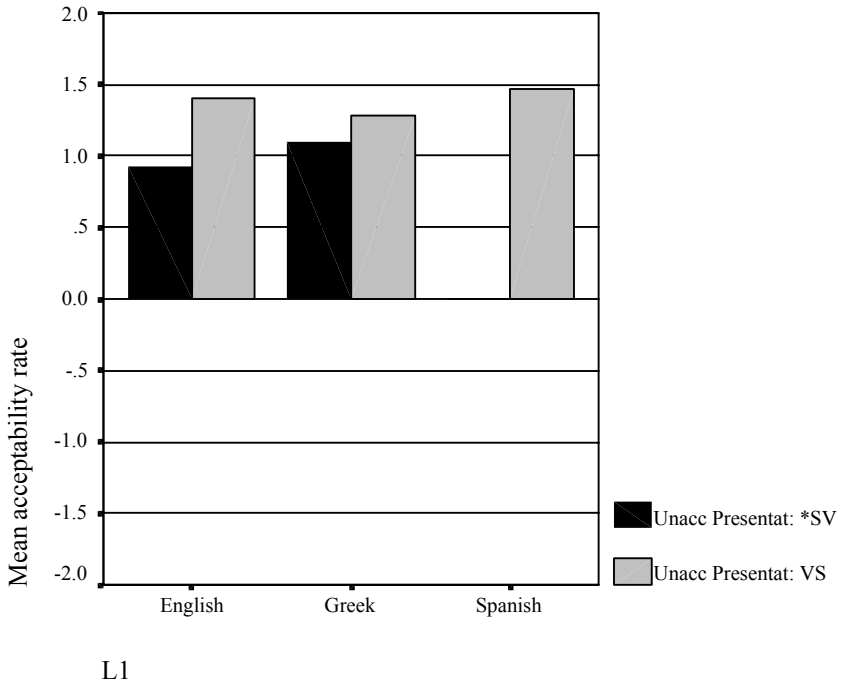
Table 36: Descriptives for unaccusatives in presentational contexts

Descriptive Statistics

	L1	Mean	Std. Deviation	N
Unacc Presentat: *SV	English	.9312	.7733	17
	Greek	1.0928	.5893	18
	Spanish	-4.7619E-04	.9467	14
Unacc Presentat: VS	English	1.3976	.5801	17
	Greek	1.2872	.6031	18
	Spanish	1.4757	.5430	14

A two-way repeated measures ANOVA (word order by L1) shows a significant main effect of word order ($F(1,46)=25.53$, $p<.01$), a significant main effect of L1 ($F(2,46)=4.38$, $p=.02$) and a significant interaction of word order by L1 ($F(2,46)=7.20$, $p<.01$), as shown in Figure 26 (more details can be found in the appendices).

Figure 26: Unaccusatives, presentational focus context



Within-group comparisons (paired-samples t-test) show that the Spanish native group clearly distinguishes between the grammatical and ungrammatical conditions, preferring the grammatical VS order to the ungrammatical SV order[132] (t(13)=-5.51, p<.01), as Figure 26 clearly shows. The learner groups do not statistically differentiate between the grammatical and ungrammatical condition, preferring both to the same extent: English group (t(16)=-1.98, p=.07), Greek group (t(17)=-.85, p=.41). These results are very similar to the previous section, i.e., unergatives in presentational context (see Figure 25). In other words, learners prefer both the grammatical and ungrammatical construction in Spanish in presentational environments.

Between-group comparisons (one-way between-group ANOVA with post-hoc Scheffe) reveal a similar pattern to unergatives in presentational contexts. Learners prefer the grammatical unaccusative VS to the same statistical extent as Spanish natives do: English-Spanish (p=.93) and Greek-Spanish (p=.66). However, learners differ from natives in their acceptance of ungrammatical unaccusative SV: English-Spanish (p<.01) and Greek-Spanish (p<.01).

[132] Note that the ungrammatical SV dark bar for the Spanish group in Figure 26 is not shown since its mean value is approximately zero.

To summarise, learners' preference of both SV and VS with unaccusatives in presentational contexts leads to optionality (the same is true for unergatives in presentational contexts). Learners behave differently from the Spanish group in the ungrammatical, but not in the grammatical condition. This indicates that learners are accepting the grammatical VS in a native-like fashion, while still accepting the ungrammatical SV. This divergence between non-natives and natives is predicted by H_2.

7.5 Discussion

Recall that H_1 predicts that learners will show native-like intuitions in contexts governed by UG (UH and UTAH). In particular, we would expect the Spanish native group and both the English and Greek groups to show convergent intuitions by preferring SV to VS with unergatives but VS to SV with unaccusatives, as the UH (Burzio, 1986) and the UTAH (Baker, 1988) predict.

H_2 predicts that learners will show divergent intuitions in contexts governed by functional features where the parametric values between the L1 and the L2 differ. In particular, we would expect (i) the Spanish group to prefer VS to SV with unergatives and unaccusatives, but both the English and Greek groups would be expected to prefer (i) SV to VS or perhaps both SV *and* VS simultaneously (optional intuitions).

7.5.1 Neutral focus contexts

As predicted by the theory, Spanish natives significantly prefer SV to VS with unergatives, yet VS to SV with unaccusatives in neutral contexts. In other words, Spanish natives treat the SV/VS alternation categorically. This finding yields support to the claim that (i) UG (UH and UTAH) constrains knowledge of word order alternations in Spanish native grammars; (ii) the preferred word order with core unaccusatives is VS over SV (Sorace, 1993a, 1993b).

As H_1 predicts, both the English and Greek groups also show sensitivity to UH, preferring SV to VS with unergatives, but VS to SV with unaccusatives. It could be argued that the Greek group's convergent sensitivity to word order distribution is an effect of their L1, as the surface effects of unaccusative word order are identical in Greek and Spanish for neutral contexts. However, it would then be difficult to explain

the English group's convergent results, as the surface effects of unaccusativity in English are different from Spanish. In other words, the Greek group is not using their L1 as the privileged source of knowledge in their L2. It is therefore reasonable to assume that the intuitions of both groups of learners are guided by UG (UH and UTAH) in neutral focus contexts, as H_1 predicts.

Recall that between-group comparisons with unaccusatives revealed that natives' *a* (grammatical VS) did not differ significantly from either the English group's *a* or the Greek group's *a*. The same was true for the *b* (ungrammatical SV) construction. This finding also supports the non-difference prediction of H_1, i.e., learners show convergent intuitions.

Between-group comparisons with unergatives also revealed that natives' *a* (grammatical SV) did not differ significantly from either the English group's *a* or the Greek group's *a*. However, natives' *b* (ungrammatical VS) did differ from both the English group's *b* and the Greek group's *b*. Learners were accepting the ungrammatical construction at an approximate value of +.7, whereas natives were rejecting it at –.1. In other words, learners seem to be overgeneralising (ungrammatical) VS order to unergatives[133]. Similar findings are reported in de Miguel (1993), Hertel (2000) and Hertel & Pérez-Leroux (1999). A tempting account for overgeneralisation to VS with unergatives in neutral contexts would be to propose that learners' knowledge of the unergative derivation is as follows (i) learners raise Spanish unergative verbs from V to T, as natives do; however, (ii) the subject remains in its base-generated position, i.e., [Spec,VP], where it can check nominative case via the presence of an overt *pro* in [Spec,TP]. The resulting surface word order would be VS[134].

To summarise, learners distinguish between verb classes (unergative vs. unaccusatives in neutral focus contexts) to the same extent as natives do. Learners' intuitions therefore converge with natives' in contexts governed by UG, as predicted by H_1.

[133] Note, however, that learners do prefer the grammatical SV order to the ungrammatical VS order, as predicted by the UH.

[134] This proposal, however, needs to be tested empirically. As there is no evidence to prove the contrary, I leave this issue open to future research.

7.5.2 Presentational focus contexts

The Spanish native group highly prefers grammatical VS to ungrammatical SV with both unergatives and unaccusatives in presentational contexts. This is predicted by the theory, as presentationally focused subjects appear in sentence-final position (Bolinger's generalisation). The English and Greek groups accept both the grammatical VS and the ungrammatical SV to the same extent. According to H_2, we would expect learners to diverge from natives' intuitions. Recall that three possible types of divergent intuitions are available: near-native, optional and indeterminate. The English and Greek groups seem to show optionality in these cases, as their grammars equally tolerate SV and VS. Assuming that the weak value of the focus head is transferred from L1 English/Greek[135] into L2 Spanish, we can account for the fact that they highly tolerate ungrammatical SV in L2 Spanish. However, they also show sensitiveness to the Spanish strong value, as they highly accept grammatical VS. This result cannot be due to learners' random behaviour as, for example, they (i) equally prefer unergative SV and VS in presentationally focused contexts, yet (ii) significantly prefer unergative VS to SV in neutral focus contexts.

Let us consider the case of optionality in further detail.

7.5.3 Optionality

In this section, I will review some current proposals on optionality. Their predictions will be assessed in relation to the results from the current study.

A recently debated issue in L2A research is the pervasive phenomenon of syntactic optionality, which has been observed to occur not only at intermediate stages, but also in advanced and end-state grammars[136] (for an overview, see Hawkins, 2001b and Sorace, 2000b). In the current study, optionality occurs in cases where natives treat related SV/VS constructions in presentational focus contexts as being categorical, but learners treat them as being optional.

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[135] Recall from earlier discussions that presentationally focused subjects in English and Greek can check [+Focus] in [Spec,TP], yielding SV order. Also recall that the theory predicts presentationally focused subjects to check focus in [V,Comp] with Greek unaccusatives in presentational contexts.

[136] A distinction has to be drawn between optionality in native vs. non-native grammars. Recall from our earlier discussion in chapter 1 that we are only interested in non-native optionality in cases where natives treat the constructions as a categorical rule.

Recall from our discussion in Chapter 3 that (i) optionality in advanced non-native grammars is one of the three possible types of divergent representations (the other two being near-native and indeterminate intuitions); (ii) it is defined as the coexistence in the learner's interlanguage of two phonological forms for one logical form (Sorace, 2000b), (77)[137].

(243) Optionality in L2 grammars:

$$\lambda_1, \left\{ \begin{matrix} \pi_1 \\ \pi_2 \end{matrix} \right\}$$

Optionality has been reported to occur in the acquisition of non-native English constructions at advanced levels of proficiency: verb raising with respect to the locus of adverbs (e.g., Eubank, 1996; Schwartz & Gubala-Ryzak, 1992); English L2 distribution of articles by speakers of Chinese (Robertson, 2000) and residual V2 constraints in the grammars of German learners of English (Robertson & Sorace, 1999). There is also evidence that optionality pervades the following structures in non-native Spanish grammars: verb movement (Guijarro-Fuentes & Clibbens, 2001), core vs. non-core unaccusatives (Montrul, 2002) and clitics (Parodi, 2001a,b). Optionality in other L2s has also been reported: Hungarian L2 focus movement (Papp, 2000); Italian L2 auxiliary choice in clitic climbing constructions with unaccusatives (Sorace, 1993a, 1993b) and Chinese L2 postverbal arguments with unaccusatives (Yuan, 1999).

While optionality is an undisputable phenomenon in L2A, there is no consensus as to its etiology in advanced and end-state grammars[138]. Although most researchers envisage optionality as a deficit, two opposing approaches have been recently trying to achieve explanatory adequacy for such deficit, namely, the *impaired representation hypothesis*, IRH, and the *non-impaired representation hypothesis*, NIRH, as Figure 27 shows.

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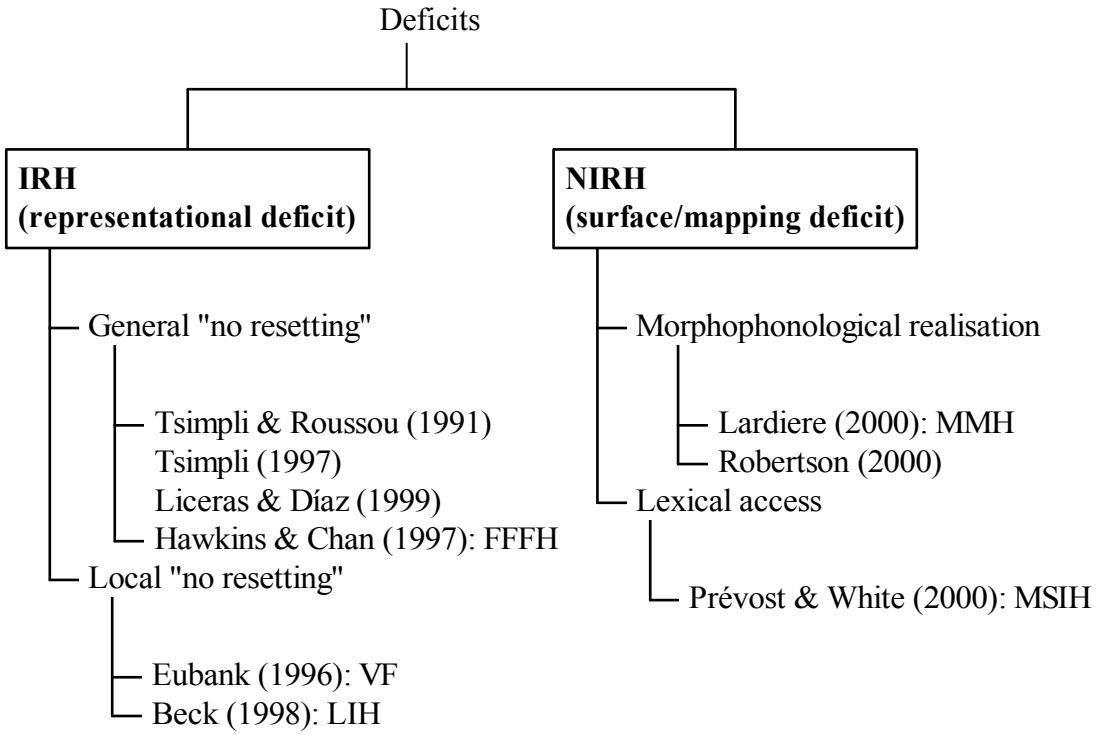
[137] Note that, incidentally, optionality is not desirable under recent minimalist approaches to language (e.g., Chomsky, 1995, 1998, 1999), as it is envisaged that native grammars are 'monorepresentational' in nature, i.e., one well-formed structure (PF) corresponds to one (and only one) representation (LF). Cases where one structure is dually represented are ruled out due to economy reasons. I will leave this issue pending until the next section (p. 238).

[138] While there is evidence suggesting that native grammars may contain optional representations in cases where the generative theory predicts monorepresentations (Papp, 2000), L2 researchers agree that optionality is a pervasive phenomenon in L2A. In the words of Sorace (2000b:98): 'L2 grammars clearly have a much greater degree of tolerance for synonymy than native grammars.'

Figure 27: Two sources of deficits in L2A



(i) On the one hand, IRH postulates a representational impairment of the functional feature module after a supposedly critical period. While learners' mental representations have reduced resources as a result of impaired features, their computation for human language (C_{HL}) is argued to be intact. Some argue that parameter resetting[139] is not possible after the claimed critical period (e.g., Liceras & Díaz, 1999; Tsimpli, 1997; Tsimpli & Roussou, 1990) and that the module responsible for functional features is defective (Hawkins & Chan, 1997; Hawkins, 2000). Others follow the same line of argumentation but further propose that lack of resetting is local (e.g., Beck, 1998; Eubank 1996).

(ii) On the other hand, NIRH, claims that optionality is a surface problem. In particular, learners' deficits are a result of their inability to realise (or map) abstract grammatical features onto the corresponding morphological reflexes: Lardiere's (2000) Morphological Misreading Hypothesis, Robertson (2000).

> A more recent version of the NIRH approach is Prévost & White (2000), who argue that learners' deficits are a consequence of their inability to retrieve the correctly inflected lexical item in real-time production.

Amongst the IRH approach, two perspectives are acknowledged in the literature: the general non-resetting approach (e.g., Hawkins & Chan, 1997; Liceras & Díaz, 1999; Tsimpli, 1997; Tsimpli & Roussou, 1991) and the local non-resetting approach (Beck, 1998; Eubank, 1996).

Tsimpli & Roussou's (1991) pioneering approach contends that the features responsible for cross-linguistic parametric variation are unavailable after a critical or sensitive period. In particular, Greek learners of English appear to have reset their L1 null-subject value to their L2 non-null subject value, as they use overt pronouns like *I*, *you*, etc. This is a surface effect, though, as learners misanalyse overt pronouns as the overt realisation of verbal agreement, i.e., learners treat pronouns as agreement markers. This implies that learners misanalyse the L2 input to accommodate it to existing L1 mental representations. The parametric value of the L2 is therefore never acquired, hence the impossibility of parameter resetting. More evidence for this approach can be found in Liceras & Díaz (1999) and Tsimpli (1997).

Following the same line of argumentation developed by Tsimpli & Roussou (1991), Hawkins & Chan (1997) and Hawkins (2000) argue for the *failed functional feature hypothesis*, FFFH, which postulates the existence of a critical period after which the selection of L2 functional features (which are not instantiated in the L1) ceases to operate: 'If the options allowed by such features are not selected as part of language acquisition in the early years of life, they will not be available to enter syntactic derivations in later language learning.' (Hawkins, 2000:80). To illustrate, Chinese learners of English show representational deficits with operator movement (Hawkins & Chan, 1997), as the [wh] feature responsible for operator raising to C is absent in Chinese L1. By contrast, French learners of English do not exhibit such deficits since their L1 contains a [wh] feature in C, similarly to what occurs in English. This type of

[139] The Government & Binding notion of 'parameter resetting' seems to have been superseded by the minimalist idea of whether the correct value of L2 functional categories can be acquired (i.e., reset) by learners. Though both ideas entail the similar syntactic consequences, we will follow the second approach in consonance with recent minimalist developments in L2 acquisition.

mismatch between the L1 and L2 feature values leads learners to a state of permanent fossilisation in spite of long exposure to the L2.

It is beyond the scope of this study to argue the case for IRH vs. NIRH approaches to deficits in L2A (see Franceschina (2001) and Hawkins (2000, 2001b) for a discussion). What is common to the above proposals is that they make predictions about the source and nature of divergence in advanced and end-state grammars. As optionality is the type of divergence that is under scrutiny in the current study, I will compare *valueless features*, VF, (Eubank, 1996) and its more recent version, the *local impairment hypothesis*, LIH, (Beck, 1998) with the *missing surface inflection hypothesis*, MSIH, (Prévost & White, 2000).

7.5.3.1 MSIH (Prévost & White, 2000)

The *missing surface inflection hypothesis*, MSIH, (Prévost & White, 2000) claims that optionality is a surface/mapping (not representational) deficit[140]. Learners have difficulty mapping abstract features onto overt morphology. In particular, Prévost & White (2000) investigate four learners. Two of them (Abdelmalek and Zahra) are L1 Moroccan Arabic learners of L2 French. Ana and Zita are L1 Spanish and L1 Portuguese (respectively) learners of L2 German.

Before proceeding, it is important to highlight some facts regarding the sampling of subjects: (i) no proficiency scores are provided for any of the learners, as only length of exposure to the L2 seems to be relevant; however, (ii) length of exposure is not uniform across subjects either. The francophone learners, who were immigrants to France, were recorded (in the form of informal interviews) at monthly intervals after one year of residence in France and for a period of three years. The authors point out that 'At that point, their L2 proficiency was judged to be very limited.' (Prévost & White, 2000:112). The learners of German were immigrants to Germany. They were first recorded three months after their arrival in Germany. Recordings were monthly and lasted approximately two years. Ana 'had much more exposure to the language than Zita. Ana also had started taking classes in German one month prior to the first

[140] The MSIH was not specifically formulated to account for optionality *per se*, but rather to test for the degree of variability in the use of finite verbs in finite/non-finite contexts (as well as the use of non-finite verbs in finite/non-finite contexts). Optionality can be regarded as a subtype of variability. I review the MSIH approach as it offers some insights regarding optionality in L2.

recording session.' (Prévost & White, 2000:112). From these facts, it is not clear what proficiency level these learners belonged to. If we assume, as Prévost & White (2000) do, that learners seemed to have mastered verbal inflectional morphology to a native-like level, we could assume that they were advanced learners. However, Meisel (1991), argues the opposite, i.e., that the learners of L2 German had not fully acquired the morphological reflexes (in particular, agreement) of the German inflectional paradigm[141].

After Pollock (1989), it is commonly accepted that French and German are verb-raising languages. To illustrate, consider the following French example. In (244a) the strong inflectional head forces finite thematic verbs like *chante* 'sing' to raise over the negator *pas* 'not' (V to T raising). By contrast, if the finite verb remains in situ (to the right of the negator) the construction leads to ungrammaticality, (244b). Non finite verbs like *chanter* 'to sing' appear in situ in cases where T may be occupied by a modal like *peux* 'can', (244c) [142].

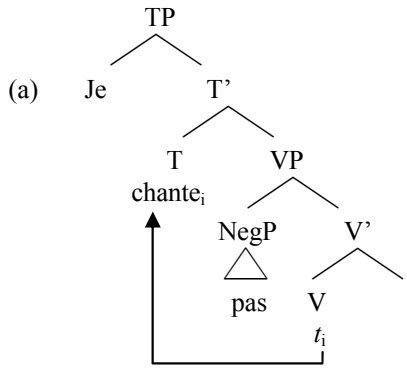
(244) a. Je chante pas
I sing not
'I do not sing'

b. *Je pas chante
I not sing
'I do not sing'

c. Je peux pas chanter
I can not sing
'I cannot sing'

[141] Note that Prévost & White's (2000) data for the learners of L2 German were originally presented and analysed by Meisel (1991).

[142] The standard analysis presented for French is equally applicable to German, although it is well known that the finite verb in German raises as far as CP (see Beck (1998) and Prévost & White (2000) for details). This slight modification does not alter the argument, however. What is important for the analysis is that strong heads attract the verb for feature checking purposes. The result is the raised verb appearing to the left of the negator, however high the verb raises.



(b) *Je pas chante

(c) Je peux pas chanter

The MSIH predicts that interlanguage grammars (ILGs) would be characterised by the following:

(i) *Prediction 1*: Finite forms (*chante*) should only appear in the raised position (*je chante pas*) and never in situ (**je pas chante*), since learners' featural strength is not impaired (i.e., they have acquired knowledge of the fact that the finite form *chante* is strong and it therefore raises to T to check its strong feature).

(ii) *Prediction 2*: Non-finite forms (*chanter*) can appear in situ (*je peux pas chanter*) and *also* in raised positions (**je chanter pas*). In the latter case, the infinitival form *chanter* is being used as a 'default' form instead of the expected finite form *chante*. In other words, it is claimed that learners show problems mapping/realising the abstract features of T^0 onto the morpheme *–e*, thus producing the default infinitival form, *chanter*, rather than the grammatical finite form *chante*. This implies that learners' featural representations remain intact, while the mapping of features onto the corresponding morpheme is defective.

Prévost & White (2000) present results for several constructions. I will only discuss verb raising over the negator/adverb, as this is the relevant piece of information for our discussion on optionality in the following section (Beck's 1998 study).

Table 37 presents the results on production of finite vs. non-finite forms in raised positions (V-Neg) and unraised positions (Neg-V).

Table 37: Verb placement with respect to negation

	L2 French				L2 German			
	Abdelmalek		Zahra		Ana		Zita	
	V-Neg	Neg-V	V-Neg	Neg-V	V-Neg	Neg-V	V-Neg	Neg-V
Finite	90	3	135	0	82	2	74	4
Non-fin	6	44	7	5	9	12	13	29

(Source: Prévost & White, 2000, table 5, p. 117)

It is clear from Table 37 that non-natives (correctly) prefer the use of finite forms (*chante*) in raised positions, as predicted by MSIH: 'the MSIH holds that abstract feature strength is unimpaired; hence, finite verbs should systematically precede the negator in L2 French and L2 German.' (Prévost & White, 2000:117). This finding confirms the first prediction of the MSIH.

I converted Prévost & White's table 5 (the current Table 37) into percentage terms (Table 38), to have a better understanding of learners' production. As can be observed in Table 38, it can be reconfirmed that learners indeed prefer finite forms in raised positions (95% or above) to unraised positions (5% or below).

Table 38: Verb placement with respect to negation

	L2 French				L2 German			
	Abdelmalek		Zahra		Ana		Zita	
	V-Neg	Neg-V	V-Neg	Neg-V	V-Neg	Neg-V	V-Neg	Neg-V
Finite	97%	3%	100%	0%	98%	2%	95%	5%
Non-fin	12%	88%	58%	42%	43%	57%	31%	69%

(Source: adapted from Prévost & White, 2000, their table 5, p. 117)

As for non-finite forms, Prévost & White (2000:118) conclude that 'there is variability [[143]] in verb placement. With the exception of Abdelmalek, … the other subjects show non-finite verb forms in raised and unraised positions.' This statement should be taken cautiously. While it is true that Abdelmalek correctly produces a high

[143] Prévost & White (2000) use the terms 'variability' and 'optionality' interchangeably throughout their text. Though they do not necessarily mean the same, I will therefore assume that 'variability' corresponds to 'optionality'.

proportion of non-finite forms (88%) in non-raised constructions as opposed to a low proportion of them (12%) in raised constructions, this very finding contradicts the second MSIH prediction, namely, it is expected that non-finite forms (*chanter*) are equally possible in raised *and* unraised positions. Certainly, the difference between 12% and 88% for Abdelmalek must be statistically significant, given the fact that there are 6+44=50 tokens of non-finite verbs for Abdelmalek. This implies that the raised/unraised constructions with non-finite verbs are not optional for the learner. Note that the same holds for Zita (31% vs. 61%).

Consider now Zahra and Ana's productions. Their amount of tokens in percentage terms in Table 38 is: 58% in raising positions vs. 42% non-raising for Zahra; 43% vs. 57% for Ana. These percentages can be considered as being statistically non-significant, as they all are around chance level. Therefore, these learners treat the raised vs. unraised positions as truly optional variants, as predicted by the second MSIH prediction.

However, consider the total number of non-finite verbs produced for each position, which is: 7+5=12 (Zahra) and 9+12=21 (Ana) (Table 37). These numbers of tokens are relatively low (compared to 50 for Abdelmalek and 42 for Zita and compared to the production of finite forms: 90+3=93 for Abdelmalek, 135+0=135 for Zahra, 82+2=84 for Ana and 74+4=78 for Zita). This raises serious doubts about the claimed optional (or variable) status of non-finite verbs for these learners on the basis of a very small sample of tokens. Extrapolating conclusions on the basis of 12 and 21 items respectively (as opposed as 50 and 42) can yield this type of results, as a low number of tokens typically yields an unstable mean, which may not be representative of a larger sample.

An additional problem arises when analysing the data as a whole. Prevost & White's (2000:117) results in Table 38 collapse all data from their longitudinal study. It is difficult, for example, to interpret the 6 instances (12%) of production of non-finite forms (*manger*) by Abdelmalek: do they correspond to Abdelmalek's late stages of acquisition (end-state)? Or perhaps to the earlier stages? The 12% result can be obtained in different ways. For example, it can mean that the learner used, say, 40% of non-finite verbs in raised constructions in the first sample (first month of recording) and, perhaps, 2% in subsequent samplings. The mean of all samplings would therefore be 12%. This difference is crucial in terms of the MSIH predictions on optionality, as

the contrasts on optionality relevant to the current study are those performed at *advanced* levels of competence only[144].

If we were to apply the predictions of the MSIH to our study, it would be predicted that learners are sensitive to the correct strong values of the focus head in Spanish and that their optional behaviour with respect to SV/VS would be a mapping/surface effect. If this were the case, the fact that learners accept the grammatical (surface) VS order in presentationally focused contexts would imply that they are sensitive to the abstract [+strong] value of Foc^0 in Spanish, as Spanish natives are. On the other hand, learners also accept the ungrammatical SV order in presentational contexts. According to the MSIH, a likely reasoning would be to propose that learners are using the surface SV order to express [±Focus]. While this is plausible, it is impossible to disconfirm it. In other words, it is difficult to refute the assertion that the ungrammatical SV order is a surface effect, as learners know that SV represents the abstract focus feature.

Still, if we were to maintain the above claim, the MSIH would logically predict that learners exhibit optional behaviour of the SV/VS distribution both in neutral focus *and* in presentational focus contexts. As the results of the current study show, this is certainly not the case, as learners show optional behaviour *only* in presentational focus contexts, i.e., in those contexts where SV/VS alternations are constrained by the [+strong] value of the functional focus head in Spanish.

Since the MSIH dissociates knowledge of abstract grammatical features *from* their overt morphological realisation, it would be difficult to make accurate predictions for our study with respect to the feature-morphology mapping. In particular, the contrasts under investigation (SV/VS) depend on the [±strong] value of the Spanish focus head. These contrasts are purely syntactic as focus is not morphologically marked in Spanish. However, recall from the evidence presented in Chapter 2 that languages like Quechua or Arabic-Berber overtly mark their focus head, i.e., the morphemes *–mi* and *–ay* are the spellout of Foc^0 respectively. Assuming that Quechua or Berber were the L2s under investigation in the present study, the MSIH could certainly make some predictions. In particular, similarly to what occurs with non-finite verbs, we would expect morphologically unmarked focus both in focused positions *and* in unfocused

[144] As we will see later, Beck (1998) divided her subjects into two groups (less advanced, more advanced). Her LIH theory applies only to the more advanced group. As a result, the claims on

positions. Similarly to what occurs with finite verbs, morphologically marked focus would appear only in focused positions. While these are relevant predictions, to our knowledge, there is no L2A study dealing with these issues. Therefore, the MSIH predictions for focus constructions remain an open debate until new empirical findings are reported.

7.5.3.2 VF (Eubank, 1996) and LIH (Beck, 1998)

Under the *valueless features* approach (Eubank, 1996), the early stages of acquisition are characterised by L1 transfer of lexical categories (as in Vainikka & Young-Scholten's (1996a, 1996b) Minimal Trees theory). L1 transfer of functional categories (containing 'valueless' features) is possible only if the L2 input contains positive evidence to trigger such a functional category. Further exposure to the L2 would trigger the acquisition of the L2 value. Optionality is therefore the result of underspecified values in functional heads. It is predicted that optionality ceases to operate once the relevant morphological paradigm is acquired. In other words, optionality is not permanent but rather developmental.

Building on Eubank's (1996) VF, Beck's (1998) *local impairment hypothesis*, LIH, postulates that it is the *strength* value of functional heads that ceases to operate after a critical period in L2A. Due to this 'local' impairment, learners' grammars are characterised by a *permanent* state of unconstrained optionality (contrary to Eubank's (1996) *temporary* state) [145].

Beck (1998) investigates whether the ILGs of 48 L1 English learners of L2 German are impaired with respect to the featural strength that is responsible for verb raising. As it was argued above regarding Prévost & White's (2000) study, German is a verb raising language, whereas English is not. Recall that one syntactic test to decide whether thematic verbs raise or not is the location of the thematic verb with respect to the negator and frequency adverbs. Adverbs, like negators, are standardly assumed to be left adjoined to the specifier of the verb (i.e., between T^0 and V^0). When the finite verb raises from V^0 to T^0 in German, the adverb appears to the right of the raised verb

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optionality in the current study must be interpreted only in the context of advanced grammars.

(SVAdvO), (245a). If the finite verb remains in situ, (245b), the resulting word order (SAdvVO) is ungrammatical. The opposite is true for the English counterparts, as the contrast in (246a,b) reveals.

(245) a. Der Vater liest selten die Zeitung.
b. *Der Vater selten liest die Zeitung.

(246) a. *The father reads seldom the newspaper
b. The father seldom reads the newspaper.

Beck (1998) used a sentence matching (SM) experiment using a response latency (RL) technique. The target stimuli consisted of paired sentences like (245a,b) above. A computer first shows a grammatical sentence like (245a) and, after a short delay, an ungrammatical sentences like (245b). When confronted with both the *a* and *b* sentence, subjects are asked to determine, as quickly as possible, whether the two members (sentences) of a particular stimulus pair are *identical* or not, as opposed to judging whether both are *grammatical* or not. A computer will measure the response latency time it takes each subject to decide whether they are identical or not. For example, when presented with a grammatical and ungrammatical sentence like (245a,b), German natives will typically take longer to parse the ungrammatical sentence than when presented with a pair containing two grammatical sentence like (245a). In other words, the time it takes to react to (un)grammaticality corresponds to the latency time.

Beck's (1998:316) LIH predicts that 'only X^0 movement in L2 competence may be defective.' In particular, 'because the strength values of features under functional heads are impaired, all learners will have optional verb raising' (p. 317). In other words, learners will not show significant latency-time differences between the (grammatical) raised vs. the (ungrammatical) unraised finite verb, thus preferring both (245a) and (245b) to the same extent. By contrast, native German controls are expected to treat the two constructions significantly differently, i.e., their latency times will be higher when matching an ungrammatical sentence, (245b), with its

[145] Note that while both Beck's (1998) and Hawkins & Chan's (1997) accounts assume that deficits are representational, the former predicts a permanent state of unconstrained optionality with respect to the strength of features, yet the latter predicts that the L2 value can never be acquired, leading to a permanent state of fossilisation.

grammatical counterpart, (245a), than when matching a grammatical sentence, (245a), with the same grammatical sentence, (245a).

Note that, contrary to Prévost & White (2000) predictions, Beck's (1998) LIH does not make any prediction as to whether finite verbs will appear only in raised positions (finite contexts) while non-finite verbs will appear in raised or unraised positions. Beck seems to assume that either finite and non-finite verbs can appear in either raised or unraised positions: 'this local impairment results in L2 grammars that effectively overgenerate (i.e., allow optional raising) when compared to mature, adult-state NL grammars.' (Beck, 1998:316). Two predictions were made:

(i) *Prediction 1*. Advanced learners' impaired strength values with respect to verb raising will result in production of verbs in both raised and unraised positions. In other words, learners will show an optional behaviour with respect to verb raising.

(ii) *Prediction 2*. There is no correlation between overt inflectional morphology (finite/non-finite verbs) and feature strength (raised/unraised position). In other words, both finite forms (liest 'he/she reads') and non-finite forms (*liesen* '(to) read') will appear in either raised or unraised positions. This indicates, contrary to Prévost 7 White's (2000) MSIH, that learners may use overt morphology despite having featural deficits.

Data were statistically analysed using one-way ANOVAs. As for overt morphology, Table 39, two groups of learners were clearly differentiated: those who overtly marked agreement and those who did not.

Table 39: Production of overt verbal agreement in raised and unraised positions

Group	**V-Adv (raised)**	**Adv-V (unraised)**	
–strong agreement	-.0449	.0448	p=.175
+strong agreement	-.0693	.0483	p=.161

(Source: Beck, 1998:331)

The –strong agreement group did not differentiate between raised and unraised positions. The same holds for the +strong agreement group. This implies a

dissociation between the abstract knowledge of functional features (which trigger verb raising) and their overt morphological realisation. In Beck's (1998:321) words: 'Simply put, then, verb raising comes about when verb raising comes about, no matter what learners do with overt morphology.' This supports the second LIH prediction.

As for the inversion (raised/unraised) constructions, results support the first LIH prediction. Native Germans differentiate between the two constructions, showing lower LTs for the grammatical-grammatical pairing than for the ungrammatical-grammatical pairing, as predicted. Two groups of learners were differentiated, Table 40, those showing no raising at all and those showing raising[146]. The less proficient group (–raising) shows a significant difference between raised and unraised positions. Recall that the LIH is silent with respect to this finding, as these learners' distinction between raised and unraised positions may be a reflection of developmental factors. Advanced learners, on the other hand, do not differentiate between the grammatical and ungrammatical condition. This is expected under the first prediction, as learners are optionally and equally allowing grammatical verb raising *and* ungrammatical non-raising. In Beck's (1998:317) words: 'Because the strength feature under the functional head either requires or prohibits verb raising in mature languages, an impairment to this feature would effectively cause verb raising to become optional.'

Table 40: Production of verbs in raised and unraised positions

Group	V-Adv (raised)	Adv-V (unraised)	
–raising (interm)	-.0878	.0878	(p=.026)
+raising (advan)	-.0316	.0175	(p=.483)

(Source: Beck, 1998:332)

[146] Following Vainikka & Young-Scholten (1996a, 1996b), Beck (1998) argues that (i) the no-raising group shows no knowledge of having acquired the functional TP projection yet (their ILG only contains a lexical projection, VP), as it is standardly assumed that verb raising requires having acquired a TP projection since T^0 is the landing site for the raised verb. Hence, these learners are considered to be the 'less advanced group' as they cannot raise the verb to a higher functional projection; (ii) the +raising group must be at a 'more advanced' level, as the fact that they raise the verb implies that the have knowledge of a functional projection above VP where the verb lands, namely, TP. Consequently, any results on optionality are only applicable to the more proficient group (+raising group). As the discussion of the results in our study are only relevant to advanced learners, we will only discuss Beck's more proficient group's results only, as 'the Local Impairment view is silent with respect to the early presence of functional projections in learners' grammars.' Beck (1998:338).

Beck (1998: 337) concludes that 'by assuming that the early learners have only a VP, one can account for the no-inversion learner [–raising group] results; by assuming that a selective deficit locally impairs the strength features, one can account for the inversion-learner [+raising group group] results.'

The LIH predictions and observations are further corroborated by a series of studies:

(i) Eubank & Beck (1998) conducted a study on a Moroccan Arabic learner of French. Both Arabic and French are verb-raising languages, the verb appearing to the left of the negator. The learner showed optional raising for as long as the recordings took place (3 years).

(ii) In a LT experiment, Eubank *et al*. (1997) found that Chinese learners of English optionally raise the verb over the adverb, even though neither Chinese nor English are verb-raising languages. Similar findings were reported in Eubank & Grace (1996). This finding implies that in cases where the learners' L1 and L2 disallow raising, learners will still continue to show deficits with the strength of functional categories[147].

Note that, incidentally, in Prévost & White's (2000) study, the learners' L1 are Arabic, Spanish and Portuguese, three verb-raising languages, like their L2s, French and German. However, in Beck's (1998) study, the L1 is English, a non verb-raising language, and the L2 German, a verb raising language. Following the line of argumentation developed in the FFFH (Hawkins and Chan; 1997; Hawkins, 2000), it is not surprising that Prévost & White's learners show an apparently more accurate (less optional) behaviour with respect to verb raising than Beck's learners. This could be caused by the fact that lack of instantiation of the L1 features in the L2 may lead to representational deficits (fossilisation) in Beck's learners. This would hold true for the current study, as the learners' L1 (English/Greek) parametrically differs from their L2 (Spanish) with respect to the value of the functional head focus.

An argument along the lines of the LIH can account for the observed results in our study (presentational contexts). Assuming the strength value of the functional focus

[147] Note that Hawkins & Chan's (1997) FFFH predicts that learners will show representational deficits (fossilisation in particular) *only when* the L1 and L2 differ parametrically. Therefore, FFFH and LIH differ with respect to the role of the L1 may play in representational deficits.

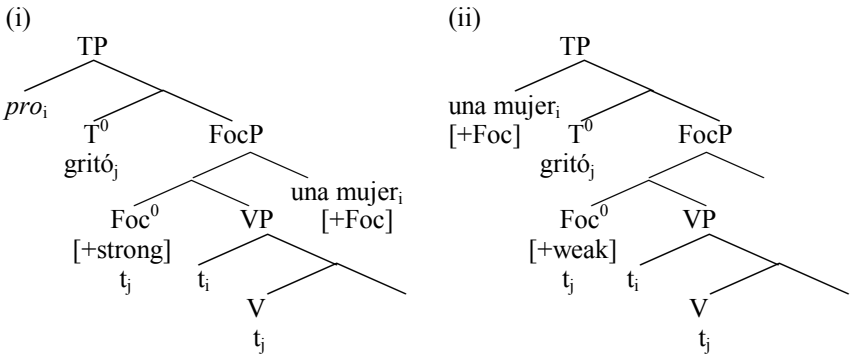
head (Foc^0) in Spanish to be underspecified/impaired, we would expect learners to be in a state of uncertainty as to its [+strong]/[–strong] value. In other words, learners would be predicted to *optionally* raise the presentationally focused subject to [Spec,FocP][148]. This would result in optional acceptance of both the grammatical VS (where the focused subject has raised to Spec,FocP), and, at the same time, the ungrammatical SV (where it does not raise to Spec,FocP, but rather to Spec,TP).

Coming back to our results in presentational contexts, the behaviour of the English and Greek groups entails that in Spanish non-native grammars both SV and VS with unergatives can be interpreted as focused subject. This is a straightforward case of optionality (1 LF to 2 PFs). It is plausible to propose that the grammars of English and Greek learners of Spanish can contain two different mental representations.

Consider *unergatives in presentational contexts*. Questions like *Who shouted?* in (247A) bias for a presentationally focus subject. Spanish natives grammars categorically distinguish between (247Bi) and (247Bii), preferring the grammatical (247Bi) with a postverbally focused subject. By contrast, Spanish non-native grammars seem to prefer both the grammatical (247Bi) and the ungrammatical (247Bii). In other words, learners' ILGs allow presentationally focused subjects to check focus in either [Spec,FocP] or in [Spec,TP], leading to optionality.

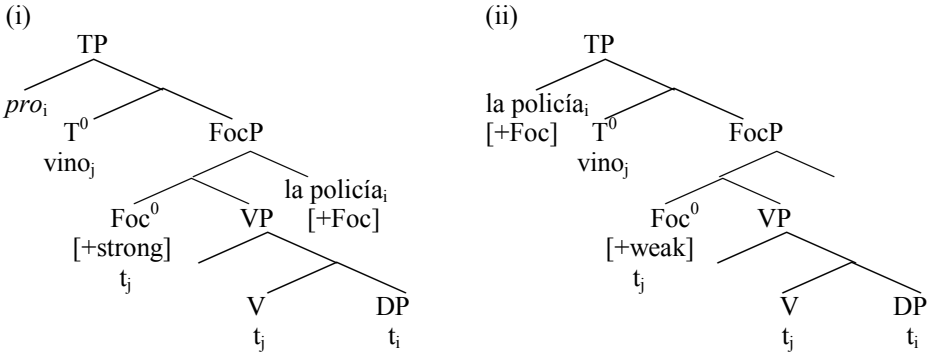
(247) A: ¿Quién gritó?
'Who shouted?'
B: (i) Gritó [UNA MUJER]$_{Foc}$
(ii) *[UNA MUJER]$_{Foc}$ gritó
'A woman shouted'

[148] In cases where learners do not optionally raise the focused subject to [Spec,FocP], it could be argued that the subject must raise to [Spec,TP] with unergatives. This latter case of raising could be argued to be a counterexample to the argument we are proposing here. However, note that in the case of unergatives, the Spanish presentationally focused subject does indeed raise to [Spec,TP] to check nominative case. This type of raising is different from focus raising, as it is not triggered to satisfy feature strength, but rather to satisfy case checking.



As for *unaccusatives in presentational contexts*, the results are very similar to those of unergatives in presentational contexts. Recall that, similarly to what occurs with unergatives, Spanish native grammars only accept presentationally focused subjects to appear in [Spec,FocP] with unaccusatives, i.e., subjects appear in sentence-final position, (248Bi). In non-native grammars subjects can be interpreted as being presentationally focused when they correctly appear in [Spec,FocP], (248Bi), or even when they appear in [Spec,TP], (248Bi).

(248) A: ¿Quién vino?
'Who arrived?'
B: (i) Vino $[\text{LA POLICÍA}]_{\text{Foc}}$
(ii) *$[\text{LA POLICÍA}]_{\text{Foc}}$ vino
'The police arrived'



To summarise, English and Greek natives' ILGs in Spanish seem to optionally allow the strong value of the focus head, (247Bi) and (248Bi), while still allowing the weak value, (247Bii) and (248Bii). This difference in behaviour with respect to the Spanish native group is predicted by H_2. Recall that between-group comparisons also support this finding, as learners differ from natives with respect to the acceptance of ungrammatical *b* (SV order).

It seems therefore reasonable to assume that the strength of the functional head Foc^0 could be responsible for the observed divergence in mental representations between learners and natives, which results in non-native optionality.

At this stage, however, I do not have empirical evidence to support (or refute) Beck's (1998) claim that optionality results in a *permanent* state. In order for the LIH to be fully confirmed in the case of focus in L2 Spanish, we would need studies showing that learners of Spanish do indeed show indeterminate intuitions with respect to the strength of focus in end-states (i.e., after long immersion in Spanish). To my knowledge, there is no such study yet.

An alternative (though somewhat similar) proposal to LIH would be to assume that learners allow their L1 English/Greek weak value on Foc^0 (i.e., SV order) and, at the same time, the correct L2 Spanish strong value in presentationally focused environments (i.e., VS order[149]). This approach would also correctly account for the observed behaviour. However, it could run against Eubank's (1996) VFH. It is not entirely clear from her argumentation what the term 'valueless' exactly entails. His article assumes, without argument, that 'valueless' stands for those features with an indefinite parametric value. However, the claim that English learners of German use verbs in raised and unraised positions in an optional fashion entails, in my view, that 'valueless' needs to be understood as those features containing both the positive and negative values of the parameter simultaneously, [±]. If this is correct, it could be argued that learners are using their L1 value (weak value) and their L2 value (strong value) simultaneously. The implications of this line of argumentation for the current study would be that English and Greek learners of Spanish use their L1 (weak) value and L2 (strong) value simultaneously, leading to optionality. I leave this question open to future research.

7.5.4 Optionality vs. near-nativeness

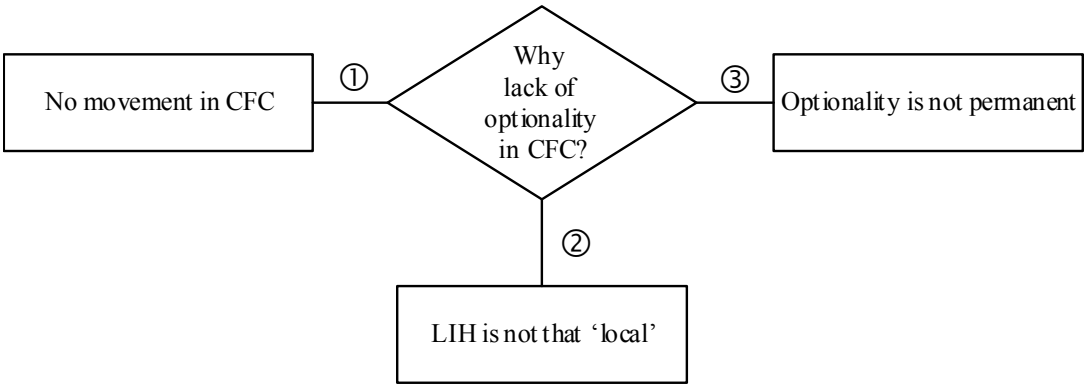
It is clear from the results and discussion on the ditribution of SV/VS in presentational focus contexts that the English and the Greek groups show divergent intuitions. In particular, Beck's (1998) LIH correctly predicts their optional behaviour, since they seem not to be sensitive to the feature value of the strong Foc^0 Spanish, which forces

[149] Recall from our previous discussion in chapter 4 that the theory predicts surface VS order with Greek unaccusatives.

presentationally focused subjects to move to [Spec,FocP] in the TP domain, where they can check focus.

However, it is not entirely clear why optionality is predicted to occur in presentational contexts with unergatives and unaccusatives, and not in CFC contexts with pronominal subjects (Chapter 5, test #1). Beck's (1998) LIH would predict that both English and Greek learners of Spanish should show optional behaviour with respect to contrastively focused pronominal subjects in CFC contexts by accepting an overt pronoun (raised position: Spec,FocP) and a null pronoun (unraised position: Spec,TP). Three likely explanations are put forward, Figure 28.

Figure 28: Why is there lack of optionality in pronominal CFC contexts?



There is a limited set of explanations for the lack of optionality in CFC contexts (where the LIH would predict it): either our analysis of CFC contexts is incorrect (option 1), or the LIH is incorrect (options 2 and 3).

Option 1. It is possible that the analysis I presented in Chapter 2 is incorrect. Since the crux of the LIH argument relies on X^0 raising to satisfy the feature strength of functional heads, it is at least conceivable that the overt pronominal subject *él* 'he' (with a contrastive focus reading) does not raise to [Spec,FocP] in the left periphery to check focus, but rather remains in [Spec,TP] where it could check focus. In other words, we would have to claim that Foc^0 is weak in all three languages (Spanish, Greek and English) in contrastive focus environments, hence the lack of X^0 movement. If this analysis is correct, the LIH would make no predictions whatsoever, since it only makes predictions in case of X^0 movement. Still, we would need to explain why the English group shows divergent knowledge in the ungrammatical CFC construction, while the Greek group shows convergent knowledge.

Option 2. A second possibility would be to propose that the Local Impairment Hypothesis is not 'local', in the sense that X^0-movement deficits apply in some cases (presentational focus with unergatives and unaccusatives) but not in others (contrastive focus with referential pronominal subjects). This would certainly undermine the main proposal of the LIH, i.e., that deficits are 'local' as they affect the stregth of functional heads in any domain.

Option 3. A third possibility would be to propose that LIH is incorrect with respect to its predictions on 'permanent'/'unconstrained' optionality. A milder version of the LIH, namely, Eubank's (1996) VF, predicts that optionality is not permanent, but rather developmental. If Eubank's predictions are along the right track, we would expect the following in our study:

(i) Consider first those constructions in L2 Spanish that are acquired from the *earlier stages*. According to studies on the pro-drop parameter (e.g., Al-Kasey & Pérez-Leroux, 1999; Liceras, 1989; Lozano, 2002a; Pérez-Leroux & Glass, 1999; Phinney, 1997), learners of Spanish license null referential subjects from their earlier stages of acquisition. However, recall from our discussion in Chapter 5 that it is debatable whether these learners' knowledge of null pronouns is native-like in earlier stages. The results of our study suggest that the overt/null alternation is stable in the grammars of English learners of Spanish, as they do distinguish between grammatical overt pronouns vs. ungrammatical null pronouns in CFC contexts. However, while they show divergence for the ungrammatical construction, their divergence is relatively 'mild', as it is of the near-native type. This is expected if we assume, following previous research, that the licensing of null pronouns is acquired earlier, although there may be some residual deficits with respect to their distribution and identification.

(ii) Consider now those constructions that are acquired at *later stages*. It is well known that SV/VS distributions are acquired later than overt/null pronoun distributions (e.g., Al-Kasey & Pérez-Leroux, 1999; Liceras, 1989; Lozano, 2002a; Pérez-Leroux & Glass, 1999; Phinney, 1997). Assuming this to be correct, we would expect our learners' intuitions to be 'poorer' for the distribution of SV and VS in presentationally focused contexts than for the

distribution of overt/null pronouns in CFC contexts. Indeed, this is what our results suggest: while learners show optional intuitions with respect to SV/VS alternations in presentational focus contexts, they (i.e., the English group) show near-native intuitions with respect to overt/null alternations in CFC contexts.

Note that there is evidence that *optionality* in CFC constructions occurs in the *intermediate* ILGs of English learners of Spanish (Pérez-Leroux & Glass, 1999). Further note that our results indicate that *near-nativeness* in CFC constructions occurs in the *advanced* ILGs of English learners of Spanish. To illustrate these two findings, consider an idealised developmental sequence like (249). Learners' intuitions of the overt/null alternation in CFC contexts are optional at an intermediate stage, call it stage *b*. Given more proficiency and exposure (advanced stages), learners' representations get closer to native grammars by becoming near-native (stage *c*) and, ideally, native-like (stage *d*).

(249) *Developmental stages of pronominal intuitions in CFC contexts:*

a	*b*	*c*	*d*
… >	optional >	near-native >	native-like

If Beck's (1998) LIH proposal is correct, we would never expect learners to reach stage *c* (contrary to our findings), let alone stage *d*, in CFC contexts, where X^0 movement is involved. However, if a moderate version of Beck's proposal (à la Eubank, 1996) is correct, we would expect learners to show optionality as a consequence of development, which seems to be the case.

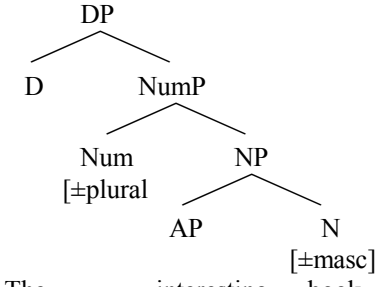
Consider now our results on word order distribution. They indicate that *optionality* occurs in the *advanced* ILGs of English (and Greek) learners of Spanish with SV/VS distribution in presentational contexts as a result learners' inability to determine the featural strengh value of Foc^0 in L2 Spanish. This would represent stage *b*. Crucially, Hertel (2000) found that *native-like* intuitions occur in the *very advanced* ILGs of English learners of Spanish with the same type of constructions. This would correspond to stage *d*. In other words, optionality seems to be a developmental phenomenon (as opposed to permanent), as learners can eventually achieve native-like intuitions.

There are reasons to believe that Beck's (1998) strong prediction with respect to *permanent* optionality can be easily disproved if it could be shown that not all cases of X^0 movement due to feature strength result in (permanent) optional behaviour. One piece of evidence comes from our results in CFC contexts, as just discussed. Further evidence comes from a study by Parodi *et al.* (1997), who investigated the alternation of Adj-N/N-Adj within the DP in L2 German, a non-N raising language[150]. The learners' L1 were Korean and Turkish (non-N raising languages: Adj-N) and Romance languages (which are N-raising languages: N-Adj). If Beck's (1998) LIH is correct, we would expect *all* learners to show optional N-Adj/Adj-N alternations (evein in their later stages of acquisition), since, by hypothesis, they would not be sensitive to the feature strength of Num^0 in L2 German. However, Parodi *et al.* (1997) found some L1 influence, as Romance speakers used a considerable proportion of ungrammatical N-Adj in German, while Korean/Turkish speakers did not.

Bruhn de Garavito & White (to appear) found similar results to those of Parodi *et al*. (1997). The former authors investigated N-raising in the ILGs of French learners of Spanish. Recall that in Romance languages (amongst them, French and Spanish), the [+strong] specification of Num^0 attracts N^0, resulting in N-Adj order. If the LIH is correct, we would expect learners to show uncertainty with respect to the feature strength of Num^0, thus allowing both the grammatical N-Adj and the ungrammatical Adj-N. However, Bruhn de Garavito & White's results clearly show that French learners of Spanish strongly prefer the correct N-Adj order (98% for the beginner

[150] The fine structure of the DP is presented in (i), where the Adjective is adjoined to N^0. As Num^0 is weak in German (and Korean/Turkish), it does not attract N^0. The resulting order is Adj-N. By contrast, as Num^0 in strong in Romance, it attracts N^0, resulting in N-Adj. This is another case of X^0 movement due to feature strength.

(i)



The		interesting	book	(English)
Das		interessant-e	Buch	(German)
El	$libro_i$	interesante	t_i	(Spanish)

group and 91% for the intermediate group). In short, it seems to be the case that the feature strength of Num is not inert, contra Beck's (1998) LIH.

A final piece of evidence against the strong LIH view comes from a study by Yuan (2001), who investigated verb placement with respect to advers in L2 Chinese by native speakers of L1 English and French[151]. Yuan (2001) tested whether the feature strength of INFL is acquirable by L2 learners. He used similar structures to those used by Beck (1998). According to the LIH, verb placement is predicted to be variable/optional for both groups of learners, regardless of the feature setting of their L1. Yuan's (2001) results show that learners can acquire the correct L2 feature strength, as they do not typically allow verb raising in L2 Chinese, whereas they correctly accept and produce non-raised constructions (over 90% of the time) at all levels of proficiency. It was also found that there is no evidence for inertness at any stage of development, contra Beck's (1998) LIH.

The evidence presented so far seems to suggests that optionality may be a sufficient (though not necessary) condition to describe advanced ILGs. In order to settle this issue, we need more L2A research specifically addressing the issue of X^0 raising in advanced grammars not only in the verbal domain, but also in the nominal domain.

7.5.5 Optionality and optimal language design

This section presents some conjectures of a highly speculative nature regarding the issue of optionality in the light of recent proposals on optimal language design within the Minimalist Program (MP).

The central question of the MP is whether the faculty for language (FL) is optimally designed to meet certain 'legibility conditions' (Chomsky, 1998:7). The basic design of FL is as follows. Expressions generated by FL must be legible by the two systems of mind, namely, the conceptual-intentional (CI) system and the sensori-motor (SM) system. These legible expressions are used by CI/SM as instructions for thought and action. The Logical Form (LF) and Phonological Form (PF) interfaces mediate between the syntactic-computational system for human language, C_{HL}, and CI/SM. Any information generated by C_{HL} must be in a readable/legible format for LF/PF before the external systems CI/SM can take further action. Derivations are therefore

[151] Note that INFL is [+strong] in French but [–strong] in Chinese and English, resulting in raising in French but non-raising in Chinese and English.

said to converge only when features sent from C_{HL} are interpretable at either interface, LF/PF. If uninterpretable features are sent to LF/PF, the derivation crashes.

A strong view is to propose that the FL is optimally designed to satisfy the conditions imposed by the external systems, CI/SM. Indeed, the Strong Minimalist Thesis (SMT) states that 'Language is an optimal solution to legibility conditions.'[152] (Chomsky, 1998:9).

If the SMT is along the right lines, displacement (i.e., movement) seems *prima facie* to be an 'imperfection' of FL, as it does not appear to serve any legibility purpose. To illustrate, consider the case of movement in presentational focused contexts. Recall from earlier chapters that the focus head, Foc^0, contains an [–interpretable] strong feature. By contrast, the focalised element contains a [+interpretable] focus feature. The sole function of the strong uninterpretable feature of Foc^0 is syntactic, i.e., to attract the interpretable feature of the focalised element, which moves to [Spec,FocP], as the only way to delete uninterpretable features is by matching them with their interpreable counterpart.

Note that this type of displacement is not optional, but rather satisfies the quasi-morphological requirements of the strong focus head. Basically, the neutral word order SV for unergatives is interpreted as the subject being unfocused, known information. By contrast, once the neutral SV undergoes displacement in presentational focus contexts, CI interprets the the resulting VS configuration as the subject being new, focused information.

Chomsky indeed argues that displacement is forced by legibility conditions and that legibility conditions are imposed by the interfaces. In his own words (Chomsky, 2000:13):

> 'The displacement property is, indeed, forced by legibility conditions: it is motivated by interpretive requirements that are externally imposed by our systems of thought.'

It follows that displacement of focused elements to Foc^0 serves an interpretive purpose, namely, to interpret the presentationally focused VS configuration as focused

[152] It is not clear what Chomsky's (1998) notion of 'language' implies. I follow Atkinson (2000:8) and Hawkins (2001a:4) in assuming that 'language' refers to I-language, i.e., the human faculty for language (FL). An interesting question for L2 research is whether 'language' can also refer to learners' interlanguage grammars (ILGs). I will discuss this issue below.

subject. The implication is that displacement is not an 'imperfection' of FL, but rather an instance of its 'good design'.

Having established that displacement of focused elements to Foc^0 is triggered to satisfy certain legibility conditions, let us return now to the issue of optionality. As discussed in Chapter 3, L2 researchers have recently reported cases of optionality in developmental stages as well as advanced and near-native states, (e.g., Beck, 1998; Guijarro-Fuentes & Clibbens, 2001; Montrul, 2002; Papp, 2000; Parodi, 2001a, 2001b; Parodi & Tsimpli, submitted 2002; Prévost & White, 2000; Robertson, 2000; Sorace, 1993a, 1993b, 2000b). Recall that learners' *optional* ILGs represent a case of two PFs for one LF (π_1/π_2, λ_1), while Spanish natives' *categorical* grammars are characterised by the use of one PF for one LF, (π_1, λ_1), as Table 41 shows.

Table 41: Optional and categorical rules in presentational focus contexts

		λ	
Verb type	**π**	**Learner's ILGs**	**Spanish natives**
Unergative	π_1: SV	λ_1: [+Foc]	λ_1: [–Foc]
	π_2: VS	λ_1: [+Foc]	λ_2: [+Foc]
Unaccusative	π_1: SV	λ_1: [+Foc]	λ_1: [–Foc]
	π_2:VS	λ_1: [+Foc]	λ_2: [+Foc]

Note that the two surface word orders in Spanish native grammars meet the legibility conditions. For example, the SV configuration (π_1) with unergatives in presentational focus contexts is interpreted by CI as unfocused (known) subject (λ_1). By contrast, the VS configuration (π_2) is interpreted as focused (unknown) subject (λ_2). It follows that native, steady-state grammars consist of (π_1, λ_1) pairs, where one and only one PF corresponds to one and only one LF. As Atkinson (2000:10) points out:

> 'If SMT is correct, a theory of language which satisfies good design conditions will produce pairs (π, λ) such that:
>
> (a) π is legible at the sensimotor interface.
>
> (b) λ is legible at the conceptual-intentional interface
>
> (c) π means λ'

Our discussion so far entails that C_{HL} generates only categorical rules in adult native grammars, as only *one* well-formed structure out of a set of candidates is allowed, while other possible candidates are ruled out[153]. By definition, optional constructions like those of learners in Table 41 pose a problem for MP: they are not allowed, as they entail the pairing of two PFs for one LF, (π_1/ π_2, λ_1), contrary to SMT. Intuitively, this also runs against economy considerations, since convergent syntactic representations should contain as few constituents/derivations/symbols as possible and displacement is seen as 'last resort', i.e., it is triggered by necessity and it is never optional (Chomsky, 1995). Given an λ_1, learners' ILGs are uneconomical since the derivation of λ_1 can be achieved via displacement (π_2), as in their L2/L3 Spanish, and lack of displacement (π_1), as in their L1 English/Greek.

The crucial question now is whether the design of learners' optional ILGs meets the criterion of 'optimal design' and, in particular, whether displacement (and, at the same time, lack of it) of the focused element to Foc^0 satisfies the legibility conditions imposed by the external systems, as the SMT stipulates. At least two possibilities are available.

First, it is possible to speculate that the systems of thought do not impose any conditions on ILGs (while they do, say, on steady-state native grammars). This would run against what is standardly assumed (Chomsky, 1998, 2000), namely, (i) that the interfaces are fully developed in adult grammars (hence, ILGs in the current study are in their adult, final state); (ii) the systems of thought of adults is in an adult, fully-fledged final state (hence, our learners' systems of thought are developed, as they are adult learners); and (iii) FL (in particular, C_{HL}) is invariant across languages[154] (hence, our learners' C_{HL} is, by hypothesis, not different from Spanish natives' C_{HL}).

Second, it is possible to assume that ILGs are not designed well enough to meet legibility conditions. For example, an ILG at any given state of development (S_x) is more deficient than the following state (S_{x+1}) in meeting legibility conditions. This possibility would run against the Thesis of Dynamic Minimalism (TDM) (Chomsky, 2000:18), which states that all states of L1 development have to satisfy legibility

[153] There is empirical evidence showing that adult native grammars may contain truly optional rules where the generative theory would predict there to be a categorical rule (Papp, 2000). Conversely, adult native grammars may contain truly categorical rules where they theory predicts optionality (Sorace & Shomura, 2001).

[154] Chomsky (1998, 2000) is of the opinion that while C_{HL} is invariant across languages, cross-linguistic differences are located in the different specification of functional features within the lexicon.

conditions. In the words of Atkinson (2000:44), 'At any point in development, the child's language system is an optimal solution to legibility problems posed by the interfaces.'

It is well known that optionality is a pervasive phenomenon in L1A (e.g., Hyams, 1996; Radford, 1986; Rizzi, 1994; Wexler, 1994, 1998). If TDM is correct, L1 optionality should not pose any problems for the idea of FL being an optimal solution to legibility problems. By the same token, if TDM is correct, it can be assumed that the learner's ILG is an optimal solution to legibility problems at any stage of L2 development. In short, ILGs are optimally designed to meet the legibility conditions.

Assuming this line of argumentation to be correct, it would face serious difficulties in explaining our results on optionality (experiment #2, this chapter). In MP terms, it is difficult to envisage a language system (e.g., ILG) that (i) theoretically meets 'good design' and 'legibility' conditions, but (ii) in practice violates economy principles.

Some L2 researchers acknowledge the fact that the MP is indeed incompatible with optionality (Papp, 2000; Parodi & Tsimpli, submitted 2002; Sorace, 2000b). As Papp (2000:173) remarks:

> 'In the MP, syntactic optionality is excluded within the computational system because of economy principles which require 'an optimal realization of interface conditions' … As a result, movement is possible only if it is necessary. Movement which is possible but not necessary (i.e., truly optional) is not permitted … Optionality may occur precisely because neither alternative qualifies as a unique optimal realisation of interface conditions.'

While there are attempts to explain *what* causes optionality in ILGs (e.g., Eubank's (1996) VF, Beck's (1998) LIH, Prévost & White's (2000) MSIH), none of them addresses the problem of *why* the supposedly 'optimal' design of FL (i.e., ILGs) should generate optional constructions, which, by hypothesis, are excluded[155]. A possibility is to appeal to the (traditional) idea that ILGs can encompass two linguistic systems simultaneously (L1 and L2).

To illustrate, consider the case of presentational focus contexts (test #2), Table 42. In English and Greek native grammars, the surface SV order (π_1) must be interpreted as

[155] Papp (2000) and Parodi & Tsimpli (submitted 2002) briefly mention that optionality may run against the idea of 'optimal design'. However, none of these authors addresses the problem in depth.

focused subject (λ_1)[156]. By contrast, the surface VS order (π_2) in the Spanish input is interpreted as focused subject (λ_1).

Table 42: Presentational focus contexts

	π	**λ**
L1 English/Greek	π_1: SV	λ_1: [+Foc]
L2/L3 Spanish	π_2: VS	λ_1: [+Foc]
ILG	π_1: SV π_2: VS	λ_1: [+Foc]

The resulting ILG is the consequence of two linguistic systems: (i) the learners' L1 and (ii) the Spanish input. The result is a 'mixed' system where one LF (λ_1) corresponds to two PFs (π_1, π_2), each from a different linguistic system. As H_2 predicts (see (241), p. 197), optionality can arise as a result of the parametric values of F_{L1} and F_{L2} differing. In this case, learners then seem to be using their F_{L1} value (surfacing as π_1) and, at the same time, their F_{L2} value (surfacing as π_2) to convey the same meaning, namely, that the subject is focused, new information (λ_1). Each of these linguistic systems (both L1 and L2/L3) certainly meets the conditions of (i) optimal design stipulated by the SMT; (ii) being constrained by UG, as they fall within the range of parametric options allowed by UG.

This type of argument would not seem to be able to account for results in studies where optional movement appears in cases where neither the L1 nor the L2 instantiate movement, as we discussed in the previous section (Eubank & *al.*, 1997; Eubank & Grace, 1996). However, what seems crucial is that both options (optional raising vs. non-raising) fall within the limits of one of the parameters of UG, irrespective of whether raising is instantiated in the learners' L1 or L2. Under this approach, optional systems are those that simultaneously exploit both values [±] of the same parameter at a given time of development. In short, optional ILGs are possible (though uneconomical) grammars constrained by UG.

[156] Recall that the theory predicts VS order for presentationally focused subjects with Greek unaccusatives, though Greek natives also allow SV.

To summarise, while there is a considerable amount of evidence that optionality is a pervasive phenomenon in L2A, there are a number of promising questions which future research would need to refine, e.g.:

(i) What is the etiology of optionality? Eubank's (1996) VF, Beck's (1998) LIH, Hawkins & Chan's (1997) FFFH, Prévost & White's (2000) MSIF or something else?
(ii) Are optionality and good design mutually exclusive?
(iii) Are some L2s more prone to cause optionality than others, as reported by Parodi & Tsimpli (submitted 2002)?
(iv) Are some domains more amenable to optionality than others? (e.g., optional verb raising in the verbal domain (Beck, 1998; Eubank, 1986; Prévost & White, 2000) vs. non-optional noun raising in the nominal domain (Bruhn de Garavito & White, to appear; Parodi & *al*., 1997).
(v) Is optionality permanent (à la Beck, 1998) or rather developmental (á la Eubank, 1996)?
(vi) Do all optional ILGs fall within the limits of one parameter of UG? In other words, is optionality constrained by the architeture of UG?

7.5.6 The role of input

As I mentioned in the discussion in Chapter 5 (page 133), another point worth mentioning is the role of input. If Papp (2000) is correct in assuming that ambiguous input leads learners to optional representations, it is then difficult to explain our results on word order distribution. I assume that the primary linguistic data learners are exposed to in L2 Spanish contain ambiguous input, as unergatives are not morphologically different from unaccusatives. Only subtle syntactic (and semantic) differences distinguish them. Therefore, the input learners receive contains SV and VS free alternations. Under an input-driven model of acquisition, it is then difficult to explain why learners show native-like intuitions in neutral focus contexts constrained by UG, yet optional intuitions in contexts governed by focus. An input-driven model of acquisition would predict no difference in behaviour between contexts, contrary to our findings. In the lack of an alternative explanation, it seems reasonable to suppose

that knowledge of the unaccusative/unergative distinction in neutral contexts is constrained by UG (UH and UTAH).

7.5.7 The privileged language in parametric transfer

In the third research question of our study (p. 4) I postulated that L2ers and L3ers would show convergent intuitions in contexts governed by UG, irrespective of their L1. Results from experiment #1 (Chapter 5) and experiment #2 (this chapter) suggest that this is the case. In contexts governed by FFs, I postulated that learners (L2ers as well as L3ers) would show convergent intuitions whenever the parametric values of F_{L1} and F_{L2} coincide, yet divergent intuitions if they do not coincide. The implicit assumption is that the L1 is the priviledged source of parametric transfer. Let us consider this assumption in more detail.

Recall from our earlier discussion in Chapter 3 that most studies on L3A acknowledge that the majority lexical transfers occur from the L2 (rather than the L1) onto the L3. Assuming this to be the case in adult syntax acquisition, it would be difficult to account for the findings in the current study.

First, recall from the results in Chapter 5 and this chapter that learners show native-like behaviour in *neutral focus contexts* with both pronominal (overt/null) and verbal (SV/VS) constructions. Note that from a typological point of view it is plausible to assume that Greek learners will typically outperform English natives. However, while L1 Greek and L3 Spanish show the same surface effects on overt/null pronouns and on unergative/unaccusative word orders, L1 English and L2 Spanish do not. If the L1 was the privileged source of transfer, it would predict (i) Greek natives to behave similarly to Spanish natives, but (ii) English natives to behave differently from Spanish natives. These predictions are contrary to the results obtained in the neutral focus condition in the present study.

Suppose, however, that both the English and Greek natives had behaved differently from Spanish natives in neutral contexts. In particular, suppose that both the English and Greek natives had behaved similarly to each other. It could then be argued that the L2 English in the case of the Greeks would be the privileged source of transfer. However, this is contrary to fact.

As for *contrastive focus contexts* with overt/null pronominal constructions, Greek natives behave similarly to Spanish natives due to the parametric similarities between

overt and null pronouns. English natives, however, differ from Spanish natives due to the differences between the two languages. This can be regarded as the L1 being the privileged source of transfer. If the L2 were to be the privileged source, we would expect the Greek group to behave similarly to the English group, which is contrary to fact. In presentational contexts with unergative/unaccusative word order alternations, both groups of learners behave similarly (yet differently from Spanish natives). This could be due to the parametric equivalence between the English and Greek focus feature strength, in which case the L1 would be the most likely source of transfer.

While language transfer is an indisputable phenomenon of adult language acquisition (Towell & Hawkins, 1994), it is still debatable which language is the primary source of transfer in adult language acquisition of syntax. More research in the generative pradigm would clarify this issue since the high level of formalism and explicitness in the current theoretical literature would make fine-grained predictions.

7.6 Conclusion

Results in this chapter confirm H_1, as learners prefer SV to VS with unergatives but VS to SV with unaccusatives in neutral focus contexts. As their intuitions are convergent, this was taken as an indication that learners' knowledge is constrained by UG (UH and UTAH).

Results also confirm H_2, as learners prefer both the grammatical VS and the ungrammatical SV in presentation focus contexts, irrespective of verb type (unergatives/unaccusative). This is contrary to the Spanish natives' behaviour, who prefer VS to SV. This results in learners' intuitions being divergent, since learners' L1 differs parametrically from their L2. More specifically, learners show optionality (a subtype of divergence). Some implications were drawn in the light of current theories of L2A. It was concluded that, while Beck's (1998) LIH can account for our data on word order distribution in presentational focus contexts, it cannot account for our data on pronominal distribution in contrastive focus contexts (experiment #1). It was suggested that a milder version of the LIH would be able to account for both kind of data, assuming optionality to be developmental rather than permanent.

7.7 Summary of chapter 7

Test #2 in this chapter examined the distribution of SV and VS with unergatives and unaccusatives in both neutral and presentational focus contexts. The first type of contexts is governed by UG (in particular, by UH and UTAH), while the second type of contexts is governed by a language-specific functional feature, namely, the strength of the focus head. Results showed that learners obey the restrictions in word order imposed by UG, since they show convergent intuitions. By contrast, learners' knowledge of such distribution in presentational focus contexts is divergent (optional), probably due to L1-L2 mismatches in the strength specification of the functional focus head, Foc^0.

Chapter 8. CONCLUSION

Recall that the first hypothesis (H_1) in our study related to whether advanced L2 learners show convergent (native-like) knowledge in unfocused (i.e., neutral focus) contexts governed by principles of UG, (250).

(250) H_1: *Neutral focus contexts*
(Pronouns: Overt Pronoun Constraint / Verbs: Unaccusative Hypothesis):
In contexts constrained by UG principles, all advanced learners will show convergent intuitions irrespective of whether the construction under investigation is instantiated in their L1.

H_1 was confirmed in the first test relating to the distribution of overt/null pronouns in unfocused contexts governed by UG (OPC contexts). Both groups of learners of Spanish (L1 English and L1 Greek) showed convergent (i.e., native-like) knowledge, whether OPC is instantiated in the learners' L1 or not.

Recall from our earlier discussion on poverty-of-the-stimulus (POS) phenomena that OPC effects cannot be learnt from the input, as evidence in the form of negative evidence is not typically available to the learners (the OPC relates to what *cannot* be said rather than what *can* be said). I also discarded as improbable the fact that learners could have acquired the OPC in instructed environments.

H_1 was also confirmed in the second test relating the distribution of SV and VS orders in neutral focus contexts with unergatives and unaccusatives. These contexts are governed by two principles of UG (UH and UTAH). The SV/VS alternation also represented a typical POS phenomenon, as the verb type that determines its distribution, unaccusative/unergative, is not morphologically distinguishable. Results showed that both groups of learners' intuitions are convergent (except with unergatives, which I attributed to learners' overgeneralising word order).

In light of the results and discussion of the preceding chapters, I concluded that learners' knowledge of subtle POS phenomena is mediated by UG.

The second hypothesis related to whether learners would show divergent intuitions with respect to Spanish natives in cases where the parameterisable strength values of

F_{L1} and F_{L2} (i.e., F_{Ln}) differ, (250). In short, parametric differences between the L1 and L2 would result in divergence.

(251) H_2: *Focused contexts*
(Pronouns: Contrastive Focus Constraint / Verbs: Presentational focus):
In contexts constrained by parameterisable FFs, advanced learners will show (i) convergent intuitions if the strength values of F_{L1} and F_{L2} coincide, but (ii) divergent intuitions if the strength values of F_{L1} and F_{L2} differ.

H_2 was confirmed in the first test relating to the distribution of overt and null pronominal subjects in contexts governed by the contrastive focus constraint (CFC). English learners of Spanish showed divergent intuitions, as the parametric values between L1 English – L2 Spanish differ. By contrast, Greek learners of Spanish showed convergent intuitions, as Greek and Spanish do not differ parametrically.

H_2 was also confirmed in the second test regarding the distribution of SV and VS in presentational focus contexts. Both groups of learners showed divergent intuitions as the strength of the focus head in their English/Greek L1 differs parametrically from Spanish.

One of the most relevant issues of the current study was the degree of divergence (near-native, optional and indeterminate intuitions). In particular, I discussed why learners showed near-native intuitions with respect to the distribution of pronominal subjects in CFC contexts, but optional intuitions in the distribution of SV/VS in presentational focus contexts. I argued that optionality appears to be more of a developmental phenomenon (à la Eubank, 1996) than a permanent stage (à la Beck, 1998). I then engaged in discussion of whether L2 optionality is incompatible with the theoretical assumption of 'optimal' language design. I concluded that, while evidence on L2 optionality is accumulating, L2 research needs to account for a series of key questions.

Recall that the third research question (about which I did not set up a hypothesis) related to the privileged source of language transfer in L3A. While it was shown that most studies on lexical acquisition favour the idea that L2 is the most active source of transfer in L3, I showed that in L3 (and L2) syntax acquisition (i) the L1 is irrelevant with relevant to POS phenomena, as learners' convergent intuitions appear to be constrained by the architecture of UG; (ii) the L1 (and not the L2) seems to be the

privileged source of parametric transfer in L3, though more studies are needed to (dis)confirm this.

I also briefly discussed the implications of our results for an input-driven model of L2A. It was shown that, if input is taken as the sole source of knowledge in L2A, it would then be difficult to explain why, given the same construction, learners show convergent intuitions in UG-constrained contexts, but divergent intuitions in FF-constrained contexts.

In this study it was also shown how discursive phenomena (which have been largely ignored in the L1 and L2 generative literature) are exploitable within the MP framework. Perhaps one of the major questions for L2 research is to decide whether discursive constraints lead to divergence, whereas formal constraints lead to convergence (there is some evidence from L1 and L2 research pointing in this direction). This is probably a promising area for future L2 research.

APPENDICES

8.1 Linguistic tests

In the next sections I present the tests used in the current study: linguistic background questionnaire, Spanish placement test, English placement test, instructions for AJTs and, finally, the AJTS (test #1 and test #2, each with its two versions).

8.1.1 Linguistic background questionnaire

INFORMACIÓN LINGÜÍSTICA

ESTA INFORMACIÓN SERÁ TRATADA **CONFIDENCIALMENTE**

Nombre y Apellido (iniciales)…….
Hombre o mujer……
Edad……..
Nacionalidad…….

Lengua materna: griego ☐ o inglés ☐

→ **2ª lengua**……..

¿Qué nivel tienes en esta lengua?
☐ 5 avanzado
☐ 4
☐ 3 intermedio
☐ 2
☐ 1 inicial

¿A qué edad empezaste a aprender la 2ª lengua?

¿Durante cuántos años la has estudiado?

¿Has aprendido una 3ª lengua?

→ (**3ª lengua**……..)?

¿Qué nivel tienes en esta lengua?
☐ 5 avanzado
☐ 4
☐ 3 intermedio
☐ 2
☐ 1 inicial

¿Qué lengua aprendiste primero: tu 2ª lengua o tu 3ª lengua?

¿A qué edad empezaste a aprender la 3ª lengua?

¿Durante cuántos años la has estudiado?

Si tienes 2ª y 3ª lengua: ¿Qué lengua crees que hablas mejor: tu 2ª lengua o tu 3ª lengua?

¿Has vivido en un país de habla hispana? ¿Cuánto tiempo?

Gracias por tu colaboración.

8.1.2 Spanish placement test (University of Wisconsin, 1997)

TEST DE NIVEL / PLACEMENT TEST

Nombre (iniciales)…….
Hombre o mujer…….
Edad……
Nacionalidad…….
Lengua materna……
Segunda lengua.……...…..
(Tercera lengua……)

Instrucciones:

Elija UNA opción solamente:

Ejemplo: Pablo es __ muchacho.

a. un ☑
b. una ☐
c. unas ☐
d. unos ☐

En algunas oraciones, no hay que cambiar nada. Elija los guiones: "--- "

Ejemplo: María es __ su hermana.

a. el ☐
b. la ☐
c. lo ☐
d. --- ☑

Sección 1, Parte 1

1. No veo ___ los muchachos.
   a. a ☐
   b. --- ☐

2. ¡Pobre Pablo! Hoy ___ enfermo.
   a. está ☐
   b. es ☐

3. A: ¿Te costó mucho el libro?
B: Sí, pagué veinte dólares ___ este libro.
   a. para ☐
   b. por ☐

4. Tomás siempre escuchaba la radio mientras ___.
   a. leía ☐
   b. leyó ☐

5. Nadie nos lo había dicho antes, pero anoche ___ la noticia de su muerte.
   a. supimos ☐
   b. conocimos ☐

6. La mamá ___ preocupada porque Ángela no ha llegado.
   a. es ☐
   b. está ☐

7. En vez de ___, fuimos al cine.
   a. estudiar ☐
   b. estudiando ☐

8. No ___ cuándo vendrán.
   a. conocemos ☐
   b. sabemos ☐

9. No veo ___ nadie.
   a. a ☐
   b. --- ☐

10. Ella ___ mira a sí misma.
   a. se ☐
   b. la ☐

11. ¡___ fabuloso es esquiar!
   a. Qué ☐
   b. Cómo ☐

12. A: ¿Qué programa prefiere usted?
B: Prefiero ___.
   a. el nuevo ☐
   b. la nueva ☐

Sección 1, Parte 2

13. Hay ___ mil personas aquí.
   a. un ☐
   b. una ☐
   c. uno ☐
   d. --- ☐

14. A: Mi tío tenía un coche muy bonito.
   B: ¿De qué color?
   C: ___ rojo y negro.
   a. Era ☐
   b. Fue ☐
   c. Estaba ☐
   d. Eran ☐

15. Cuando yo ___ joven, fui a Chile.
   a. fue ☐
   b. soy ☐
   c. era ☐
   d. fui ☐

16. Juan me dijo ___ su hermana iba a visitar España el año que viene.
   a. que ☐
   b. cual ☐

c. quien ☐
d. --- ☐

17. A: ¿Quisieras ayudar a la gente pobre?
B: Si, quisiera ___.
a. ayudarla ☐
b. ayudarlas ☐
c. la ayudo ☐
d. los ayuda ☐

18. Cuando necesito dinero, ___ pido a mi padre diez o qui nce dólares.
a. le ☐
b. lo ☐
c. les ☐
d. los ☐

19. ___ un examen el viernes.
a. Ha ☐
b. Es ☐
c. Está ☐
d. Hay ☐

20. A: ¿Cuándo es tu cumpleaños?
B: Es ___ tres de abril.
a. a ☐
b. en ☐
c. el ☐
d. --- ☐

21. ¿Conoces a alguien que ___ bien?
a. cante ☐
b. cantes ☐
c. cantas ☐
d. cantar ☐

22. Si no estuviéramos en clase, ___ en la playa.
a. estamos ☐
b. estaremos ☐
c. habríamos ☐
d. estaríamos ☐

23. No hay duda de que ellos ___ dinero.
a. ganan ☐
b. ganen ☐
c. ganasen ☐
d. hayan ganado ☐

24. A: ¿Debo decirte la verdad?
B: Sí, ¡___ la verdad!
a. dime ☐
b. me dice ☐
c. me dices ☐
d. me digas ☐

25. A: Anoche hablé con Ricardo.
B: ¿Y qué dijo?
A: Que ___ hoy.
a. él te llame ☐
b. te llamo ☐
c. te haya llamado ☐
d. te llamaría ☐

26. Su esposa esperaría hasta que él ___.
a. volviera ☐
b. volvería ☐
c. haya vuelto ☐
d. había vuelto ☐

27. Paco es ___ alto ___ Juanita.
a. tan, de ☐
b. tan, que ☐
c. más, de ☐
d. más, que ☐

28. El edificio es alto pero la montaña es más alta. El edificio es ___ la montaña.
a. alto como ☐
b. más alto que ☐
c. tan alto como ☐
d. menos alto que ☐

29. Cuando la vi, ___ triste.
a. estás ☐
b. estaban ☐
c. estaba ☐
d. estuviera ☐

30. Voy a buscar ___ mi abrigo.
a. a ☐
b. por ☐
c. para ☐
d. --- ☐

31. Enrique compró unas rosas y ___ las dio a sus padres.
a. me ☐
b. le ☐
c. se ☐
d. les ☐

32. ¡Cuidado! ¡No ___ caigas!
a. se ☐
b. te ☐
c. tú ☐
d. ti ☐

Sección 1, Parte 3

Lea la siguente historia de principio a fin. Luego léala nuevamente y elija las palabras apropiadas para completar la historia utilizando una de las opciones presentadas.

Como me gusta ayudar a otras personas y tengo bastante tiempo libre, ___ (33) voluntaria en un hospital muy grande de la ciudad de Milwaukee.

a. estoy ☐
b. tengo ☐
c. soy ☐

A veces es muy agradable ___ (34) allí,

a. trabajo ☐
b. trabajar ☐
c. trabajando ☐

pero tambien, de vez en cuando, tenemos problemas con ___ (35) paciente majadero y con ciertos doctores arrogantes que se creen muy importantes.

a. algún ☐
b. alguna ☐
c. alguno ☐

Con frecuencia, para ___ (36) el tiempo, nos reunimos los voluntarios y nos contamos chistes.

a. pasando ☐
b. pasar ☐
c. pasado ☐

Un día, un paciente me ___ (37) éste que me pareció muy gracioso:

a. contó ☐
b. contaría ☐
c. conté ☐

Dicen que un hombre que tenía cien años se murió y fue directamente al cielo.
Allí ___ (38) encontró en una enorme cafetería con muchas personas que hacían cola para que les sirvieran la comida.

a. se ☐
b. me ☐
c. les ☐

De repente, un hombre vestido de blanco que acababa de llegar pasó del último lugar hasta el primero sin hacer caso a los demás. El hombre recién llegado al cielo, ___ (39) muy enojado: "Pero, ¿quién es ese señor?"

a. preguntó ☐
b. preguntara ☐
c. preguntaría ☐

Otro que ___ (40) pacientemente en la cola

a. esperó ☐
b. esperando ☐
c. esperaba ☐

___ (41) contestó:

a. le ☐
b. lo ☐
c. se ☐

"¡Hombre! Ése ___ (42) Dios, pero a veces cree que es médico".

a. es ☐
b. sea ☐
c. está ☐

Todos nos reímos, ___ (43) sabíamos que no todos los médicos son así.

a. desde que ☐
b. aunque ☐
c. tanto que ☐

8.1.3 English placement test (Allan, 1992)

ENGLISH PLACEMENT TEST

Name and surname (initials)……. **Male or Female…….**
Age…… **Nationality…….**
Mother tongue…… **Second language.……...….**
(Third language……)

Instructions:

Look at these examples. The correct answer is ticked.

a. In warm climates people like✓ | likes | are liking sitting outside in the sun.
b. If it is very hot, they sit at | in✓ | under the shade

Now the test will begin. Tick the correct answers.

1. Water is to boil | is boiling | boils at a temperature of 100ºC.
2. In some countries there is | is | it is very hot all the time.
3. In cold countries people wear thick clothes for keeping | to keep | for to keep warm.
4. In England people are always talking about a weather | the weather | weather .
5. In some places it rains | there rains | it raining almost every day.
6. In deserts there isn't the | some | any grass.
7. Places near the Equator have a warm | the warm | warm weather even in the cold season.
8. In England coldest | the coldest | colder time of year is usually from December to February.
9. The most | Most of | Most people don't know what it's like in other countries.
10. Very less | little | few people can travel abroad

11. Mohammed Ali has won | won | is winning his first world title fight in 1960.
12. After he had won | have won | was winning an Olympic gold medal he became a professional boxer.
13. His religious beliefs have made him | made him to | made him change his name when he became champion.
14. If he has / would have / had lost his first fight with Sonny Liston, no one would have been surprised.
15. He has travelled a lot both | and | or as a boxer and as a world-famous personality.
16. He is very well known all in | all over | in all the world.

17. Many people is believing | are believing | believe he was the greatest boxer of all time.
18. To be the best from | in | of the world is not easy.
19. Like any top sportsman Ali had to | must | should train very hard.
20. Even though he has now lost his title, people would | will | did always remember him as a champion.

The history of aeroplane | the aeroplane | an aeroplane is quite a | a quite | quite short one. For many centuries men are trying | try | had tried to fly, but with little | few | a little success. In the 19th century a few people succeeded to fly | in flying | into flying in balloons. But it wasn't until the beginning of last | next | that century that anybody were | is | was able to fly in a machine
who | which | what was heavier than air, in other words, in who | which | what we now call a 'plane'. The first people to achieve 'powered flight' were the Wright brothers. His | Their | Theirs was the machine which was the forerunner of the Jumbo

jets and supersonic airlines that are such | such a | so common sight today. They could | should | couldn't hardly have imagined that in 1969, not much | not many | no much more than half a century later, a man
will be | had been | would be landed on the moon.

Already a man | man | the man is taking the first steps towards the stars. Although space satellites have existed since | during | for less than forty years, we are now dependent
from |of | on them for all kinds of informations | information | an information . Not only
are they | they are | there are being used for scientific research in space, but also to see what kind of weather is coming | comes | coming . By 2008 there would | must | will have been satellites in space for fifty years and the 'space superpowers' are planning to have | make | let massive space stations built. When these will be | are | will have been completed it will be the first time when | where | that astronauts will be able to work in space in large numbers.

Apart | For | Except all that, in many ways the most remarkable flight of | above | at all was
in | that | that one of the flying bicycle, which the world saw on television, flying | to fly | fly across the Channel from England to France, with nothing apart | but | than a man to power it. As the bicycle-flyer said, 'It's the first time I realize | I've realized | I am realizing what hard work it is to be a bird!'

8.1.4 Instructions for acceptability judgement tests (AJTs)

DATOS PERSONALES:

Tus iniciales……. Tu edad.....
Hombre o mujer..... Nacionalidad……
Lengua materna……. Segunda lengua……. Tercera lengua……..

INSTRUCCIONES:

El objetivo de estos tests es averiguar cómo te suenan ciertas oraciones en español. Es importante resaltar que sólo nos interesa **TU opinión** sobre ellas, es decir, si te parecen más o menos aceptables. Los tests no serán corregidos, sino que su finalidad es averiguar si ciertas oraciones suenan mejor o peor a los hablantes nativos de español. La información obtenida se usará en investigación lingüística sólamente, nadie (aparte del investigador) tendrá acceso a ella y tus datos permanecerán anónimos.
Primero, la oración precedida por una flechita como ésta: ⇒ , sirve para indicar el contexto. Luego le siguen dos oraciones muy parecidas: oración (a) y oración (b), cada una de ellas seguidas de la siguiente escala para puntuar cada oración: **–2 –1 0 +1 +2**.
Aqui te ponemos un ejemplo:

⇒ María siempre ha tenido miedo de los perros, por eso…
(a) ahora tienen un gato. –2 –1 0 +1 +2
(b) ahora tiene un gato. –2 –1 0 +1 +2

Como puedes ver, tanto la oración (a) como la oración (b) son aceptables, aunque de acuerdo con el contexto (oración precedida por la flechita), la oración (a) no suena bien en este caso. Por lo tanto, de acuerdo con el contexto:

- Haz un círculo en el número **–2** si crees que la oración te suena **rara**.
- Haz un círculo en el número **+2** si crees que la oración te suena **bien**.
- Haz un círculo en el los **otros números** si la oración te suena **más o menos bien**.

Imaginemos que, por ejemplo, la oración (a) te puede sonar totalmente mal (por lo tanto, pones un círculo en el número –2), o puede ser que te suene bien (pones un +2), o puede ser que te suene un poco bien (número +1).
Por otro lado, la oración (b) puede ser que también te suene muy bien (número +2) o puede ser que te suene ni bien ni mal (número 0) o tal vez medio mal (número –1).
Es decir, que **CUALQUIER COMBINACIÓN DE NÚMEROS ES POSIBLE** para cada una de las dos oraciones.
Por favor, haz el test **LO MÁS RÁPIDO POSIBLE**, pues tan sólo nos interesa **TU PRIMERA INTUICIÓN** (por lo tanto, no te preocupes demasiado por ciertas oraciones, decide lo que "primero te venga" a la cabeza).

ORACIONES DE PRÁCTICA:

Antes de empezar el test, nos gustaría que hicieses unas oraciones de práctica para ver si has entendido lo que hay que hacer. Estas son las oraciones:

⇒ Hoy es lunes y Alfredo ha hecho un examen para acceder a la universidad. Según parece …
(a) los resultados del examen salen el viernes. –2 –1 0 +1 +2
(b) los resultados del examen salieron el viernes. –2 –1 0 +1 +2

⇒ Mi amigo Juan López es el director de Microsoft en España, por eso...
(a) trabajan mucho todos los días. –2 –1 0 +1 +2
(b) trabaja mucho todos los días. –2 –1 0 +1 +2

⇒ María se ha comprado un coche nuevo y siempre lo está cuidando. Además…
(a) le lava todos los fines de semana. –2 –1 0 +1 +2
(b) lo lava todos los fines de semana. –2 –1 0 +1 +2

8.1.5 Acceptability judgement test (AJT): test 1, pilot

TEST 1a (v.1)
Aquí empieza el test:

1. La jugadora de tenis Martina Higgis es la mejor del mundo, pero Pete Sampras también es un buen jugador.
   (a) Todo el mundo cree que ella ganará en Winbledon. –2 –1 0 +1 +2
   (b) Todo el mundo cree que ganará en Winbledon. –2 –1 0 +1 +2

2. Normalmente, el norte de España es una región muy fría en invierno.
   (a) Nieva allí de vez en cuando. –2 –1 0 +1 +2
   (b) Lo nieva allí de vez en cuando. –2 –1 0 +1 +2

3. María estudia en la universidad de Essex y no tiene trabajo.
   (a) María dice que tiene poco dinero. –2 –1 0 +1 +2
   (b) María dice que ella tiene poco dinero. –2 –1 0 +1 +2

4. Mi amigo es una persona muy inteligente y le gustan los números.
   (a) Es estudiante de matemáticas en un colegio privado. –2 –1 0 +1 +2
   (b) Está estudiante de matemáticas en un colegio privado. –2 –1 0 +1 +2

5. Alfonso comenzó la carrera de física, pero no le gustaba demasiado.
   (a) Ahora estudian literatura inglesa en Oxford. –2 –1 0 +1 +2
   (b) Ahora estudia literatura inglesa en Oxford. –2 –1 0 +1 +2

6. Aquella casa se ha derrumbado. La propietaria y el arquitecto están de juicio.
   (a) El juez dice que no es responsable. –2 –1 0 +1 +2
   (b) El juez dice que ella no es responsable. –2 –1 0 +1 +2

7. Mayorca es una isla muy cálida y está en el mar Mediterráneo.
   (a) Hace sol casi todo el año. –2 –1 0 +1 +2
   (b) Lo hace sol casi todo el año. –2 –1 0 +1 +2

8. Los estudiantes hicieron un exámen el jueves, pero la profesora ha perdido las notas.
   (a) Todo el mundo dice que él ha aprobado. –2 –1 0 +1 +2
   (b) Todo el mundo dice que ha aprobado. –2 –1 0 +1 +2

9. El doctor ha venido a visitar a mi abuela esta mañana porque está en la cama.
   (a) Es muy enferma y tiene un resfriado. –2 –1 0 +1 +2
   (b) Está muy enferma y tiene un resfriado. –2 –1 0 +1 +2

10. Antonio y María son muy buenos estudiantes de matemáticas.
    (a) El profesor dice que ella es inteligente. –2 –1 0 +1 +2
    (b) El profesor dice que es inteligente. –2 –1 0 +1 +2

11. José no quiere venir con nosotros al cine este viernes.
    (a) Está cansado porque trabaja demasiado de noche. –2 –1 0 +1 +2
    (b) Es cansado porque trabaja demasiado de noche. –2 –1 0 +1 +2

12. Los estudiantes han hecho un exámen. La profesora dice que ha sido fácil.
    (a) Cada estudiante dice que ha suspendido. –2 –1 0 +1 +2
    (b) Cada estudiante dice que él ha suspendido. –2 –1 0 +1 +2

13. La profesora Smith ha publicado muchos libros y el profesor Johnson ha publicado muchos artículos.
    (a) Cada estudiante dice que es inteligente. –2 –1 0 +1 +2
    (b) Cada estudiante dice que ella es inteligente. –2 –1 0 +1 +2

14. Mis padres suelen ir de vacaciones a Mayorca todos los veranos.
    (a) Este verano viajarán en avión hasta allí. –2 –1 0 +1 +2
    (b) Este verano viajará en avión hasta allí. –2 –1 0 +1 +2

15. Pedro estudia informática en la universidad, pero no tiene ordenador.
    (a) Pedro dice que él va a comprar uno. –2 –1 0 +1 +2
    (b) Pedro dice que va a comprar uno. –2 –1 0 +1 +2

16. Estoy estudiando medicina en la universidad de Barcelona.
    (a) Hoy tengo una clase de anatomía. –2 –1 0 +1 +2
    (b) Ayer tengo una clase de anatomía. –2 –1 0 +1 +2

17. El profesor González tiene muchos proyectos de investigación en la universidad.
    (a) González dice que tiene un nuevo proyecto. –2 –1 0 +1 +2
    (b) González dice que él tiene un nuevo proyecto. –2 –1 0 +1 +2

18. Los lunes, Andrés no suele ir a clase de física y química.(a) Hoy no irá a clase de matemáticas. –2 –1 0 +1 +2(b) Ayer no irá a clase de matemáticas. –2 –1 0 +1 +2

19. El profesor Aguilar y la profesora García trabajan todos los días en el colegio.
    (a) Los estudiantes dicen que él trabaja demasiado. –2 –1 0 +1 +2
    (b) Los estudiantes dicen que trabaja demasiado. –2 –1 0 +1 +2

20. Hace mucho tiempo que no he visitado a mi familia.
    (a) El verano pasado visitaré a mis abuelos. –2 –1 0 +1 +2
    (b) El verano próximo visitaré a mis abuelos. –2 –1 0 +1 +2

21. La profesora García dice que el exámen de español es muy difícil.
    (a) Nadie dice que él aprobará el exámen. –2 –1 0 +1 +2
    (b) Nadie dice que aprobará el exámen. –2 –1 0 +1 +2

22. El profesor Herrero solía trabajar en un colegio de Madrid.
    (a) Este año trabajan en la universidad de Londres. –2 –1 0 +1 +2
    (b) Este año trabaja en la univerisad de Londres. –2 –1 0 +1 +2

23. Michael Douglas gana $10 millones al año y Sharon Stone gana $7 millones.
    (a) Nadie cree que él es pobre. –2 –1 0 +1 +2
    (b) Nadie cree que es pobre. –2 –1 0 +1 +2

24. Normalmente, pedro estudia en su casa por las mañanas.
    (a) Ahora, Pedro está en la biblioteca. –2 –1 0 +1 +2
    (b) Ahora, Pedro es en la biblioteca. –2 –1 0 +1 +2

25. Vanesa tiene un exámen de inglés la semana que viene.
    (a) Ayer está estudiando para su exámen. –2 –1 0 +1 +2
    (b) Hoy está estudiando para su exámen. –2 –1 0 +1 +2

26. La policía encontró ayer un cadáver en la universidad y después interrogó a los estudiantes.
    (a) Ningún estudiante dice que es culpable. –2 –1 0 +1 +2
    (b) Ningún estudiante dice que él es culpable. –2 –1 0 +1 +2

27. La selva tropical es la zona más verde de la Tierra.
    (a) Lo llueve allí durante todo el año. –2 –1 0 +1 +2
    (b) Llueve allí durante todo el año. –2 –1 0 +1 +2

28. La profesora López y el profesor Cano han sido expulsados de la universidad porque nunca vienen a clase.
    (a) Ningún estudiante cree que trabaja mucho. –2 –1 0 +1 +2
    (b) Ningún estudiante cree que ella trabaja mucho. –2 –1 0 +1 +2

29. Mi hermano ha sido un político durante 10 años.
    (a) Ahora es parlamentario del gobierno regional. –2 –1 0 +1 +2
    (b) Ahora son parlamentario del gobierno regional. –2 –1 0 +1 +2

30. Bill Gates es el director y el propietario de la famosa empresa Microsoft.
    (a) Bill dice que él creará otra nueva empresa. –2 –1 0 +1 +2
    (b) Bill dice que creará otra nueva empresa. –2 –1 0 +1 +2

31. Inglaterra es un país con un clima muy húmedo y con poco sol.
    (a) Lo llueve mucho en otoño y en invierno. –2 –1 0 +1 +2
    (b) Llueve mucho en otoño y en invierno. –2 –1 0 +1 +2

32. Carmen y Pedro han suspendido el exámen de historia.
    (a) El profesor dice que élla estudia poco. –2 –1 0 +1 +2
    (b) El profesor dice que estudia poco. –2 –1 0 +1 +2

33. Ayer María y yo fuimos a ver una nueva película al cine.
    (a) Nos gusta ir al cine de vez en cuando. –2 –1 0 +1 +2
    (b) Les gusta ir al cine de vez en cuando. –2 –1 0 +1 +2

34. Acabo de ver a Mateo corriendo detrás de su perro.
    (a) El perro persigue una mariposa. –2 –1 0 +1 +2
    (b) El perro estaba persiguiendo una mariposa. –2 –1 0 +1 +2

8.1.6 Acceptability judgement test (AJT): test 1, version 1

AQUI EMPIEZA EL TEST: **test 1, v.1 Sp**

	1. ⇒	Ayer María y yo fuimos a ver una nueva película al cine, pues… (a) nos gusta ir al cine normalmente. –2 –1 0 +1 +2 (b) les gusta ir al cine normalmente. –2 –1 0 +1 +2
	2. ⇒	Pedro y Luisa se han ido a vivir a Barcelona porque… (a) prefieren el vivir en Barcelona. –2 –1 0 +1 +2 (b) prefieren vivir en Barcelona. –2 –1 0 +1 +2
D5	3. ⇒	Mi amiga María siempre saca buenas notas en todos sus exámenes. Por eso... (a) los profesores dicen que ella estudia mucho. –2 –1 0 +1 +2 (b) los profesores dicen que estudia mucho. –2 –1 0 +1 +2
A1	4. ⇒	Los estudiantes hicieron un examen la semana pasada, pero la profesora ha perdido los resultados del examen. Ahora... (a) todo el mundo dice que él obtuvo un buen resultado. –2 –1 0 +1 +2 (b) todo el mundo dice que obtuvo un buen resultado. –2 –1 0 +1 +2
C1	5. ⇒	Normalmente, María y Antonio sacan muy buenas notas en todos sus exámenes. No obstante… (a) cada profesor dice que él no es inteligente. –2 –1 0 +1 +2 (b) cada profesor dice que no es inteligente. –2 –1 0 +1 +2
B1	6. ⇒	María, Luisa y Ana trabajan en una oficina. Anoche se descubrió un cadáver en la oficina y esta mañana la policía está interrogando a María, aunque... (a) María dice que ella no es culpable. –2 –1 0 +1 +2 (b) María dice que no es culpable. –2 –1 0 +1 +2
A2	7. ⇒	Los estudiantes tienen un examen hoy. Como el examen es difícil… (a) cada estudiante dice que está nervioso. –2 –1 0 +1 +2 (b) cada estudiante dice que él está nervioso. –2 –1 0 +1 +2
C3	8. ⇒	Aunque la profesora López y el profesor Cano vienen a clase todos los días... (a) ningún estudiante cree que él trabaja mucho. –2 –1 0 +1 +2 (b) ningún estudiante cree que trabaja mucho. –2 –1 0 +1 +2
B2	9. ⇒	Ayer se descubrió que faltaba dinero en el banco. El jefe sospecha que ha sido uno de los tres trabajadores: Roberto, Alfonso o Manuel. Cuando el jefe los está interrogando, ... (a) Alfonso afirma que no tiene el dinero. –2 –1 0 +1 +2 (b) Alfonso afirma que él no tiene el dinero. –2 –1 0 +1 +2
D6	10. ⇒	El profesor López tiene una gran casa en las Islas Canarias y otra en Miami, por eso... (a) los estudiantes dicen que tiene mucho dinero. –2 –1 0 +1 +2 (b) los estudiantes dicen que él tiene mucho dinero. –2 –1 0 +1 +2
D2	11. ⇒	Pedro es un buen estudiante de matemáticas y siempre saca buenas notas. Por eso… (a) los profesores dicen que es inteligente. –2 –1 0 +1 +2 (b) los profesores dicen que él es inteligente. –2 –1 0 +1 +2
A3	12. ⇒	La policía encontró ayer un cadáver en la universidad y después interrogó a los estudiantes. Según el informe policial... (a) ningún estudiante dice que él es culpable. –2 –1 0 +1 +2 (b) ningún estudiante dice que es culpable. –2 –1 0 +1 +2
C6	13. ⇒	Los estudiantes Antonio Soto y María Lara siempre aprueban los exámenes. No obstante…

(a) ningún profesor cree que ella estudia mucho. –2 –1 0 +1 +2
(b) ningún profesor cree que estudia mucho. –2 –1 0 +1 +2

B3 14. ⇒ José, Pedro y Antonio son hermanos. Esta mañana, su madre se da cuenta de que le falta dinero, así que sospecha de uno de ellos: Pedro. La madre decide preguntar a Pedro, pero...
(a) Pedro dice que él no tiene el dinero. –2 –1 0 +1 +2
(b) Pedro dice que no tiene el dinero. –2 –1 0 +1 +2

A4 15. ⇒ La semana pasada se hizo una encuesta a los trabajadores de la compañía Volkswagen. La conclusión de la encuesta fue que...
(a) todo el mundo dice que trabaja mucho. –2 –1 0 +1 +2
(b) todo el mundo dice que él trabaja mucho. –2 –1 0 +1 +2

C5 16. ⇒ Aunque Pedro y María han sido acusados de haber robado dos millones del banco…
(a) todo el mundo cree que él es inocente. –2 –1 0 +1 +2
(b) todo el mundo cree que es inocente. –2 –1 0 +1 +2

B4 17. ⇒ Tres niños, Pedrito, Joselito y Manolito estaban jugando al fútbol en la calle ayer. El balón rompió la ventana de la casa de un vecino. Esta mañana, el vecino sospecha que ha sido Manolito, aunque...
(a) Manolito dice que no rompió la ventana. –2 –1 0 +1 +2
(b) Manolito dice que él no rompió la ventana. –2 –1 0 +1 +2

D3 18. ⇒ El profesor Antonio López trabaja todos los días en la universidad, por eso …
(a) los estudiantes dicen que él trabaja mucho. –2 –1 0 +1 +2
(b) los estudiantes dicen que trabaja mucho. –2 –1 0 +1 +2

D1 19. ⇒ María está muy enferma, así que ha decidido ir al hospital. En el hospital...
(a) los doctores dicen que ella tiene cáncer. –2 –1 0 +1 +2
(b) los doctores dicen que tiene cáncer. –2 –1 0 +1 +2

A5 20. ⇒ El gobierno ha llevado a cabo un informe sobre la situación económica de los estudiantes. La conclusión del informe es que...
(a) cada estudiante dice que él tiene poco dinero. –2 –1 0 +1 +2
(b) cada estudiante dice que tiene poco dinero. –2 –1 0 +1 +2

C4 21. ⇒ El profesor López y la profesora García trabajan para la universidad y además para una famosa editorial. Aunque…
(a) cada estudiante dice que tiene poco dinero. –2 –1 0 +1 +2
(b) cada estudiante dice que ella tiene poco dinero. –2 –1 0 +1 +2

B5 22. ⇒ El profesor de matemáticas se ha dado cuenta de que los exámenes han desaparecido. Cree que una de sus tres estudiantes, Carmen, María o Rosa, ha robado los exámenes. El profesor le pregunta a Rosa, pero...
(a) Rosa dice que ella no es culpable. –2 –1 0 +1 +2
(b) Rosa dice que no es culpable. –2 –1 0 +1 +2

A6 23. ⇒ Parece ser que el salario de los profesores es uno de los más bajos actualmente. Por eso...
(a) ningún profesor dice que él tiene mucho dinero. –2 –1 0 +1 +2
(b) ningún profesor dice que tiene mucho dinero. –2 –1 0 +1 +2

D4 24. ⇒ Mi compañera Carmen no suele aprobar los exámenes casi nunca, por eso …
(a) los profesores dicen que estudia poco. –2 –1 0 +1 +2
(b) los profesores dicen que ella estudia poco. –2 –1 0 +1 +2

B6 25. ⇒ Cuatro amigas, Clara, María, Lola y Ana, trabajan en una empresa de ordenadores. El jefe se da cuenta de que ha habido un robo de nueve ordenadores y sospecha que María es reponsable del robo, aunque...
(a) María dice que no es responsable. –2 –1 0 +1 +2
(b) María dice que ella no es responsable. –2 –1 0 +1 +2

C2 26. ⇒ Aunque Michael Douglas y Sharon Stone ganan muchos millones al año…
(a) todo el mundo cree que es infeliz. –2 –1 0 +1 +2

(b) todo el mundo cree que ella es infeliz. –2 –1 0 +1 +2

27. ⇒ En verano, cuando hace mucha calor...
(a) me gusta beber cerveza. –2 –1 0 +1 +2
(b) me gusta beber la cerveza. –2 –1 0 +1 +2

28. ⇒ Normalmente, yo...
(a) me levantas a las 7:30. –2 –1 0 +1 +2
(b) me levanto a las 7:30. –2 –1 0 +1 +2

8.1.7 Acceptability judgement test (AJT): test 1, version 2

AQUI EMPIEZA EL TEST: **test 1, v.2 Sp**

	1.	⇒	Ayer María y yo fuimos a ver una nueva película al cine, pues… (a) nos gusta ir al cine normalmente. –2 –1 0 +1 +2 (b) les gusta ir al cine normalmente. –2 –1 0 +1 +2
	2.	⇒	Pedro y Luisa se han ido a vivir a Barcelona porque… (a) prefieren el vivir en Barcelona. –2 –1 0 +1 +2 (b) prefieren vivir en Barcelona. –2 –1 0 +1 +2
A4	3.	⇒	La semana pasada se hizo una encuesta a los trabajadores de la compañía Volkswagen. La conclusión de la encuesta fue que... (a) todo el mundo dice que trabaja mucho. –2 –1 0 +1 +2 (b) todo el mundo dice que él trabaja mucho. –2 –1 0 +1 +2
C5	4.	⇒	Aunque Pedro y María han sido acusados de haber robado dos millones del banco… (a) todo el mundo cree que él es inocente. –2 –1 0 +1 +2 (b) todo el mundo cree que es inocente. –2 –1 0 +1 +2
B4	5.	⇒	Tres niños, Pedrito, Joselito y Manolito estaban jugando al fútbol en la calle ayer. El balón rompió la ventana de la casa de un vecino. Esta mañana, el vecino sospecha que ha sido Manolito, aunque... (a) Manolito dice que no rompió la ventana. –2 –1 0 +1 +2 (b) Manolito dice que él no rompió la ventana. –2 –1 0 +1 +2
D3	6.	⇒	El profesor Antonio López trabaja todos los días en la universidad, por eso … (a) los estudiantes dicen que él trabaja mucho. –2 –1 0 +1 +2 (b) los estudiantes dicen que trabaja mucho. –2 –1 0 +1 +2
A2	7.	⇒	Los estudiantes tienen un examen hoy. Como el examen es difícil… (a) cada estudiante dice que está nervioso. –2 –1 0 +1 +2 (b) cada estudiante dice que él está nervioso. –2 –1 0 +1 +2
C3	8.	⇒	Aunque la profesora López y el profesor Cano vienen a clase todos los días... (a) ningún estudiante cree que él trabaja mucho. –2 –1 0 +1 +2 (b) ningún estudiante cree que trabaja mucho. –2 –1 0 +1 +2
B2	9.	⇒	Ayer se descubrió que faltaba dinero en el banco. El jefe sospecha que ha sido uno de los tres trabajadores: Roberto, Alfonso o Manuel. Cuando el jefe los está interrogando, ... (a) Alfonso afirma que no tiene el dinero. –2 –1 0 +1 +2 (b) Alfonso afirma que él no tiene el dinero. –2 –1 0 +1 +2
D6	10.	⇒	El profesor López tiene una gran casa en las Islas Canarias y otra en Miami, por eso... (a) los estudiantes dicen que tiene mucho dinero. –2 –1 0 +1 +2 (b) los estudiantes dicen que él tiene mucho dinero. –2 –1 0 +1 +2
D1	11.	⇒	María está muy enferma, así que ha decidido ir al hospital. En el hospital... (a) los doctores dicen que ella tiene cáncer. –2 –1 0 +1 +2 (b) los doctores dicen que tiene cáncer. –2 –1 0 +1 +2
A5	12.	⇒	El gobierno ha llevado a cabo un informe sobre la situación económica de los estudiantes. La conclusión del informe es que... (a) cada estudiante dice que él tiene poco dinero. –2 –1 0 +1 +2 (b) cada estudiante dice que tiene poco dinero. –2 –1 0 +1 +2
C4	13.	⇒	El profesor López y la profesora García trabajan para la universidad y además para una famosa editorial. Aunque… (a) cada estudiante dice que tiene poco dinero. –2 –1 0 +1 +2

(b) cada estudiante dice que ella tiene poco dinero. –2 –1 0 +1 +2

B5 14. ⇒ El profesor de matemáticas se ha dado cuenta de que los exámenes han desaparecido. Cree que una de sus tres estudiantes, Carmen, María o Rosa, ha robado los exámenes. El profesor le pregunta a Rosa, pero...
(a) Rosa dice que ella no es culpable. –2 –1 0 +1 +2
(b) Rosa dice que no es culpable. –2 –1 0 +1 +2

D5 15. ⇒ Mi amiga María siempre saca buenas notas en todos sus exámenes. Por eso...
(a) los profesores dicen que ella estudia mucho. –2 –1 0 +1 +2
(b) los profesores dicen que estudia mucho. –2 –1 0 +1 +2

A1 16. ⇒ Los estudiantes hicieron un examen la semana pasada, pero la profesora ha perdido los resultados del examen. Ahora...
(a) todo el mundo dice que él obtuvo un buen resultado. –2 –1 0 +1 +2
(b) todo el mundo dice que obtuvo un buen resultado. –2 –1 0 +1 +2

C1 17. ⇒ Normalmente, María y Antonio sacan muy buenas notas en todos sus exámenes. No obstante…
(a) cada profesor dice que él no es inteligente. –2 –1 0 +1 +2
(b) cada profesor dice que no es inteligente. –2 –1 0 +1 +2

B1 18. ⇒ María, Luisa y Ana trabajan en una oficina. Anoche se descubrió un cadáver en la oficina y esta mañana la policía está interrogando a María, aunque...
(a) María dice que ella no es culpable. –2 –1 0 +1 +2
(b) María dice que no es culpable. –2 –1 0 +1 +2

A6 19. ⇒ Parece ser que el salario de los profesores es uno de los más bajos actualmente. Por eso...
(a) ningún profesor dice que él tiene mucho dinero. –2 –1 0 +1 +2
(b) ningún profesor dice que tiene mucho dinero. –2 –1 0 +1 +2

D4 20. ⇒ Mi compañera Carmen no suele aprobar los exámenes casi nunca, por eso …
(a) los profesores dicen que estudia poco. –2 –1 0 +1 +2
(b) los profesores dicen que ella estudia poco. –2 –1 0 +1 +2

B6 21. ⇒ Cuatro amigas, Clara, María, Lola y Ana, trabajan en una empresa de ordenadores. El jefe se da cuenta de que ha habido un robo de nueve ordenadores y sospecha que María es reponsable del robo, aunque...
(a) María dice que no es responsable. –2 –1 0 +1 +2
(b) María dice que ella no es responsable. –2 –1 0 +1 +2

C2 22. ⇒ Aunque Michael Douglas y Sharon Stone ganan muchos millones al año…
(a) todo el mundo cree que es infeliz. –2 –1 0 +1 +2
(b) todo el mundo cree que ella es infeliz. –2 –1 0 +1 +2

D2 23. ⇒ Pedro es un buen estudiante de matemáticas y siempre saca buenas notas. Por eso…
(a) los profesores dicen que es inteligente. –2 –1 0 +1 +2
(b) los profesores dicen que él es inteligente. –2 –1 0 +1 +2

A3 24. ⇒ La policía encontró ayer un cadáver en la universidad y después interrogó a los estudiantes. Según el informe policial...
(a) ningún estudiante dice que él es culpable. –2 –1 0 +1 +2
(b) ningún estudiante dice que es culpable. –2 –1 0 +1 +2

C6 25. ⇒ Los estudiantes Antonio Soto y María Lara siempre aprueban los exámenes. No obstante…
(a) ningún profesor cree que ella estudia mucho. –2 –1 0 +1 +2
(b) ningún profesor cree que estudia mucho. –2 –1 0 +1 +2

B3 26. ⇒ José, Pedro y Antonio son hermanos. Esta mañana, su madre se da cuenta de que le falta dinero, así que sospecha de uno de ellos: Pedro. La madre decide preguntar a Pedro, pero...
(a) Pedro dice que él no tiene el dinero. –2 –1 0 +1 +2

(b) Pedro dice que no tiene el dinero. –2 –1 0 +1 +2

27. ⇒ En verano, cuando hace mucha calor...
(a) me gusta beber cerveza. –2 –1 0 +1 +2
(b) me gusta beber la cerveza. –2 –1 0 +1 +2

28. ⇒ Normalmente, yo...
(a) me levantas a las 7:30. –2 –1 0 +1 +2
(b) me levanto a las 7:30. –2 –1 0 +1 +2

8.1.8 Acceptability judgement test (AJT): test 2, pilot

1. ⇒ Tu hermana y tú estuvisteis de compras ayer. Hoy, tu amigo Pablo te ha llamado por teléfono y te pregunta: ¿Qué pasó ayer? Tú respondes:
   (a) Compró mi hermana un ordenador. –2 –1 0 +1 +2
   (b) Mi hermana compró un ordenador. –2 –1 0 +1 +2

2. ⇒ Tu amigo Roberto y tú estáis en una reunión de negocios muy seria y aburrida. Roberto empieza a dormirse un poco y en ese momento el jefe estornuda estrepitosamente. Roberto se despierta desconcertado y te pregunta: ¿Quién estornudó? Tú respondes:
   (a) El jefe estornudó. –2 –1 0 +1 +2
   (b) Estornudó el jefe. –2 –1 0 +1 +2

3. ⇒ Anoche estuviste en una discoteca con tus amigos. Fue muy aburrido porque tan sólo bailó una chica Hoy, tu madre te llama por teléfono y te pregunta: ¿Quién bailó anoche? Tú respondes:
   (a) Una chica bailó. –2 –1 0 +1 +2
   (b) Bailó una chica. –2 –1 0 +1 +2

4. ⇒ Tu amiga Isabel y tú estáis en un restaurante. Isabel va al servicio y, mientras tanto, el camarero estornuda accidentalmente sobre vuestros platos. Cuando Isabel vuelve del servicio, ve que tú estás muy enfadado. Ella te pregunta: ¿Qué pasó? Tú respondes:
   (a) El camarero estornudó sobre los platos. –2 –1 0 +1 +2
   (b) Estornudó el camarero sobre los platos. –2 –1 0 +1 +2

5. ⇒ Estás en una fiesta con tu amiga María. Mientras María va al servicio, un hombre al que no conoces llega a la fiesta. Al volver del servicio, María se da cuenta de que hay alguien más y te pregunta: ¿Quién vino? Tú respondes:
   (a) Un hombre vino. –2 –1 0 +1 +2
   (b) Vino un hombre. –2 –1 0 +1 +2

6. ⇒ Tu amigo Pedro te ha llamado por teléfono porque sabe que alguien de tu familia se puso enfermo ayer pero no sabe por qué. Pedro te pregunta: ¿Qué pasó? Tú respondes:
   (a) Mi hermano comió demasiado. –2 –1 0 +1 +2
   (b) Comió demasiado mi hermano. –2 –1 0 +1 +2

7. ⇒ Tu amiga Sole y tú estáis hablando sobre las cosas que os gustan. Sole te pregunta: ¿Qué bebida te gusta? Tú respondes:
   (a) Me gusta la cerveza. –2 –1 0 +1 +2
   (b) Me gusta cerveza. –2 –1 0 +1 +2

8. ⇒ Trabajas en una guardería y Pablito empieza a llorar mucho porque un niño nuevo llegó a la guardería. Tu compañera de trabajo, María, no sabe porqué llora Pablito y te pregunta: ¿Qué pasó? Tú respondes:
   (a) Un niño nuevo llegó. –2 –1 0 +1 +2
   (b) Llegó un niño nuevo. –2 –1 0 +1 +2

9. ⇒ Tu amiga Aurora y tú estáis tomando un café en el comedor de tu casa. Tú vas a la cocina a por más café y ves por la ventana que un niño está gritando en la calle. Cuando vuelves, Aurora te pregunta: ¿Quién gritó? Tú respondes:
   (a) Gritó un niño. –2 –1 0 +1 +2
   (b) Un niño gritó. –2 –1 0 +1 +2

10. ⇒ Ayer, mientras estabas en el banco, un ladrón entró a robar. Tu amigo José te llama por teléfono porque escuchó una noticia sobre el banco. José te pregunta: ¿Qué pasó en el banco? Tú respondes:
    (a) Un ladrón entró. –2 –1 0 +1 +2
    (b) Entró un ladrón. –2 –1 0 +1 +2

11. ⇒ Tu amigo Alfonso y tú fuisteis de compras ayer. Hoy, tu madre quiere saber qué compró tu amigo y te pregunta: ¿Qué compró Alfonso? Tú respondes:
(a) Compró una bicicleta roja. –2 –1 0 +1 +2
(b) Compró una roja bicicleta. –2 –1 0 +1 +2

12. ⇒ Ayer organizaste una fiesta en tu casa y fue un desastre porque tus amigos no vinieron. Hoy, tu compañero de clase, Manuel, te pregunta: ¿Cómo fue la fiesta? Tú respondes:
(a) Nadie vino a la fiesta. –2 –1 0 +1 +2
(b) No vino nadie a la fiesta. –2 –1 0 +1 +2

13. ⇒ Anoche te despertaste porque un niño empezó a llorar en la calle. Después, no te pudiste dormir. A la mañana siguiente, tu madre te ve con mala cara por no haber dormido y te pregunta: ¿Qué pasó? Tu respondes:
(a) Lloró un niño en la calle. –2 –1 0 +1 +2
(b) Un niño lloró en la calle. –2 –1 0 +1 +2

14. ⇒ Anoche estuviste con tu familia en un restaurante italiano. Tu hermana no pudo ir porque estaba enferma. Cuando volvisteis del restaurante, tu hermana te preguntó: ¿Quién comió pizza? Tu respondes:
(a) No comió nadie pizza. –2 –1 0 +1 +2
(b) Nadie comió pizza. –2 –1 0 +1 +2

15. ⇒ Estás en el cine con tu amigo Pablo viendo una película romántica. Pablo te ve un poco aburrido y te pregunta: ¿Qué tipo de cine prefieres? Tú respondes:
(a) Prefiero cine de acción. –2 –1 0 +1 +2
(b) Prefiero el cine de acción. –2 –1 0 +1 +2

16. ⇒ Tu amigo Manuel y tú estáis en una fiesta en tu casa. Manuel va a la cocina a por una cerveza. En ese momento, un vecino vino a quejarse porque la música estaba muy alta. Cuando Manuel viene de la cocina, te pregunta: ¿Qué pasó? Tú respondes:
(a) Un vecino vino. –2 –1 0 +1 +2
(b) Vino un vecino. –2 –1 0 +1 +2

17. ⇒ Tu amiga Clara está en un restaurante contigo. Clara va al servicio. Mientras tanto, tú miras por la ventana y ves a una mujer gritando en la calle. Al volver del servicio, Clara te pregunta: ¿Qué pasó? Tú respondes:
(a) Gritó una mujer. –2 –1 0 +1 +2
(b) Una mujer gritó. –2 –1 0 +1 +2

18. ⇒ Tu amigo Pepe va a visitarte a tu casa. En realidad, Pepe está enamorado de tu hermana, así que te pregunta: ¿Dónde está tu hermana? Tú le respondes:
(a) Está con su novio nuevo. –2 –1 0 +1 +2
(b) Está con su nuevo novio. –2 –1 0 +1 +2

19. ⇒ Tú estás en una fiesta con tu amiga Laura. Laura sale de la habitación y en ese momento llega la policía porque hay mucho ruido en la fiesta. Cuando Laura vuelve, te pregunta: ¿Quién llegó? Tú contestas:
(a) La policía llegó. –2 –1 0 +1 +2
(b) Llegó la policía. –2 –1 0 +1 +2

20. ⇒ Eres un guía turístico y llevas a un grupo de turistas a Madrid. La primera noche, muchos turistas te dicen que no pudieron dormir porque había mucho ruido en el hotel por la noche. El jefe del hotel te pregunta por la mañana: ¿Quién durmió anoche? Tú respondes:
(a) Poca gente durmió. –2 –1 0 +1 +2
(b) Durmió poca gente. –2 –1 0 +1 +2

21. ⇒ Anoche tus compañeros de clase, tu profesor y tú estuvisteis en una fiesta en el colegio. Todos os sorprendisteis al ver al profesor bailando. El domingo, tu padre quiere saber cómo fue la fiesta, así que te pregunta: ¿Qué pasó? Tú respondes:
(a) El profesor bailó. –2 –1 0 +1 +2
(b) Bailó el profesor. –2 –1 0 +1 +2

22. ⇒ Trabajas como salvavidas en una piscina, pero hoy ha hecho mucho frío y poca gente ha ido a la piscina. Tan sólo un hombre usó la piscina. Tu jefe, al final de la jornada, te pregunta: ¿Quién nadó hoy? Tú respondes:
(a) Nadó un hombre. –2 –1 0 +1 +2
(b) Un hombre nadó. –2 –1 0 +1 +2

23. ⇒ Tu compañero de piso, Pepe, está de vacaciones, así que has planeado celebrar una fiesta el domingo en tu piso. Pero Pepe vuelve de las vacaciones el sábado y no puedes celebrar la fiesta. Tu madre te llama por teléfono y te nota un poco enfadado, así que te pregunta: ¿Qué pasó? Tu respondes:
(a) Mi compañero volvió. –2 –1 0 +1 +2
(b) Volvió mi compañero. –2 –1 0 +1 +2

24. ⇒ Mientras estás estudiando en tu habitación, un niño en la calle lanza una piedra a tu ventana y la rompe. Tu madre, al oír el ruido, pregunta: ¿Qué pasó? Tú respondes:
(a) Un niño rompió la ventana. –2 –1 0 +1 +2
(b) Rompió la ventana un niño. –2 –1 0 +1 +2

25. ⇒ Ayer fuiste a una conferencia en la universidad. Tu amigo Paco no fue, así que Paco quiere saber si alguien fue a la conferencia, y te pregunta: ¿Quién fue a la conferencia? Tú respondes:
(a) Fue mucha gente. –2 –1 0 +1 +2
(b) Mucha gente fue. –2 –1 0 +1 +2

26. ⇒ Trabajas en una prisión. Hoy, un prisionero peligroso ha escapado. Al volver a casa, tu hermano te ve preocupado, así que te pregunta: ¿Qué pasó? Tú respondes:
(a) Escapó un prisionero. –2 –1 0 +1 +2
(b) Un prisionero escapó. –2 –1 0 +1 +2

27. ⇒ Estás en una clase de física. Todo el mundo está callado mientras el profesor explica la lección, pero un chico ríe durante unos segundos. El profesor no ve quién ha reído, así que te pregunta: ¿Quién rió? Tú respondes:
(a) Rio un chico. –2 –1 0 +1 +2
(b) Un chico rio. –2 –1 0 +1 +2

28. ⇒ Estas en un examen de matemáticas. Como el examen es muy difícil, una chica protesta en voz baja, pero el profesor no sabe quién ha protestado. Así que el profesor te pregunta: ¿Quién protestó? Tú respondes:
(a) Una chica protestó. –2 –1 0 +1 +2
(b) Protestó una chica. –2 –1 0 +1 +2

29. ⇒ Estás en una excursión en Barcelona con un gran grupo de turistas. Una mujer olvida sus gafas en el hotel, así que regresa al hotel. El guía turístico no sabe quién ha regresado al hotel, así que te pregunta: ¿Quién regresó? Tú respondes:
(a) Una mujer regresó. –2 –1 0 +1 +2
(b) Regresó una mujer. –2 –1 0 +1 +2

30. ⇒ Tu amigo Juan y tú estáis hablando sobre el trabajo. Tú le dices a Juan que tienes un nuevo trabajo en la universidad. Juan te pregunta: ¿Te gusta tu trabajo? Tú respondes:
(a) Sí, es un trabajo interesante. –2 –1 0 +1 +2
(b) Sí, es un interesante trabajo. –2 –1 0 +1 +2

31. ⇒ Tu compañero Antonio y tú estáis en una reunión en el colegio. Antonio sale de la habitación un momento y, al minuto, un hombre al que no conoces también sale de la habitación. Cuando Antonio vuelve, se da cuenta de que falta alguien, pero no sabe quién. Antonio te pregunta: ¿Quién salió? Tú respondes:
(a) Salió un hombre. –2 –1 0 +1 +2
(b) Un hombre salió. –2 –1 0 +1 +2

32. ⇒ Vas al cine a ver una película romántica. Durante la película, una mujer, que está a tu lado, empieza a llorar. Al salir del cine, te encuentras con un amigo, Felipe. Felipe también oyó llorar a alguien en el cine pero no sabe quién. Felipe te pregunta: ¿Quién lloró? Tú respondes:
(a) Lloró una mujer. –2 –1 0 +1 +2
(b) Una mujer lloró. –2 –1 0 +1 +2

33. ⇒ Tú estás en el hospital y tu amiga Marta te está visitando. Marta va al servicio durante unos minutos. Mientras tanto, un doctor entró rápidamente en la habitación para darte la medicina. Cuando Marta regresa, te pregunta: ¿Quién entró? Tú respondes:
(a) Entró un doctor. –2 –1 0 +1 +2
(b) Un doctor entró. –2 –1 0 +1 +2

34. ⇒ Ayer por la mañana tuviste un examen muy importante, pero no pudiste hacerlo porque el examinador durmió toda la noche y no se despertó a tiempo. Hoy tu madre te pregunta: ¿Qué pasó ayer? Tú respondes:
(a) El examinador durmió demasiado. –2 –1 0 +1 +2
(b) Durmió el examinador demasiado. –2 –1 0 +1 +2

35. ⇒ Eres un soldado en el ejército. Tus compañeros y tú vais a hacer una expedición, pero uno de los soldados tiene mucho miedo, así que regresa al campamento. El capitán, que no se ha enterado del asunto, te pregunta: ¿Qué pasó? Tú respondes:
(a) Un soldado regresó. –2 –1 0 +1 +2
(b) Regresó un soldado. –2 –1 0 +1 +2

36. ⇒ Ayer tu profesor de física dijo las notas del examen. Al llegar a casa, tu madre te ve triste y te pregunta: ¿Aprobó mucha gente? Tú respondes:
(a) Nadie aprobó el examen. –2 –1 0 +1 +2
(b) No aprobó nadie el examen. –2 –1 0 +1 +2

37. ⇒ Tu padre se fue anoche de casa porque discutió con tu madre. Cuando tu amigo Felipe viene a tu casa, ve que estás triste, así que te pregunta: ¿Qué pasó anoche? Tú respondes:
(a) Se fue mi padre. –2 –1 0 +1 +2
(b) Mi padre se fue. –2 –1 0 +1 +2

38. ⇒ Tu amiga Carmen y tú estáis en una reunión de negocios. Mientras Carmen está hablando con el jefe, una secretaria sale de la habitación. Cinco minutos más tarde, Carmen se da cuenta de que alguien salió de la habitación, así que te pregunta: ¿Qué pasó? Tú contestas:
(a) Salió una secretaria. –2 –1 0 +1 +2
(b) Una secretaria salió. –2 –1 0 +1 +2

39. ⇒ Trabajas como profesor en un colegio. Ayer fuiste a la playa con tu grupo de estudiantes. Hizo mucho sol y todo el grupo nadó en la playa. Esta mañana, el director del colegio te pregunta: ¿Quién nadó? Tú respondes:
(a) Nadó todo el grupo. –2 –1 0 +1 +2
(b) Todo el grupo nadó. –2 –1 0 +1 +2

40. ⇒ Ayer estuviste haciendo un examen de literatura. Un chico salió de la clase porque no sabía las respuestas, pero cinco minutos más tarde se arrepintió y volvió a la clase. Al día siguiente, tu madre se enteró de que alguien había vuelto al examen y te preguntó: ¿Quién volvió? Tú respondes:
(a) Un chico volvió. –2 –1 0 +1 +2
(b) Volvió un chico. –2 –1 0 +1 +2

41. ⇒ Ayer hiciste un examen de literatura muy difícil porque las preguntas del examen no se habían estudiado en clase. Muchos estudiantes protestaron. Hoy, tu hermana te pregunta: ¿Qué pasó en el examen? Tú respondes:
(a) Mucha gente protestó. –2 –1 0 +1 +2
(b) Protestó mucha gente. –2 –1 0 +1 +2

42. ⇒ Tú trabajas en una prisión. Últimamente, tu amigo Pedro ha escuchado en la radio que un prisionero intentó escapar, pero no sabe quién exactamente. Así que él te pregunta: ¿Quién escapó? Tú le respondes:
(a) Escapó un criminal. –2 –1 0 +1 +2
(b) Un criminal escapó. –2 –1 0 +1 +2

43. ⇒ Tu amiga Sonia y tú estáis en un restaurante. Sonia va al servicio durante unos minutos. En esos instantes, un hombre empezó a reír a carcajadas en la calle. Sonia vuelve y te pregunta: ¿Qué pasó en la calle? Tú respondes:
(a) Rio un hombre. –2 –1 0 +1 +2
(b) Un hombre rio. –2 –1 0 +1 +2

44. ⇒ Tu primo Alberto y tú estáis en una fiesta. Alberto te habla de tenis y nota que empiezas a aburrirte, así que te pregunta: ¿Qué deporte te gusta? Tú respondes:
(a) Me gusta el fútbol. –2 –1 0 +1 +2
(b) Me gusta fútbol. –2 –1 0 +1 +2

8.1.9 Acceptability judgement test (AJT): test 2, version 1

AQUI EMPIEZA EL TEST: test 2, v.1 Sp

	29. ⇒	Tu amigo Pepe va a visitarte a tu casa. En realidad, Pepe está enamorado de tu hermana, así que te pregunta: ¿Dónde está tu hermana? Tú le respondes: (a) Está con su novio nuevo. –2 –1 0 +1 +2 (b) Está con su nuevo novio. –2 –1 0 +1 +2
	30. ⇒	Estás en el cine con tu amigo Pablo viendo una película romántica. Pablo te ve un poco aburrido y te pregunta: ¿Qué tipo de cine prefieres? Tú respondes: (a) Prefiero cine de acción. –2 –1 0 +1 +2 (b) Prefiero el cine de acción. –2 –1 0 +1 +2
D5	31. ⇒	Estás en una clase de física. Todo el mundo está callado mientras el profesor explica la lección, pero un chico ríe durante unos segundos. El profesor no ve quién ha reído, así que te pregunta: ¿Quién se rió? Tú respondes: (a) Se rio un chico. –2 –1 0 +1 +2 (b) Un chico se rio. –2 –1 0 +1 +2
A1	32. ⇒	Trabajas en una guardería y Pablito, empieza a llorar mucho porque otro niño llegó a la guardería. Tu compañera de trabajo, María, no sabe porqué llora Pablito y te pregunta: ¿Qué pasó? Tú respondes: (a) Otro niño llegó. –2 –1 0 +1 +2 (b) Llegó otro niño. –2 –1 0 +1 +2
C1	33. ⇒	Estás en una fiesta con tu amiga María. Mientras María va al servicio, un hombre al que no conoces llega a la fiesta. Al volver del servicio, María quiere saber quién ha venido, así que te pregunta: ¿Quién vino? Tú respondes: (a) Un hombre vino. –2 –1 0 +1 +2 (b) Vino un hombre. –2 –1 0 +1 +2
B1	34. ⇒	Tu amiga Isabel y tú estáis en un restaurante. Isabel va al servicio y, mientras tanto, el camarero estornuda accidentalmente sobre vuestros platos. Cuando Isabel vuelve del servicio, ve que tú estás muy enfadado. Ella te pregunta: ¿Qué pasó? Tú respondes: (a) El camarero estornudó sobre los platos. –2 –1 0 +1 +2 (b) Estornudó el camarero sobre los platos. –2 –1 0 +1 +2
A2	35. ⇒	Ayer, mientras estabas en el banco, un ladrón entró a robar. Hoy, tu amigo José te llama por teléfono porque escuchó una noticia sobre el banco. José te pregunta: ¿Qué pasó en el banco? Tú respondes: (a) Un ladrón entró. –2 –1 0 +1 +2 (b) Entró un ladrón. –2 –1 0 +1 +2
C3	36. ⇒	Tu compañero Antonio y tú estáis en una reunión en el colegio. Antonio sale de la habitación un momento y, al minuto, un hombre al que no conoces también sale de la habitación. Cuando Antonio vuelve, te pregunta: ¿Quién salió? Tú respondes: (a) Salió un hombre. –2 –1 0 +1 +2 (b) Un hombre salió. –2 –1 0 +1 +2
B2	37. ⇒	Anoche te despertaste porque un niño empezó a llorar en la calle. Después, no te pudiste dormir. A la mañana siguiente, tu madre te ve con mala cara por no haber dormido y te pregunta: ¿Qué pasó? Tu respondes: (a) Lloró un niño en la calle. –2 –1 0 +1 +2 (b) Un niño lloró en la calle. –2 –1 0 +1 +2
D6	38. ⇒	Vas al cine a ver una película romántica. Durante la película, una mujer, que está a tu lado, empieza a llorar. Al salir del cine, te encuentras con un amigo, Felipe.

Felipe también oyó llorar a alguien en el cine pero no sabe quién. Felipe te pregunta: ¿Quién lloró? Tú respondes:
(a) Lloró una mujer. –2 –1 0 +1 +2
(b) Una mujer lloró. –2 –1 0 +1 +2

D2 39. ⇒ Anoche estuviste en una discoteca con tus amigos. Fue muy aburrido porque tan sólo bailó una chica Hoy, tu madre te llama por teléfono y te pregunta: ¿Quién bailó anoche? Tú respondes:
(a) Una chica bailó. –2 –1 0 +1 +2
(b) Bailó una chica. –2 –1 0 +1 +2

A3 40. ⇒ Tu amigo Manuel y tú estáis en una fiesta en tu casa. Manuel va a la cocina a por una cerveza. En ese momento, un vecino vino a quejarse porque la música estaba muy alta. Cuando Manuel viene de la cocina, te pregunta: ¿Qué pasó? Tú respondes:
(a) Un vecino vino. –2 –1 0 +1 +2
(b) Vino un vecino. –2 –1 0 +1 +2

C6 41. ⇒ Tú trabajas en una prisión. Últimamente, tu amigo Pedro ha escuchado en la radio que un prisionero intentó escapar, pero no sabe quién exactamente. Así que él te pregunta: ¿Quién escapó? Tú le respondes:
(a) Se escapó un criminal. –2 –1 0 +1 +2
(b) Un criminal se escapó. –2 –1 0 +1 +2

B3 42. ⇒ Tu amiga Clara está en un restaurante contigo. Clara va al servicio. Mientras tanto, tú miras por la ventana y ves a una mujer gritando en la calle. Al volver del servicio, Clara te pregunta: ¿Qué pasó? Tú respondes:
(a) Gritó una mujer. –2 –1 0 +1 +2
(b) Una mujer gritó. –2 –1 0 +1 +2

A4 43. ⇒ Tu compañero de piso, Pepe, está de vacaciones, así que has planeado celebrar una fiesta el domingo en tu piso. Pero Pepe vuelve el sábado y no puedes celebrar la fiesta. Tu madre te llama por teléfono y te nota un poco enfadado, así que te pregunta: ¿Qué pasó? Tu respondes:
(a) Mi compañero volvió. –2 –1 0 +1 +2
(b) Volvió mi compañero. –2 –1 0 +1 +2

C5 44. ⇒ Ayer estuviste haciendo un examen de literatura. Un chico salió de la clase porque no sabía las respuestas, pero cinco minutos más tarde se arrepintió y volvió a la clase. Al día siguiente, tu madre se enteró de que alguien había vuelto al examen y te preguntó: ¿Quién volvió? Tú respondes:
(a) Un chico volvió. –2 –1 0 +1 +2
(b) Volvió un chico. –2 –1 0 +1 +2

B4 45. ⇒ Anoche tus compañeros de clase, tu profesor y tú estuvisteis en una fiesta en el colegio. Todos os sorprendisteis al ver al profesor bailando. Hoy, tu padre quiere saber cómo fue la fiesta, así que te pregunta: ¿Qué pasó? Tú respondes:
(a) El profesor bailó. –2 –1 0 +1 +2
(b) Bailó el profesor. –2 –1 0 +1 +2

D3 46. ⇒ Tu amiga Aurora y tú estáis tomando un café en el comedor de tu casa. Tú vas a la cocina a por más café y ves por la ventana que un niño está gritando en la calle. Cuando vuelves, Aurora te pregunta: ¿Quién gritó? Tú respondes:
(a) Gritó un niño. –2 –1 0 +1 +2
(b) Un niño gritó. –2 –1 0 +1 +2

D1 47. ⇒ Tu amigo Roberto y tú estáis en una reunión de negocios muy seria y aburrida. Roberto empieza a dormirse un poco y en ese momento el jefe estornuda estrepitosamente. Roberto se despierta desconcertado y te pregunta: ¿Quién estornudó? Tú respondes:
(a) El jefe estornudó. –2 –1 0 +1 +2
(b) Estornudó el jefe. –2 –1 0 +1 +2

A5 48. ⇒ Trabajas en una prisión. Hoy, un prisionero peligroso ha escapado. Al volver a casa, tu hermano te ve preocupado, así que te pregunta: ¿Qué pasó? Tú respondes:
(a) Se escapó un prisionero. –2 –1 0 +1 +2
(b) Un prisionero se escapó. –2 –1 0 +1 +2

C4 49. ⇒ Tú estás en el hospital y tu amiga Marta te está visitando. Marta va al servicio durante unos minutos. Mientras tanto, un doctor entró rápidamente en la habitación para darte la medicina. Cuando Marta regresa, te pregunta: ¿Quién entró? Tú respondes:
(a) Entró un doctor. –2 –1 0 +1 +2
(b) Un doctor entró. –2 –1 0 +1 +2

B5 50. ⇒ Ayer por la mañana tuviste un examen muy importante, pero no pudiste hacerlo porque el examinador se durmió y no vino. Hoy tu madre te pregunta: ¿Qué pasó ayer? Tú respondes:
(a) El examinador se durmió. –2 –1 0 +1 +2
(b) Se durmió el examinador. –2 –1 0 +1 +2

A6 51. ⇒ Tu amiga Carmen y tú estáis en una reunión de negocios. Mientras Carmen está hablando con el jefe, una secretaria sale de la habitación. Carmen no se ha dado cuenta de lo que ha pasado, así que te pregunta: ¿Qué pasó? Tú contestas:
(a) Salió una secretaria. –2 –1 0 +1 +2
(b) Una secretaria salió. –2 –1 0 +1 +2

D4 52. ⇒ Eres un guía turístico y llevas a un grupo de turistas a Madrid. La primera noche, muchos turistas te dicen que no pudieron dormir porque había mucho ruido en el hotel por la noche. El jefe del hotel te pregunta por la mañana: ¿Quién durmió anoche? Tú respondes:
(a) Poca gente durmió. –2 –1 0 +1 +2
(b) Durmió poca gente. –2 –1 0 +1 +2

B6 53. ⇒ Tu amiga Sonia y tú estáis en un restaurante. Sonia va al servicio durante unos minutos. En esos instantes, un hombre empezó a reír a carcajadas en la calle. Sonia vuelve y te pregunta: ¿Qué pasó en la calle? Tú respondes:
(a) Rio un hombre. –2 –1 0 +1 +2
(b) Un hombre rio. –2 –1 0 +1 +2

C2 54. ⇒ Tú estás en una fiesta con tu amiga Laura. Laura sale de la habitación y en ese momento llega la policía porque hay mucho ruido en la fiesta. Cuando Laura vuelve, te pregunta: ¿Quién llegó? Tú contestas:
(a) La policía llegó. –2 –1 0 +1 +2
(b) Llegó la policía. –2 –1 0 +1 +2

55. ⇒ Tu amigo Juan y tú estáis hablando sobre el trabajo. Tú le dices a Juan que tienes un nuevo trabajo en la universidad. Juan te pregunta: ¿Te gusta tu trabajo? Tú respondes:
(a) Sí, es un trabajo interesante. –2 –1 0 +1 +2
(b) Sí, es un interesante trabajo. –2 –1 0 +1 +2

56. ⇒ Tu amigo Alfonso y tú fuisteis de compras ayer. Hoy, tu madre quiere saber qué compró tu amigo y te pregunta: ¿Qué compró Alfonso? Tú respondes:
(a) Compró una bicicleta roja. –2 –1 0 +1 +2
(b) Compró una roja bicicleta. –2 –1 0 +1 +2

8.1.10 Acceptability judgement test (AJT): test 2, version 2

AQUI EMPIEZA EL TEST: **test 2, v.2 Sp**

	1.	⇒	Tu amigo Pepe va a visitarte a tu casa. En realidad, Pepe está enamorado de tu hermana, así que te pregunta: ¿Dónde está tu hermana? Tú le respondes: (a) Está con su novio nuevo. –2 –1 0 +1 +2 (b) Está con su nuevo novio. –2 –1 0 +1 +2
	2.	⇒	Estás en el cine con tu amigo Pablo viendo una película romántica. Pablo te ve un poco aburrido y te pregunta: ¿Qué tipo de cine prefieres? Tú respondes: (a) Prefiero cine de acción. –2 –1 0 +1 +2 (b) Prefiero el cine de acción. –2 –1 0 +1 +2
A4	3.	⇒	Tu compañero de piso, Pepe, está de vacaciones, así que has planeado celebrar una fiesta el domingo en tu piso. Pero Pepe vuelve el sábado y no puedes celebrar la fiesta. Tu madre te llama por teléfono y te nota un poco enfadado, así que te pregunta: ¿Qué pasó? Tu respondes: (a) Mi compañero volvió. –2 –1 0 +1 +2 (b) Volvió mi compañero. –2 –1 0 +1 +2
C5	4.	⇒	Ayer estuviste haciendo un examen de literatura. Un chico salió de la clase porque no sabía las respuestas, pero cinco minutos más tarde se arrepintió y volvió a la clase. Al día siguiente, tu madre se enteró de que alguien había vuelto al examen y te preguntó: ¿Quién volvió? Tú respondes: (a) Un chico volvió. –2 –1 0 +1 +2 (b) Volvió un chico. –2 –1 0 +1 +2
B4	5.	⇒	Anoche tus compañeros de clase, tu profesor y tú estuvisteis en una fiesta en el colegio. Todos os sorprendisteis al ver al profesor bailando. Hoy, tu padre quiere saber cómo fue la fiesta, así que te pregunta: ¿Qué pasó? Tú respondes: (a) El profesor bailó. –2 –1 0 +1 +2 (b) Bailó el profesor. –2 –1 0 +1 +2
D3	6.	⇒	Tu amiga Aurora y tú estáis tomando un café en el comedor de tu casa. Tú vas a la cocina a por más café y ves por la ventana que un niño está gritando en la calle. Cuando vuelves, Aurora te pregunta: ¿Quién gritó? Tú respondes: (a) Gritó un niño. –2 –1 0 +1 +2 (b) Un niño gritó. –2 –1 0 +1 +2
A2	7.	⇒	Ayer, mientras estabas en el banco, un ladrón entró a robar. Hoy, tu amigo José te llama por teléfono porque escuchó una noticia sobre el banco. José te pregunta: ¿Qué pasó en el banco? Tú respondes: (a) Un ladrón entró. –2 –1 0 +1 +2 (b) Entró un ladrón. –2 –1 0 +1 +2
C3	8.	⇒	Tu compañero Antonio y tú estáis en una reunión en el colegio. Antonio sale de la habitación un momento y, al minuto, un hombre al que no conoces también sale de la habitación. Cuando Antonio vuelve, te pregunta: ¿Quién salió? Tú respondes: (a) Salió un hombre. –2 –1 0 +1 +2 (b) Un hombre salió. –2 –1 0 +1 +2
B2	9.	⇒	Anoche te despertaste porque un niño empezó a llorar en la calle. Después, no te pudiste dormir. A la mañana siguiente, tu madre te ve con mala cara por no haber dormido y te pregunta: ¿Qué pasó? Tu respondes: (a) Lloró un niño en la calle. –2 –1 0 +1 +2 (b) Un niño lloró en la calle. –2 –1 0 +1 +2
D6	10.	⇒	Vas al cine a ver una película romántica. Durante la película, una mujer, que está a tu lado, empieza a llorar. Al salir del cine, te encuentras con un amigo, Felipe.

		Felipe también oyó llorar a alguien en el cine pero no sabe quién. Felipe te pregunta: ¿Quién lloró? Tú respondes: (a) Lloró una mujer. –2 –1 0 +1 +2 (b) Una mujer lloró. –2 –1 0 +1 +2
D1	11. ⇒	Tu amigo Roberto y tú estáis en una reunión de negocios muy seria y aburrida. Roberto empieza a dormirse un poco y en ese momento el jefe estornuda estrepitosamente. Roberto se despierta desconcertado y te pregunta: ¿Quién estornudó? Tú respondes: (a) El jefe estornudó. –2 –1 0 +1 +2 (b) Estornudó el jefe. –2 –1 0 +1 +2
A5	12. ⇒	Trabajas en una prisión. Hoy, un prisionero peligroso ha escapado. Al volver a casa, tu hermano te ve preocupado, así que te pregunta: ¿Qué pasó? Tú respondes: (a) Se escapó un prisionero. –2 –1 0 +1 +2 (b) Un prisionero se escapó. –2 –1 0 +1 +2
C4	13. ⇒	Tú estás en el hospital y tu amiga Marta te está visitando. Marta va al servicio durante unos minutos. Mientras tanto, un doctor entró rápidamente en la habitación para darte la medicina. Cuando Marta regresa, te pregunta: ¿Quién entró? Tú respondes: (a) Entró un doctor. –2 –1 0 +1 +2 (b) Un doctor entró. –2 –1 0 +1 +2
B5	14. ⇒	Ayer por la mañana tuviste un examen muy importante, pero no pudiste hacerlo porque el examinador se durmió y no vino. Hoy tu madre te pregunta: ¿Qué pasó ayer? Tú respondes: (a) El examinador se durmió. –2 –1 0 +1 +2 (b) Se durmió el examinador. –2 –1 0 +1 +2
D5	15. ⇒	Estás en una clase de física. Todo el mundo está callado mientras el profesor explica la lección, pero un chico ríe durante unos segundos. El profesor no ve quién ha reído, así que te pregunta: ¿Quién se rió? Tú respondes: (a) Se rio un chico. –2 –1 0 +1 +2 (b) Un chico se rio. –2 –1 0 +1 +2
A1	16. ⇒	Trabajas en una guardería y Pablito, empieza a llorar mucho porque otro niño llegó a la guardería. Tu compañera de trabajo, María, no sabe porqué llora Pablito y te pregunta: ¿Qué pasó? Tú respondes: (a) Otro niño llegó. –2 –1 0 +1 +2 (b) Llegó otro niño. –2 –1 0 +1 +2
C1	17. ⇒	Estás en una fiesta con tu amiga María. Mientras María va al servicio, un hombre al que no conoces llega a la fiesta. Al volver del servicio, María quiere saber quién ha venido, así que te pregunta: ¿Quién vino? Tú respondes: (a) Un hombre vino. –2 –1 0 +1 +2 (b) Vino un hombre. –2 –1 0 +1 +2
B1	18. ⇒	Tu amiga Isabel y tú estáis en un restaurante. Isabel va al servicio y, mientras tanto, el camarero estornuda accidentalmente sobre vuestros platos. Cuando Isabel vuelve del servicio, ve que tú estás muy enfadado. Ella te pregunta: ¿Qué pasó? Tú respondes: (a) El camarero estornudó sobre los platos. –2 –1 0 +1 +2 (b) Estornudó el camarero sobre los platos. –2 –1 0 +1 +2
A6	19. ⇒	Tu amiga Carmen y tú estáis en una reunión de negocios. Mientras Carmen está hablando con el jefe, una secretaria sale de la habitación. Carmen no se ha dado cuenta de lo que ha pasado, así que te pregunta: ¿Qué pasó? Tú contestas: (a) Salió una secretaria. –2 –1 0 +1 +2 (b) Una secretaria salió. –2 –1 0 +1 +2
D4	20. ⇒	Eres un guía turístico y llevas a un grupo de turistas a Madrid. La primera noche, muchos turistas te dicen que no pudieron dormir porque había mucho ruido en el hotel por la noche. El jefe del hotel te pregunta por la mañana: ¿Quién durmió

anoche? Tú respondes:
(a) Poca gente durmió. –2 –1 0 +1 +2
(b) Durmió poca gente. –2 –1 0 +1 +2

B6 21. ⇒ Tu amiga Sonia y tú estáis en un restaurante. Sonia va al servicio durante unos minutos. En esos instantes, un hombre empezó a reír a carcajadas en la calle. Sonia vuelve y te pregunta: ¿Qué pasó en la calle? Tú respondes:
(a) Rio un hombre. –2 –1 0 +1 +2
(b) Un hombre rio. –2 –1 0 +1 +2

C2 22. ⇒ Tú estás en una fiesta con tu amiga Laura. Laura sale de la habitación y en ese momento llega la policía porque hay mucho ruido en la fiesta. Cuando Laura vuelve, te pregunta: ¿Quién llegó? Tú contestas:
(a) La policía llegó. –2 –1 0 +1 +2
(b) Llegó la policía. –2 –1 0 +1 +2

D2 23. ⇒ Anoche estuviste en una discoteca con tus amigos. Fue muy aburrido porque tan sólo bailó una chica Hoy, tu madre te llama por teléfono y te pregunta: ¿Quién bailó anoche? Tú respondes:
(a) Una chica bailó. –2 –1 0 +1 +2
(b) Bailó una chica. –2 –1 0 +1 +2

A3 24. ⇒ Tu amigo Manuel y tú estáis en una fiesta en tu casa. Manuel va a la cocina a por una cerveza. En ese momento, un vecino vino a quejarse porque la música estaba muy alta. Cuando Manuel viene de la cocina, te pregunta: ¿Qué pasó? Tú respondes:
(a) Un vecino vino. –2 –1 0 +1 +2
(b) Vino un vecino. –2 –1 0 +1 +2

C6 25. ⇒ Tú trabajas en una prisión. Últimamente, tu amigo Pedro ha escuchado en la radio que un prisionero intentó escapar, pero no sabe quién exactamente. Así que él te pregunta: ¿Quién escapó? Tú le respondes:
(a) Se escapó un criminal. –2 –1 0 +1 +2
(b) Un criminal se escapó. –2 –1 0 +1 +2

B3 26. ⇒ Tu amiga Clara está en un restaurante contigo. Clara va al servicio. Mientras tanto, tú miras por la ventana y ves a una mujer gritando en la calle. Al volver del servicio, Clara te pregunta: ¿Qué pasó? Tú respondes:
(a) Gritó una mujer. –2 –1 0 +1 +2
(b) Una mujer gritó. –2 –1 0 +1 +2

27. ⇒ Tu amigo Juan y tú estáis hablando sobre el trabajo. Tú le dices a Juan que tienes un nuevo trabajo en la universidad. Juan te pregunta: ¿Te gusta tu trabajo? Tú respondes:
(a) Sí, es un trabajo interesante. –2 –1 0 +1 +2
(b) Sí, es un interesante trabajo. –2 –1 0 +1 +2

28. ⇒ Tu amigo Alfonso y tú fuisteis de compras ayer. Hoy, tu madre quiere saber qué compró tu amigo y te pregunta: ¿Qué compró Alfonso? Tú respondes:
(a) Compró una bicicleta roja. –2 –1 0 +1 +2
(b) Compró una roja bicicleta. –2 –1 0 +1 +2

8.2 Data: Experimental study #1

8.2.1 Raw data

This table contains the average of each stimulus for each subject in each condition. For example, the first English subject (initials: 'mf') scored –1.67 for the condition *[OPC_i ... $overt_i$]*. This score was calculated from the average of six stimuli, each contaning a different quantifiers.

Note that 'UWPT' stands for the University of Wisconsin Placement test (Spanish placement test) and 'OPT' stands for Oxford Placement test (English placement test).

						OPC CONTEXTS		CFC CONTEXTS	
L1	**UWPT**	**OPT**	**INITIAL**	**SEX**	**AGE**	**QP_i …$OVERT_{*i}$**	**QP_i …$NULL_i$**	**QP_i … $OVERT_j$**	**QP_i … $NULL_{*j}$**
English	100		mf	m	51	-1.67	1.67	2	-1.67
English	98		jc	f	34	-0.17	1.33	2	-1.83
English	98		cmb	f	22	-1.17	1.5	1.83	-0.83
English	98		me	m	51	-1.17	2	1.67	-1
English	98		hb	f	21	-0.5	2	1.5	-0.83
English	98		dsj	f	19	-1.67	1.67	1.83	0.33
English	95		mjr	f	23	-0.33	1.83	2	-1
English	93		lt	f	21	0.33	1.17	0.5	-1.67
English	93		mcs	f	36	-1	0.5	2	-1.5
English	93		lw	f	21	0.67	1.83	0.83	1
English	91		aw	f	26	0	1.33	1.17	-0.5
English	88		cr	f	21	0.5	1.17	0.5	-1.33
English	88		hlm	f	22	0.67	2	0.5	-0.33
English	86		hh	f	20	-0.33	2	0.67	0.33
English	84		krlb	f	21	-0.83	2	1.5	-0.17
English	84		kc	f	20	-0.67	0.83	0.17	0.67
English	81		an	f	20	-0.33	1.83	-0.67	-0.83
English	81		hjc	f	19	-0.17	1.33	1.17	-0.67
English	81		an	f	20	-0.17	1.83	-0.17	2
English	81		nwl	f	18	0.33	2	1.5	0.5
Greek	100	82	mb	f	25	-1.5	0.5	0.5	-2
Greek	95	92	ks	f	25	-0.83	1.17	0.83	-2
Greek	95	86	kc	f	20	-0.17	1	2	-2
Greek	95	82	pf	m	21	-0.5	2	2	-1.83

Greek	95	80 ac	f	25	-1.33	2	1.83	-2
Greek	95	84 mv	f	19	-1.33	2	1	0.33
Greek	95	96 c	f	22	-0.17	2	2	0.17
Greek	93	86 da	f	30	-1.17	1.83	-1.33	0.67
Greek	93	90 el	f	24	-1.67	1.17	-0.33	-1
Greek	93	90 fk	f	23	-1.17	2	1.5	-2
Greek	91	84 mk	f	28	-0.33	1.33	1.67	-1.67
Greek	91	84 mk	f	24	-0.17	1.17	2	-2
Greek	91	80 vr	f	25	-1.5	2	2	-1.33
Greek	88	80 cl	f	21	-0.17	2	0	-2
Greek	88	82 ja	m	33	-0.17	2	1.83	-2
Greek	88	82 ct	f	25	-2	0.83	1	-1.83
Greek	86	94 jt	f	33	-1.83	2	0	-2
Greek	86	94 ag	f	19	-0.83	2	2	-1.67
Greek	86	80 dp	m	23	-0.83	1.83	1.17	-0.5
Greek	81	86 kt	f	24	1.17	1.5	2	-1.33
Spanish		daa	f	23	-1.5	1.83	2	-2
Spanish		esa	f	25	0.33	1.17	2	-2
Spanish		tap	f	25	0.17	0.33	0.83	-1.5
Spanish		ff	f	26	-1	2	2	-1
Spanish		cf	f	27	-0.5	1.67	1.83	-0.67
Spanish		gmm	m	26	-1.17	1.83	0	-1.67
Spanish		fra	m	29	-0.67	1.83	0.83	-1
Spanish		fa	f	34	-0.17	2	0.83	-0.67
Spanish		rrj	f	40	-1.17	1.5	-0.5	-1.17
Spanish		mtqs	f	46	-0.33	2	1.17	-1
Spanish		vpb	f	17	-0.67	2	0.67	-2

8.2.2 Descriptives

Descriptive Statistics

L1		N	Minimum	Maximum	Mean	Std. Deviation
English	*QPi ... OVERTi	20	-1.67	.67	-.3840	.7083
	QPi ... NULLi	20	.50	2.00	1.5910	.4341
	QPi ... OVERTj	20	-.67	2.00	1.1250	.7966
	*QPi ... NULLj	20	-1.83	2.00	-.4665	1.0108
	Valid N (listwise)	20				
Greek	*QPi ... OVERTi	20	-2.00	1.17	-.8250	.7691
	QPi ... NULLi	20	.50	2.00	1.6165	.4867
	QPi ... OVERTj	20	-1.33	2.00	1.1835	.9709
	*QPi ... NULLj	20	-2.00	.67	-1.3995	.8729
	Valid N (listwise)	20				
Spanish	*QPi ... OVERTi	11	-1.50	.33	-.6073	.5792
	QPi ... NULLi	11	.33	2.00	1.6509	.5082
	QPi ... OVERTj	11	-.50	2.00	1.0600	.8440
	*QPi ... NULLj	11	-2.00	-.67	-1.3345	.5210
	Valid N (listwise)	11				

8.2.3 One-sample Kolmogorov-Smirnoff fit test

One-Sample Kolmogorov-Smirnov Test

L1			*QPi ... OVERTi	QPi ... NULLi	QPi ... OVERTj	*QPi ... NULLj
English	N		20	20	20	20
	Normal Parameters[a,b]	Mean	-.3840	1.5910	1.1250	-.4665
		Std. Deviation	.7083	.4341	.7966	1.0108
	Most Extreme Differences	Absolute	.130	.209	.181	.140
		Positive	.081	.173	.136	.140
		Negative	-.130	-.209	-.181	-.089
	Kolmogorov-Smirnov Z		.583	.935	.810	.628
	Asymp. Sig. (2-tailed)		.886	.347	.528	.825
Greek	N		20	20	20	20
	Normal Parameters[a,b]	Mean	-.8250	1.6165	1.1835	-1.3995
		Std. Deviation	.7691	.4867	.9709	.8729
	Most Extreme Differences	Absolute	.147	.285	.200	.272
		Positive	.147	.215	.200	.272
		Negative	-.103	-.285	-.197	-.246
	Kolmogorov-Smirnov Z		.658	1.273	.895	1.215
	Asymp. Sig. (2-tailed)		.779	.078	.399	.104
Spanish	N		11	11	11	11
	Normal Parameters[a,b]	Mean	-.6073	1.6509	1.0600	-1.3345
		Std. Deviation	.5792	.5082	.8440	.5210
	Most Extreme Differences	Absolute	.115	.274	.183	.194
		Positive	.115	.246	.153	.172
		Negative	-.093	-.274	-.183	-.194
	Kolmogorov-Smirnov Z		.381	.909	.606	.644
	Asymp. Sig. (2-tailed)		.999	.380	.856	.801

a. Test distribution is Normal.

b. Calculated from data.

8.2.4 t-test (within groups)

Paired Samples Statistics

L1			Mean	N	Std. Deviation	Std. Error Mean
English	Pair 1	*QPi ... OVERTi	-.3840	20	.7083	.1584
		QPi ... NULLi	1.5910	20	.4341	9.708E-02
	Pair 2	QPi ... OVERTj	1.1250	20	.7966	.1781
		*QPi ... NULLj	-.4665	20	1.0108	.2260
Greek	Pair 1	*QPi ... OVERTi	-.8250	20	.7691	.1720
		QPi ... NULLi	1.6165	20	.4867	.1088
	Pair 2	QPi ... OVERTj	1.1835	20	.9709	.2171
		*QPi ... NULLj	-1.3995	20	.8729	.1952
Spanish	Pair 1	*QPi ... OVERTi	-.6073	11	.5792	.1746
		QPi ... NULLi	1.6509	11	.5082	.1532
	Pair 2	QPi ... OVERTj	1.0600	11	.8440	.2545
		*QPi ... NULLj	-1.3345	11	.5210	.1571

Paired Samples Test

			Paired Differences					t	df	Sig. (2-tailed)
						95% Confidence Interval of the Difference				
L1			Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
English	Pair 1	*QPi ... OVERTi - QPi ... NULLi	-1.9750	.8053	.1801	-2.3519	-1.5981	-10.968	19	.000
	Pair 2	QPi ... OVERTj - *QPi ... NULLj	1.5915	1.5296	.3420	.8756	2.3074	4.653	19	.000
Greek	Pair 1	*QPi ... OVERTi - QPi ... NULLi	-2.4415	.8733	.1953	-2.8502	-2.0328	-12.502	19	.000
	Pair 2	QPi ... OVERTj - *QPi ... NULLj	2.5830	1.5031	.3361	1.8795	3.2865	7.685	19	.000
Spanish	Pair 1	*QPi ... OVERTi - QPi ... NULLi	-2.2582	.9530	.2873	-2.8984	-1.6180	-7.859	10	.000
	Pair 2	QPi ... OVERTj - *QPi ... NULLj	2.3945	1.0140	.3057	1.7134	3.0757	7.832	10	.000

8.2.5 One-way ANOVA, independent groups (between groups)

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
*QPi ... OVERTi	Between Groups	1.945	2	.972	1.935	.156
	Within Groups	24.128	48	.503		
	Total	26.073	50			
QPi ... NULLi	Between Groups	2.569E-02	2	1.284E-02	.058	.944
	Within Groups	10.665	48	.222		
	Total	10.691	50			
QPi ... OVERTj	Between Groups	.111	2	5.543E-02	.072	.931
	Within Groups	37.089	48	.773		
	Total	37.200	50			
*QPi ... NULLj	Between Groups	10.096	2	5.048	6.619	.003
	Within Groups	36.606	48	.763		
	Total	46.702	50			

Multiple Comparisons

Scheffe

Dependent Variable	(I) L1	(J) L1	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
*QPi ... OVERTi	English	Greek	.4410	.2242	.156	-.1254	1.0074
		Spanish	.2233	.2661	.705	-.4490	.8956
	Greek	English	-.4410	.2242	.156	-1.0074	.1254
		Spanish	-.2177	.2661	.717	-.8900	.4546
	Spanish	English	-.2233	.2661	.705	-.8956	.4490
		Greek	.2177	.2661	.717	-.4546	.8900
QPi ... NULLi	English	Greek	-2.5500E-02	.1491	.985	-.4020	.3510
		Spanish	-5.9909E-02	.1769	.944	-.5069	.3871
	Greek	English	2.550E-02	.1491	.985	-.3510	.4020
		Spanish	-3.4409E-02	.1769	.981	-.4814	.4126
	Spanish	English	5.991E-02	.1769	.944	-.3871	.5069
		Greek	3.441E-02	.1769	.981	-.4126	.4814
QPi ... OVERTj	English	Greek	-5.8500E-02	.2780	.978	-.7607	.6437
		Spanish	6.500E-02	.3300	.981	-.7686	.8986
	Greek	English	5.850E-02	.2780	.978	-.6437	.7607
		Spanish	.1235	.3300	.932	-.7101	.9571
	Spanish	English	-6.5000E-02	.3300	.981	-.8986	.7686
		Greek	-.1235	.3300	.932	-.9571	.7101
*QPi ... NULLj	English	Greek	.9330*	.2762	.006	.2354	1.6306
		Spanish	.8680*	.3278	.038	3.994E-02	1.6961
	Greek	English	-.9330*	.2762	.006	-1.6306	-.2354
		Spanish	-6.4955E-02	.3278	.981	-.8931	.7631
	Spanish	English	-.8680*	.3278	.038	-1.6961	-3.9943E-02
		Greek	6.495E-02	.3278	.981	-.7631	.8931

*. The mean difference is significant at the .05 level.

8.2.6 Two-way ANOVA, repeated measures

These are the within-group and between-group analyses for OPC contexts and CFC contexts.

7.1.1.1 OPC contexts

Descriptive Statistics

	L1	Mean	Std. Deviation	N
*QPi ... OVERTi	English	-.3840	.7083	20
	Greek	-.8250	.7691	20
	Spanish	-.6073	.5792	11
	Total	-.6051	.7221	51
QPi ... NULLi	English	1.5910	.4341	20
	Greek	1.6165	.4867	20
	Spanish	1.6509	.5082	11
	Total	1.6139	.4624	51

Mauchly's Test of Sphericity[b]

Measure: MEASURE_1

					Epsilon[a]		
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Huynh-Feldt	Lower-bound
OPC	1.000	.000	0	.	1.000	1.000	1.000

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

b.
Design: Intercept+L1
Within Subjects Design: OPC

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
OPC	Sphericity Assumed	116.682	1	116.682	312.058	.000	.867
	Greenhouse-Geisser	116.682	1.000	116.682	312.058	.000	.867
	Huynh-Feldt	116.682	1.000	116.682	312.058	.000	.867
	Lower-bound	116.682	1.000	116.682	312.058	.000	.867
OPC * L1	Sphericity Assumed	1.099	2	.549	1.469	.240	.058
	Greenhouse-Geisser	1.099	2.000	.549	1.469	.240	.058
	Huynh-Feldt	1.099	2.000	.549	1.469	.240	.058
	Lower-bound	1.099	2.000	.549	1.469	.240	.058
Error(OPC)	Sphericity Assumed	17.948	48	.374			
	Greenhouse-Geisser	17.948	48.000	.374			
	Huynh-Feldt	17.948	48.000	.374			
	Lower-bound	17.948	48.000	.374			

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
*QPi ... OVERTi	.461	2	48	.633
QPi ... NULLi	.462	2	48	.633

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a.
Design: Intercept+L1
Within Subjects Design: OPC

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
Intercept	24.238	1	24.238	69.067	.000	.590
L1	.872	2	.436	1.242	.298	.049
Error	16.845	48	.351			

7.1.1.2 CFC contexts

Descriptive Statistics

	L1	Mean	Std. Deviation	N
QPi ... OVERTj	English	1.1250	.7966	20
	Greek	1.1835	.9709	20
	Spanish	1.0600	.8440	11
	Total	1.1339	.8626	51
*QPi ... NULLj	English	-.4665	1.0108	20
	Greek	-1.3995	.8729	20
	Spanish	-1.3345	.5210	11
	Total	-1.0196	.9665	51

Mauchly's Test of Sphericity[b]

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[a] Greenhouse-Geisser	Huynh-Feldt	Lower-bound
CFC	1.000	.000	0	.	1.000	1.000	1.000

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

b.
Design: Intercept+L1
Within Subjects Design: CFC

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
CFC	Sphericity Assumed	113.018	1	113.018	111.099	.000	.698
	Greenhouse-Geisser	113.018	1.000	113.018	111.099	.000	.698
	Huynh-Feldt	113.018	1.000	113.018	111.099	.000	.698
	Lower-bound	113.018	1.000	113.018	111.099	.000	.698
CFC * L1	Sphericity Assumed	5.323	2	2.661	2.616	.083	.098
	Greenhouse-Geisser	5.323	2.000	2.661	2.616	.083	.098
	Huynh-Feldt	5.323	2.000	2.661	2.616	.083	.098
	Lower-bound	5.323	2.000	2.661	2.616	.083	.098
Error(CFC)	Sphericity Assumed	48.829	48	1.017			
	Greenhouse-Geisser	48.829	48.000	1.017			
	Huynh-Feldt	48.829	48.000	1.017			
	Lower-bound	48.829	48.000	1.017			

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
Intercept	7.388E-02	1	7.388E-02	.143	.707	.003
L1	4.884	2	2.442	4.714	.014	.164
Error	24.866	48	.518			

8.3 Data: Experimental study #2

8.3.1 Raw data

This table contains the average of each stimulus for each subject in each condition. For example, the first English subject (initials: 'mf') scored 1.5 for the condition *neutral context unergative SV*. This score was calculated from the average of six stimuli, each contaning a different unergative verb.

Note that 'UWPT' stands for the University of Wisconsin Placement test (Spanish placement test) and 'OPT' stands for Oxford Placement test (English placement test).

						NEUTRAL CONTEXTS				**PRESEN. CONTEXTS**			
						UNERGA		UNACCUSA		UNERGA		UNACCUSA	
L1	**UWPT**	**OPT**	**INITIAL**	**SEX**	**AGE**	**SV**	**VS**	**SV**	**VS**	**SV**	**VS**	**SV**	**VS**
English	100		mf	m	51	1.5	0.67	0.83	1.83	0.83	1.5	1.5	1.83
English	98		cmb	f	22	1.67	1.67	1.5	1.83	1.33	1.67	1.5	1.83
English	98		ecr	f	21	1.67	2	0.83	2	1	2	1.17	2
English	98		dsj	m	19	1.83	1.17	1.67	1.83	1.83	1.33	1.67	1.33
English	95		mjr	f	23	2	-0.17	1.17	2	1.17	1.5	0.83	2
English	93		lt	f	21	1.17	1.38	1	2	1	2	1.17	1.83
English	93		jh	f	21	1	1.5	-0.67	2	-0.33	1.33	-1.17	2
English	88		ec	f	22	1.5	0.83	1.5	1.33	1.33	1.33	1.5	1.33
English	84		kc	f	20	0.83	0.5	0.5	0.5	0.5	0.83	-0.33	1
English	81		hjc	f	19	1.33	0.33	1	0.83	1.33	0.33	1	0.67
English	81		mwl	f	18	1.5	0.83	1.17	1.67	1.67	1	1.33	1.67
English	80		gfs	f	19	1.17	-0.17	1	0.5	1	0	0.83	0
English	80		ld	f	18	1.33	0.67	1	1.17	1.17	1	1	1.77
English	80		cd	f	19	1.17	0.33	1.5	1.67	1.67	1.17	0.83	1.5
English	93		ob	m	21	0.83	-0.17	0	1	1	-0.2	0	0.83
English	95		lt	f	22	2	0.67	1.83	1.33	1.67	0.17	1.83	0.67
English	91		rb	m	45	1.5	1.33	1.17	1.67	1.5	1.5	1.17	1.5
Greek	100	82	mb	f	25	1.33	-0.5	1.5	1.83	1.33	0.33	0.33	1.67
Greek	95	92	ks	f	25	2	1	1.83	1.83	2	0.17	1.83	0.83
Greek	95	86	kc	f	20	1.33	0.17	1.67	1.5	1.67	1	1.17	1.33

Greek	95	84	mv	f	19	1.67	0	0	1.67	2	0.5	1	0.33
Greek	95	82	pf	m	21	1.17	1.83	0.5	2	0.5	2	0.5	2
Greek	95	80	ac	f	25	1.83	0.83	1.17	1.83	1.33	1.67	1.17	2
Greek	93	86	ga	f	21	1.17	1.83	1	2	2	0.67	1.83	1.17
Greek	93	86	da	f	30	1.83	0.17	-0.17	2	2	-0.8	1.17	-0.2
Greek	93	86	ga	f	21	1.17	1.83	1	2	2	0.67	1.83	1.17
Greek	93	90	el	f	24	1.5	0.17	0.17	1.33	0.83	1.67	0.5	1.5
Greek	93	90	fk	f	23	1.5	1.5	1.33	1.67	1.37	1.33	1.17	1
Greek	93	84	hb	m	22	1.83	0.67	1.83	1	1.5	1	1.67	0.83
Greek	91	80	vr	f	25	1.33	0.67	0.33	2	1	1	1	1.67
Greek	88	82	ja	m	33	2	-0.33	1	0.83	1.17	1.17	0.67	1.67
Greek	88	80	cl	f	21	1.67	1.67	0.67	1.33	2	1	2	1
Greek	88	82	ct	f	25	1.67	0.83	0.83	2	1.17	1.83	1	2
Greek	86	94	ag	f	19	1.83	1.17	1.17	1.83	1.33	1.67	1	2
Greek	86	80	dp	m	23	0.5	0.33	0	1	-0.5	1	-0.17	1.17
Spanish			scl	f	27	1	0.33	0.5	1	0.17	1	0.17	1
Spanish			fa	f	34	2	-0.83	0.33	1.67	0.17	0.33	0.33	0.83
Spanish			nlo	f	21	2	-1	-0.83	2	0.67	2	-1	2
Spanish			ps	f	27	1.67	0.5	1.5	1.67	0.67	1.67	0.5	1.5
Spanish			cudgb	f	27	2	0.5	0.83	2	1.17	1.5	1	2
Spanish			esa	f	25	2	-1	1.83	0	-0.33	1.33	-1.33	2
Spanish			gs	f	23	2	-0.17	1.33	1.83	0.83	1	0.33	2
Spanish			daa	f	23	1.33	-0.67	-0.67	1.33	-0.17	2	-0.17	1.17
Spanish			cf	f	27	2	0.67	1.5	1.5	1.33	1.67	1	1.83
Spanish			fra	m	29	1.33	0.33	0.67	2	0.5	1.67	0.5	2
Spanish			ihp	f	37	0	-0.5	-0.83	0.33	-1.17	0.83	-1.83	0.33
Spanish			lrg	f	29	1	-0.33	-0.5	1.17	0.83	1.17	-1.17	1.67
Spanish			mj	f	16	1.5	0.33	0.17	1.33	-1.17	2	0.83	1
Spanish			mvg	f	17	2	0	1.17	1.17	0.83	0.83	0.83	1.33

8.3.2 Descriptives

Descriptive Statistics

L1		N	Minimum	Maximum	Mean	Std. Deviation
English	Unerg Neutral: SV	17	.83	2.00	1.4118	.3594
	Unerg Neutral: *VS	17	-.17	2.00	.7865	.6541
	Unac Neutral: *SV	17	-.67	1.83	1.0000	.6160
	Unac Neutral: VS	17	.50	2.00	1.4800	.5167
	Unerg Presentat: *SV	17	-.33	1.83	1.1571	.5183
	Unerg Presentat: VS	17	-.17	2.00	1.0876	.6595
	Unacc Presentat: *SV	17	-1.17	1.83	.9312	.7733
	Unacc Presentat: VS	17	.00	2.00	1.3976	.5801
	Valid N (listwise)	17				
Greek	Unerg Neutral: SV	18	.50	2.00	1.5183	.3780
	Unerg Neutral: *VS	18	-.50	1.83	.7689	.7532
	Unac Neutral: *SV	18	-.17	1.83	.8794	.6360
	Unac Neutral: VS	18	.83	2.00	1.6472	.3918
	Unerg Presentat: *SV	18	-.50	2.00	1.3722	.6533
	Unerg Presentat: VS	18	-.83	2.00	.9917	.6914
	Unacc Presentat: *SV	18	-.17	2.00	1.0928	.5893
	Unacc Presentat: VS	18	-.17	2.00	1.2872	.6031
	Valid N (listwise)	18				
Spanish	Unerg Neutral: SV	14	.00	2.00	1.5593	.5906
	Unerg Neutral: *VS	14	-1.00	.67	-.1310	.5925
	Unac Neutral: *SV	14	-.83	1.83	.5010	.9243
	Unac Neutral: VS	14	.00	2.00	1.3571	.6060
	Unerg Presentat: *SV	14	-1.17	1.33	.3083	.7816
	Unerg Presentat: VS	14	.33	2.00	1.3574	.5149
	Unacc Presentat: *SV	14	-1.83	1.00	-4.7619E-04	.9467
	Unacc Presentat: VS	14	.33	2.00	1.4757	.5430
	Valid N (listwise)	14				

8.3.3 One-sample Kolmogorov-Smirnoff fit test

One-Sample Kolmogorov-Smirnov Test

L1			Unerg Neutral: SV	Unerg Neutral: *VS	Unac Neutral: *SV	Unac Neutral: VS	Unerg Presentat: *SV	Unerg Presentat: VS	Unacc Presentat: *SV	Unacc Presentat: VS
English	N		17	17	17	17	17	17	17	17
	Normal Parameters[a,b]	Mean	1.4118	.7865	1.0000	1.4800	1.1571	1.0876	.9312	1.3976
		Std. Deviation	.3594	.6541	.6160	.5167	.5183	.6595	.7733	.5801
	Most Extreme Differences	Absolute	.126	.121	.215	.232	.204	.173	.271	.159
		Positive	.109	.121	.097	.157	.102	.110	.123	.150
		Negative	-.126	-.091	-.215	-.232	-.204	-.173	-.271	-.159
	Kolmogorov-Smirnov Z		.521	.497	.886	.955	.843	.712	1.119	.658
	Asymp. Sig. (2-tailed)		.949	.966	.413	.321	.476	.691	.163	.780
Greek	N		18	18	18	18	18	18	18	18
	Normal Parameters[a,b]	Mean	1.5183	.7689	.8794	1.6472	1.3722	.9917	1.0928	1.2872
		Std. Deviation	.3780	.7532	.6360	.3918	.6533	.6914	.5893	.6031
	Most Extreme Differences	Absolute	.156	.120	.131	.235	.168	.171	.170	.126
		Positive	.101	.120	.090	.184	.168	.106	.170	.119
		Negative	-.156	-.112	-.131	-.235	-.165	-.171	-.160	-.126
	Kolmogorov-Smirnov Z		.661	.509	.555	.998	.714	.728	.722	.535
	Asymp. Sig. (2-tailed)		.774	.958	.918	.273	.688	.665	.675	.937
Spanish	N		14	14	14	14	14	14	14	14
	Normal Parameters[a,b]	Mean	1.5593	-.1310	.5010	1.3571	.3083	1.3574	-4.7619E-04	1.4757
		Std. Deviation	.5906	.5925	.9243	.6060	.7816	.5149	.9467	.5430
	Most Extreme Differences	Absolute	.272	.210	.146	.164	.177	.155	.213	.190
		Positive	.228	.103	.146	.144	.114	.113	.145	.167
		Negative	-.272	-.210	-.123	-.164	-.177	-.155	-.213	-.190
	Kolmogorov-Smirnov Z		1.019	.787	.547	.615	.661	.578	.797	.711
	Asymp. Sig. (2-tailed)		.251	.566	.925	.843	.775	.892	.550	.693

a. Test distribution is Normal.

b. Calculated from data.

8.3.4 t-test (within groups)

Paired Samples Statistics

L1			Mean	N	Std. Deviation	Std. Error Mean
English	Pair 1	Unerg Neutral: SV	1.4118	17	.3594	8.717E-02
		Unerg Neutral: *VS	.7865	17	.6541	.1586
	Pair 2	Unac Neutral: *SV	1.0000	17	.6160	.1494
		Unac Neutral: VS	1.4800	17	.5167	.1253
	Pair 3	Unerg Presentat: *SV	1.1571	17	.5183	.1257
		Unerg Presentat: VS	1.0876	17	.6595	.1600
	Pair 4	Unacc Presentat: *SV	.9312	17	.7733	.1875
		Unacc Presentat: VS	1.3976	17	.5801	.1407
Greek	Pair 1	Unerg Neutral: SV	1.5183	18	.3780	8.911E-02
		Unerg Neutral: *VS	.7689	18	.7532	.1775
	Pair 2	Unac Neutral: *SV	.8794	18	.6360	.1499
		Unac Neutral: VS	1.6472	18	.3918	9.235E-02
	Pair 3	Unerg Presentat: *SV	1.3722	18	.6533	.1540
		Unerg Presentat: VS	.9917	18	.6914	.1630
	Pair 4	Unacc Presentat: *SV	1.0928	18	.5893	.1389
		Unacc Presentat: VS	1.2872	18	.6031	.1421
Spanish	Pair 1	Unerg Neutral: SV	1.5593	14	.5906	.1579
		Unerg Neutral: *VS	-.1310	14	.5925	.1583
	Pair 2	Unac Neutral: *SV	.5010	14	.9243	.2470
		Unac Neutral: VS	1.3571	14	.6060	.1620
	Pair 3	Unerg Presentat: *SV	.3083	14	.7816	.2089
		Unerg Presentat: VS	1.3574	14	.5149	.1376
	Pair 4	Unacc Presentat: *SV	-4.7619E-04	14	.9467	.2530
		Unacc Presentat: VS	1.4757	14	.5430	.1451

Paired Samples Test

L1			Paired Differences					t	df	Sig. (2-tailed)
			Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
English	Pair 1	Unerg Neutral: SV - Unerg Neutral: *VS	.6253	.6769	.1642	.2773	.9733	3.809	16	.002
	Pair 2	Unac Neutral: *SV - Unac Neutral: VS	-.4800	.7714	.1871	-.8766	-8.3402E-02	-2.566	16	.021
	Pair 3	Unerg Presentat: *SV - Unerg Presentat: VS	6.941E-02	.8679	.2105	-.3768	.5157	.330	16	.746
	Pair 4	Unacc Presentat: *SV - Unacc Presentat: VS	-.4665	.9706	.2354	-.9655	3.257E-02	-1.982	16	.065
Greek	Pair 1	Unerg Neutral: SV - Unerg Neutral: *VS	.7494	.8939	.2107	.3049	1.1940	3.557	17	.002
	Pair 2	Unac Neutral: *SV - Unac Neutral: VS	-.7678	.7638	.1800	-1.1476	-.3879	-4.265	17	.001
	Pair 3	Unerg Presentat: *SV - Unerg Presentat: VS	.3806	1.1660	.2748	-.1993	.9604	1.385	17	.184
	Pair 4	Unacc Presentat: *SV - Unacc Presentat: VS	-.1944	.9754	.2299	-.6795	.2906	-.846	17	.409
Spanish	Pair 1	Unerg Neutral: SV - Unerg Neutral: *VS	1.6902	.8292	.2216	1.2115	2.1690	7.627	13	.000
	Pair 2	Unac Neutral: *SV - Unac Neutral: VS	-.8562	1.1108	.2969	-1.4976	-.2148	-2.884	13	.013
	Pair 3	Unerg Presentat: *SV - Unerg Presentat: VS	-1.0490	.9345	.2498	-1.5886	-.5095	-4.200	13	.001
	Pair 4	Unacc Presentat: *SV - Unacc Presentat: VS	-1.4762	1.0020	.2678	-2.0547	-.8977	-5.512	13	.000

8.3.5 One-way ANOVA, independent groups (between groups)

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Unerg Neutral: SV	Between Groups	.185	2	9.263E-02	.472	.627
	Within Groups	9.032	46	.196		
	Total	9.217	48			
Unerg Neutral: *VS	Between Groups	8.254	2	4.127	9.018	.000
	Within Groups	21.051	46	.458		
	Total	29.306	48			
Unac Neutral: *SV	Between Groups	2.037	2	1.019	1.948	.154
	Within Groups	24.053	46	.523		
	Total	26.090	48			
Unac Neutral: VS	Between Groups	.681	2	.340	1.343	.271
	Within Groups	11.656	46	.253		
	Total	12.337	48			
Unerg Presentat: *SV	Between Groups	9.609	2	4.804	11.336	.000
	Within Groups	19.496	46	.424		
	Total	29.105	48			
Unerg Presentat: VS	Between Groups	1.099	2	.549	1.364	.266
	Within Groups	18.533	46	.403		
	Total	19.631	48			
Unacc Presentat: *SV	Between Groups	10.526	2	5.263	8.926	.001
	Within Groups	27.121	46	.590		
	Total	37.647	48			
Unacc Presentat: VS	Between Groups	.288	2	.144	.431	.653
	Within Groups	15.401	46	.335		
	Total	15.689	48			

Multiple Comparisons

Scheffe

Dependent Variable	(I) L1	(J) L1	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Unerg Neutral: SV	English	Greek	-.1066	.1499	.778	-.4857	.2725
		Spanish	-.1475	.1599	.656	-.5521	.2570
	Greek	English	.1066	.1499	.778	-.2725	.4857
		Spanish	-4.0952E-02	.1579	.967	-.4404	.3585
	Spanish	English	.1475	.1599	.656	-.2570	.5521
		Greek	4.095E-02	.1579	.967	-.3585	.4404
Unerg Neutral: *VS	English	Greek	1.758E-02	.2288	.997	-.5612	.5963
		Spanish	.9174*	.2441	.002	.2998	1.5350
	Greek	English	-1.7582E-02	.2288	.997	-.5963	.5612
		Spanish	.8998*	.2411	.002	.2900	1.5097
	Spanish	English	-.9174*	.2441	.002	-1.5350	-.2998
		Greek	-.8998*	.2411	.002	-1.5097	-.2900
Unac Neutral: *SV	English	Greek	.1206	.2446	.886	-.4981	.7392
		Spanish	.4990	.2610	.172	-.1611	1.1592
	Greek	English	-.1206	.2446	.886	-.7392	.4981
		Spanish	.3785	.2577	.348	-.2734	1.0303
	Spanish	English	-.4990	.2610	.172	-1.1592	.1611
		Greek	-.3785	.2577	.348	-1.0303	.2734
Unac Neutral: VS	English	Greek	-.1672	.1702	.620	-.5979	.2634
		Spanish	.1229	.1817	.797	-.3367	.5824
	Greek	English	.1672	.1702	.620	-.2634	.5979
		Spanish	.2901	.1794	.280	-.1637	.7439
	Spanish	English	-.1229	.1817	.797	-.5824	.3367
		Greek	-.2901	.1794	.280	-.7439	.1637
Unerg Presentat: *SV	English	Greek	-.2152	.2202	.623	-.7721	.3418
		Spanish	.8487*	.2350	.003	.2544	1.4431
	Greek	English	.2152	.2202	.623	-.3418	.7721
		Spanish	1.0639*	.2320	.000	.4770	1.6507
	Spanish	English	-.8487*	.2350	.003	-1.4431	-.2544
		Greek	-1.0639*	.2320	.000	-1.6507	-.4770
Unerg Presentat: VS	English	Greek	9.598E-02	.2147	.905	-.4470	.6390
		Spanish	-.2697	.2291	.505	-.8492	.3098
	Greek	English	-9.5980E-02	.2147	.905	-.6390	.4470
		Spanish	-.3657	.2262	.280	-.9379	.2065
	Spanish	English	.2697	.2291	.505	-.3098	.8492
		Greek	.3657	.2262	.280	-.2065	.9379
Unacc Presentat: *SV	English	Greek	-.1616	.2597	.825	-.8185	.4953
		Spanish	.9317*	.2771	.006	.2306	1.6327
	Greek	English	.1616	.2597	.825	-.4953	.8185
		Spanish	1.0933*	.2736	.001	.4011	1.7854
	Spanish	English	-.9317*	.2771	.006	-1.6327	-.2306
		Greek	-1.0933*	.2736	.001	-1.7854	-.4011
Unacc Presentat: VS	English	Greek	.1104	.1957	.853	-.3846	.6054
		Spanish	-7.8067E-02	.2088	.933	-.6063	.4502
	Greek	English	-.1104	.1957	.853	-.6054	.3846
		Spanish	-.1885	.2062	.661	-.7101	.3331
	Spanish	English	7.807E-02	.2088	.933	-.4502	.6063
		Greek	.1885	.2062	.661	-.3331	.7101

*. The mean difference is significant at the .05 level.

8.3.6 Two-way ANOVA, repeated measures

These are the within-group and between-group analyses. Each of the following section deals with two constants at a time, e.g., unergatives in neutral contexts, unaccusatives in neutral contexts, and so forth.

7.1.1.3 Unergative, neutral context

Descriptive Statistics

	L1	Mean	Std. Deviation	N
Unerg Neutral: SV	English	1.4118	.3594	17
	Greek	1.5183	.3780	18
	Spanish	1.5593	.5906	14
	Total	1.4931	.4382	49
Unerg Neutral: *VS	English	.7865	.6541	17
	Greek	.7689	.7532	18
	Spanish	-.1310	.5925	14
	Total	.5179	.7814	49

Mauchly's Test of Sphericity[b]

Measure: MEASURE_1

					Epsilon[a]		
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Huynh-Feldt	Lower-bound
UNER_NEU	1.000	.000	0	.	1.000	1.000	1.000

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

b.
Design: Intercept+L1
Within Subjects Design: UNER_NEU

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
UNER_NEU	Sphericity Assumed	25.279	1	25.279	77.903	.000	.629
	Greenhouse-Geisser	25.279	1.000	25.279	77.903	.000	.629
	Huynh-Feldt	25.279	1.000	25.279	77.903	.000	.629
	Lower-bound	25.279	1.000	25.279	77.903	.000	.629
UNER_NEU * L1	Sphericity Assumed	5.078	2	2.539	7.825	.001	.254
	Greenhouse-Geisser	5.078	2.000	2.539	7.825	.001	.254
	Huynh-Feldt	5.078	2.000	2.539	7.825	.001	.254
	Lower-bound	5.078	2.000	2.539	7.825	.001	.254
Error(UNER_NEU)	Sphericity Assumed	14.927	46	.324			
	Greenhouse-Geisser	14.927	46.000	.324			
	Huynh-Feldt	14.927	46.000	.324			
	Lower-bound	14.927	46.000	.324			

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
Unerg Neutral: SV	1.965	2	46	.152
Unerg Neutral: *VS	.472	2	46	.627

Tests the null hypothesis that the error variance of the dependent variable is equal across groups

a.
Design: Intercept+L1
Within Subjects Design: UNER_NEU

Tests of Between-Subjects Effects

Measure: MEASURE_1
Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
Intercept	94.111	1	94.111	285.630	.000	.861
L1	3.361	2	1.681	5.101	.010	.182
Error	15.156	46	.329			

7.1.1.4 Unaccusative, neutral context

Descriptive Statistics

	L1	Mean	Std. Deviation	N
Unac Neutral: *SV	English	1.0000	.6160	17
	Greek	.8794	.6360	18
	Spanish	.5010	.9243	14
	Total	.8131	.7373	49
Unac Neutral: VS	English	1.4800	.5167	17
	Greek	1.6472	.3918	18
	Spanish	1.3571	.6060	14
	Total	1.5063	.5070	49

Mauchly's Test of Sphericity[b]

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[a] Greenhouse-Geisser	Huynh-Feldt	Lower-bound
UNAC_NEU	1.000	.000	0	.	1.000	1.000	1.000

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

b.
Design: Intercept+L1
Within Subjects Design: UNAC_NEU

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
UNAC_NEU	Sphericity Assumed	11.912	1	11.912	30.888	.000	.402
	Greenhouse-Geisser	11.912	1.000	11.912	30.888	.000	.402
	Huynh-Feldt	11.912	1.000	11.912	30.888	.000	.402
	Lower-bound	11.912	1.000	11.912	30.888	.000	.402
UNAC_NEU * L1	Sphericity Assumed	.622	2	.311	.807	.452	.034
	Greenhouse-Geisser	.622	2.000	.311	.807	.452	.034
	Huynh-Feldt	.622	2.000	.311	.807	.452	.034
	Lower-bound	.622	2.000	.311	.807	.452	.034
Error(UNAC_NEU)	Sphericity Assumed	17.740	46	.386			
	Greenhouse-Geisser	17.740	46.000	.386			
	Huynh-Feldt	17.740	46.000	.386			
	Lower-bound	17.740	46.000	.386			

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
Unac Neutral: *SV	2.726	2	46	.076
Unac Neutral: VS	1.057	2	46	.356

Tests the null hypothesis that the error variance of the dependent variable is equal across groups

a.
Design: Intercept+L1
Within Subjects Design: UNAC_NEU

Tests of Between-Subjects Effects

Measure: MEASURE_1
Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
Intercept	126.811	1	126.811	324.623	.000	.876
L1	2.095	2	1.048	2.682	.079	.104
Error	17.969	46	.391			

7.1.1.5 Unergative, presentational contex

Descriptive Statistics

	L1	Mean	Std. Deviation	N
Unerg Presentat: *SV	English	1.1571	.5183	17
	Greek	1.3722	.6533	18
	Spanish	.3083	.7816	14
	Total	.9936	.7787	49
Unerg Presentat: VS	English	1.0876	.6595	17
	Greek	.9917	.6914	18
	Spanish	1.3574	.5149	14
	Total	1.1295	.6395	49

Mauchly's Test of Sphericity[b]

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[a] Greenhouse-Geisser	Huynh-Feldt	Lower-bound
UNER_PRE	1.000	.000	0	.	1.000	1.000	1.000

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

b.
Design: Intercept+L1
Within Subjects Design: UNER_PRE

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
UNER_PRE	Sphericity Assumed	.966	1	.966	1.910	.174	.040
	Greenhouse-Geisser	.966	1.000	.966	1.910	.174	.040
	Huynh-Feldt	.966	1.000	.966	1.910	.174	.040
	Lower-bound	.966	1.000	.966	1.910	.174	.040
UNER_PRE * L1	Sphericity Assumed	8.596	2	4.298	8.500	.001	.270
	Greenhouse-Geisser	8.596	2.000	4.298	8.500	.001	.270
	Huynh-Feldt	8.596	2.000	4.298	8.500	.001	.270
	Lower-bound	8.596	2.000	4.298	8.500	.001	.270
Error(UNER_PRE)	Sphericity Assumed	23.259	46	.506			
	Greenhouse-Geisser	23.259	46.000	.506			
	Huynh-Feldt	23.259	46.000	.506			
	Lower-bound	23.259	46.000	.506			

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
Unerg Presentat: *SV	1.491	2	46	.236
Unerg Presentat: VS	.235	2	46	.792

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a.
Design: Intercept+L1
Within Subjects Design: UNER_PRE

Tests of Between-Subjects Effects

Measure: MEASURE_1
Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
Intercept	105.935	1	105.935	329.923	.000	.878
L1	2.112	2	1.056	3.289	.046	.125
Error	14.770	46	.321			

7.1.1.6 Unaccusative, presentational context

Descriptive Statistics

	L1	Mean	Std. Deviation	N
Unacc Presentat: *SV	English	.9312	.7733	17
	Greek	1.0928	.5893	18
	Spanish	-4.7619E-04	.9467	14
	Total	.7244	.8856	49
Unacc Presentat: VS	English	1.3976	.5801	17
	Greek	1.2872	.6031	18
	Spanish	1.4757	.5430	14
	Total	1.3794	.5717	49

Mauchly's Test of Sphericity[b]

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[a] Greenhouse-Geisser	Huynh-Feldt	Lower-bound
UNAC_PRE	1.000	.000	0	.	1.000	1.000	1.000

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

b.
Design: Intercept+L1
Within Subjects Design: UNAC_PRE

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
UNAC_PRE	Sphericity Assumed	12.290	1	12.290	25.524	.000	.357
	Greenhouse-Geisser	12.290	1.000	12.290	25.524	.000	.357
	Huynh-Feldt	12.290	1.000	12.290	25.524	.000	.357
	Lower-bound	12.290	1.000	12.290	25.524	.000	.357
UNAC_PRE * L1	Sphericity Assumed	6.932	2	3.466	7.198	.002	.238
	Greenhouse-Geisser	6.932	2.000	3.466	7.198	.002	.238
	Huynh-Feldt	6.932	2.000	3.466	7.198	.002	.238
	Lower-bound	6.932	2.000	3.466	7.198	.002	.238
Error(UNAC_PRE)	Sphericity Assumed	22.150	46	.482			
	Greenhouse-Geisser	22.150	46.000	.482			
	Huynh-Feldt	22.150	46.000	.482			
	Lower-bound	22.150	46.000	.482			

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
Unacc Presentat: *SV	2.181	2	46	.124
Unacc Presentat: VS	.010	2	46	.990

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a.
Design: Intercept+L1
Within Subjects Design: UNAC_PRE

Tests of Between-Subjects Effects

Measure: MEASURE_1
Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
Intercept	102.909	1	102.909	232.363	.000	.835
L1	3.883	2	1.941	4.383	.018	.160
Error	20.373	46	.443			

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