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**LATERAL (MORPHO)SYNTACTIC TRANSFER**

*An empirical investigation into the positive and negative influences of French on L1  
English learners of Spanish within an instructed language-learning environment*

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Thesis submitted to the University of London for the degree of PhD

## WORD COUNT & DECLARATION

Word count (exclusive of bibliography and appendices): **40879 words**.

I hereby declare that, except where explicit attribution is made, the work presented in this thesis is entirely my own.

A handwritten signature in black ink, appearing to read 'John Witney', with a horizontal line and a vertical stroke extending downwards.

John Witney  
December 2014

## **ABSTRACT**

This thesis explores lateral (morpho)syntactic transfer – non-native transfer at the level of morphology and syntax – from French among L1 English learners of Spanish in an instructed language-learning environment. A quantitative and qualitative study was conducted to investigate the positive and negative influences of L2 French and to identify learners’ foreign language experiences and strategies in making interlingual connections.

The quantitative study focused on providing statistical evidence of morphological and syntactic transfer and comprised three groups: The EN/FR/SP Group consisted of 28 L1 English learners with five years’ instruction in French and two in Spanish; the EN/SP Group consisted of 22 L1 English learners with two years’ instruction in Spanish and no prior knowledge of French; the SP Group consisted of 36 monolingual Spanish speakers.

The qualitative study was conducted through semi-structured interviews to gain a greater understanding of learners’ ability to apply interlingual connections and draw on prior language-learning experiences and strategies. Participants consisted of 10 L1 English learners with six years’ instruction in French and three in Spanish.

It is argued that knowledge of a non-native language plays a pivotal role in the learning of a further typologically similar one at the level of morphology and syntax. The overall results suggest that positive transfer may be facilitated and negative transfer may be highlighted and understood through cross-linguistic comparisons, with important pedagogical implications for future research.

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*“Learning, including language learning, is based on prior knowledge”*

– Håkan Ringbom

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# Chapter 1

## INTRODUCTION

This thesis explores the positive and negative influences of French at the level of morphology and syntax among L1 English learners of Spanish in an instructed environment. In other words, it addresses the concept of “lateral syntactic transfer” (Jarvis & Pavlenko, 2008). Through empirical enquiry, the research also points to a number of pedagogical implications, whereby positive transfer may be facilitated and incidences of negative transfer may be highlighted through cross-linguistic comparisons. This has been addressed by Cook (2001, 2008) regarding the L2 classroom and the potential facilitative use of the L1, hitherto frequently seen as “the enemy of the L2” (Jarvis & Pavlenko, 2008: 217); it would therefore seem natural to transfer this ideology to the L3 classroom, whereby students of Spanish may be encouraged to draw on specific knowledge of a typologically-related L2 such as French and, more generally, on their previous foreign language learning strategies and experiences.

### 1.1 Theoretical background to the present study

The majority of theoretical models<sup>1</sup> of Third Language Acquisition (TLA) have been developed from a psycholinguistic perspective (e.g. Cenoz et al, 2003; Jessner, 2007). The present research draws on a number of elements – the “Foreign Language Specific Factors” – from one such model, Hufeisen’s *factor model* (Hufeisen & Marx, 2007), as a theoretical framework within which to address the research questions in both

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<sup>1</sup> I retain the use of ‘model’ throughout as they are presented as such in the literature. However, neither the *factor model* (Hufeisen & Marx, 2007) nor the *model for L3 learning* (Falk & Bardel, 2010, 2011) make any predictions or attempt to model interactions between the factors presented, as such ‘schema’ might be a more appropriate term; indeed this has been used synonymously on at least one occasion (e.g. Falk & Bardel, 2011: 61).

the quantitative and qualitative studies. This particular model was chosen for two reasons. First, it was developed “to explain the foreign language learning process with a special focus on multiple acquisition in an instructed context” (Jessner, 2007: 22), which is the focus of my research among L1 English learners of Spanish with and without L2 French, acquired in an instructed learning environment. Second, it has also been adapted in recent generative studies of L3 syntactic transfer (Falk & Bardel, 2010, 2011) in investigating the *L2 status factor* – “a general tendency of the language learner to activate other foreign languages when using a non-native language” (Falk & Bardel, 2010:188). This is also the focus of my present research<sup>2</sup>.

In short, my objective is to bridge the gap between the psycholinguistic and generative strands of research into L2 influence on L3 learning through quantitative and qualitative investigation. Although my results are discussed from a predominantly psycholinguistic perspective, given the nature of the linguistic properties under investigation, it is of course necessary to take into account the findings of those researchers adopting differing theoretical stances, as Jarvis and Pavlenko (2008) point out, referring to the work of a pioneer in transfer research, Terence Odlin:

“Investigators of syntactic transfer who work outside the UG [Universal Grammar] framework need to be aware of findings of UG research. Likewise, UG researchers need to be aware of the research on syntactic transfer that has been conducted outside of the UG framework in order to avoid “the risk of making empirically unsound claims” (Odlin, 2003:461).” (pp. 101-102)

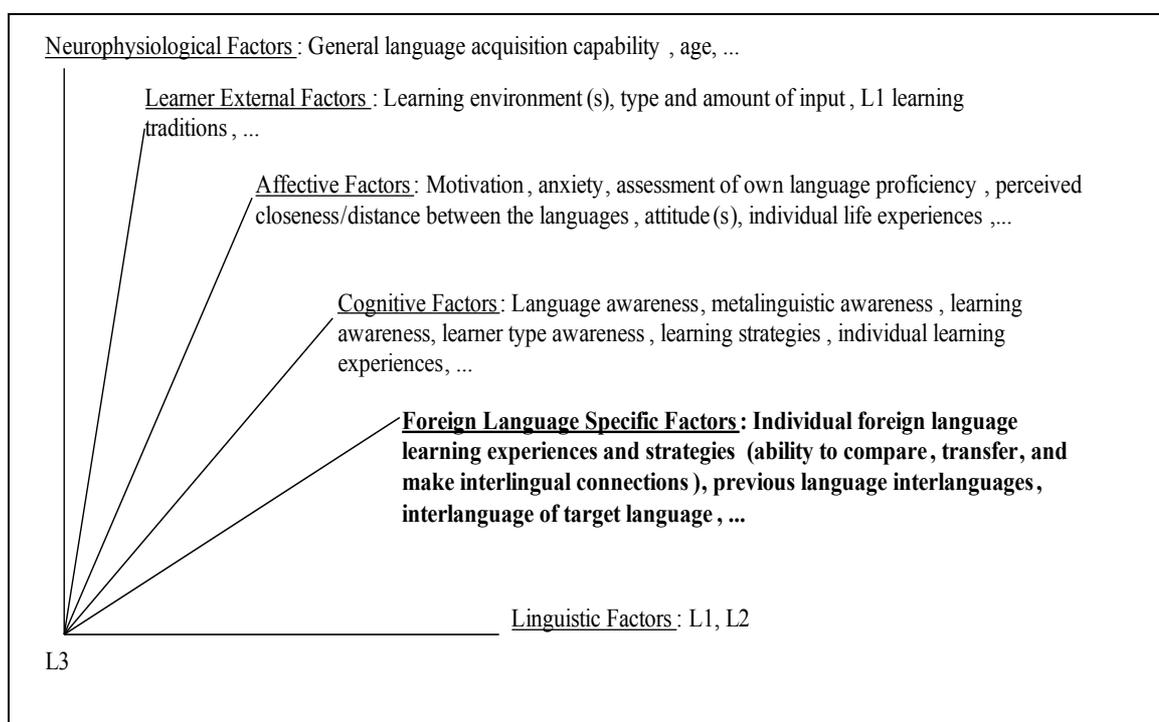
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<sup>2</sup> However I adopt the term *Second Language (L2) Factor* (e.g. Leung, 2007; Sanchez, 2011) in the discussion of results in this thesis, rather than *L2 Status Factor*, because ‘status’ has been associated specifically with L2 English in several studies: English has a significant status globally for many learners (e.g. Jessner, 2006; Bono, 2011), which may in itself be a mediating variable (e.g. Murphy, 2005). *Second Language (L2) Factor* is abbreviated to *L2 factor* throughout the discussion.

As such, in the discussion of results (Chapter 5), my quantitative investigation will reference research findings from both the psycholinguistic and generative literature on non-native language transfer, as they will be seen to complement each other.

Let us now look in a little more detail at the specific components of the L3 learning model that inform my research questions, which are outlined at the end of Chapter 2.

### 1.1.1 Hufeisen's factor model



Source: Hufeisen and Marx (2007: 314)

Figure 1.1 Factor model.

The essence of the *factor model* is to highlight the differences between L2 and L3 learning, the latter involving a number of factors that are not available to an L2 learner, namely the “Foreign Language Specific Factors” (highlighted in the original in figure 1.1 above). This is explained by Jessner (2007):

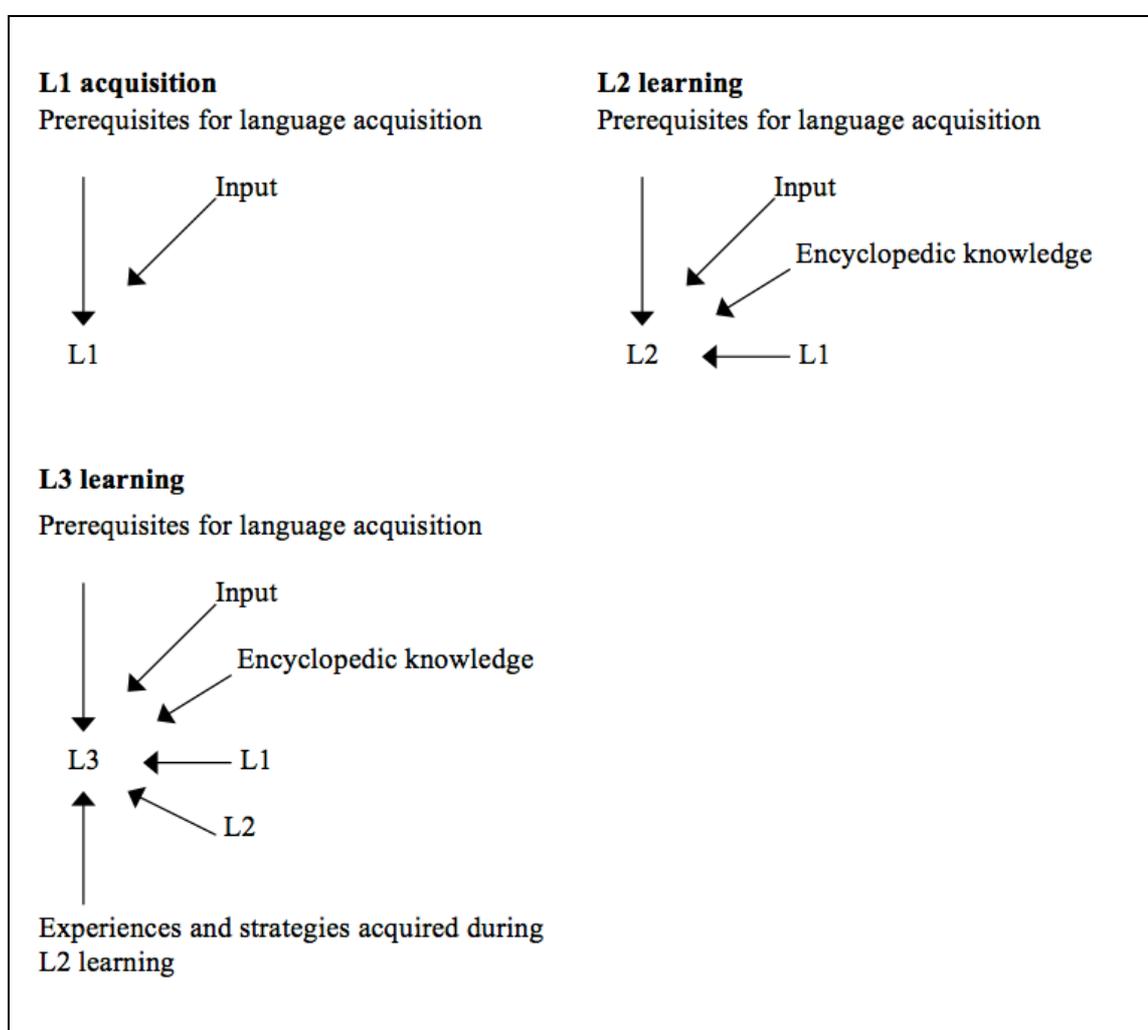
“Whereas the L2 learner is a complete beginner in the learning process of a second or first foreign language, the L3 learner already knows about the foreign language learning process and has (consciously or subconsciously) gathered individual techniques and strategies to deal with such a situation with differing degrees of success. Additionally, the learner may have intuitively learned about her/his individual learner style. These new features are part of a new set of factors: foreign/L2 learning-specific factors such as individual L2 learning experiences, (explicit or subconscious) foreign language learning strategies and interlanguages of other learned languages.” (p. 23)

It is in particular the “Foreign Language Specific Factors” that underpin my research questions although other factors outlined in the model will clearly interact with these, most notably Affective Factors, such as perceived language distance, i.e. the participants’ “psychology” (Kellerman, 1979), and Cognitive Factors, such as metalinguistic awareness and use of metalanguage (e.g. Berry, 2005). as will be shown in the discussion of results.

Before turning to the significance of the present study, let us first briefly consider Falk and Bardel’s (2010, 2011) *model of L3 learning*, inspired by Hufeisen’s *factor model*.

### 1.1.2 Falk and Bardel's model for L3 learning

Bardel and Falk (2012) have drawn on the elements of Hufeisen's *factor model* in forwarding a neurolinguistic account of L3 learning with reference to the *L2 status factor*, highlighting, in particular, the “dissimilarity between native and non-native languages” (p. 71); this is shown in figure 1.2 below. We shall return to this model in the concluding chapter and evaluate its implications for L3 learning and language pedagogy in general.



Source: Bardel and Falk (2012: 69)

Figure 1.2 Model for L3 learning.

In summary, instructed L3 learners – as opposed to L1/L2 bilingual L3 learners (e.g. Le Pichon et al, 2010) – have come into contact with a previous non-native language and the various strategies adopted during this experience will have an impact upon the L3 learning process, as will be shown in the results and discussion of the empirical investigations of the present research.

## **1.2 Significance of the present study**

Today, Third Language Acquisition (TLA) (e.g. De Angelis, 2007) and Multilingualism (e.g. Aronin & Hufeisen, 2009; De Angelis & Dewaele, 2011; Gabryś-Barker, 2012) are quite rightly considered fields in their own right, no longer subsumed under the umbrella term of Second Language Acquisition (SLA) (e.g. Cenoz et al, 2001; Jessner, 2007). As such, the TLA literature now takes into account any previously acquired, non-native languages when investigating the acquisition of a further non-native language.

My research aims to build on findings in the psycholinguistic literature on cross-linguistic influence (CLI) that have hitherto investigated examples of non-native transfer or “interlanguage transfer” (De Angelis & Selinker, 2001) at a predominately – but not exclusively – lexical level (e.g. Dewaele, 1998; Williams & Hammarberg, 1998, Hammarberg, 2001; Cenoz, 2001; De Angelis, 2005) and develop a greater understanding of lateral syntactic transfer from a TLA perspective, whilst taking into account the most recent generative investigations into non-native (morpho)syntactic transfer (e.g. Flynn et al, 2004; Leung, 2003, 2005; Falk & Bardel, 2010, 2011; Bardel & Falk, 2007, 2012 and Rothman, 2011). Recently, several TLA studies have investigated CLI and non-native transfer at a wider range of transfer levels (De Angelis

& Dewaele, 2011) but, as García-Mayo (2012) notes, there still remains “a dearth of studies on L3 morphosyntax from the psychological perspective.” (p. 136)<sup>3</sup>

Through empirical enquiry my research aims to contribute to the current TLA literature by providing new data – both quantitative and qualitative – concerning the positive and negative influences of French at the level of (morpho)syntax among L1 English learners of Spanish in an instructed environment.

### **1.3 Organisation of the thesis**

This thesis is organised around six chapters as follows:

**Chapter 1 (Introduction)** – the present chapter – introduces the principal theme of the research and the theoretical model adopted that underpins the quantitative and qualitative studies.

**Chapter 2 (A review of the literature)** comprises three sections. The first section outlines the genesis of language transfer and the transition from behaviourism to cognition. The second and third sections present a critique of the generative and psycholinguistic literature relevant to my present research. The research questions are presented in full at the end of the chapter.

**Chapter 3 (Methodology)** provides an overview and justification of the methodological approach adopted. The characteristics of the samples for the quantitative and qualitative studies are described, along with the instruments used for data collection.

**Chapter 4 (Results)** presents the statistical findings of the quantitative study and reports from the semi-structured interviews. The research questions are reviewed and linked to findings of the two empirical investigations.

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<sup>3</sup> One notable exception is Ó Laoire and Singleton’s (2009) study of morphosyntax, which will be discussed in Chapter 2.

**Chapter 5 (Discussion of results)** analyses the results with support from and reference to previous related research. Both expected and unexpected results are discussed and suggestions for further research are proposed.

**Chapter 6 (Conclusion)** summarises the key findings, referencing the original aim of the research outlined in the introduction. The significance of the research is restated in the light of the findings, pointing to future research development, and a number of limitations are addressed.

## **Chapter 2**

### **A REVIEW OF THE LITERATURE**

This chapter provides a review of the literature relevant to the present research on lateral (morpho)syntactic transfer outlined in Chapter 1. The chapter is divided into three sections: the first section (Section 2.1) outlines the genesis and evolution of language transfer by way of background information; the second section (Section 2.2) reviews the literature that relates to my quantitative study and the third section (Section 2.3) addresses the psycholinguistic factors that inform the focus of my qualitative study.

#### **2.1 The genesis of language transfer**

The fundamental concept of language transfer – in its broadest terms – has been the subject of discussion, speculation and debate among generations of language learners and linguists probably, as Jarvis and Pavlenko (2008: 1) point out, since the evolution of language itself. Just as languages have evolved throughout the centuries, so too have opinions regarding the nature of transfer, from the predominately negative stance adopted by many well into the 20<sup>th</sup> century – with transfer being, at best, synonymous with interference from previously acquired languages; at worst with mental instability – to the current, generally accepted viewpoint among scholars (e.g. Ellis, 1994; Ringbom, 2007) that linguistic similarities are to be considered as equally important as linguistic differences, differences which do not necessarily lead to faulty language production (Lado, 1957) and which may indeed facilitate, rather than hinder, the acquisition of target language structures.

Although the work of Lado is now very much associated with the negative aspects of transfer, corresponding empirical weaknesses of the Contrastive Analysis Hypothesis and the subsequent decline in behaviourism, researchers in the 21<sup>st</sup> century investigating the influence of one non-native language on another – “interlanguage transfer” (Gass & Selinker, 2001), the “foreign language effect” (De Angelis &

Selinker, 2001; De Angelis, 2005), or “lateral transfer” (Jarvis & Pavlenko, 2008), for example – undoubtedly owe much of the current thinking to the early findings of Lado and his contemporary, Polish-born linguist Uriel Weinreich and his seminal work *Languages in Contact* (1953). Jarvis and Pavlenko (2008) note:

“[...] the work of Charles Fries (1945), Uriel Weinreich (1953) [...] and Robert Lado (1957) moved discussions of language transfer to a scholarly footing, legitimizing transfer as an unavoidable feature of language learning, [...] exploring it as a linguistic, psycholinguistic, and a sociolinguistic phenomenon.” (p. 3)

### ***2.1.2 Evolving terminology***

It was undoubtedly the result of the persistence and resilience of the term “transfer”, associated predominately with negative concepts of language acquisition well beyond the era of behaviourism with which it was synonymous, which encouraged two scholars in the field to suggest the more theory-neutral term *Cross-linguistic Influence* (CLI), “allowing one to subsume under one heading such phenomena as ‘transfer’, ‘interference’, ‘avoidance’, ‘borrowing’ and L2-related aspects of language loss and thus permitting discussion of the similarities and differences between these phenomena” (Sharwood Smith & Kellerman, 1986:1). Although the notion of “transfer” is now largely divorced from earlier thinking regarding behaviourism and habit formation (Ellis, 1994), the term does remain as a generic concept and “cover term” in the literature to date, but with a now greater understanding of its application in wider contexts. In other words, cross-linguistic influence *is* transfer (Jarvis & Pavlenko, 2008: xi), but we now understand it to encompass a broader range of linguistic and psycholinguistic issues in the shift from behaviourism to cognition. Today, cognitive approaches to L3 acquisition follow two predominant strands: the psychological (psycholinguistic) and the generative (formal linguistic) as identified by García-Mayo (2012) in terms of modularity:

“Whereas psycholinguistic accounts claim that the processes of language acquisition are the same as those used in the acquisition of any other cognitive skill [...] where cognitive factors such as memory, attention/perception, intelligence etc. are at work, formal linguistic accounts claim that the language faculty is a module independent from other cognitive modules (although interacting with them) and ruled by linguistic mechanisms.” (p. 131)

### ***2.1.3 Towards a definition of transfer***

Let us briefly consider two important theoretical works that provide a major overview of language transfer: Odlin (1989) and Jarvis and Pavlenko (2008), the latter being the most comprehensive study on the subject to date and to which I refer at various points throughout this thesis.

Drawing together a number of strands from previous viewpoints, established principally during the first half of the 20<sup>th</sup> century, Odlin aims to consolidate a contemporary understanding of transfer by defining, in four basic statements, what he believes transfer is not:

- 1) Transfer is not simply a consequence of habit formation;
- 2) Transfer is not simply interference;
- 3) Transfer is not simply a falling back on the native language;
- 4) Transfer is not always native language influence. (p. 27)

He then proposes a working definition of transfer, recognizing the problems of nomenclature and the need for further clarification:

“Transfer is the influence resulting from similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly) acquired.” (p. 27)

Notwithstanding Odlin’s own reservations regarding the difficulties in establishing a definitive definition of language transfer, the principal premise broadly remains in the literature today; furthermore – and for the purposes of the present study – (4) is

particularly significant in terms of identifying influences of L2 French on L3 Spanish among L1 English learners.

Building substantially on the work of Odlin, Jarvis and Pavlenko (2008) provide a detailed analysis of every aspect of language transfer and methodological approaches to empirical enquiry, with particular reference to adult language learners, adopting a predominately psycholinguistic stance, which they describe as “a phenomenon that takes place in the minds of individuals, and which is subject to the effects of various cognitive, linguistic, social, and situational factors” (p.3). The text highlights in particular some significant findings in recent research, which have “pushed the boundaries of the field outward, demonstrating that transfer is not limited to production and acquisition and can be identified in a variety of psycholinguistic processes” (p.14). Related directly to my present research into (morpho)syntactic transfer, the authors note that “there has been considerable growth in the level of detail that has come to light about these types of transfer since 1990 [i.e. since the publication of Odlin’s text]” (p. 21); I explore some of these below, as well as others that have been published within the last five years.

## **2.2 Multilingual syntactic transfer**

The quantitative study of the present research addresses positive and negative aspects of (morpho)syntactic lateral transfer. In this section we review the literature that has investigated multilingual transfer at the level of syntax, the shift from L2 to L3 acquisition with regard to the “initial state” and, finally, we discuss three models of syntactic transfer from the current generative literature.

### **2.2.1 Background**

Research on Third Language Acquisition (TLA) within the domain of syntax has predominately been conducted within a generative framework, analysing the role of

Universal Grammar (UG) in the L3 initial state (e.g. García-Mayo, 2012), as it is believed that transfer is most likely to occur in the early stages of acquisition (e.g. Ringbom, 2007). Generative studies have predominately focused on learners' recognition, acceptance and rejection of sentences presented to them in controlled conditions. One of the first major studies of its kind was conducted by Zobl (1992) in the receptive area of learners' grammaticality judgments. Since the turn of the millennium, however, there has been a significant growth of interest in syntactic transfer with regard to Third Language Acquisition (TLA) and Multilingualism (e.g. Leung, 2003, 2005; Flynn et al, 2004; Bardel & Falk, 2007; Bayona, 2009; Foote, 2009; Rothman & Cabrelli, 2010 and Rothman, 2011). These studies are reviewed in the sections that follow.

### ***2.2.2 Generative influences***

In traditional Second Language Acquisition (SLA) studies, the principal concern of generativist researchers investigating L2 grammar has been the nature of the L2 "initial state" (e.g. Schwartz & Eubank, 1996), that is the starting point of the L2 learner's grammar and the extent of influence and interplay of UG and the L1 (White, 2003); in TLA and Multilingualism, of course, the issue necessarily becomes more diverse and complex (see Cenoz, 2000), with not only the addition of linguistic variables – L2, L<sub>n</sub> – but also a wide range of psycholinguistic elements and individual differences to consider. We shall return to this later. For now, though, and for the purpose of providing some background information on the generativist framework, we address two hypotheses, which, although have been extended to embrace TLA studies, are more specifically rooted in SLA.

### *2.2.2.1 The Full Transfer Full Access Hypothesis*

The Full Transfer Full Access (FTFA) model (Schwartz & Sprouse, 1996) is comprised of two separate entities, Full Transfer and Full Access: the former refers to the learner's L2 initial state and "assumes the transfer of L1 grammar in its entirety (including all abstract properties, both functional and lexical)" Leung (2005: 41); the latter refers to the developmental stages which the L2 learner undergoes during the acquisition process, which "allows for the possibility of UG-based restructuring in L2 interlanguage development; those parameterized properties not instantiated in the L1 grammar could be ultimately acquirable; the final outcome of L2A is predicted to be a grammar that is fully UG-constrained (although it is not necessarily L2 target-like)." (Leung, 2005:41)

### *2.2.2.2 The Failed Functional Features Hypothesis*

A competing theoretical model of acquisition, the Failed Functional Features Hypothesis (FFFH) (Hawkins & Chan 1997), "assumes full transfer of L1 in the L2 initial state. It predicts the non-availability in L2A of parameterized properties not instantiated in L1. In other words, the FFFH rejects the possibility of UG restructuring in L2 development" (Leung, 2003: 199).

Both the FTFA and FFFH models have been extended to third language acquisition from a generative perspective, as we shall see in the following section.

### **2.2.3 From L2 to L3 Initial State**

Clearly, neither the FTFA nor the FFFH was designed to account for the processes of TLA, which, as mentioned above, is an altogether more complex issue, yet a number of generativist researchers (e.g. Leung, 2003, 2005; Rothman & Cabrelli, 2010; Rothman, 2011) have nevertheless aimed to extend the SLA models in an attempt to establish the nature and identity of the L3 initial state in TLA, to which we now turn.

Leung (2005) extended the scope of the two SLA theoretical models outlined above, aiming to compare the L2 and L3 initial states in TLA, specifically in the acquisition of the French Determiner Phrase (DP)<sup>4</sup>; her subjects were two groups studying French: Group I (L3) consisted of L1 Cantonese, L2 English and L3 French learners; Group II (L2) were native speakers of Vietnamese with L2 French. In establishing her hypotheses and predictions, Leung notes that “neither Chinese nor Vietnamese has the functional categories of D or Num or the formal feature of [ $\pm$ definite] instantiated in the grammar. It is also assumed that feature strength of Num is not responsible for the related adjective placement phenomenon in the two source languages” (p. 47), and presents them as follows:

*L3 group (Cantonese–English bilinguals):*

1. FFFH hypothesizes that the L3 French initial state is the L1 Chinese final state. Specifically, D, Num and [ $\pm$  definite] are absent in the L3 group’s French interlanguage. Adjective placement will be problematic since feature strength of Num is not operative and the surface order in Chinese may be transferred.
2. According to FTFA, the L3 French initial state could be the L1 Chinese final state or L2 English steady state. It makes the same predictions as FFFH if L1 transfer is hypothesized. Alternatively, if L2 transfer is hypothesized, then it predicts that the UG-constrained interlanguage grammar achieved at the L2 English steady state will transfer to the L3 French initial state. All the features and feature strength which have been acquired in the L2 English steady state will be transferred to the L3 French initial state. Specifically, the functional categories of D and Num as well as the feature [ $\pm$  definite] will be present in L3 group’s English and French. The weak feature strength of Num of English will also transfer hence causing problems in subjects’ adjective placement in French.

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<sup>4</sup> Grammatical categories: Determiner (D),  $\pm$  definite; Number (Num),  $\pm$  plural; Feature strength of Num and surface adjective placement.

*L2 group (Vietnamese monolinguals):*

Both FTFA and FFFH predict full transfer of L1 Vietnamese into the L2 French initial state. Since Vietnamese does not have D, Num nor [ $\pm$  definite], it is hypothesized that L2 subjects will have problems with these properties in French. Nonetheless, adjective placement will pose no apparent problem to the Vietnamese speakers possibly because of the surface similarity between Vietnamese and French with respect to adjective-noun order.

Leung's methodology is certainly thorough and a wide range of both oral and written tasks was used in the two experiments conducted, with suitable native control groups tested for each category, despite the acknowledgement (p. 48) regarding the lack of comparability of L2 and L3 experimental samples in terms of age and socio-economic background, the latter highlighted by Ringbom (2007: 33) as an important variable in the assessment of transfer of linguistic elements of learners with different L1s studying the same foreign language. Notwithstanding, the results of Leung's research – confirming the original goal of her study – are particularly important in recognizing that L3 acquisition is not simply an extension of L2 acquisition at morphosyntactic level, and significant transfer from L1 to L3 was not confirmed: while Full Transfer of the L1 in the L2 initial state was found, transfer from the L2 in the L3 initial state was only partial; furthermore, the L3 group performed much better than the L2 group “on most of the grammatical properties tested” (p. 39), so inconsistent to a degree with the FFFH and FTFA hypotheses. Finally, data from the study suggest that “the more languages there are in the pool of prior linguistic knowledge at the language learner's disposal, the more beneficial it will be for his subsequent acquisition of additional languages, especially those that are typologically-related” (p. 58). This is helpful in setting the scene for my empirical investigation of two typologically-related languages at the level of (morpho)syntax.

Patricia Bayona's (2009) study examines the acquisition of Spanish middle and impersonal passive constructions. Despite some potential methodological weaknesses – to which I refer below – the research is nevertheless particularly significant, since it combines the traditional generativist SLA approach with TLA. As with Leung's (2005) study, Bayona investigates the notion of L1 Full Transfer Full Access with not dissimilar results adding, in particular, support for prior linguistic knowledge beyond the L1, as will be demonstrated below. The author confirms that, unlike generative SLA studies:

“TLA research does not assume that there is necessarily a dominant language within the linguistic spectrum of the multilingual speaker, or a weaker language. Neither is it presupposed that linguistic transfer is predetermined by the parameters of the L1 or that it is unidirectional toward the foreign languages.” (p. 3)

Indeed, in previous studies, she has identified L2 proficiency and length of exposure as being significant in hindering transfer from L1 to L3 (p.5). Bayona carries out two experiments, one from a generative SLA perspective and the second from a TLA perspective, as follows:

In the first study, the predominately L1 English subjects comprised 15 L2 Spanish adult learners (post-secondary education), studying the language on an average of five hours per week over two academic years; they were organized into two groups by ability (advanced and high intermediate) following grammatical placement tests; native Spanish speakers – with varying dialects – comprised the control group. The subjects' receptive skills were tested using grammatical judgment and truth-value tasks. The overall results were somewhat inconclusive with regards to Full Access to UG, with support for this only appearing significant on the grammatical judgments; the results of the truth-value statements with abstract semantic-syntactic properties were far more mixed with intermediate – rather than advanced – learners' responses at times

matching more closely the intuitions of the native group, possibly “attributable to a state of permanent indetermination of IL grammars” (p.20). This may also, I would argue, be because the difference between the Spanish middle and impersonal passive constructions is an extremely subtle one even, perhaps, for an average native Spanish speaker, especially given the flexible word order of the language and the degree of nuance in interpretation as a result (p.11):

*“A Luisa le parece que Pedro come muy extraño porque:*

(a) El arroz se come con mayonesa (Unexpected / middle);

(b) Se come el arroz con mayonesa (Expected answer / reflexive)”.

Furthermore, the middle clitic “se” construction is not one that is easily acquired, unless of course this was specifically drilled during the language classes, which is not reported in the paper, although the aspect of learnability is addressed in the second study. More important still, though, as with other similar studies conducted within a generative framework, without any other data to support the findings of grammaticality judgment tasks, the extent of acquisition is necessarily limited to “acceptance and recognition levels.” (p.10)

Bayona’s second experiment from a TLA perspective considers previously acquired languages as an independent variable in the learners’ perception of middle and impersonal passive constructions. Here, the subjects acquiring L3 Spanish have L1 English and L2 French only. Bayona hypothesizes that the assumption of Full Transfer from L1 English to L3 Spanish will be problematic, given that in both French and Spanish “the clitic “se” may explicit [sic] the presence of middles”, whereas in English “there are no overt morphological markers for middles”; should the learner transfer knowledge from – in this case – the typologically similar L2 (French), then “it may also constitute a confusing scenario” (p.21). The author notes that, while both French (29) and Spanish (30) make use of the clitic “se” in middle constructions, the surface

similarity is deceptive, given that French (31), unlike Spanish (32), uses a different morphological marker – “on” – for impersonal constructions:

- (29) Ce livre se lit facilement.
- (30) Este libro se lee fácilmente.
- (31) On travaille toute la semaine.
- (32) Se trabaja toda la semana. (p. 21)

In other words, Bayona concludes “the semantic features that differentiate middles from impersonals in Spanish have to be recognized through context only” (p. 22). This may be the case to a certain extent, but the assessment nevertheless fails to take into account that, in a number of instances (Stanley Whitley, 2002: 181), Spanish – as an alternative to the impersonal “se” – can also make use of the impersonal “uno” (a), which is of course much closer to the French “on” (b) and the English “one”, and indeed is obligatory if the verb is already reflexive (c), in which case the impersonal “se” is prohibited (d):

- (a) Uno trabaja toda la semana.
- (b) On travaille toute la semaine.
- (c) Uno se levanta a las seis.
- (d) \*Se se levanta a las seis.

One would expect, therefore, a positive correlation in terms of acceptance and recognition levels with L2 French learners acquiring L3 Spanish in the use of the impersonal Spanish “uno”, were such examples to be included in a grammaticality judgment task, and something to consider for future research.

In this second experiment from a TLA perspective, Bayona considers the role of previously acquired languages as playing an instrumental or supplier role in L3 acquisition (Williams & Hammarberg, 1998; Hammarberg, 2001), evaluating the extent to which:

“the principles of typological similarity and proficiency allow the learner to discriminate between the previously acquired languages in order to choose the source language (L1 or L2 in the case of trilinguals) that would facilitate the acquisition process.” (p. 22)

The subjects were 13 intermediate-advanced adult learners with L2 French (acquired during elementary school) and L3 Spanish (acquired during late adolescence or early adulthood) attending a university summer course; two groups (lower and higher) were formed on the basis of self-assessed language proficiency in L2 French and subjects were tested on sentences that “exhibited the overt morphological characteristics of the three languages of the participants.” (p. 23)

The results of Bayona’s second experiment confirm similar findings in the literature (e.g. Cenoz et al, 2003) as to the default supplier role of the typologically similar L2 in the acquisition of the L3:

“participants with a higher proficiency in French demonstrated more confidence and accuracy in their choice of the expected answer, whereas those with lesser command of the L2 were uncertain in their choice between the sentence that imitated the French middle structure and the one that actually portrayed the Spanish middle. In addition, these observations were confirmed by positive correlations between L2 proficiency and the level of expected answers.” (p. 25)

Bayona quite rightly concludes her study by noting “a more detailed explanation is needed on the subject of the specific function of previously acquired languages in L3 acquisition than the one offered by the generative SLA framework” (p.26). This supports similar findings in the literature on L3 acquisition and Bayona thus rejects the FTFA model, given that no absolute L1 transfer was in evidence. In a slightly defensive final paragraph, Bayona acknowledges the small sample size and other non-tested variables in both experiments and expresses caution in “generalizing the results to other populations” (p. 26), inviting “more elaborate and comprehensive research.” (p.27)

In a sense, TLA research need not necessarily be more elaborate in terms of the testing procedures employed but it does need to be reliable if conclusions are to be drawn as to the nature and extent of L2 (or L1) syntactic influence on the L3. In other words, empirical findings can be enhanced if studies embrace both receptive and productive data, both quantitative and qualitative assessments, in order to make any significant and more widely generalizable claims. Bayona's study, though, is certainly an excellent starting point, which successfully demonstrates – along with Leung's (2005) study outlined above – that TLA cannot simply be considered a bolt-on addition to traditional generative SLA methodologies.

In her study of transfer in L3 acquisition and the role of typology, Foote (2009) acknowledges findings in the literature and the need to discount evidence of L1 transfer under the generative FTFA hypothesis in L2 SLA data as a “straightforward extension” to the field of TLA. Further, she recognises that, at a lexical level at least, language typology (e.g. Cenoz, 2003) – as well as a learner's perception of the differences and similarities of the languages being acquired, i.e. their “psychotypology” (Kellerman, 1983) – are significant in the L3 acquisition process, the L2 being the principal source of transfer. Foote's study aims to establish whether findings relating to lexis in terms of typology and psychotypology can in fact be extended to embrace morphosyntactic transfer too, regardless of the order of acquisition, and the following two research questions are addressed, focusing on L1 – L3 or L2 – L3 transfer of contrast in aspectual meaning between Romance (Italian, Spanish and French) past tenses:

1. If the L3 (a Romance language) has a semantic contrast realized grammatically in a way that differs from the L1 (English), but is the same in the L2 (another Romance language), will this contrast in meaning be transferred from the L2, or will the L3 learner have to ‘relearn’ this contrast for the L3, having the L1 as the initial state?

2. If the L3 (a Romance language) has the semantic contrast realized grammatically in a way that is similar to the L1 (another Romance language), but different from the L2 (English), will this contrast be transferred from the L1, or will the L2 interfere in some way?

Foote hypothesizes that “L1 Romance, L2 English learners of L3 Romance will transfer their knowledge of this contrast from the L1 without the L2 English interfering. Similarly, L1 English, L2 Romance learners of L3 Romance will transfer their knowledge of contrast from the L2” (p. 95). In other words, typologically similar languages will affect transfer of contrast in aspectual meaning with past tenses, when “the other language has no analogous semantic contrast available which may be used as a source of transfer.” (p.95)

Subjects for Foote’s study were 85 volunteers from US universities and these were divided into four groups as follows:

1. Control (n=34): native Romance speakers.
2. L1 English (n=25): L2 Romance.
3. L1 English (n=14): L3 Romance with L2 Romance.
4. L1 Romance (n=12): L3 Romance with L2 English. (p. 96)

As well as providing information on language history, subjects were submitted to a Romance morphology and a Romance sentence conjunction judgment task, conducted via online questionnaires.

Foote’s results suggest that the two L3 groups (3 and 4 above) were able to transfer knowledge of aspect from previously acquired Romance languages. In other words, linguistic typology – rather than order of acquisition – would appear significant in determining the source of morphosyntactic transfer, although Foote notes:

“transfer of a contrast that is grammatically realized may come from either the L1 or L2, contrary to what has been found in L3 research focusing on transfer of meaning at the lexical level (Ringbom, 1986, 2001).”

One of the problems of this study – indeed addressed by Foote in her concluding remarks – is that the learners’ psychotypology was not taken into account, despite initial thoughts on this matter in the introductory paragraphs. However, the author does recognise the potential advantage of speaking to learners themselves in order to build up a more purposeful evaluation of transfer, which is something I address in the qualitative element of the present research:

“It would be beneficial to ask study participants how similar they believe their various languages to be in order to provide a richer picture of how language typology affects processes of transfer, including whether it affects all speakers in the same manner, or whether it depends upon personal beliefs about language structure. Also, is it the overall typological similarity of the languages that matters, or is it the similarity of specific properties across languages that influences where transfer comes from?” (p. 112)

#### ***2.2.4 Generative models of multilingual syntactic transfer***

Current models in the literature from within the generative framework of multilingual enquiry that investigate the L3 initial state and access to UG across (psycho)typologically-related or unrelated grammars can be summarised as follows:

1. *The L2 Status Factor*: The L2, being the most recently acquired language and regardless of any (psycho)typologically-relatedness among the languages under investigation, is afforded the highest status in terms of transfer of syntactic properties to the L3;
2. *The Cumulative Enhancement Model*: All previously acquired grammars, (psycho)typologically-related or otherwise, will assist only in positive syntactic transfer to the L3;

3. *The Typological Primacy Model*: The (psycho)typological proximity of languages is significant in determining both positive and negative syntactic transfer to the L3.

We now turn to a more detailed discussion of these three current models and related investigations of multilingual syntactic transfer:

#### *2.2.4.1 The L2 status factor*

While the L2 status is a widely recognized variable influencing the acquisition of L3 lexis (e.g. Dewaele, 1998; De Angelis & Selinker, 2001; Williams & Hammarberg, 1998, Hammarberg, 2001; Cenoz, 2001; De Angelis, 2002, 2005; Burton, 2013), there have been far fewer studies examining the extent of the L2 status at a syntactic level. Hammarberg (2001) defined the L2 status factor as:

“a desire to suppress L1 as being ‘non-foreign’ and to rely rather on an orientation towards a prior L2 as a strategy to approach the L3.” (pp. 36-37)

Bardel and Falk (2007), drawing on Hammarberg’s (2001) definition of lexical activation of L2 in L3 production, investigated whether a similar L2 effect might be present at the level of syntax in the initial stages of L3 acquisition. The authors carried out a study with a number of L1 learners with L2 English, Dutch or German and L3 Dutch or Swedish, apart from English all V2 languages. They found that the L2 provided a filtering role, effectively blocking L1 syntactic transfer at the L3 initial state in the area of negation placement with Germanic syntax. The authors concluded that “the L2 status factor is stronger than the typology factor in L3 acquisition” (p. 480). Furthermore, the authors’ findings rejected the hypothesis that “positive influence of all previous languages – L1, L2(s) – would facilitate the learning task [...], hence yielding overall target-like structures from the outset” (p. 479) – the basic premise of the Cumulative Enhancement Model, to which we now turn.

#### 2.2.4.2 *The Cumulative Enhancement Model*

Flynn et al. (2004) proposed the Cumulative Enhancement Model (CEM), which suggests that all previously acquired languages have the potential to influence positively<sup>5</sup> the acquisition of a new language, in “one of the first generative attempts at modeling morphosyntactic multilingual transfer” (Rothman & Cabrelli, 2010: 193). The L1, it was reported, was not seen as playing a privileged role, that is to say, it was not the principal source of transfer to L3 at the level of formal syntactic features. The study compared L1 Kazakh, L2 Russian and L3 English learners’ patterns of acquisition in production of three types of relative clauses. De Angelis (2007) notes:

“A major strength of this research design lies in the choice of languages. Kazakh is a Turkish [sic] language with a head-final, left-branching structure like Japanese, while Russian is a Slavic language with a head-initial, right-branching structure, like English. It follows that, if learners draw on their prior knowledge with relative clause structures in the English L3, evidence of use of a right-branching language would suggest the influence of the Russian L2, which in turn would provide support for a Cumulative Enhancement Model of acquisition.” (p. 62)

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By way of an extension to these models, Rothman and Cabrelli’s (2010) study tested the area of negative syntactic transfer not addressed in the CEM, incorporating the L2 status factor proposed by Bardel and Falk (2007). The research focused on the Null-Subject Parameter (Chomsky, 1981) in two groups of L3 learners, one with L3 French and the other with L3 Italian; the L1 (English) and L2 (Spanish) applied to both groups. By so doing, the authors effectively combined syntactic and typological factors, given that although L2 Spanish, L3 Italian and L3 French are all Romance languages,

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<sup>5</sup> The CEM assumes positive transfer in multilingual syntactic influence or none at all; the possibility of negative transfer is not addressed in this study (see Rothman & Cabrelli, 2010: 191, 197).

and thus typologically related, only L2 Spanish and L3 Italian permit the omission of an explicit subject, being pro-drop languages, whereas L1 English and L3 French both require explicit subjects. The study built on Bardel and Falk's (2007) L2 status factor for syntactic transfer, testing the following factors: (1) the L1 transfer hypothesis (2) the L2 status factor and (3) the CEM. The subjects, between the ages of 18 and 26, were tested at the initial stages of L2 and L3 acquisition, at between 20 and 30 hours of formal instruction in a university setting, with all L3 learners selected on the basis of their advanced L2 Spanish ability; L2 learners had no prior-linguistic knowledge of a non-native language. Experiments involved a grammaticality judgment / correction task (GJCT) and a context / sentences matching Overt Pronoun Constraint (OPC) task, vocabulary used being accessible to all subjects in both experiments.

The results of Rothman and Cabrelli's (2010) research broadly rejected the L1 transfer hypothesis but supported the L2 status factor as forwarded by Bardel and Falk (2007). The authors concluded that while "L1 transfer explains L2 performances, it is unable to explain the L3 patterns, especially in comparison to the L2 group performances" (p. 213); the CEM was necessarily rejected too, given that the participants in the L3 group were not seen to access different sources of transfer, that is both the L1 and L2 constants (English and Spanish respectively), when matching the L3 input. Finally, the authors pointed to an alternative interpretation of the results, that of a typologically or psychotypologically-motivated transfer, expanding on the notion of psychotypology as forwarded by Kellerman (1983, 1986)<sup>6</sup> to TLA, thus addressing a possible application of the CEM from a psycholinguistic perspective. However, the authors noted that in the particular area of Null Subject Parameter (NSP) under

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<sup>6</sup> Defined here as "a learner's perception of relative similarity between any two languages, which might or might not coincide with actual typology, the legitimate structural similarity between the two languages." (Rothman & Cabrelli, 2010: 214)

investigation, the following sets of language groups would be required to “differentiate *a posteriori* between the ‘L2 status factor’ and this psycho-typological version of the CEM” (p. 214), if one is to associate psychotypology accurately and empirically with the transfer of null subjects:

- a. L1 English → L2 Spanish → L3 Italian
- b. L1 Spanish → L2 English → L3 Italian
- c. L1 English → L2 Chinese → L3 French
- d. L1 Spanish → L2 German → L3 French (p. 214)

Although this would facilitate more accurate findings regarding the interplay of positive and negative multilingual transfer, L2 status and typology, the inclusion of a qualitative element would seem sensible to complement the GJCTs and OPCs (even if these in themselves may be robust in making claims as to the nature of multilingual syntactic transfer). Furthermore, within the specific area of NSP testing outlined in Rothman and Cabrelli’s (2010) study, both null/overt and expletive/referential subject examples are adequately suited to production data analysis and need not be restricted to levels of acceptance and recognition.

#### 2.2.4.3 *The Typological Primacy Model*

In an attempt to address the shortcomings of the CEM, that “transfer is either facilitative or does not obtain, The TPM [Typological Primacy Model] (Rothman, 2011) hypothesized that non-facilitative transfer can occur based on typological proximity – actual or real – between the languages”<sup>7</sup> (Rothman, 2011: 9). The study investigated the variables which condition syntactic transfer as its primary research question: it was hypothesized that “proximity in actual or perceived linguistic typology between the

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<sup>7</sup> The languages in question are those of Rothman and Cabrelli’s (2010) previous study mentioned above: L3 French and Italian, L1 English and L2 Spanish.

target L3/L<sub>n</sub> measured against the grammars of the L1 and L2 is the most deterministic variable to predict which of these previous systems is selected for adult multilingual syntactic transfer” (Rothman, 2011: 108). The TPM can be summarised as follows:

“Initial state transfer for multilingualism occurs selectively, depending on the comparative perceived typology of the language pairings involved, or psychotypological proximity. Syntactic properties of the closest (psycho)typological language, either L1 or L2, constitute the initial state in multilingualism, whether or not such transfer constitutes the most economical option.” (p. 112)

In this study of the syntax of the Determiner Phrase and adjectival semantics – essentially an investigation into Romance versus English syntactic properties examining noun-raising and adjectival placement – 60 participants were tested: the two L3 experimental groups comprised 12 L3 Spanish learners with L1 Italian and L2 English and 15 L3 Portuguese learners with L1 English and L2 Spanish; the control group comprised 17 L1 Spanish and 16 L1 Brazilian Portuguese speakers; the L3 participants undertook both a cloze and general grammar test, as well as completing a linguistic history background questionnaire, with only L3 intermediate and L2 advanced or near-native proficiency level participants selected. Two experiments were conducted to test the acquisition of the syntactic and semantic properties: a “Semantic Interpretation Task” and a “Context-based Collocation Task”. Both tests were dichotomous in nature, that is to say there was only one possible answer from the two options available for each token. In the first, participants were asked to match a given token containing either a pre- or post-positioned adjective against one of two sentences expressing the same meaning but written in a different way; the second test was a cloze-type exercise with pre- and post-adjectival positions in each token left blank. This was a well-conceived study and an ambitious one too, spanning a wide area of the transfer continuum from conceptual and lexical to semantic and syntactic; the methodological approach was

suitably rigorous with good inter- and intra- group homogeneity (e.g. Jarvis & Pavlenko, 2008), the results returning no statistical difference between the native control groups and the two L3 groups, or at an individual level, and there was no statistical difference between item type and group results; the author thus concludes that

“each L3 group – and each individual learner [...] – at the intermediate level of L3 Spanish and L3 Portuguese respectively has a native-like target grammar for this property, which includes obligatory noun-raising.” (p. 120)

Although TPM follows a robust model of linguistic enquiry from a generative perspective and goes some way to lending support to relevant syntactic and semantic features preferring typological proximity to chronological order of acquisition unlike the L2 status factor, the author does recognize that other variables need to be tested. Whilst the author rejects a need to examine “the extent to which typological proximity of the two languages needs to be conscious to the speaker” (p. 122), he does of course accept that “we are far from being able to directly tap the information we seek. All measure of linguistic competence, whether on-line or off-line, are indirect and as such a type of performance.” (p.123)

As with other studies conducted within a generative framework, I would argue that there is a need to embrace performance more readily and to *extend* – but not *replace* – data from the results of participants’ receptive skills in the area of acceptance and recognition beyond the initial state, so as to complement our knowledge of TLA when investigating psycholinguistic variables, for example, or taking into account production data and qualitative feedback, before any conclusions can be established as to the nature of (morpho)syntactic transfer in L3 acquisition.

\* \* \*

What these three models do show is that (morpho)syntactic transfer in L3 acquisition has to take into account a learner's L2 and that his or her L1 does not necessarily play a privileged role, but may do so under certain conditions. Beyond the L3 initial state in an instructed learning environment, it is likely that learners will aim to identify similarities between typologically related languages; if a previously learned L2 is related to the L3, then one would expect learners to make connections (see Ringbom, 2007: 78). Whether these connections result in positive or negative CLI is the focus of my present research in looking specifically at the influence of L2 French on L3 Spanish among L1 English learners at the level of (morpho)syntax.

### ***2.2.5 Syntactic features investigated in the present study***

#### *2.2.5.1 Clitic placement*

Clitic placement is the most complex of the syntactic features investigated in the present research for two reasons. First, although pronoun word order in English can match pronoun word order in Spanish (but not French) and may therefore be a candidate for transfer, English only has strong pronouns, whereas in Spanish (and French) weak pronoun forms are clitics. Second, unlike French and English, the position of the pronoun in Spanish is flexible in the sentence types under investigation.

Let us consider this in a little more detail. Of the languages in the present study two are Romance (French and Spanish) and one Germanic (English). In both French and Spanish the indirect and direct object (weak) pronoun forms are clitics, whereas English has only strong pronoun forms that are always placed in the post-verbal position (see Cardinaletti & Starke, 2000 for a comprehensive overview); the canonical word order for all three languages is Subject-Verb-Object but, whereas strong object pronouns in English maintain this order appearing in a post-verbal position, French requires a strict OV position, with weak pronouns or object clitics always appearing

pre-verbally (Wust, 2010); Spanish is more flexible than both French and English in that pronoun positioning is variable, as detailed below.

The present study investigates the nature of direct and indirect object pronoun placement in declarative sentences with Spanish verbs of the ‘restructuring class’ (modal and aspectual with infinitive complements) (e.g. Roberts, 1997) that most easily allow for flexible word order in Spanish (e.g. Davies, 1995). This flexible word order allows the clitic, essentially a phonologically-bound morpheme (Kroeger, 2005), to be placed either before the finite verb as a *proclitic* – a process known variously in the literature as “clitic climbing”, “promotion” or “shifting” (Posner, 1996) – or after the infinitive as an *enclitic*, the result of “infinitive raising” in descriptive linguistic terms (Wurmbrand, 2001). Examples of proclisis (a) and (c) and enclisis (b) and (d) are given below:

(a) **Lo** quiero hacer  
 it<sub>CL</sub> want<sub>(1SG)V</sub> do<sub>INF</sub>  
 ‘I want to do it’

(b) Quiero **hacerlo**  
 want<sub>(1SG)V</sub> do-INFit<sub>CL</sub>  
 ‘I want to do it’

With multiple clitics (i.e. a combination of direct and indirect objects), the same applies:

(c) **Te lo** quiero dar  
 to-you<sub>CL</sub> it<sub>CL</sub> want<sub>(1SG)V</sub> give<sub>INF</sub>  
 ‘I want to give it to you’

(d) Quiero **dártelo**  
 want<sub>(1SG)V</sub> give-INFto-you.CLit<sub>CL</sub>  
 ‘I want to give it to you’

In other words, the placement of object clitics in Spanish is flexible, although regional and stylistic differences are to be found too, as Butt and Benjamin (2011) note:

“when shifting is possible, both the suffixed and the shifted forms are equally acceptable in spoken Spanish. In Spain the two constructions seem to be about equally frequent in ordinary speech, but [...] Latin-American speech strongly prefers the shifted form. The suffixed forms are everywhere preferred in formal written styles.” (pp. 145-6)

Davies’ (1995) comprehensive analysis of syntactic variation with computer-based corpora among Hispanic speakers regarding the extent of clitic climbing lends support to this claim:

“Assuming the uncontroversial notion that the spoken register of a language represents the more popular tendencies of a language than the conservative written register, [clitic climbing] represents a popular (rather than conservative) tendency of Spanish.” (p. 372)

However in French, with comparable modal and aspectual verbs with an infinitive complement, the placement of object clitics is not flexible and is strictly proclitic to the infinitive, as in the sentence (e) below:

(e) Je           veux           le       faire  
      I<sub>SUB.PRO</sub> want<sub>(1SG)V</sub> it<sub>CL</sub> do<sub>INF</sub>  
      ‘I want to do it’

Posner (1996) does, though, point to instances of clitic climbing in French until the 17th century “when it was ruled out by grammarians, largely on the grounds that it is more logical to attach the pronoun to the verb which governs it (f). In the modern language the object pronoun is proclitic to the infinitive.” (p. 265)

(f) \* Je *le* veux faire.

In theoretical linguistics, the differing clitic placement in French and Spanish has been linked to the pro-drop parameter: Montrul et al (2011) cite the work of Kayne (1989), who

“proposed that the cross-linguistic variation in clitic climbing is tightly connected to the possibility of having null subjects: Spanish is a null subject language and has clitic climbing; French is not a null subject language and does not have clitic climbing.” (p. 32)

English, unlike French and Spanish, has only strong object pronouns that behave as nouns in terms of retaining their position in the canonical SVO word order, in other words:

“English is a robust VO language, hence it does not have object shift and pronouns do not behave differently when compared with full DPs [Determiner Phrases].” (Falk & Bardel, 2011: 66)

Two researchers working within the UG framework – Duffield and White (1999) – investigated L2 grammatical (interlanguage) knowledge of clitic placement among intermediate and advanced adult learners of Spanish with L1 French and English; the authors report on seven third-person Spanish accusative clitics tested (A – H), and note that “Spanish and French clitics show the same distribution in Conditions A, B, C, G and H: they differ in the restructuring conditions E / F” (p. 141). This is illustrated in the table 2.1 below. The grammatical and ungrammatical conditions E and F (restructuring verb class) are highlighted, as these concern my present investigation.

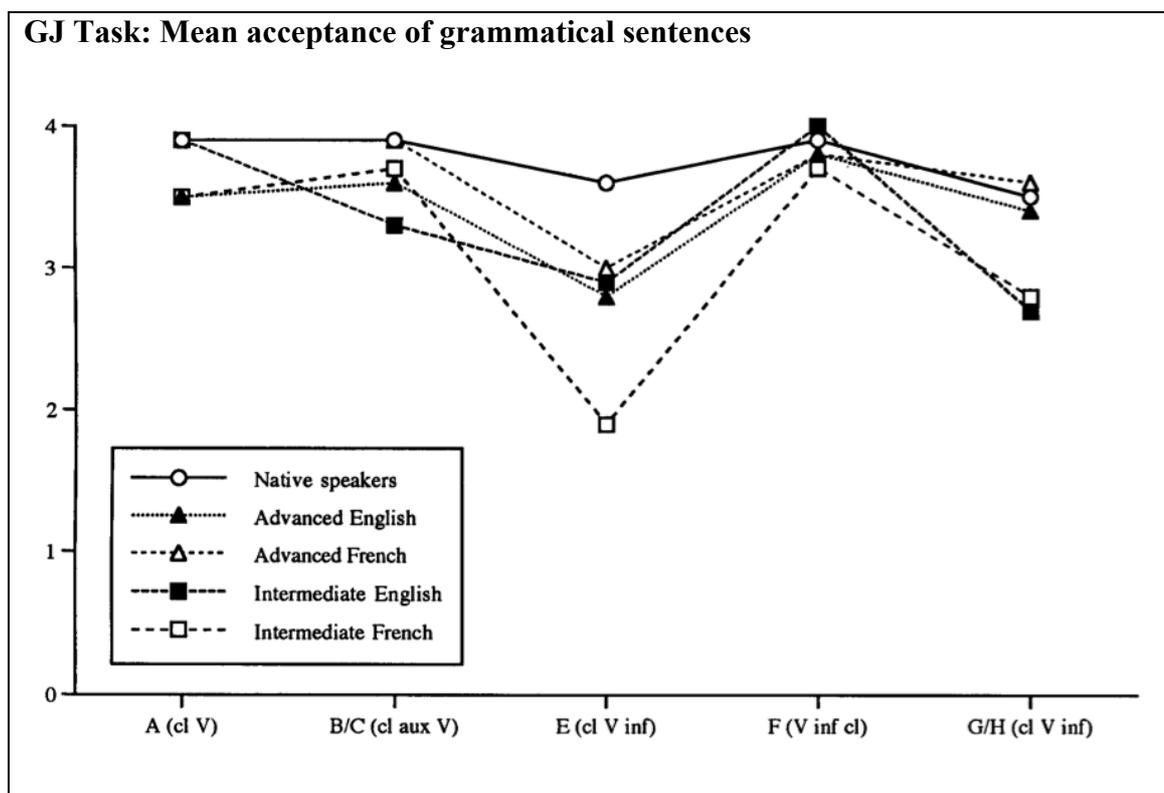
Conditions	Constructions	Example sentences
<i>Grammatical</i>		
A	main verbs (cl V)	Juan la encuentra completamente estúpida. (Juan her finds completely stupid)
B	auxiliaries (cl aux V)	Mario los ha asesinado dentro de un auto. (Mario them has assassinated inside of a car)
C	auxiliaries (cl aux V)	Mario los ha asesinado dentro de un auto. (Mario them has assassinated inside of a car)
E	<b>restructuring</b> <b>(cl V inf)</b>	<b>Marta las quiere comprar con cheque.</b> <b>(Martha them wants (to) buy with cheque)</b>
F	<b>restructuring</b> <b>(V inf cl)</b>	<b>Marta quiere comprarlas con cheque.</b> <b>(Martha wants (to) buy-them with cheque)</b>
G	causatives (cl V inf)	El profesor los hace escribir mucho. (The professor them makes write a lot)
H	causatives (cl V inf)	El profesor los hace escribir mucho. (The professor them makes write a lot)
<i>Ungrammatical</i>		
A	main verbs (*V cl)	Juan encuentra la completamente estúpida. (Juan finds her completely stupid)
B	auxiliaries (*aux cl V)	Mario ha los asesinado dentro de un auto. (Mario has them assassinated inside of a car)
C	auxiliaries (*aux V cl)	Mario ha asesinado los dentro de un auto. (Mario has assassinated them inside of a car)
E / F	<b>restructuring</b> <b>(*V cl inf)</b>	<b>Marta quiere las comprar con cheque.</b> <b>(Martha wants them (to) buy with cheque)</b>
G	causatives (*V cl inf)	El profesor hace los escribir mucho. (The professor makes them write a lot)
H	causatives (*V inf cl)	El profesor hace escribirlos mucho. (The professor makes write-them a lot)

*Source:* Duffield and White (1999: 140)

Table 2.1 Test sentence types by condition

The authors conducted two tasks: an on-line Sentence Matching (SM) and an off-line Grammaticality Judgment (GJ) task, having established the subjects' level of L2 Spanish from a proficiency test that consisted of 50 items; the subjects were adult English-speaking and French-speaking learners of Spanish, either currently or recently attending Spanish classes at university in Quebec; scores on the test from 37 – 50 indicated advanced proficiency; scores between 25 and 36 indicated intermediate proficiency and scores below 25 low proficiency. The results of the GJs shown in

Figures 2.1 and 2.2 below are of particular interest and relevance to my present empirical investigations.



Source: Duffield and White (1999: 150)

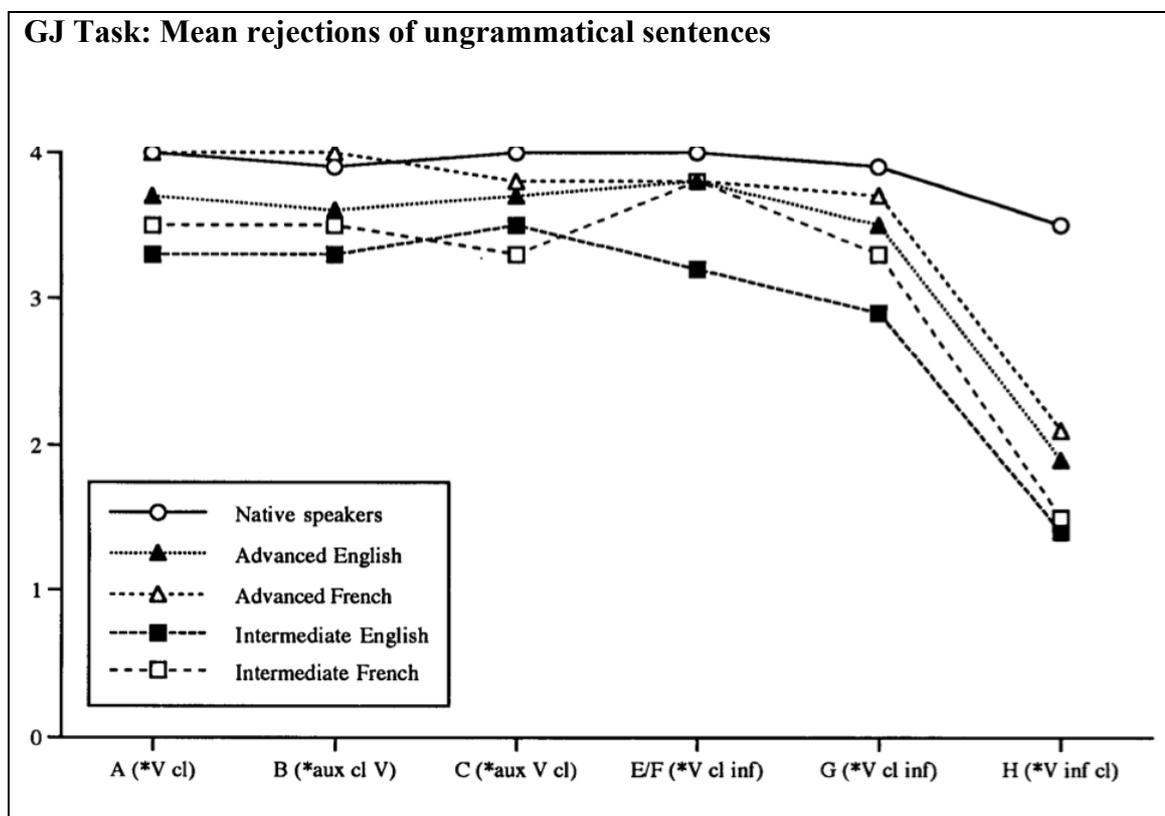
Figure 2.1

Responses to Condition E (cl V inf) among intermediate French learners were noticeably at odds with other responses:

“there are significant differences between the groups on restructuring Condition E ( $F(4.65) = 3.69, p = <0.01$ ); Scheffé tests show that this is due to the intermediate-level French speakers being significantly less accurate than the native speakers.”  
(p. 150)

It is also interesting to note that this was not however the case with Condition F (V inf cl) where responses were considerably closer to the control group – and indeed to the experimental groups – more so than with the other conditions tested. In other words, L1 English learners of Spanish with intermediate-level French were significantly less tolerant in responses to incidences of Spanish clitic-climbing [cl V inf] than Spanish infinitive raising [V inf cl].

L1 French learners of Spanish with intermediate-level English were more tolerant of ungrammatical sentences that replicated French word order – i.e. E / F (\* V cl inf) – as illustrated in figure 2.2 below.



Source: Duffield and White (1999: 151)

Figure 2.2

The authors note:

“[I]n the case of the ungrammatical conditions, the differences between the groups are significant on restructuring Conditions E / F ( $F(4.65) = 2.874, p = < 0.05$ ), where Scheffé tests show that the intermediate English group is significantly less accurate than the native speakers.” (pp. 150-1)

However, following correlation of the results of both SM and GJ tasks, they conclude that “in restructuring contexts it is clitic climbing that is problematic, rather than infinitive raising. In other words, while rejecting clitic climbing, the L2 learners do not

consider the French order with the unraised infinitive [V cl inf] to be grammatical in Spanish” (p. 153). In summarizing the GJ results, the authors note:

“clitic-climbing is not fully permitted in the interlanguage grammars of our L2 learners; the intermediate level French group, in particular, reject the grammatical order with the clitic preceding the higher verb in Condition E [...]; all groups (including native speakers) show a higher acceptance of Condition F sentences, where the clitic has not climbed. Both orders are in fact permissible in Spanish but it seems that native speakers and L2 learners have a preference for the order where the clitic remains associated with the lower verb.” (p. 153)

In other words, the results suggest that both L1 French and L1 English learners of Spanish gravitate towards infinitive raising [V inf cl] in their overall acceptance of grammatically correct clitic placement, rather than the equally correct placement as a result of clitic-climbing [cl V inf], or the ungrammatical clitic placement in Spanish that reflects French word order [V cl inf]. I draw on these findings in my present study among L1 English learners of Spanish with and without L2 French.

It is important to stress that the purpose of Duffield and White’s study was to “reflect interlanguage competence, rather than learned knowledge” (p. 155), drawing on the results of both on-line (SM) and off-line (GJ) tasks in an attempt to lessen the impact of participants’ reliance on metalinguistic awareness; this they undoubtedly achieve within their generative paradigm. However, whilst instruments such as grammaticality judgment tasks provide researchers with useful statistical data – indeed they form the basis of the quantitative study of my present research – there is no reason why these data should not feed into a wider discussion of the phenomena under investigation with an added qualitative element.

#### *2.2.5.2 Past participle agreement*

Past participle agreement occurs widely in Romance languages (e.g. Posner,

1996; Alkire & Rosen, 2010) although, as Mackenzie (2006) notes:

“participle agreement in the perfect is typically impoverished or completely absent in those languages that have lost perfect auxiliary *E*<sup>8</sup>. In Spanish, for example, which now has only the *A* auxiliary, the past participle is invariable in the perfect.” (p. 162)

In modern Spanish, therefore, the past participle is invariable in the perfect tense and the same auxiliary verb (“haber”) is used for both unaccusative (a) and unergative (b) classes of intransitive verbs (e.g. Perlmutter, 1978).

French, on the other hand, makes a distinction between unaccusatives and unergatives in the selection of the auxiliary: “être” with unaccusatives (c) and “avoir” with unergatives (d), the former resulting in past participle agreement with the subject of the sentence in both gender and number (e.g. Lois, 1990).

(a) María ha salido

María has left FEM. SING [NONAGR]

‘María has left’

(b) Las chicas han estudiado

The girls have studied FEM. PLUR [NONAGR]

‘The girls have studied’

(c) Marie est partie

Marie is gone FEM. SING [AGR]

‘Marie has gone’

(d) Les filles ont étudié

The girls have studied FEM. PLUR [NONAGR]

‘The girls have studied’

---

<sup>8</sup> Mackenzie (2006) uses *E* and *A* throughout to designate ‘be’ and ‘have’ verbs respectively.

The cross-linguistic influence of French past participle agreement among learners of Spanish has not been addressed in the transfer literature although, as discussed in Section 2.3.2, it is now clear that morphological features are not impervious to transfer (e.g. De Angelis & Selinker, 2001; Ó Laoire & Singleton, 2009).

#### *2.2.5.3 Adverbial placement*

In her monograph “The Role of Transfer in Second Language Acquisition”, Alonso (2002) investigates a number of incidences of adverbial placement among L1 Spanish and L2 English learners in an empirical study focusing on the role of the native language among secondary school learners during the course of an academic year; these results were matched against a second group of adult learners with varying levels of language ability as an independent variable. I concentrate here on the first group, which corresponds more closely to my present research into syntactic influences among a similar group of learners.

Four principal features of the study were highlighted as follows:

1. Longitudinal, with data collected from 10 subjects bimonthly over the course of an academic year;
2. Internal factors and linguistic background were taken into account;
3. Interlanguage (IL)<sup>9</sup> analysis was applied so as to take full account, not only of IL as an independent system, but also related to the subjects’ native language (NL) and target language (TL);
4. Data collected were both of a qualitative and quantitative nature. (p. 75)

The author notes the potential weaknesses, especially with regard to the nature of the longitudinal study and being able to generalize findings, offering adequate compensatory measures by, for example, conducting a parallel experiment with adult

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<sup>9</sup> “IL is defined as an independent system with its own principles and transfer constitutes one of the main cognitive processes involved in it.” (Alonso, 2002: 131)

learners and focusing in particular on qualitative analysis of subjects' performances.

Drawing on methodologies within the IL framework initiated by Selinker (1992) with regards to adverbial placement, Alonso analyses the following data:

1. Interlanguage form produced by the subject;
2. Literal translation of the IL form;
3. Hypothesized TL form;
4. Hypothesized NL form. (p. 76)

All three experiments (two guided interviews and a presentation) focused on oral production since, according to the author, "IL is mainly produced when the learner tries to communicate in the TL" (Alonso, 2002: 81) and the hypotheses were as follows:

1. Spanish speakers transfer the placement of adverbials from their NL, applying transfer of choice. Therefore when the English placement differs, the NL placement is likely to be transferred.
2. LT (language transfer) can be applied to the TL, leading to non-target like adverbial placement, nevertheless it can also exert positive effects, resulting in target-like placement.
3. What gets transferred is not a definite placement, it is the abstract organizing principle that allows transfer of choice, i.e. the position of adverbials can be chosen between different options, as can be done in the NL. As previous research indicates (Selinker, 1969, 1992), transfer of choice will take place in adverbial word order when there is a choice in the NL sentence. (pp. 81-2)

In terms of the results and conclusions of her study among school age and adult learners, Alonso notes some particularly interesting findings: "students with a larger knowledge of the target language mix up structures that beginners do not because their IL is in the initial state" (p. 132), but equally reports that transfer "is more frequently occurring [sic] at the beginners' level; as their IL develops and they progress towards the TL norms, TL [adverbial] placement is preferred" (p. 134) and there is support for the psychotypology factor too: "transfer of choice applies when learners rely on their

own perception of language similarity between both languages [...] ultimately due to the creation of interlingual identifications.” (p. 135)

Alonso’s study is a particularly significant *point de repère* in relation to my present research for a number of reasons: it focuses on an important element of syntactic transfer among school-age learners, identifying significant variables, referencing an established IL framework and embracing both quantitative and qualitative accounts. As such, it provides a suitable bridge between SLA and TLA in terms of empirical and theoretical investigations.

\* \* \*

Let us now consider what may result in positive and negative transfer by looking at the concepts of subjective/objective similarities and differences, before addressing two further psycholinguistic variables – metalinguistic awareness and psychotypology.

### **2.3 Cross-linguistic similarity**

According to Jarvis and Pavlenko (2008), subjective similarity affects the degree to which learners rely on the source language(s) when using the target language; objective similarity can affect the likelihood that transfer is positive or negative. Objective similarities and differences do not cause transfer, but *subjective* similarities do. To illustrate this, let us look at an example from my present investigation into object clitic placement, with the sentence “I want to do it”:

(1a) *Spanish*: Quiero hacerlo / lo quiero hacer

(1b) *French*: Je veux le faire

(2a) *Spanish*: \*Quiero lo hacer

(2b) *French*: Je veux le faire

Sentences (1a) represent the objective (i.e. actual) difference between the two placements available for the clitic in Spanish compared with French (1b); sentence (2a) represents the subjective similarity between the (incorrect) placement of the clitic in Spanish, replicating the French word order (2b), resulting in negative transfer from French to Spanish.

Subjective similarities are therefore what concern our investigation into lateral syntactic transfer. These have been further divided into two categories in the literature – *perceived* and *assumed* similarities (Jarvis & Pavlenko, 2008: 197) and can be summarised as follows:

- *Perceived similarity*: conscious or unconscious judgment that a form that a user has encountered in the input of the recipient language is similar to a corresponding feature in the source language.
- *Assumed similarity*: conscious or unconscious hypothesis that a form that exists in the source language has a counterpart in the recipient language, regardless of whether the user has yet encountered it in the recipient language and regardless of whether it exists.

All perceived similarities are necessarily assumed similarities, but not all assumed similarities are actually perceived. Now, in terms of positive and negative transfer, Ringbom (2007) equates the two categories of perceived similarity versus assumed similarity to the “transfer to somewhere” (Anderson, 1983) and “transfer to nowhere” (Kellerman, 1995) debate:

“Transfer to somewhere [perceived similarity] is predominantly positive, and is particularly clearly manifested in comprehension and across languages perceived to be similar, whereas transfer to nowhere [assumed similarity] mostly corresponds to negative transfer or interference in learner production and across distant languages.” (p. 26)

Returning to our example grammatically incorrect sentence above with this in mind, we can attach the label as follows:

(3) \*Quiero lo hacer [assumed similarity]

Such an error may occur if the user makes the conscious or unconscious assumption of similarity between two languages, resulting in negative transfer although clearly not always, as Ringbom (2007: 26) suggests, “across distant languages”. This has occurred between the source language (French) and the recipient language (Spanish) – two typologically similar languages.

Let us take another example from my present investigation into adverbs of manner, with the sentence “my brother plays the guitar well”:

(4a) *Spanish*: Mi hermano toca bien la guitarra

(4b) *French*: Mon frère joue bien de la guitarre

Here we see that the position of the adverb of manner (“bien” in both French and Spanish) is placed directly after the third person singular form of the verb (“toca” in Spanish and “joue” in French). If the source language of transfer is French (4b), it is likely that the user will recognise as grammatically correct, or produce a grammatically accurate sentence in Spanish (4a), resulting in positive transfer. In other words, the user perceives a similarity between two structures encountered in both languages:

(5) Mi hermano toca bien la guitarra [perceived similarity]

If, on the other hand, the source of transfer is English, the user will recognise as grammatically correct, or produce a grammatically inaccurate sentence in Spanish such as (6) below, replicating English word order with this adverb of manner, resulting in negative transfer:

(6) \*Mi hermano toca la guitarra bien [assumed similarity]

Equally related to what learners perceive to be correct in the target language is the notion of ‘overgeneralization’ (e.g. Selinker, 1992; De Angelis, 2002, 2005), highlighted in Kellerman (1995) in response to Anderson’s (1983) paper:

“One of the classic illustrations of the workings of the *transfer to somewhere* principle is the overgeneralization of SVO by English-speaking learners to include French object pronouns, which should be verbal preclitics (\**je vois le* – literally ‘I see him’ – instead of *je le vois*, ‘I him see’). French learners, on the other hand, finding evidence of SVO but not for SOV in English, are not therefore tempted to make verbal clitics out of English object pronouns (Zobl, 1980), failing to produce the reciprocal \**I him see*.” (pp. 126-7)

Now, if we consider this scenario with the addition of a non-native language in terms of transfer source and the clitic/pronoun distinction, we can return to the example sentences (1a – 2b) set out above: L1 English learners of Spanish with L2 French are necessarily subject to both perceived and assumed similarities. Let us first restate the combinations and adjust the above labels accordingly, adding a little more detail:

- (7a) *English*: I want to do it [possible transfer source 1]
- (7b) *French*: Je veux le faire [possible transfer source 2]
- (7d) *Spanish*: Quiero hacerlo [target form] + [perceived and assumed similarity]
- (7e) *Spanish*: \*Quiero lo hacer [non-target form] + [assumed similarity]

So L1 English learners of Spanish with L2 French have the option to transfer word order from either their native language (7a) or their non-native language (7b). If an L1 English learner overgeneralises in assuming that clitics function as object pronouns where word order in Spanish (7d) matches that of English (7a), then similarity with the target language form will be both perceived and assumed: perceived in that evidence of Spanish word order (7d) is found in English (7a), and assumed in that the learner makes the assumption that there exists in the recipient language (Spanish) a counterpart in the source language (English). If, on the other hand, we discard

overgeneralization as insignificant in the clitic/object pronoun distinction, then an L1 English learner of Spanish with L2 French may assume – consciously or unconsciously – that clitic placement in French (7b) is similar to Spanish and thus accept or produce the non-target Spanish form (7e), resulting in negative transfer<sup>10</sup>.

Similarly, Weinreich (1953) referred to ‘interlingual identifications’ between grammatical relationships such as word order regardless of its function:

“By comparing English and Russian sentences of the order SUBJECT + VERB + OBJECT, a bilingual may identify the English order with the Russian, even though its function in English is denotative, in Russian largely stylistic.” (p. 7)

Of course one should always bear in mind that the majority of language learners are not linguists and the interlingual identifications they make cannot always be anticipated, which is why an additional qualitative element is useful to include in any research on transfer to gain a fuller understanding of the process.

\* \* \*

Let us now turn to an important psycholinguistic variable – metalinguistic awareness – that will be addressed in the semi-structured interviews in answering my second research question.

### ***2.3.1 Metalinguistic awareness***

Metalinguistic awareness is clearly an important factor in an instructed environment that develops during the learning of a first foreign language and necessarily increases during the learning of a third and subsequent language (e.g. Kemp, 2001; Hufeisen & Marx, 2007). Mora (2001) suggests four points in the progression of

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<sup>10</sup> In a study conducted within the generativist framework (Rothman & Cabrelli Amaro, 2010), it has been suggested that “psychotypology is assessed not at a parameter-to-parameter level, but based on a holistic impression of the two languages’ grammatical proximity.” (p. 198)

metalinguistic awareness and transfer from a learner's native language to L2 learning, i.e. from implicit to explicit knowledge:

- 1) Implicit unarticulated knowledge of language form and function toward
- 2) structured learning experiences and purposeful uses of text toward metalinguistic awareness
- 3) to explicit knowledge of language form and function and the ability to articulate this knowledge
- 4) resulting in increased self-regulatory control over language production and increased use of language in cognitive performance. (p. 3)

By extension, an L3 learner has the advantage of being able to build on explicit knowledge acquired during the L2 learning process, together with more general foreign language learning strategies (e.g. Hufeisen & Marx, 2007; Bardel & Falk, 2012). The extent to which learners may be able to articulate effectively these factors is the focus of my qualitative study.

Let us now consider the L2 to L3 development in terms of metalinguistic awareness in a little more detail. Just as a learner may perceive the L1 as 'non-foreign' (e.g. Williams & Hammarberg, 1998) and thus appear to adopt L2 strategies in L3 learning and production, so too may s/he be unable to verbalize meaningfully this L2 influence or may be convinced that non-native linguistic systems compete and are, as such, detrimental to the L3 acquisition process:

"It is true that increased opportunities for establishing cross-linguistic comparisons do not necessarily result in perceived cognitive gain and that – regardless of the degree of typological proximity – some learners may actually resent, and thus attempt to neutralize, the influence of their non-native language." (Bono, 2007, 2008 quoted in Bono, 2011:26)

If, as Bono (2011) argues, L2 influence is to be a learning accelerator and cross-linguistic associations based on similarities or differences between known languages are to be embraced and turned to learners' advantage (e.g. Jarvis & Pavlenko, 2008; Cook,

2001, 2008), then it is their metalinguistic awareness that has a central part to play in the process and, as outlined in Chapter 1, this is one of the pedagogical considerations of my present study, which I discuss in the concluding Chapter 6.

In an early L3 study, Thomas (1988) examined the role played by metalinguistic awareness in instructed second and third language learning. The participants were enrolled in an elementary French class at Texas A&I University where 51% of the population is Hispanic and were tested after one semester of instruction on aspects of vocabulary and grammar. There were two groups: monolingual L1 English learners (n=10) and L1 English learners with L2 Spanish (n=16); this second group was further divided into those learners with a minimum of two years' formal training in their L2 Spanish (n=10) and those who reported coming from a Spanish-speaking or bilingual home but with no formal training in Spanish (n=6). The study found that English speaking students with prior knowledge of Spanish had an advantage over monolinguals when performing those activities usually associated with learning French formally in the classroom, providing evidence that developing students' metalinguistic awareness may increase the potential advantage of knowing two languages when learning a third. Furthermore, the study revealed a distinction between those with formal L2 instruction in Spanish and those who used L2 Spanish actively or passively at home with the former group outperforming the latter, and yet a further distinction between the grammatical and lexical items tested:

“Differences among bilinguals in the present study appear to be more a function of the amount of formal training they have received in Spanish than whether they use Spanish actively or passively at home. The lack of difference among the bilinguals on the vocabulary test may indicate that formal training in Spanish may have more impact on grammatical sensitivity as measured on the grammar test than on the recognition of cognates. [...] Cognates and grammatically similar structures may exist in the target language, but unless students are trained to be aware of the rules and forms of language and to recognize similarities among languages, they cannot

develop metalinguistic awareness, exploit positive transfer and avoid interference.”  
(p. 240)

Furthermore, in order to test the hypothesis that bilinguals’ advantage over monolinguals may be restricted to tests of vocabulary and grammar, production data comprising a composition of approximately 10 sentences were also analyzed, with native speakers judging the 16 bilinguals’ compositions to be statistically significantly more comprehensible than the 10 monolinguals’ on vocabulary ( $p < 0.01$ ) and grammar ( $p < 0.05$ ).

One of the limitations of this study, indeed identified by the author, was the small sample size, meaning that analyses could not determine intra-group differences in comprehensibility among bilinguals, in other words between those with and without formal L2 Spanish instruction, which would have made for a more conclusive result in terms of evaluating the importance of metalinguistic awareness on both tests of grammar or vocabulary and free composition data focusing on communication. A larger sample size would have allowed the researcher to tease apart other mediating variables such as teacher, teaching method and textbook or ‘transfer of training’ (e.g. Selinker, 1972, 1992) in order to gain a more comprehensive understanding of the potential effects of metalinguistic awareness on instructed L3 learners.

Notwithstanding, this early study is important as it provides evidence that instructed L3 learners’ increased metalinguistic awareness through exposure to and focus on grammatical function and form “may transfer positively to a successful third language-learning experience in a similar environment” (p. 240), which I address in the qualitative study of my present investigation discussed in Chapter 5. It also acknowledges previous findings in the literature in suggesting that “[E]xplicit instruction may be necessary to encourage students to be aware of language as a system before they can develop a facility for learning a third language” (p. 236).

Jessner (2008) defines metalinguistic awareness as “the ability to focus on linguistic form and to switch focus between form and meaning. Individuals who are metalinguistically aware are able to categorize words into parts of speech; switch focus between form, function, and meaning; and explain why a word has a particular function” (p. 277). Within a dynamic multilingual framework, the author extends and links two types of awareness: cross-linguistic and metalinguistic, whereby cross-linguistic awareness during L3 production is defined as “the awareness (tacit and explicit) of the interaction between the languages in a multilingual’s mind; metalinguistic awareness adds to this by making objectification possible” (p. 279). Most important, the relationship between Cross-linguistic Interaction (CLIN) and metalinguistic influence is established as being a significant facet of the multilingual mind, which is expressed similarly by Bono (2011): “the cross-linguistic and metalinguistic dimensions of third language acquisition are closely intertwined” (p. 25).

Bono’s (2011) study investigated the combination of these factors in an attempt to identify the specific roles played by native and non-native languages in L3 learning<sup>11</sup> as well as the impact of metalinguistic awareness in the learning process, both in connection with cross-linguistic interaction and as a learning asset. Participants (n=42) were predominately L1 speakers of French with L2 English and L3 Spanish or L2 English, L3 German and L4 Spanish. The study was carried out among beginner and intermediate learners of Spanish during a three year period at the Université de Technologie de Compiègne in France. The language sessions from which speech production data were taken focused on communication skills in promoting informal impromptu language with no explicit teaching of grammar and no written support. In line with other findings in the TLA literature discussed above, the learners in this study

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<sup>11</sup> L3 is taken here to mean the target language of learners who have already acquired a non-native language (e.g. Hammarberg, 2009)

relied on their second language (generally L2 English), rather than on their L1, as sources of linguistic information during the L3 learning process; however, the author does recognize, importantly, that the nature of the L2 (English) as a European lingua franca that enjoys a particularly revered status means that “when it comes to English, the possibility that *familiarity* may take precedence over *proximity* cannot be ruled out” (p. 45, emphasis in original).

Regarding the author’s second research question, that of L2-L3 interplay and metalinguistic awareness as an asset in the L3 learning process at the level of lexis, there was ample evidence that “L3 learners can [...] rely on their L2 to carry out a variety of analysis and monitoring tasks that require a great deal of attention and control and are fundamentally metalinguistic in nature” (p. 46). Multilingual learners are thus able to discuss options based on their prior linguistic knowledge and foreign language learning experiences, making use of an analytical approach to the language learning process that is, by definition, unavailable to second language learners; they possess a fine-tuned capacity to focus on the systemic features of the languages within their constellation:

“In the absence of metalinguistic awareness (i.e. of analysis and control), L2 influence may be perceived as hindering instead of favouring the learning process, hence the importance of encouraging learners to reflect upon the points of commonality and the differences between their languages to help them draw on common, shared resources in their repertoire.” (p. 49)

It this aspect of cross-linguistic influence and metalinguistic awareness that is discussed as part of the qualitative study of the present investigation into (morpho)syntactic lateral transfer.

### ***2.3.2 Psychotypology and transferability***

As Jarvis and Pavlenko (2008) point out, essential to a discussion of the evolution of transfer documented in the literature is “the shift of attention from transfer to transferability”. This resulted in Kellerman’s (1983) notion of “two general constraints that govern the occurrence of language transfer: psychotypology and transferability”:

“The essence of the psychotypology constraint is that transfer is more likely to occur when the L2 user perceives the L1 and L2 as being similar, whereas the essence of the transferability constraint is that structures perceived by the L2 user as marked (or language specific) are less likely to transfer.”

(Jarvis & Pavlenko, 2008:174)

As discussed earlier, this shift represented a determined effort to move away from the behaviorist theories that had become synonymous with negative aspects of transfer or ‘interference’, towards an altogether more cognitive approach, addressing instead the facilitative aspects of cross-linguistic influence available to the learner. It has thus been suggested in the literature that Kellerman’s (1979) original concept of “psychotypology” – the learner’s perception of distance between a first and second language – was as Gass and Selinker (2001) note:

“an attempt to place the study of transfer, or cross-linguistic influences, within a cognitive domain, thereby discrediting the implicit assumption of the necessary relationship between transfer and behaviorism. In this view, the learner is seen as “making decisions” about which forms and functions of the NL [native language] are appropriate candidates for use in the second language.” (p 127)

Of course, regarding my present research, it must be stressed that psychotypology was neither conceived in relation to (morpho)syntax nor indeed to transfer beyond the L2, but “originally proposed to account for learners’ perception of the transferability of idiomatic expressions between related languages (Dutch, English

and German)” (De Angelis, 2007: 23). Incidences of L3 findings in the psycholinguistic literature on transfer have generally been investigated at the level of lexis, i.e. “the use of an entire non-target interlanguage word” (De Angelis & Selinker, 2001: 49), idiomatic or otherwise (e.g. Cenoz, 2001; Ecke, 2001; Ringbom, 2001), although psychotypology is increasingly being addressed as an important factor in the L3 generative literature too, as discussed earlier (e.g. Rothman & Cabrelli Amaro, 2010; Rothman, 2011).

Rast (2010) extends the original L1-L2 Kellerman model of psychotypology to embrace L3 acquisition, adapting the “three principal interacting factors that control the use of cross-linguistic influence in L2 acquisition to the principal interacting factors in L3 acquisition” (p. 160):

- (1) Learners’ psychological structure of the L1;
- (2a) Learners' knowledge and possibly psychological structures of all L2s;
- (2b) Learners' perception of L1-L2 distance as well as L2-TL distance;
- (3) Learners' knowledge of the TL.

This revised L3 framework is useful, so long as we are careful in defining ‘knowledge’, or at least – as Rast (2010) herself acknowledges – in accepting that the term may be understood differently “depending on the research paradigm subscribed to”, but the author nevertheless believes there is a consensus regarding the key issue, that “in terms of psychological structure [...] the internal representations in the L1 of an adult who has not experienced L1 attrition are intact at all linguistic levels, phonetic-phonological, morpho-syntactic, semantic, lexical, etc.” (p. 160).

Rast’s (2010) study of negation placement in the initial acquisition stages (i.e. the first few hours of exposure) of TL Polish among L1 French learners with intermediate or advanced English and a number of other L2s, typologically related or otherwise (e.g. French, Spanish, Russian, German), found that

“learners placed the negator in a variety of positions, and in some cases, this placement seemed to be influenced by the structure of clausal negation in one or more of the learners’ background languages, even if the background language and the TL were not genetically related. In the case of Russian, a language typologically related to Polish, minimal knowledge appeared to be quite beneficial.” (p. 181)

Although the study also examined two further categories in the initial acquisition stages of TL Polish – sensitivity to verbal morphology and oral sentence comprehension – and some support was tentatively found for learner psychotypology<sup>12</sup>, the author recognizes that her “participant sample was not large enough to make strong claims” (p.181). Rast concludes her study as follows:

“At the very beginning of the acquisition of a novel language, adult learners appear to make use of all knowledge available to them, and they do this by means of comparing new information (TL input) with old information (background languages). What learners perceive as similar between languages, regardless of whether or not the languages are typologically related, is what they put to use. This is particularly flagrant at the early stages of TL acquisition. From this perspective, the TL input takes on crucial importance and the learner’s perception of how this input relates to his/her prior linguistic knowledge will determine what the learner is able to perceive, comprehend, parse and produce. In other words, it is the perception of what is most similar within the familiar information available that will win out, an observation that needs to be accounted for in models of L2 and L3 acquisition.” (p. 182)

Further evidence of psychotypology in relation to morphological transfer is reported in De Angelis and Selinker’s (2001) study of interlanguage transfer and competing linguistic systems, during which two subjects were investigated: Subject 1 (S1) was a 50-year-old French Canadian woman with three interlanguages: English,

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<sup>12</sup> “It is not the genetic relationship *per se* that influences the learner’s processing and production of the TL. It is rather the perceived similarity between certain features in a given word or utterance...” (Rast, 2010: 183)

Spanish and Italian; she was highly fluent in English and had received 5 years' formal instruction in Spanish and two years' formal instruction in Italian. Subject 2 (S2) was a 45-year-old British man with two interlanguages: Spanish and Italian. He lived and worked in Chile for over three years, having received five months' intensive instruction in Spanish before departure; he had originally studied Italian at school and had begun formal instruction in Italian again for a week at the time of the study.

The investigation focused specifically on the two subjects' Italian interlanguage production in relation to their previously acquired languages. The authors make a distinction regarding the transfer of 'meaning' versus transfer of 'form' (e.g. Ringbom, 1986) in claiming morphological – rather than simply lexical – transfer:

“[A]s both Spanish-bound and Italian-bound morphemes mark for plurality, for example, it cannot be claimed that the meaning of *plurality* was transferred to the Italian interlanguage. However, if a distinction is made between form and meaning, these are clear instances of transfer of form. The pattern of similarity between the Spanish non-target-bound morphemes and the Italian target-bound morphemes suggest that activation may also spread to bound morphemes across language systems.” (p. 53)

Interestingly, the authors make two additional observations following the results of their study:

First, they further extend Kellerman's notion of psychotypology – which they define as

“the learner's *perception of language distance*, which may trigger or constrain language transfer, [and which] may not necessarily correspond to the actual distance between languages” – to include “the learner's *perception of correctness* of a target word.” (p.55, emphasis added)

This is a useful addition to Kellerman's original thesis, indeed the distinction is a significant insight, given that most (instructed) L2 or L3 learners, regardless of the

extent of their *metalinguistic awareness* (see Section 2.3.1 above), are unlikely to be fully aware – if at all – of the underlying relationships between language families, beyond perhaps a basic understanding of, for example, ‘germanic’ or ‘romance’, depending on their prior-linguistic encounters. As pointed out in Section 2.3 above, the majority of language learners are not linguists: they are predominately users<sup>13</sup> who essentially draw on their knowledge, experience and similarities from previously acquired language systems (e.g. Ringbom, 2007) in an attempt to produce what they perceive as correct utterances, whether lexically, syntactically or morphologically-based. As such, *perception of correctness* should be considered alongside an individual learner’s psychotypology.

Second, following the ‘L2 status factor’ (see Section 2.2.4.1), the authors point to learners’ perception of *foreignness* regarding target language production, which may block L1 transfer “in the belief that this [the L1] is inherently ‘non-foreign’ and thus that using a non-L1 and hence ‘foreign’ language would be a better strategy in acquiring another ‘foreign’ language” (Williams & Hammarberg, 1998: 323), although this association may not necessarily be a ‘strategy’ that a learner is able to control, but rather a cognitive constraint (e.g. De Angelis, 2005). In the results of Subject 1’s interlanguage production (Italian), taking into account her native language (French), as well as her English and Spanish interlanguages, the authors note:

“She may also have opted for Spanish rather than her French native language for two additional reasons: (1) she may have instinctively perceived words in the native language as an incorrect choice; (2) she may have perceived Spanish and Italian not only as close languages, but also as ‘foreign languages’. The following example may illustrate such interaction. When S1 chose the word ‘pintura’ (paint), she instinctively knew that the French word ‘peinture’ was not an Italian word (perception of correctness), and so resisted incorporating it in her Italian

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<sup>13</sup> Note, too, the preferred use of ‘users’ over ‘learners’ in Cook (2008).

production. At the same time, the Spanish word ‘pintura’ may have also been perceived as closer to the Italian target language, not only because of actual or perceived language distance, but also because ‘pintura’ was being perceived as a *foreign* word, thus closer to the Italian target language.” (p. 55-56)

Therefore, in terms of assessing an individual learner’s psychotypology, we should aim to take into account three principal interacting elements:

1. Perception of language distance;
2. Perception of correctness;
3. Perception of foreignness.

This, of course, regardless of the specific linguistic feature(s) under investigation: any research from a TLA perspective should ideally identify this interaction, whether at the level of lexis, morphology or syntax, or indeed at a combination of levels and beyond, as we have seen in De Angelis and Selinker’s (2001) study outlined above.

Finally on the subject of psychotypology, Ó Laoire and Singleton’s (2009) studies into prior knowledge in L3 learning and use “show the psychotypological factor to be an important component of participants’ cross-linguistic consultation when faced with challenges in their L3” (p. 79). Of particular interest is the focus among participants with knowledge of English, Irish and German where Irish morphosyntax is closer to German than to English:

“We hypothesized that those of our subjects who were being immersed in Irish at school and/or had Irish as a second L1 would be better than learners of Irish as an L2 in an English-medium educational setting at dealing with the word order of German non-finite purpose clauses and the morphology of German noun phrases following prepositions. Such an outcome would be explicable in psychotypological terms – i.e. in terms of perceived similarities between Irish and German. However, given that Irish is the L2 in most cases here, our design in this instance did not strictly allow us to address the specific issue of whether the psychotypological factor is stronger than the L2 factor.” (pp. 92-3)

The subjects were required to complete two tasks (cloze-type) for both grammatical features under investigation (word order and case), as well as an introspective questionnaire following completion of the tasks. The authors found that, contrary to expectations, there was in fact no statistically significant difference between the two groups' performance on the tasks; in other words the medium of instruction and amount of exposure to L2 Irish was not statistically significant in determining overall correct responses in L3 German. Furthermore – and despite leading questions designed to elicit cross-linguistic influence on the introspective questionnaire – few respondents seemed metalinguistically aware of “the facilitative role of English or Irish in completing the task” (p. 96). The authors suggest that this “may have to do with the closeness of Irish to German in respect of non-finite purpose clause word order. The similarity of Irish to German in this connection is so obvious that its (apparently largely unconscious) perception would probably not be dependent on the degree of length or intensity of experience of Irish” (p. 98). However, regardless of exposure time, medium of instruction or perception of the facilitative role of the L1 or L2, there was nevertheless tentative evidence to suggest that participants' “ability to produce correct word order in German would appear to have drawn considerably on their knowledge of a similar structure in Irish” (p.97).

One possible problem with this study was the lack of a suitable control group and the authors acknowledge this limitation of design (p. 92) in determining the strength of the L2 factor above any psychotypological considerations; however they do report on a number of third-party examples, which have suggested that “English-speaking learners of German without Irish seem to have considerable problems with WO [word order] in subordinate clauses” (p. 97). A further weakness of this study in making any overall claims one way or another – again acknowledged by the authors (p. 96) – was in the small sample size. In addition to this weakness, ‘transfer of training’ (e.g. Selinker,

1972, 1992) as a mediating variable should perhaps have been controlled for, given that all participants were taught by the same German teacher (p. 92): this would certainly go some way to explaining why there were no statistically significant differences between the two groups in the results of the specific feature under investigation.

\* \* \*

## **2.4 Research questions**

My research questions are broadly based around the *Foreign Language Specific Factors* highlighted in Section 1.1.1 of Chapter 1, with the aim to investigate lateral (morpho)syntactic transfer. They are addressed in two separate investigations: a quantitative study among intermediate learners using web questionnaires and a qualitative study among advanced learners using semi-structured interviews. The purpose of the quantitative study was to provide statistical evidence of learners' lateral (morpho)syntactic transfer; the semi-structured interviews were constructed in order to address individual foreign language learning experiences and strategies. As such, the research questions were organised by study type as follows:

### **2.4.1 First Research Question (quantitative study)**

There were two parts to the Research Question (RQ) of the quantitative study addressing both negative and positive transfer. RQ1(a) addressed clitic placement (syntactic) and past participle agreement (morphosyntactic); RQ1(b) addressed adverbial placement.

- **RQ1(a): Can lateral transfer be identified in both syntactic and morphological features?**

Three hypotheses were investigated:

1. The experimental groups (L1 English; L2 French and L3 Spanish – the “EN/FR/SP” group and L1 English and L2 Spanish – the “EN/SP” Group) will not differ from each other in their assessment of grammatically accurate Spanish sentences on the Grammaticality Judgment Task (GJT);
2. The EN/FR/SP Group will perform less accurately than the EN/SP group on the GJTs and Translation Task (TT) in assessing and producing sentences that reflect the (morpho)syntactic features of French tested (a result of negative lateral transfer); the EN/SP Group will perform similarly to the Spanish-speaking controls (the “SP” Group) on the GJT;
3. There will be a positive relationship between the EN/FR/SP Group’s performance on the GJTs and the TTs in accepting and producing the (morpho)syntactic features of French tested.

- **RQ1(b): Can lateral syntactic transfer be positive as well as negative?**

Four hypotheses were investigated:

1. The experimental groups will not differ from each other in their assessment of grammatically accurate Spanish sentences on the GJT;
2. The EN/FR/SP Group will perform more accurately than the EN/SP Group on the GJT in rejecting non target-like forms reflecting English adverbial placement;

3. The EN/FR/SP Group will also perform more accurately than the EN/SP Group in producing target-like forms on the TT reflecting Spanish and French adverbial placement.
4. The EN/FR/SP Group's performance on the GJT will match that of the TT.

#### ***2.4.2 Second Research Question (qualitative study)***

There were two parts to the RQs for investigation during the semi-structured interviews, building on the results of the quantitative study and addressing the participants' prior foreign language learning experiences and strategies:

- **RQ2(a): How do learners make interlingual connections, compare and transfer?**

This section of the interview contained three pairs of sentences for discussion, based on the findings of the quantitative results. The aim was not to repeat the tasks from the web questionnaires, but to engage the participants in a broader discussion of the grammatical issues that arose from the quantitative results in order to investigate the interlingual connections available.

- **RQ2(b): How do learners benefit from prior foreign language learning experiences?**

This section of the interview was divided into two parts: the first addressed the RQ from the point of view of L2 grammatical knowledge and the second focused on general foreign language learning strategies and experiences. These two sections were designed to move beyond the more structured nature of the opening questions addressing RQ2(a) – once participants had become more relaxed and willing to talk freely – to allow for more open-ended discussions of prior language learning experiences at both a grammatical and general level.

## Chapter 3

### METHODOLOGY

This chapter introduces the methodological approach and research design used to answer the two research questions set out at the end of Chapter 2. In order to bring together the strands of the research questions and to build up a comprehensive picture of lateral transfer at the level of syntax, alongside foreign language-learning strategies and experiences, a multi-method design is proposed. Details of the quantitative and qualitative studies are presented in turn. We begin the chapter with a discussion of some of the methodological issues relevant to the present study.

#### 3.1 Methodological preliminaries

When investigating a complex phenomenon such as lateral (morpho)syntactic transfer, it is essential for the researcher to adopt an open-minded approach to data collection and flexibility in research design. This is because, as Jarvis and Pavlenko (2008) point out:

“[...] each type of data has unique strengths and weaknesses, and no single type of data will necessarily provide the best evidence of transfer. Thus the most useful studies [...] are often those that investigate patterns of language use across different types of data” (p. 34).

The research questions of this present study necessitate such an approach, as does the theoretical frameworks informing them: the foreign language specific factors of Hufeisen’s *factor model* (Hufeisen & Marx, 2007) require the researcher to assess a learner’s target and previous interlanguages, L2 experiences and (explicit or subconscious) foreign language learning strategies (Jessner, 2008), taking into account the findings of research conducted within different, but complementary, frameworks

outlined in Chapter 2 above. In the present study, the learner's target and previous interlanguage will be investigated at the level of (morpho)syntax.

Before examining some of the specific methodological and design issues at play, let us first consider an overview of the components of the present research:

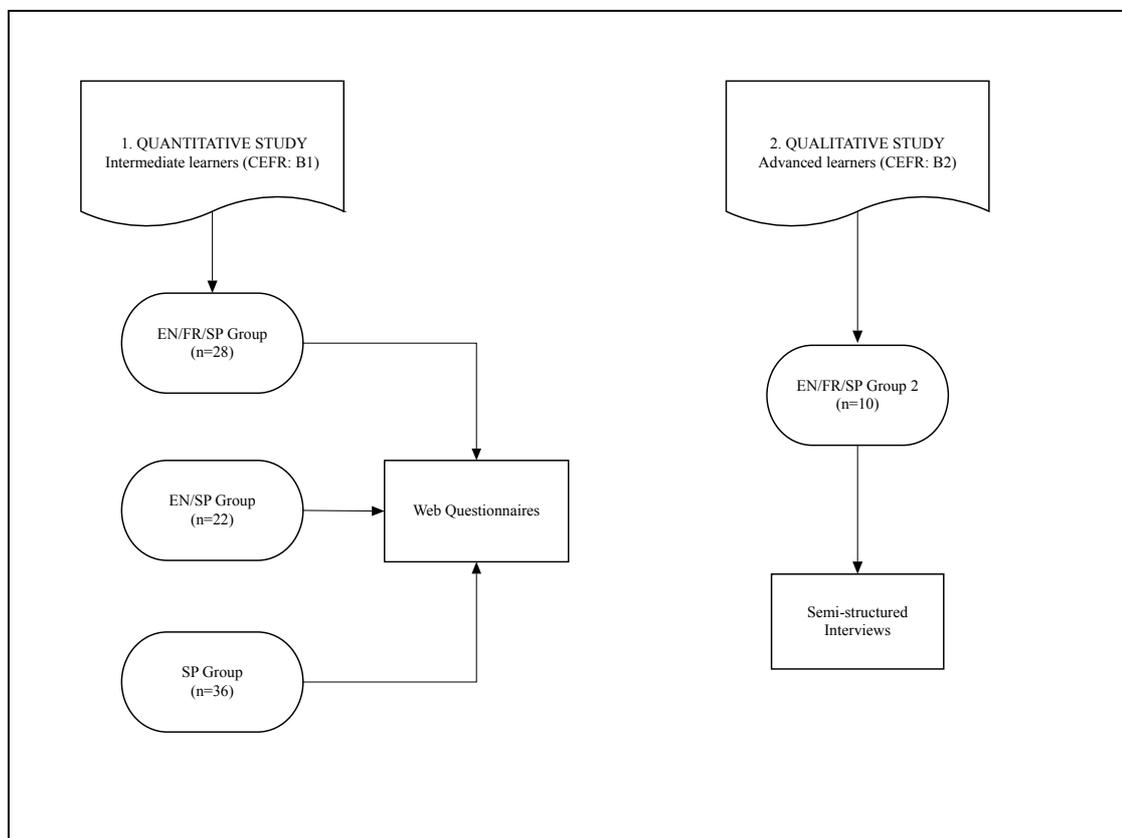


Figure 3.1 Methodological outline of the present research.

The aim of the present research in its broadest terms was to investigate lateral (morpho)syntactic transfer, in this case French at the level of morphology and syntax, among instructed L1 English learners of Spanish.

Two separate cross-sectional studies were carried out, testing distinct methods of elicitation and proficiency levels in order to assess the nature of lateral transfer among intermediate (CEFR B1) and more advanced (CEFR B2) learners. The quantitative study focused on providing statistical evidence of lateral (morpho)syntactic transfer via two web-based tasks; the qualitative study focused on individual foreign language learning experiences and strategies through semi-structured interviews. The interviews

were designed specifically to highlight the interaction between the “Foreign Language Specific Factors” and other factors outlined in Hufeisen’s *factor model*, most notably Affective Factors, such as perceived language distance, i.e. the participants’ “psychology” (Kellerman, 1979), and Cognitive Factors, such as metalinguistic awareness and use of metalanguage (e.g. Berry, 2005). I now turn to a presentation of the two studies in the following sections.

### **3.2 The Quantitative Study: Intermediate learners**

The first of the two studies focused on providing evidence of lateral (morpho)syntactic transfer through statistical analysis, drawing much of the inspiration in terms of research design on the generative studies outlined in Chapter 2. In the sections that follow, I present the participants, instruments, procedure and details of data collection and analysis.

#### **3.2.1 Participants**

There were 128 participants overall of whom 86 were included in the data analyses. There were two reasons for rejecting the 42 other participants: (a) incompatible data in terms of biographical, including language learning, background or (b) missing data on either one or both of the two web-based tasks. The participants comprised two main categories: two experimental groups and a monolingual Spanish control group. Participants in the experimental groups whose data were submitted to statistical analyses were drawn from two independent schools in south-east England as they were comparable in terms of a number of secondary, but important, moderator variables such as sex, socioeconomic background, ethnicity, some knowledge of Latin and Ancient Greek, instruction type, class size and exposure time (see e.g. Ringbom, 2007: 33; Dörnyei, 2007: 283; Jarvis & Pavlenko, 2008: 53). An independent samples T-Test showed that the two experimental groups did not differ significantly in either

mean current age ( $t(48) = .653, p = .517$ ) or age of onset of acquisition (AoA) of Spanish ( $t(48) = -.767, p = .447$ ), so were comparable on these variables too.

### *3.2.1.1 Proficiency*

Methods of measuring proficiency are extensively documented in the Third Language Acquisition literature, ranging from subjective, self-perceived assessments (e.g. Rast, 2010; Dewaele and Nakano, 2012), directly from experimental data (e.g. Falk & Bardel, 2011) or from specific course level guidance (e.g. Hall et al, 2009; Montrul et al, 2011) to more objective evaluations (e.g. Jaensch, 2011). The experimental subjects of the present research had, in their final year of language learning before the time of testing, all achieved a UK public examination qualification in Spanish as a foreign language that was broadly equivalent to B1 on the Common European Framework of Reference for Languages (CEFR). As such, participants in the two experimental groups could be considered as intermediate-level learners.

### *3.2.1.2 Exposure time*

At the time of testing (September 2010), participants in the EN/FR/SP Group had been studying both French and Spanish for approximately 2.5 hours per week (until July 2010) with no other declared exposure outside classes; subjects in the EN/SP group had had comparable instructed contact time in Spanish, again with no other declared exposure outside classes.

Let us now examine the make-up of the participants in more detail.

### *3.2.2 The EN/FR/SP Group*

Participants in this group were L1 English learners with L2 French and L3 Spanish. The group comprised 28 boys from an independent school in central London. They had had five years' instructed French learning experience since the age of 11, and

had been learning Spanish for two years, since the age of 14, as shown in table 3.1 below.

	<b>Age</b>	<b>French AoA</b>	<b>Spanish AoA</b>
<b>Mean</b>	16.3	11.4	14
<b>SD</b>	0.4	0.5	1.15
<b>Range</b>	16.2 – 17.1	11 – 12	

Table 3.1 The EN/FR/ES Group (n=28)

### 3.2.3 The EN/SP Group

This group comprised 22 boys from an independent school in south-east England. Participants were native English speakers learning Spanish; none had studied French but of the 22 participants, 9 declared a beginner knowledge of German and 4 of Japanese. They had all been learning Spanish for two years, since the age of 14, as table 3.2 below shows.

	<b>Age</b>	<b>Spanish AoA</b>
<b>Mean</b>	16.2	14.2
<b>SD</b>	0.38	0.87
<b>Range</b>	16.2 – 17.1	

Table 3.2 The EN/SP Group (n=22)

#### 3.2.3.1 Some methodological difficulties and considerations

In selecting participants for the EN/SP Group, a number of decisions had to be made. The primary concern was to select those who had no prior knowledge of French so as to be able to test the hypotheses of the present study: in order to investigate the positive and negative lateral transfer effects of the EN/FR/SP Group – the effect of L2 French on L3 Spanish – via the receptive and production tasks, it was essential to study how participants with no prior knowledge of French performed on these tasks too,

whilst taking into account the variables outlined in section 3.2.1 above. French typically remains the first foreign language taught in UK secondary schools, for historical rather than linguistic reasons, although with the increasing global importance of languages such as Arabic or Mandarin Chinese, many schools are now offering more flexible programmes of study<sup>14</sup>. Although the participants selected for the EN/SP Group in this present study had no knowledge of French and were comparable on all secondary variables outlined in section 3.2.1 above, this necessarily came with a compromise, given that a number had previous knowledge of German and Japanese, as detailed in section 3.2.3 above. However, as these were not Romance languages, for the purpose of the present investigation, it was deemed a satisfactory compromise. Ideally, of course, participants in the EN/SP Group would have had no prior foreign language learning experiences other than Spanish; whilst such participants may be found in UK secondary schools, they will invariably have studied Spanish for up to five years, which leads to the second sampling issue: in order for purposeful comparisons to be made between the EN/FR/SP and EN/SP Groups, the number of years of instruction in the target language under investigation – in this case Spanish – was of paramount importance and in the event, as detailed in section 3.2.1 above, there was no statistically significant difference in the mean age of onset of acquisition (AoA) between the two experimental groups.

Before moving on, let us first summarise the variables in the present investigation, including the mediating and moderating variables on which the EN/FR/SP and EN/SP Groups were comparable, where mediators are understood to have a direct consequence on the relationship between the independent and dependent variables and where moderators may affect the strength of this relationship:

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<sup>14</sup> Centre for Information on Language Teaching and Research (CILT), Language Trends Survey (2011).

<i>Dependent</i>	<i>Independent</i>	<i>Mediators</i>	<i>Moderators</i>
Clitic placement	Knowledge of French	Current age	Sex
PP agreement		AoA Spanish	Socioeconomic background
Adverbial placement			Ethnicity
			Knowledge of Latin/Ancient Greek
			Instruction type
			Class size
			Exposure (hours per week)

Table 3.3 Variable types in the quantitative study of intermediate learners.

### 3.2.4 The SP Group

The Spanish controls were recruited from four countries in the Spanish-speaking world, as shown in table 3.4 below. They were all educated, adult speakers (mean age = 32.4).

<b>Country of residence</b>	<b>N</b>
Mexico	15
Spain	11
Colombia	8
Chile	2

Table 3.4 The SP Group (n=36)

#### 3.2.4.1 Some methodological difficulties and considerations

The mean age of the SP Group (32.4) was more than twice that of the two experimental groups (16.3 and 16.2 respectively) and clearly the three groups were not comparable on this variable. Whilst it is relatively easy to find monolingual speakers of English in the United Kingdom, it is considerably more difficult to find speakers with no or limited knowledge of English among Spanish speakers, especially in Latin America, but slightly less so in Spain. An initial review of the data collected revealed that as the mean age of participants decreased so did their self-reported command of English increase and, at the same time, their declared knowledge of other Romance languages, especially Portuguese or French. In order to compensate for this and to

establish a homogenous group of monolingual Spanish speakers, older participants whose self-reported knowledge of English was minimal and who had no other foreign language learning experience were chosen for the final analysis. An additional justification for this was the research design of the present study, which focused on L1 English users' grammatical knowledge of Spanish as the dependent variable, with a knowledge of French as the independent variable, so essentially the SP Group served as a secondary control group to the EN/SP Group, the principal experimental participants forming the EN/FR/SP Group for the purposes of identifying any "foreign language effect".

There were two main reasons for including a sample of this population from different parts of the Hispanic world. First, because Spanish is so widely spoken globally, it was deemed sensible to canvass opinion from more than one Spanish-speaking country. Second, the nature of the grammatical properties under investigation, in particular clitic placement, for which two positions are grammatically correct in Spanish – but also adverbial placement, which can be flexible too – warranted a reasonably wide sample of participants from within the population in order to compensate for this flexibility. That said, the measure was precautionary rather than mandatory given the design of the instruments, to which we now turn.

### *3.2.5 Instruments*

This section presents the instruments used in the collection of data for the quantitative study. All data, including the biographical information outlined above, were collected via third-party software ([www.ourwebsurvey.com](http://www.ourwebsurvey.com)) – henceforth "web questionnaire" – accessible from the researcher's website at [www.jwitney.net/research](http://www.jwitney.net/research) during September 2010 (See Wilson and Dewaele (2010) on the use of web questionnaires and Section 3.2.6 below on 'Procedure').

### *3.2.5.1 Web questionnaire*

The web questionnaire was divided into two sections: a biographical data section and a task section, which comprised the specific language tasks, a Grammaticality Judgment Task and a Translation Task. Because the questionnaire was accessible via the Internet, it was potentially open to a wide audience and there were two main reasons for this approach: first, it needed to reach participants who had no prior knowledge of French, as the researcher had no immediate access to such participants in his place of work. Second, it equally needed to reach participants in a number of Spanish-speaking countries, who would act as controls. Although an increased population sample has clear advantages in terms of submitting data to suitable statistical analyses, crucially in this case, it did not increase the number of participants with comparable AoA of Spanish and no prior knowledge of French, for reasons outlined in Section 3.2.3.1 above. It did of course increase a number of important moderator variables (see table 3.3), but not enough to be able to control for these in the formation of subsets (e.g. sex, knowledge of Latin/Ancient Greek) with sufficient numbers to make statistical analyses meaningful. So the moderator variables were held constant in order to maximize the focus of the investigation on participants with and without prior knowledge of French, whose current age and AoA of Spanish were statistically significantly comparable (see Jarvis & Pavlenko, 2008: 53)

The web questionnaire was piloted three times in the academic year 2009 – 2010 at various stages in its development among the researcher's pupils, who were similar to the target sample for which the instrument was designed (see Dörnyei, 2007: 112). As a result of preliminary data analysis and pupils' feedback, one task – a Free Composition Task – was eliminated altogether as it yielded insufficient data for the time it took to complete and the two other tasks were slightly modified. In the biographical data section, declaring ethnicity was made an optional field. Two of the researcher's

colleagues completed the final version and, as a result, a number of changes were made to the wording of questions and the overall layout of the questionnaire to facilitate progression from one section to the next. The final pilot version completed by a sample of the researcher’s pupils took an average of 50 minutes to complete (see Section 3.2.6 below on ‘Procedure’). A number of technical checks were made to ensure that all data could be processed correctly and the final version of the web questionnaire went live in September 2010; print versions are included in the Appendices. Let us now turn to the two specific language tasks of the web questionnaire: the Grammaticality Judgment Task and the Translation Task.

### *3.2.5.1.1 The Grammaticality Judgment Task*

The Grammaticality Judgment Task (GJT) was designed to investigate both negative and positive transfer effects from French among instructed L1 English learners of Spanish, i.e. (morpho)syntactic lateral transfer and the “foreign language effect” (see Section 3.1 above). The three grammatical features tested were object clitic placement, past participle agreement (negative lateral transfer) and adverbial placement (positive lateral transfer), according to the Research Questions and hypotheses set out at the end of Chapter 2. The GTJ was completed by all participants: the two experimental groups, i.e. those with and without prior knowledge of French (the EN/FR/SP Group and the EN/SP Group respectively) and the Spanish-speaking controls (the SP Group). Table 3.5 below shows the distribution of the 100 sentences presented to the participants on the GJT.

<b>GJT – Overview of Spanish sentences</b>				
<i>RQ Focus</i>	<i>Category</i>	<i>Grammatical</i>	<i>Ungrammatical</i>	<i>Total</i>
Negative transfer	Clitic placement	16	16	32
	Past participle agreement	16	16	32
Positive transfer	Adverbial placement	8	8 + 8	24
<i>Distractors</i>		6	6	12
				<b>100</b>

Table 3.5 Distribution of sentences by focus, category and grammaticality

Let us consider the information in table 3.5 in a little more detail. Negative transfer (the focus of RQ1a) contained two categories, clitic placement and past participle agreement. Positive transfer contained one category, adverbial placement, specifically adverbs of manner (the focus of RQ1b). The 100 tokens across the three categories, including distractors, were distributed at random by the software programme for each participant. The negative transfer focus was straightforward in that for both the clitic placement and past participle agreement categories, there were 16 grammatical Spanish tokens and 16 ungrammatical Spanish tokens that reflected French word order and agreement respectively. The positive transfer focus was slightly more complicated in that the ungrammatical Spanish sentences had to reflect both English and French word order in order to address the research question, hence the division of ungrammatical sentences (8 + 8) in table 3.5 above for positive transfer focus. Table 3.6 below shows examples of grammatical and ungrammatical Spanish sentence for both negative (clitic placement and past participle agreement) and positive (adverbial placement) transfer foci used in the GJT.

<b>GJT – Example grammatical and ungrammatical Spanish sentences</b>			
<i>Category</i>	<i>G / U</i>	<i>Example sentence</i>	<i>English Translation</i>
Clitic placement	G	Quiero hacerlo	I want to do it
	U (FR-WO)	* Esperamos lo terminar mañana	We hope to finish it tomorrow
Past participle agreement	G	Las chicas han llegado	The girls have arrived
	U (FR-AGR)	* La profesora ha salida	The teacher has gone out
Adverbial placement	G	Mi papá toca bien la guitarra	My dad plays the guitar well
	U (EN-WO)	* Juegan al fútbol bien	They play football well
	U (FR-WO)	* Vamos a bien cenar esta noche	We are going to eat well this evening

G/U = *Grammatical/Ungrammatical*.

FR-WO = *French word order*; EN-WO = *English word order*.

FR-AGR = *French agreement*.

Table 3.6

As outlined in Chapter 1, and in line with recent empirical research assessing L3 syntactic transfer (e.g. Rothman & Cabrelli, 2010), lexical items presented in all tokens, including distractors, were only those with which non-native Spanish learners at this level were entirely familiar, so as not to hinder the principal objective in assessing lateral syntactic transfer; in other words, all vocabulary used in the tasks was known to the participants.

#### *3.2.5.1.1.1 Likert scales*

The GJT of the present study comprised a 5-point Likert scale. Likert scales have been widely used in applied linguistics research (Dörnyei, 2007; Sayehli, 2013), notably in sociolinguistic studies (e.g. Dewaele & Nakano, 2012), but also in several recent L2/L3 investigations assessing participants' grammaticality judgments at the level of syntax (e.g. Montrul et al, 2011; Mann, 2012). This procedure was used in the present study to maximise the correct elicitation of data, given the flexible positioning of clitics in Spanish and, to a lesser extent, adverbs of manner (see Section 3.2.4.1 above). In other words, it catered for flexibility in participants' responses where two options were grammaticality correct (e.g. clitic placement), but equally allowed for dichotomous responses at either end of the scale with clear-cut sentences that were either grammatical or ungrammatical (e.g. past participle agreement). Debates are ongoing and unresolved in the literature as to whether Likert scales should contain even numbers forcing participants to make a choice or odd numbers allowing them to remain undecided (see Sayehli, 2013). However feedback and initial data from the pilot studies of the present research resulted in a 5-point scale for the final GJT.

\* \* \*

Let us now turn to the Likert scale and conversion ratings used in the present study to assess participants' grammaticality judgments for the three categories tested:

1= Definitely correct.

2= Probably correct.

3= Unsure.

4= Probably incorrect.

5= Definitely incorrect.

In the first instance, the instrument aimed to assess a broad positive and negative acceptance and rejection of the tokens presented to the participants. In order to answer the research questions, the scores were then converted to dichotomous ratings to determine the extent of positive and negative lateral syntactic transfer. Although this conversion procedure is not without controversy (e.g. Tremblay, 1995), it was deemed acceptable nonetheless for this particular study for reasons outlined above. Participants' final scores submitted for statistical analyses were therefore based on acceptance and rejection of the tokens presented in each category:

- (1) For *accepting* a grammatical Spanish sentence as grammatical or *rejecting* an ungrammatical sentence as ungrammatical;
- (2) For *rejecting* a grammatical Spanish sentence as grammatical or *accepting* an ungrammatical sentence as ungrammatical;
- (3) For “unsure”.

In other words, (1) represented an accurate response and (2) an inaccurate response.

#### 3.2.5.1.2 *The Translation Task*

The Translation Task (TT) was designed to add a further dimension to the investigation of lateral (morpho)syntactic transfer and strengthen the findings of the GJT. Participants were required to translate from English into Spanish. The tokens in the TT replicated the grammatical features tested in the GJT for all three categories

(clitic placement, past participle agreement and adverbial placement) and were similar in terms of lexical complexity.

The TT was completed by both experimental groups, i.e. those with and without prior knowledge of French (the EN/FR/SP Group and the EN/SP Group respectively). Table 3.7 below shows the distribution of the 45 sentences presented to the participants on the TT.

<b>TT – Overview of English sentences for translation into Spanish</b>		
<i>RQ Focus</i>	<i>Category</i>	<i>N</i>
Negative Transfer	Clitic Placement	16
	Past Participle Agreement	16
Positive Transfer	Adverbial Placement	8
Distractors		5
		<b>45</b>

Table 3.7 Distribution of sentences by focus and category

As with the GJT, the 45 tokens across the three categories, including distractors, were distributed at random by the software programme for each participant. A similar scoring procedure was used with the TT as for the GJT as follows:

- (1) For the production of a grammatical Spanish sentence;
- (2) For the production of an ungrammatical Spanish sentence;
- (3) For an incomplete or invalid response.

In other words, (1) represented an accurate response and (2) an inaccurate response.

### 3.2.6 Procedure

The biographical data and those of the GJT and TT were collected using third-party software ([www.ourwebsurvey.com](http://www.ourwebsurvey.com)) and administered via a web-based interface (“web questionnaire”) accessible from the researcher’s website at [www.jwitney.net/research](http://www.jwitney.net/research). This software was chosen for its ease of customisation, in

particular with regard to providing a multilingual interface (an English language version for L1 English speakers and a Spanish language version for the Spanish controls) as well as the implementation of Likert scales and tokens that were relevant to the present investigation. The web questionnaire was available during September 2010. Having conducted several pilot studies during the academic year 2009 – 2010, this month was chosen to coincide with the start of the academic year so as to control for the AoA of Spanish variable with both experimental groups those with L2 French (the EN/FR/SP Group) and those with no prior instruction in French (the EN/SP Group). Of the 28 participants in the EN/FR/SP Group, 10 completed the questionnaire in controlled conditions in the computer room at the researcher's place of work before the link to the web questionnaire was made more widely available on the Internet. This measure was taken to monitor the completion of the live version among a sample of the participants in order to identify any technical hitches at an early stage. When these participants' responses had been completed and downloaded successfully, the link was made available to all pupils at the two target schools and beyond, as detailed in Sections 3.2.2 and 3.2.3 above.

#### *3.2.6.1 Confidentiality and feedback*

All participants were presented with an initial statement of confidentiality in either English or Spanish, which they were required to accept or reject before completing the questionnaire. Optional fields at the end of the questionnaire allowed participants to enter their name and email address should they be interested in receiving feedback on the results of the investigation; an optional field was also provided to allow participants to enter their comments on the questionnaire (see Appendices 1 and 2 for a print version of the English and Spanish questionnaires).

### *3.2.7 Data collection and analysis*

The data from all participants were downloaded from the website in Excel format from the 128 responses. Clearly, because pupils from two schools in particular had been targeted to participate in the investigation (Sections 3.2.2 and 3.2.3 above), the majority of responses from these participants were valid. However, since the web questionnaire was freely available on the Internet, all responses had to be considered for inclusion and then either accepted or rejected; this was particularly the case with participants in the SP group. Finally, responses that were only partially or inaccurately completed were rejected. Of the 128 responses downloaded, 86 participants were included in the final count (see Section 3.2.1 above), comprising the EN/FR/SP Group (n = 28), the EN/SP Group (n = 22) and the SP Group (n = 36).

The responses to the distractors from both the GJT and TT were then eliminated and the scoring conversion of the GJT responses computed using Excel (see Section 3.2.5.1.1.1 above). The GJT and TT scores for each of the three grammatical properties tested were then submitted for statistical analyses using SPSS v.18, as outlined in Chapter 4.

### ***3.3 The Qualitative Study: Advanced learners***

The qualitative study was completed in July 2013 and focused on individual foreign language learning experiences and strategies among advanced learners of Spanish, elicited through semi-structured interviews in order to answer the second research question outlined at the end of Chapter 2. In the sections that follow, we present the participants, semi-structured interviews, procedure and details of data collection and analysis.

### 3.3.1 Participants

Participants in the semi-structured interviews consisted of 10 L1 English learners of Spanish with L2 French (the EN/FR/SP Group 2 – see Figure 3.1 above), six boys and four girls, all aged 17. They were recruited from among A Level Spanish pupils at the researcher's place of work. They had been studying French for six years and Spanish for three years and were considered upper intermediate to advanced learners of Spanish (B2) according to the CEFR, assessed by an internal school examination conducted in June 2013.

### 3.3.2 The semi-structured interviews

Whereas the focus of the web questionnaires was on providing evidence and statistical significance of learners' lateral (morpho)syntactic transfer in answering the first research question, the semi-structured interviews were conducted to address the individual foreign language learning experiences and strategies of our adopted *factor model* of L3 learning (Hufeisen & Marx, 2007), in order to answer two aspects of the second research question, as detailed in Sections 3.3.2.1 (RQ2a) and 3.3.2.2 (RQ2b) below.

#### 3.3.2.1 Interview Section 1

The first section investigated learners' ability to make interlingual connections, compare and transfer (RQ2a). This section contained three pairs of sentences for discussion, based on the findings of the quantitative results, as shown in sentences 1 – 3 below. The aim was not to repeat the tasks from the web questionnaires, but to engage the participants in a broader discussion of the grammatical issues that arose from the quantitative results in order to investigate the interlingual connections available.

1 (a) Las chicas han comidas

1 (b) Las chicas han salido.

2 (a) ¿Puedes lo explicar?

2 (b) Quiero lo hacer mañana.

3 (a) ¿Juegas al tenis bien?

3 (b) Me gusta ir al cine y ver a mis amigos mucho.

There was one ‘distractor’ in that sentence 1(b) was grammatically accurate. This sentence was included early on to help generate an initial discussion. The first and second pair of sentences (1 – 2) reflected the past participle and clitic placement studies respectively and negative lateral transfer (RQ1a); the third pair of sentences (3) reflected the adverbial placement study and positive lateral transfer (RQ1b).

### 3.3.2.2 Interview Sections 2 and 3

The second and third sections investigated how learners may benefit from prior foreign language learning experiences (RQ2b). The second section addressed the question from the point of view of L2 grammatical knowledge and the third section focused on general foreign language learning experiences. These sections were designed to move beyond the more structured nature of Section 1 – once participants had become more relaxed and willing to talk freely – to allow for more open-ended discussions of prior language learning experiences at both a grammatical and general level, in essence moving from a categorical *etic* perspective to a broader *emic* perspective (e.g. Groom and Littlemore, 2011).

### 3.3.3 Procedure

The interviews with the EN/FR/SP Group 2 were conducted at the researcher’s place of work in two sessions on 1<sup>st</sup> and 2<sup>nd</sup> July 2013. At the start of each interview, participants were presented with a declaration of confidentiality and information

regarding the nature and purpose of the interview; they were informed that the interview would be recorded and that recordings would not be kept once the interviews had been transcribed (see Appendix 5).

#### *3.3.4 Data collection and analysis*

The 10 interviews were recorded using a Sony ICD-UX522 digital voice recorder and then transcribed and analysed using NVivo v.10 software.

## **Chapter 4**

### **RESULTS**

The results of the web questionnaires and interviews are presented in this chapter. They address the two main research questions outlined in Chapter 1, investigating non-native transfer at the level of (morpho)syntax.

First, the web questionnaire results are presented (Section 4.1), followed by the results of the interviews (Section 4.2). An analysis of the results is presented in Chapter 5.

#### **4.1 Web questionnaire results**

The web questionnaires formed the basis of the quantitative method of data collection and analysis of the present study in addressing RQ1. The focus was on providing evidence and statistical significance of learners' lateral (morpho)syntactic transfer. The web questionnaires contained two tasks: a Grammaticality Judgment Task (GJT) and a Translation Task (TT) and addressed two sub-questions of RQ1, the results for each of which are presented in turn in this chapter, through a mixture of descriptive and inferential statistics. The GJTs were completed by three independent groups: instructed L1 English learners of Spanish with L2 French (the EN/FR/SP Group, n=28); instructed L1 English learners of Spanish without knowledge of French (the EN/SP Group, n=22) and monolingual Spanish-speaking controls (the SP Group, n=36); the TTs were completed by the EN/FR/SP and EN/SP Groups.

##### ***4.1.1 Can lateral transfer be identified in both syntactic and morphosyntactic features? RQ1(a)***

As outlined in Chapter 2, this question examined two features that would provide evidence of lateral (morpho)syntactic transfer: clitic placement (syntactic) and

perfect tense past participle agreement (morphosyntactic). Let us first restate the three hypotheses forwarded in relation to this question:

1. The experimental groups will not differ from each other in their assessment of grammatically accurate Spanish sentences on the GJTs;
2. The EN/FR/SP Group will perform less accurately than the EN/SP Group on the GJTs and TTs in assessing and producing sentences that reflect the (morpho)syntactic features of French tested (a result of negative lateral transfer); the EN/SP Group will perform similarly to the SP Group on the GJTs;
3. There will be a positive correlation between the EN/FR/SP Group's performance on the GJTs and the TTs in accepting and producing the (morpho)syntactic features of French tested.

In this section, the results are presented for both the GJT and the TT, first for the clitic placement study and second for the past participle agreement study. A summary of findings is presented at the end of both studies (Section 4.1.1.4).

#### 4.1.1.1 Clitic Placement

A reminder that with the modal and aspectual verbs with an infinitive complement that were tested, the placement of object clitics is not flexible in French and is strictly proclitic to the infinitive [v cl inf], as in the following sentence:

- (a) Je           veux           le       faire  
      I<sub>SUB.PRO</sub> want<sub>(1SG)V</sub> it<sub>CL</sub> do<sub>INF</sub>  
      'I want to do it'

In Spanish, the word order is more flexible, allowing clitics to be placed either before the finite verb as *proclitics* [cl v inf], or attached to the end of the infinitive as

*enclitics* [v inf cl], but they cannot be procliticized to the infinitive [v cl inf] as in French (a). Examples of *proclisis* (b) and *enclisis* (c) are given below:

(b) **Lo** quiero hacer  
 it<sub>CL</sub> want<sub>(1SG)V</sub> do<sub>INF</sub>  
 ‘I want to do it’

(c) Quiero hacer**lo**  
 want<sub>(1SG)V</sub> do<sub>INF</sub>it<sub>CL</sub>  
 ‘I want to do it’

As this research question addresses transfer from French, participants’ accuracy scores in Spanish are grouped together in the presentation of results in this chapter ([cl v inf] + [v cl inf]), although see Chapter 5, Section 5.1.1.2.1 for a discussion of Spanish sentences by clitic placement.

#### **4.1.1.1 Grammaticality Judgment Task**

As outlined in Chapter 3, participants were scored as follows based on acceptance and rejection of the tokens presented:

- (1) For *accepting* a grammatical Spanish sentence as grammatical ([cl v inf] / [v inf cl]) or *rejecting* an ungrammatical sentence as ungrammatical, i.e. French word order ([v cl inf]);
- (2) For *rejecting* a grammatical sentence as grammatical or *accepting* an ungrammatical sentence as ungrammatical;
- (3) For “unsure”.

In other words, (1) represented an accurate response and (2) an inaccurate response.

As a first step in presenting the results of the GJT for the clitic placement study, a summary of the raw data is provided in tables 4.1a and 4.1b below, showing the accurate (1), inaccurate (2) and unsure (3) response rate per token and percentage for

both grammatically correct Spanish word order and grammatically incorrect French word order for the 16 sentences presented to each group (see Appendix 3):

<b>Grammatical Spanish (Spanish Word Order)</b>									
		Score						TOTALS	
		1		2		3			
<b>Group</b>	N	Tokens	%	Tokens	%	Tokens	%	Tokens	%
<b>EN/FR/SP</b>	28	354	79	79	18	15	3	448	100
<b>EN/SP</b>	22	289	82	53	15	10	3	352	100
<b>SP (controls)</b>	36	547	95	21	4	8	1	576	100

*1 = accurate acceptance and rejection; 2 = inaccurate acceptance and rejection; 3 = unsure*

Table 4.1a

<b>Ungrammatical Spanish (French Word Order)</b>									
		Score						TOTALS	
		1		2		3			
<b>Group</b>	N	Tokens	%	Tokens	%	Tokens	%	Tokens	%
<b>EN/FR/SP</b>	28	176	39	258	58	14	3	448	100
<b>EN/SP</b>	22	306	87	18	5	28	8	352	100
<b>SP (controls)</b>	36	543	94	23	4	10	2	576	100

*1 = accurate acceptance and rejection; 2 = inaccurate acceptance and rejection; 3 = unsure*

Table 4.1b

Table 4.1a shows that the EN/FR/SP and EN/SP Groups both performed accurately (354/448 tokens, 79% and 289/352 tokens, 82% respectively) in recognising clitic placement in grammatical Spanish sentences. However, evidence of lateral syntactic transfer already begins to emerge, as shown in table 4.1b, with the EN/FR/SP Group's accuracy scores (1) on sentences displaying French clitic placement substantially lower (176/448 tokens, 39%) than those of the EN/SP Group (306/352 tokens, 87%). This information is presented visually in figure 4.1 below:

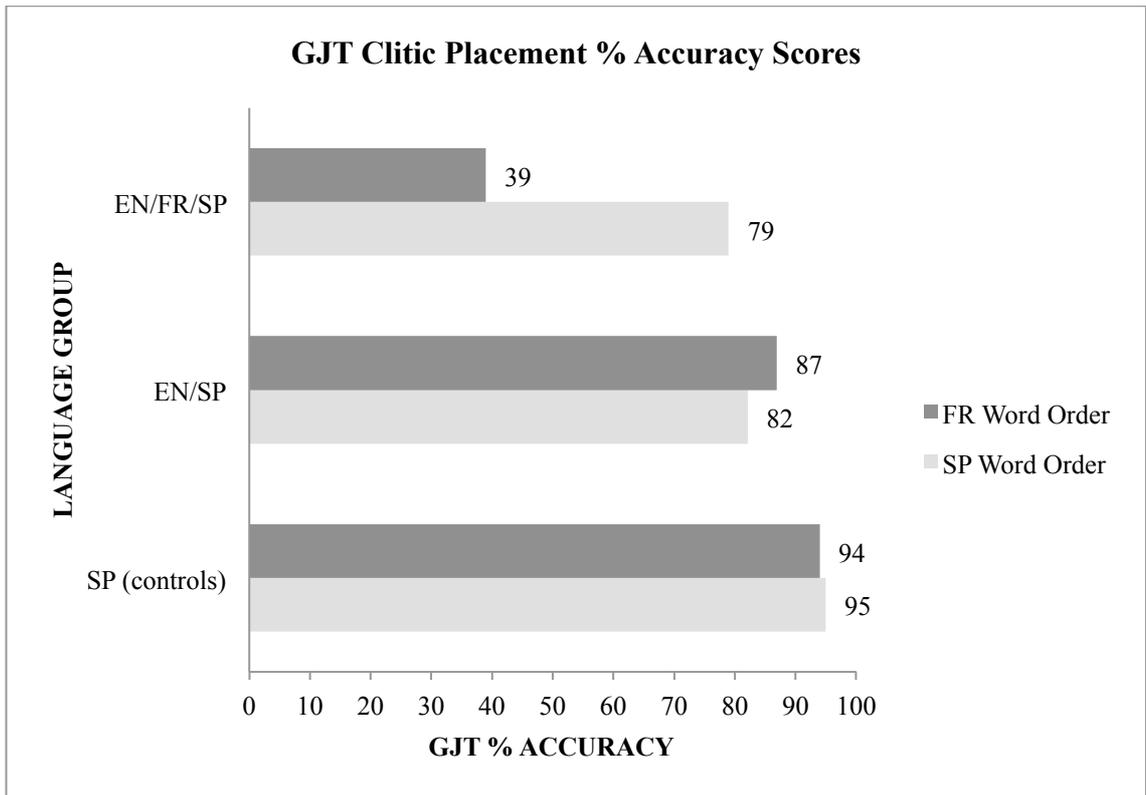


Figure 4.1

Before looking beyond the raw data and to prepare the ground for presenting the inferential statistics by clitic placement, the GJT median accuracy scores are shown in figure 4.2, which again indicate striking differences between the EN/FR/SP Group and the EN/SP Group and SP controls:

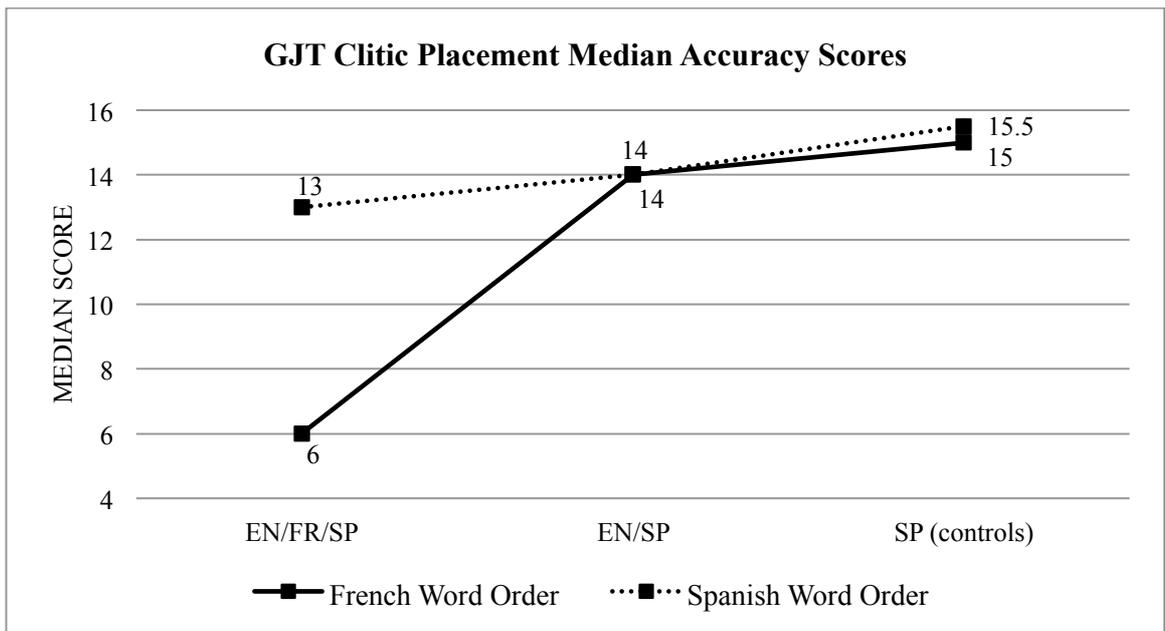


Figure 4.2

So far, the raw data show that in accepting grammatical sentences reflecting Spanish word order ([cl v inf] / [v inf cl]) the experimental groups behaved similarly to each other, but that the EN/FR/SP Group accepted far more ungrammatical sentences reflecting French word order ([v cl inf]) than the EN/SP Group and SP controls. The following two sections present the inferential statistical findings of these results in order to establish some of the evidence required to answer the research question outlined in Section 4.1.1 above.

#### *4.1.1.1.1 Grammatical Spanish word order*

A Kruskal-Wallis test was run to determine whether there were differences in the accuracy score between the EN/FR/SP and EN/SP Groups and the Spanish-speaking control group. The score was statistically significantly different between all three groups,  $\chi^2(2) = 30.478, p < .001$ . *Post-hoc* analysis revealed statistically significant differences in the accuracy score between the EN/FR/SP Group (*Mdn* = 13), EN/SP Group (*Mdn* = 14) and SP controls (*Mdn* = 15.5) ( $p < .001$ ), but not between the EN/FR/SP and EN/SP Groups ( $p = .649$ ). In other words, the two experimental groups behaved similarly to each other at a statistically significant level.

#### *4.1.1.1.2 Ungrammatical French word order*

A Kruskal-Wallis test was run to determine whether there were differences in the accuracy score between the EN/FR/SP and EN/SP Groups and the Spanish-speaking control group. The score was statistically significantly different between all three groups,  $\chi^2(2) = 61.553, p < .001$ . *Post-hoc* analysis revealed statistically significant differences in the accuracy score between the EN/FR/SP Group (*Mdn* = 6) and EN/SP Group (*Mdn* = 14) and between the EN/FR/SP Group and SP controls (*Mdn* = 15) ( $p < .001$ ), but not between the EN/SP Group and SP controls ( $p = .115$ ). In other words, the two experimental groups behaved differently at a statistically significant level.

#### 4.1.1.2 Translation Task

As outlined in Chapter 3, the Translation Task (TT) was completed by the two experimental groups (EN/FR/SP and EN/SP) in the same session as the GJT. Participants were required to translate a total of 16 sentences, from English into Spanish replicating those presented in the GJT, with four tokens for each of the 4 verbs (see appendix), as in the examples below:

- (a) I can do it.
- (b) They want to give it to you.

In terms of scoring, the same method was used as for GJT as follows:

- (1) For the production of a grammatical Spanish sentence in terms of correct clitic placement ([cl v inf] or [v inf cl]);
- (2) For the production of an ungrammatical Spanish sentence replicating French word order ([v cl inf]);
- (3) Incomplete or invalid response.

In other words, (1) represented an accurate response (“Spanish word order”) and (2) an inaccurate response (“French word order”).

As a first step in presenting the results of the TT for the clitic placement study, a summary of the raw data is provided in table 4.2 below, showing the accurate (1), inaccurate (2) and incomplete or invalid (3) response rate per token and percentage for the 16 sentences presented to the two groups (see Appendix 4):

Translation Task Scores – Clitic Placement									
Group	N	1		2		3		TOTALS	
		Tokens	%	Tokens	%	Tokens	%	Tokens	%
EN/FR/SP	28	158	35	236	53	54	12	448	100
EN/SP	22	228	65	6	2	118	34	352	100

*1 = production of grammatical Spanish sentence; 2= production of an ungrammatical Spanish sentence reflecting French word order; 3 = Incomplete or invalid response.*

Table 4.2

From this raw data, the pattern of lateral syntactic transfer highlighted in the GJT is clear in the TT too, with the EN/FR/SP Group's accuracy score (158/448 tokens, 35%) almost half those of the EN/SP Group (228/353 tokens, 65%). This is presented visually in figure 4.3 below:

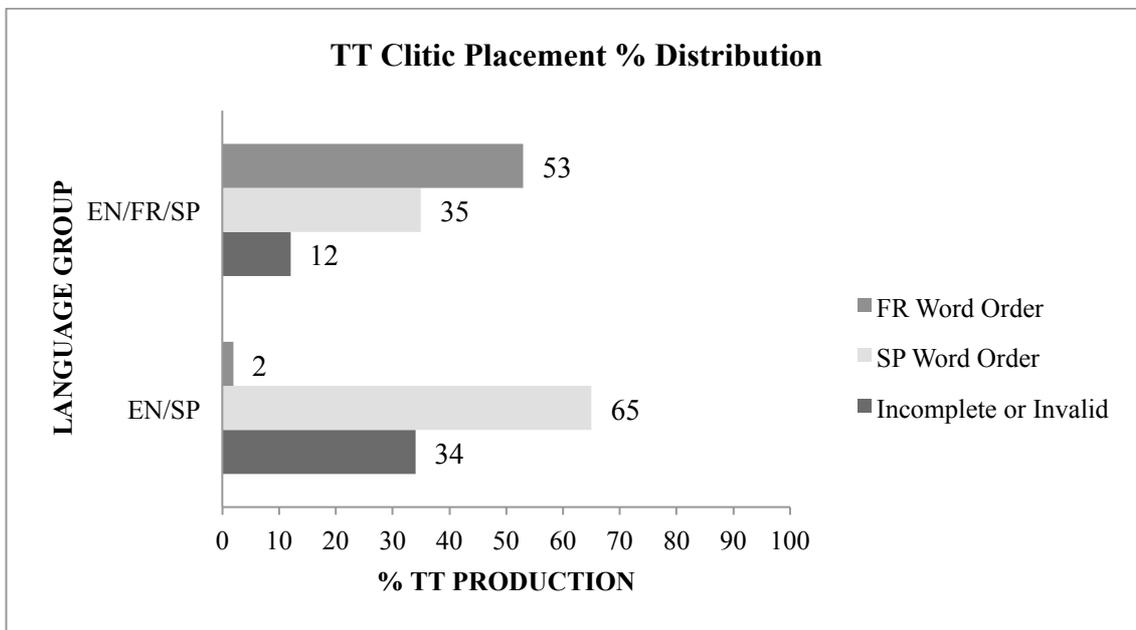


Figure 4.3

Another immediately obvious difference in the groups' performance is the incomplete or invalid score (3) and we shall return to this in the presentation of the corresponding inferential statistics in Section 4.1.1.1.2.3 below. Before moving on, let us first consider the TT median scores for French word order and Spanish word order produced by the two groups in figure 4.4 below, as a first step in presenting the statistical analyses.

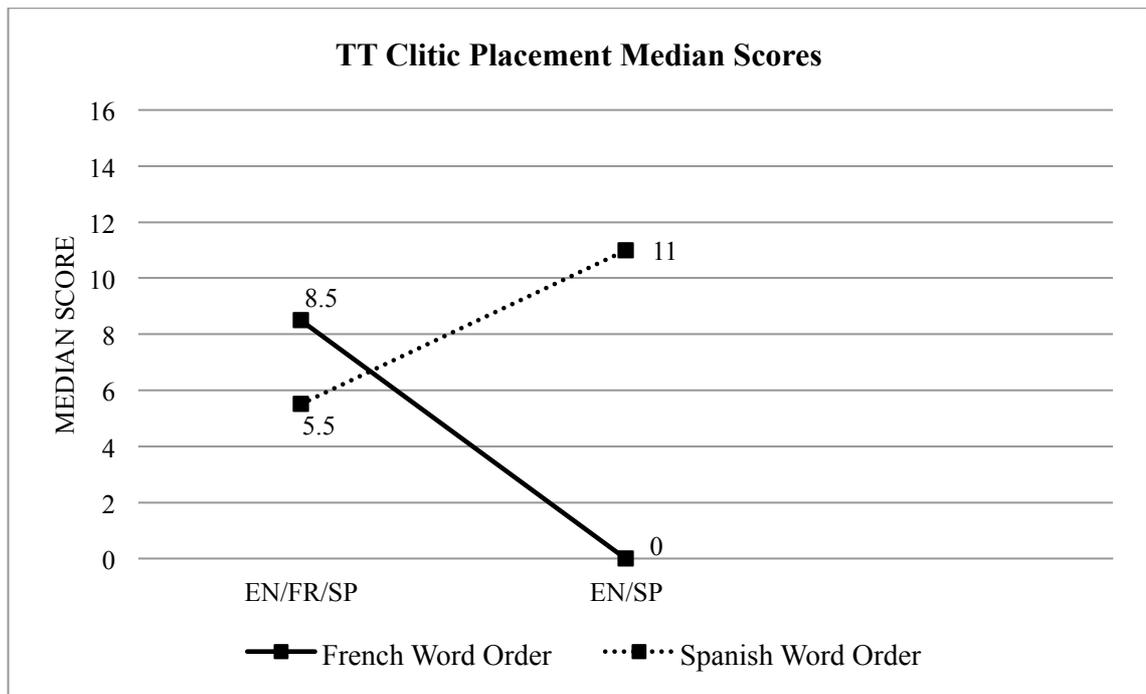


Figure 4.4

So far, the raw data show that the EN/FR/SP Group produced far fewer grammatical sentences reflecting correct Spanish word order (35%) than the EN/SP Group (65%) and, as expected, far more ungrammatical sentences reflecting French word order (53%) than the EN/SP Group (2%). The data also reveal a striking difference in the incomplete or invalid score (3%) between the EN/FR/SP group (12%) and the EN/SP Group (34%). The following two sections present the statistical findings of the TT results in order to build on the evidence gathered from the GJT and to continue providing suitable material to answer the research question outlined in Section 4.1.1 above.

#### 4.1.1.1.2.1 Grammatical Spanish word order

A Mann-Whitney test was run to determine whether there were differences in the Spanish word order score between the EN/FR/SP and EN/SP Groups. The score was statistically significantly different,  $U = 555, z = 4.86, p < .001$ .

#### 4.1.1.1.2.2 *Ungrammatical French word order*

A Mann-Whitney test was run to determine whether there were differences in the French word order score (2) between the EN/FR/SP and EN/SP Groups. Again, the score was statistically significantly different,  $U = .000$ ,  $z = -6.20$ ,  $p < .001$ . A Friedman test showed no statistically significant differences between the four verbs used by the EN/FR/SP Group in producing ungrammatical Spanish sentences reflecting French word order:  $\chi^2(3) = 4.39$ ,  $p = .222$ .

#### 4.1.1.1.2.3 *Invalid or Incomplete responses*

Unlike the “unsure” score (3) from the GJT where Kruskal-Wallis tests showed no statistically significant differences between the experimental groups in either the grammatical Spanish word order results ( $p = .228$ ) or the ungrammatical Spanish sentences reflecting French word order results ( $p = .051$ ), a Mann-Whitney test did however reveal statistically significant differences in the invalid or incomplete response score (3) on the TT,  $U = .517$ ,  $z = 4.16$ ,  $p < .001$  (EN/FR/SP Group: 12% and EN/SP Group: 34%). In other words, although the TT results presented above point to lateral syntactic transfer at a statistically significant level, a note of caution should accompany these findings.

In summary, the EN/FR/SP Group’s scores on the GJT and TT show clear evidence of lateral syntactic transfer from French to Spanish with regard to clitic placement and at a highly statistically significant level. This is the first step in providing the preliminary evidence for RQ1(a) set out in Section 4.1.1. However, in order to answer the question, we need to ascertain whether lateral morphosyntactic transfer occurs in a similar way. For this, we turn to the results of the second study – past participle agreement.

#### 4.1.1.2 Past participle agreement

As outlined in Chapter 3, the past participle is invariable in the Spanish perfect tense and the same auxiliary verb (“haber”) is used for both unaccusative (a) and unergative (b) classes of intransitive verbs. French, on the other hand, makes a distinction between unaccusatives and unergatives in the selection of the auxiliary: “être” with unaccusatives (c) and “avoir” with unergatives (d), the former resulting in past participle agreement with the subject of the sentence in both gender and number.

(a) María ha salido

María has left FEM. SING [NONAGR]

‘María has left’

(b) Las chicas han estudiado

The girls have studied FEM. PLUR [NONAGR]

‘The girls have studied’

(c) Marie est partie

Marie is gone FEM. SING [AGR]

‘Marie has left’

(d) Les filles ont étudié

The girls have studied FEM. PLUR [NONAGR]

‘The girls have studied’

##### 4.1.1.2.1 Grammaticality Judgment Task

The scoring procedure for the past participle agreement study was the same as for the clitic placement study, focusing on the acceptance and rejection of the tokens presented to the participants:

- (1) For *accepting* a grammatical Spanish sentence as grammatical ([nonagr]) or *rejecting* an ungrammatical sentence as ungrammatical, i.e. French past participle agreement ([agr]);
- (2) For *rejecting* a grammatical sentence as grammatical or *accepting* an ungrammatical sentence as ungrammatical;
- (3) For “unsure”.

In other words, as with the clitic placement study, (1) represented an accurate response and (2) an inaccurate response.

As a first step in presenting the results of the GJT for the past participle agreement study, a summary of the raw data is provided in tables 4.3a and 4.3b below, showing the accurate (1), inaccurate (2) and unsure (3) response rate per token and percentage for both grammatically correct Spanish perfect tense sentences (no past participle agreement) and grammatically incorrect Spanish perfect tense sentences (past participle agreement) for the 16 sentences presented to each group (See Appendix 3):

<b>Grammatical Spanish (No Past Participle Agreement)</b>									
		Score						TOTALS	
		1		2		3			
<b>Group</b>	N	Tokens	%	Tokens	%	Tokens	%	Tokens	%
<b>EN/FR/SP</b>	28	342	76	64	14	42	9	448	100
<b>EN/SP</b>	22	298	85	33	9	21	6	352	100
<b>SP (controls)</b>	36	524	91	19	3	33	6	576	100

*1 = accurate response; 2 = inaccurate response; 3 = unsure*

Table 4.3a

<b>Ungrammatical Spanish (Past Participle Agreement)</b>									
		Score						TOTALS	
		1		2		3			
<b>Group</b>	N	Tokens	%	Tokens	%	Tokens	%	Tokens	%
<b>EN/FR/SP</b>	28	208	46	185	41	55	12	448	100
<b>EN/SP</b>	22	263	75	41	12	48	14	352	100
<b>SP (controls)</b>	36	515	89	29	5	32	6	576	100

*1 = accurate response; 2 = inaccurate response; 3 = unsure*

Table 4.3b

Table 4.3a shows that the EN/FR/SP and EN/SP Groups both performed accurately (342/448 tokens, 76% and 298/352 tokens, 85% respectively) in recognising grammatical Spanish sentences with no past participle agreement, although the gap was certainly wider than the GJT results of the clitic placement study (79% and 82% respectively, see table 4.1a). However, as with the clitic placement study, evidence of lateral syntactic transfer from the raw data is clear, as shown in table 4.3b, with the EN/FR/SP Group's accuracy scores (1) on ungrammatical Spanish sentences with past participle agreement substantially lower (208/448 tokens, 46%) than those of the EN/SP Group (263/352 tokens, 75%). This information is presented visually in figure 4.5 below:

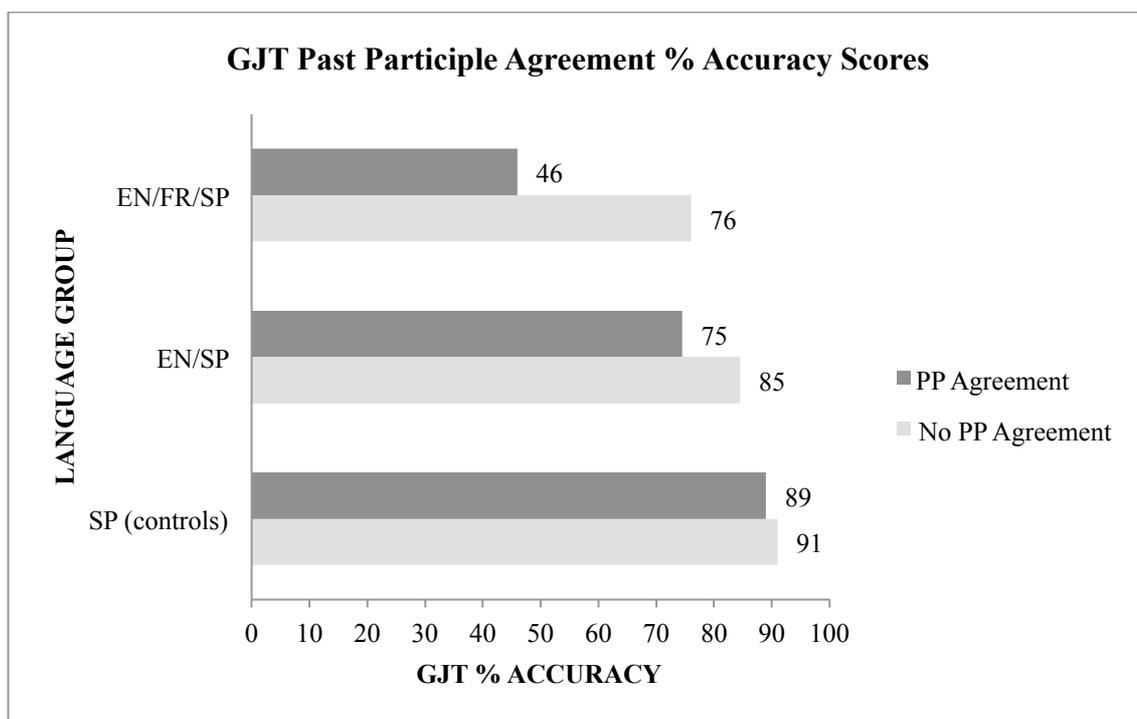


Figure 4.5

Before looking beyond the raw data and to prepare the ground for presenting the inferential statistics by past participle agreement, the GJT median accuracy scores are shown in figure 4.6 below, which – although less striking than those of the clitic placement study – nevertheless indicate substantial differences between the EN/FR/SP Group and the EN/SP Group and SP controls:

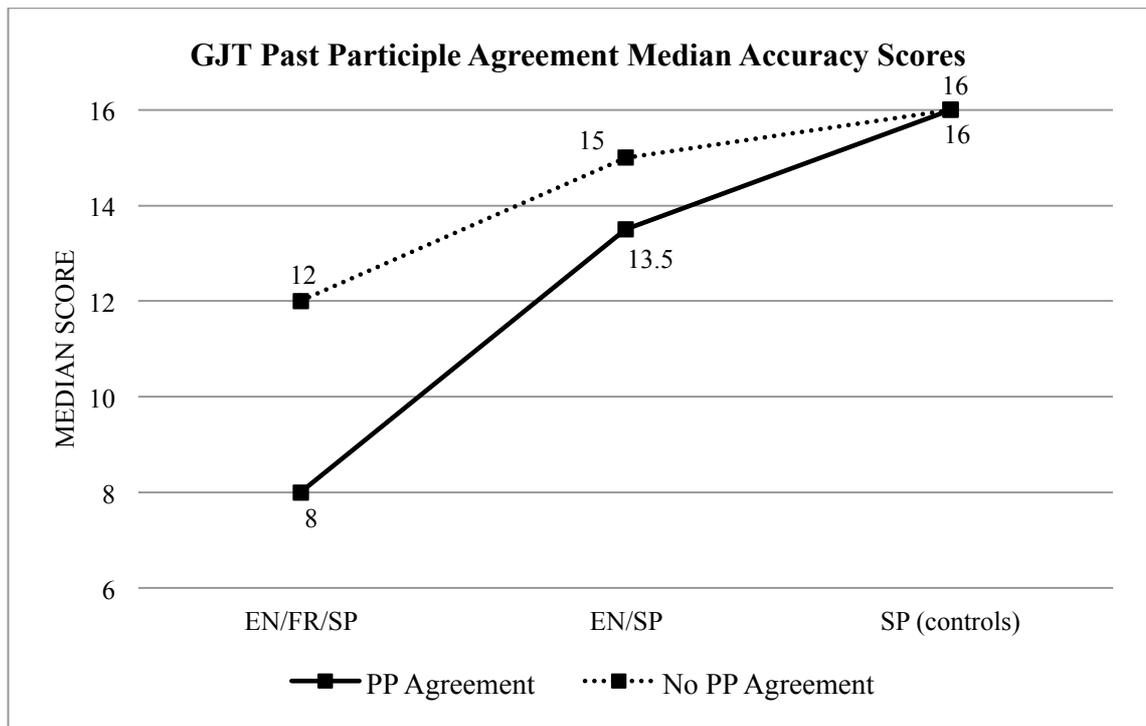


Figure 4.6

So far, the raw data show that the EN/FR/SP Group rejected more grammatical Spanish sentences with no PP Agreement ([nonagr]) than the EN/SP Group and SP controls and accepted far more ungrammatical sentences with PP Agreement ([agr]) – reflecting the French morphosyntactic feature – than the EN/SP Group and SP controls. The following two sections present the statistical findings of these results in order to add to the evidence from the clitic placement study and answer the research question outlined in Section 4.1.1 above.

#### 4.1.1.2.1.1 Grammatical (No PP agreement)

A Kruskal-Wallis test was run to determine whether there were differences in the accuracy score between the EN/FR/SP and EN/SP Groups and the Spanish-speaking control group. The score was statistically significantly different between all three groups,  $\chi^2(2) = 11.432, p < .003$ . *Post-hoc* analysis revealed statistically significant differences in the accuracy score between the EN/FR/SP Group ( $Mdn = 12$ ) and SP controls ( $Mdn = 16$ ) ( $p < .002$ ), but not between the EN/FR/SP Group and EN/SP Group ( $Mdn = 15$ ) ( $p = .597$ ), nor between the EN/SP Group and the SP controls ( $p = .231$ ). In

other words, as with the grammatical Spanish word order in the clitic placement study, the two experimental groups behaved similarly to each other and the EN/FR/SP Group behaved differently from the SP controls at a statistically significant level.

#### *4.1.1.2.1.2 Ungrammatical (PP agreement)*

A Kruskal-Wallis test was run to determine whether there were differences in the accuracy score between the EN/FR/SP and EN/SP Groups and the Spanish-speaking control group. The score was statistically significantly different between all three groups,  $\chi^2(2) = 40.11, p < .001$ . *Post-hoc* analysis revealed statistically significant differences in the accuracy score between the EN/FR/SP Group (*Mdn* = 8) and EN/SP Group (*Mdn* = 13.5) and between the EN/FR/SP Group and SP controls (*Mdn* = 16) ( $p = .001$ ), but not between the EN/SP Group and SP controls ( $p = .156$ ). In other words, as with the ungrammatical Spanish sentences reflecting French pronoun word order in the clitic placement study, the two experimental groups behaved differently at a statistically significant level.

#### *4.1.1.2.2 Translation Task*

The TT was completed by the two experimental groups (EN/FR/SP and EN/SP) in the same session as the previous tasks. Participants were required to translate a total of 16 sentences, from English into Spanish replicating those presented in the GJT requiring a past participle agreement in French, as in the examples below:

- (a) They have arrived.
- (b) She has left.

In terms of scoring, the same method was used as for the GJT as follows:

- (1) For the production of a grammatical Spanish sentence with no past participle agreement ([nonagr]);
- (2) For the production of an ungrammatical Spanish sentence replicating French past participle agreement ([agr]);
- (3) Incomplete or invalid response.

In other words, (1) represented an accurate response (“No PP agreement”) and (2) an inaccurate response (“PP agreement”).

As a first step in presenting the results of the TT for the past participle study, a summary of the raw data is provided in table 4.4 below, showing the accurate (1), inaccurate (2) and incomplete or invalid (3) response rate per token and percentage for the 16 sentences presented to the two groups (see Appendix 4):

<b>Translation Task Scores - Past Participle Agreement</b>									
		1		2		3		TOTALS	
<b>Group</b>	N	Tokens	%	Tokens	%	Tokens	%	Tokens	%
<b>EN/FR/SP</b>	28	313	70	102	23	33	7	448	100
<b>EN/SP</b>	22	314	89	0	0	38	11	352	100

*1 = accurate response; 2 = inaccurate response; 3 = incomplete or invalid response*

Table 4.4

From this raw data, the pattern of lateral transfer highlighted in the clitic placement study and in the GJT task of this study is clearly in evidence in the TT too, with the EN/SP group, as expected, producing no incidence of past participle agreement. This is presented visually in figure 4.7 below:

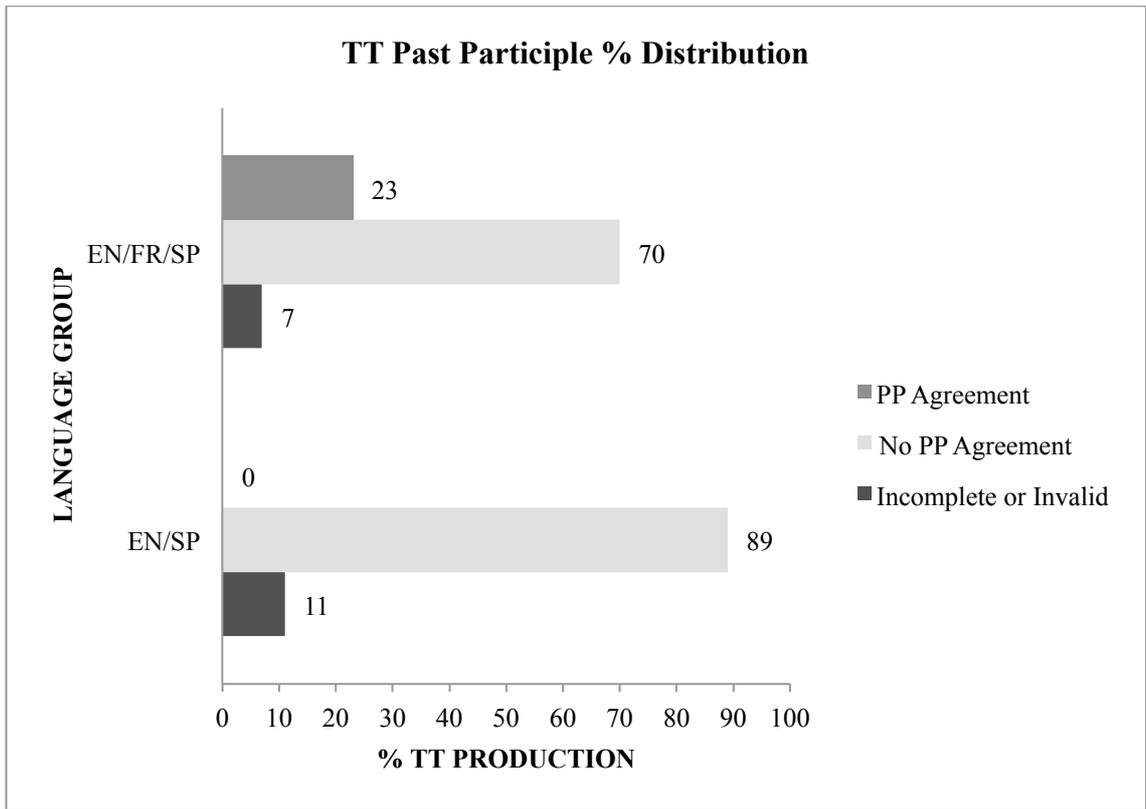


Figure 4.7

Before moving on, let us first consider the TT median scores for past participle agreement produced by the two groups in figure 4.8 below, as a first step in presenting the statistical analyses.

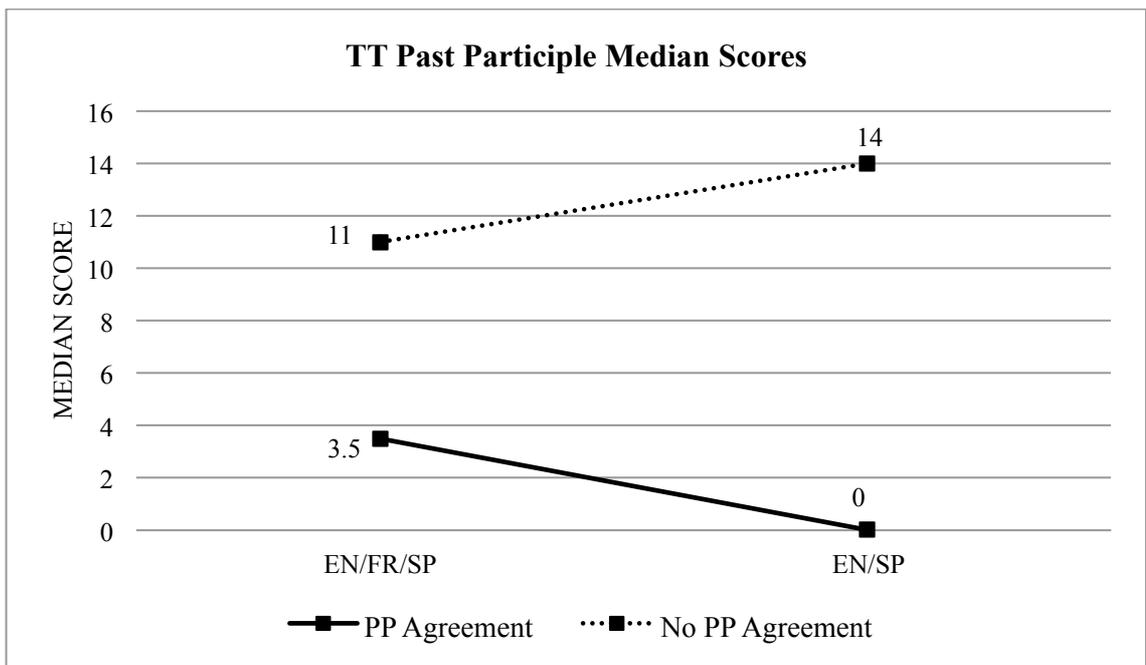


Figure 4.8

It was revealed in the TT median scores of the previous study of clitic placement (figure 4.4) that the difference in performance between the EN/FR/SP Group and EN/SP Group was striking in producing a strong, lateral syntactic transfer effect, indeed the EN/FR/SP Group's median score for producing sentences reflecting French word order was higher ( $Mdn = 8.5$ ) than that of those produced reflecting Spanish word order ( $Mdn = 5.5$ ). With the TT past participle median score, however, the difference was less striking as figure 4.8 above reveals, with the EN/FR/SP Group's median scores for no past participle agreement ( $Mdn = 11$ ) and past participle agreement ( $Mdn = 3.5$ ) indicating a weaker lateral morphosyntactic transfer effect.

The following two sections present the statistical findings of the TT results in order to build on the evidence gathered far in answering the original research question outlined in Section 4.1.1 above.

#### *4.1.1.2.2.1 Grammatical (No PP agreement)*

A Mann-Whitney test was run to determine whether there were differences in the score for grammatical Spanish sentences produced with no past participle agreement (1) by the EN/FR/SP and EN/SP Groups. The score was statistically significantly different,  $U = 510$ ,  $z = 3.99$ ,  $p < .001$ .

#### *4.1.1.2.2.2 Ungrammatical (PP agreement)*

A Mann-Whitney test was run to determine whether there were differences in the score for ungrammatical Spanish sentences produced replicating French past participle agreement (2) between the EN/FR/SP and EN/SP Groups. Again, the score was statistically significantly different,  $U = 44$ ,  $z = -5.57$ ,  $p < .001$ .

#### 4.1.1.2.2.3 Invalid or Incomplete responses

A Mann-Whitney test revealed no statistically significant differences in the two groups' scores where responses to the TT were either invalid or incomplete,  $U = 364$ ,  $z = 1.17$ ,  $p = .239$ .

#### 4.1.1.3 Intra- and inter-test relationships

In addition to the results of the two studies of (morpho)syntactic lateral transfer outlined above, we now address the relationships between the EN/FR/SP Group's performance both within and across the GJT and TT. A Spearman's rank-order correlation was run to assess the relationship between the participants' score (2) for accepting and producing ungrammatical Spanish sentences that reflected the (morpho)syntactic features of French tested.

The results revealed a moderately strong positive correlation between the group's performance on the GJT in accepting French clitic placement and past participle agreement,  $\rho (26) = .425$ ,  $p < .024$ . Regarding the relationship between recognition and production, there was a strong positive correlation between the group's GJT and TT scores for clitic placement,  $\rho (26) = .673$ ,  $p < .001$ , but a non-significant negative correlation for past participle agreement  $\rho (26) = -.074$ ,  $p = .708$ .

#### 4.1.1.4 Summary of findings

Let us now bring together the results of the two studies and summarise the statistical findings. A reminder that the first study, examining the extent of lateral syntactic transfer, focused on object clitic placement; the second study, examining morphosyntactic transfer addressed perfect tense past participle agreement. As both studies tested (morpho)syntactic features of French, it was hypothesized that L1 English participants with knowledge of French (the EN/FR/SP Group;  $n = 28$ ) would perform less accurately than both those with no knowledge of French (the EN/SP Group;  $n = 22$ )

and the native Spanish speaking controls (the SP Group;  $n = 36$ ); it was also hypothesized that the EN/SP group would perform similarly to the SP controls and that the experimental groups' performance on the TT would match that of the GJT. Participants completed two tasks for each study – a Grammaticality Judgment Task (GJT) and a Translation Task (TT). In order to test the hypotheses, participants were presented with 16 grammatical Spanish tokens and 16 ungrammatical Spanish tokens in the GJT for both the clitic placement and past participle agreement studies and were scored on the basis of accurate (1), inaccurate (2) and unsure (3) responses; the TT for each study consisted of 16 sentences for translation from English to Spanish, replicating the tokens presented in the GJT and were scored similarly, i.e. accurate (1), inaccurate (2) and incomplete or invalid (3).

Let us now summarize the results by test type, first the GJT for the clitic placement and past participle agreement studies, following by the TT task for both studies.

#### ***4.1.1.4.1 GJT results – Clitic placement and past participle agreement studies***

Figure 4.9 below visually summarizes the GJT median accuracy scores for the clitic placement and past participle agreement studies:

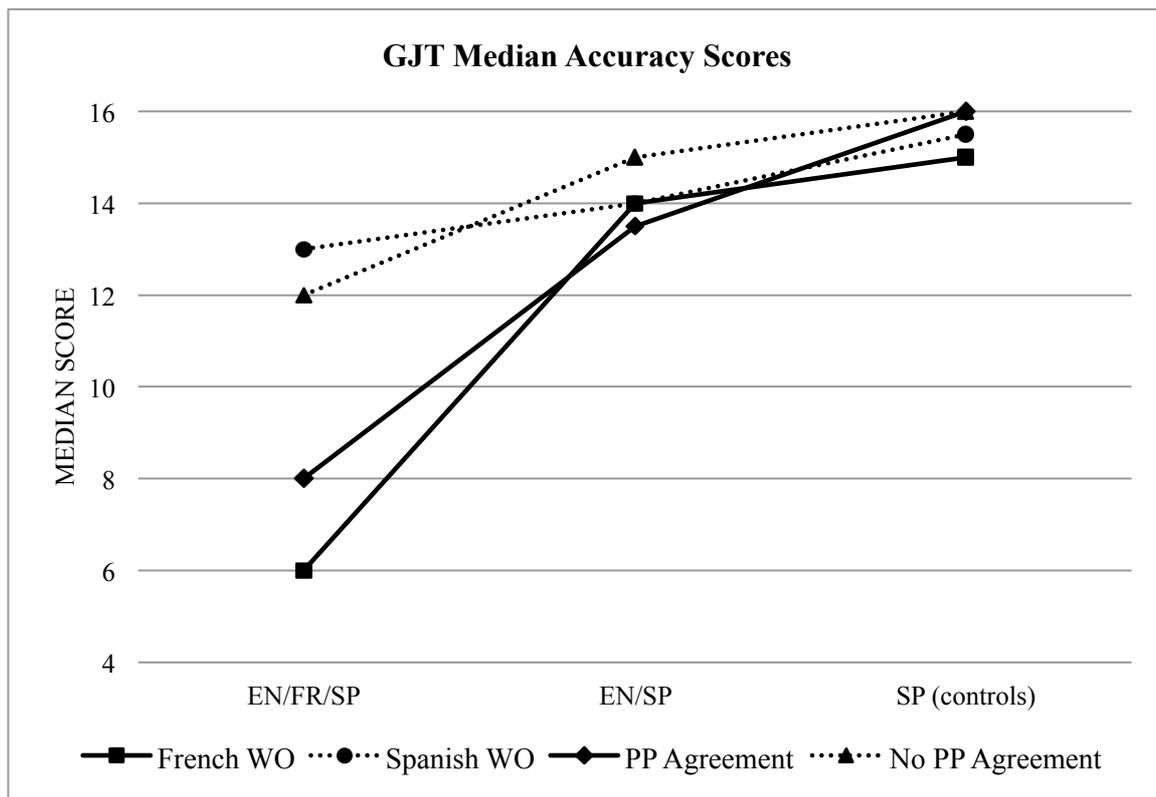


Figure 4.9

Figure 4.9 shows a clear difference between the performance of the EN/FR/SP Group and the EN/SP Group where lateral (morpho)syntactic transfer is possible (French WO and PP Agreement respectively); this difference proved to be highly statistically significant for both French WO ( $p < .001$ ) and PP Agreement ( $p < .001$ ) as hypothesized. Likewise, it was found that the EN/SP Group performed similarly to the Spanish speaking controls at a statistically significant level for both French WO ( $p = .115$ ) and PP Agreement ( $p = .156$ ), also as hypothesized. Furthermore, there was no statistically significant difference between the EN/FR/SP and EN/SP Groups' assessment of grammatically accurate Spanish sentences, either for Spanish WO ( $p = .649$ ) or No PP Agreement ( $p = .597$ ), again as hypothesized.

In short, instructed L1 English learners with knowledge of French performed significantly less accurately than participants with no knowledge of French in assessing (morpho)syntactic features that allowed for lateral transfer, but there was no significant

difference in their assessment of grammatically accurate Spanish sentences. We turn now to a summary of the TT scores for both studies.

#### 4.1.1.4.2 TT results – Clitic placement and past participle agreement studies

Figure 4.10 below visually summarizes the TT median accuracy scores for the clitic placement and past participle agreement studies:

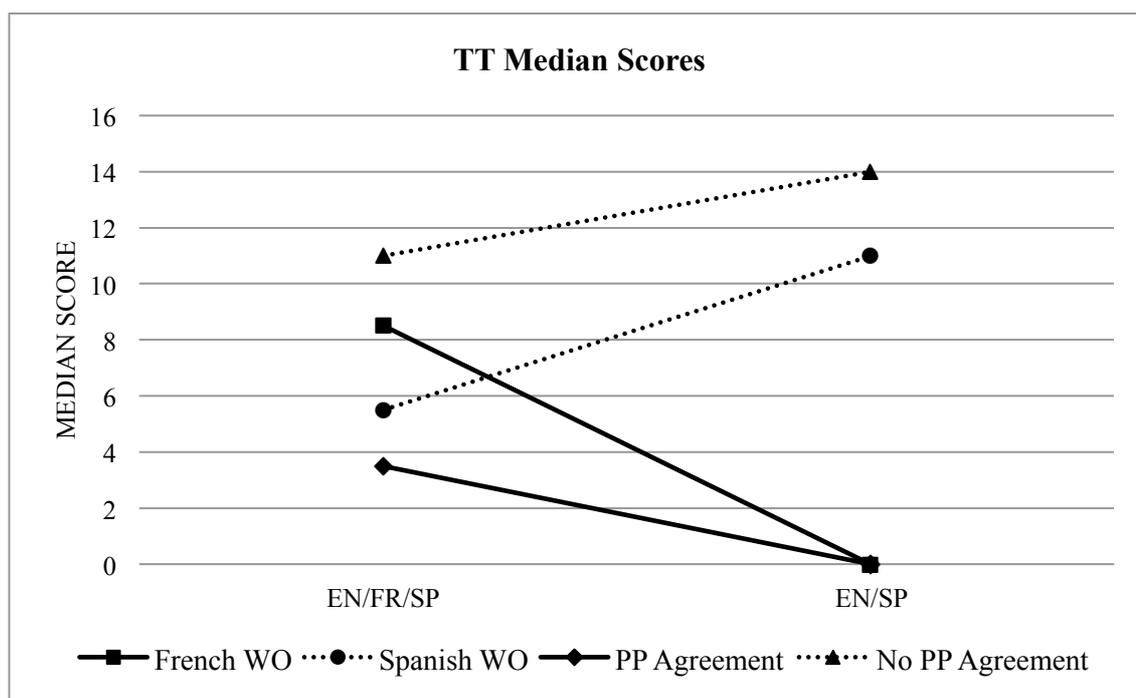


Figure 4.10

Figure 4.10 shows a less pronounced effect compared with the GJT results for both studies, although similar directionality and, as expected, a 0 median score for the EN/SP Group in producing sentences that reflected French word order or those with perfect tense past participle agreement, given that these (morpho)syntactic features would only be reproduced with prior knowledge of French. The difference in the production of sentences reflecting French word order between the EN/FR/SP Group and the EN/SP Group was highly significant ( $p < .001$ ); the difference in the production of sentences reflecting perfect tense past participle agreement was, as expected, highly significant too ( $p < .001$ ). This, therefore, confirmed the presence of lateral (morpho)syntactic transfer in line with the results of the GJT as hypothesized. However,

in terms of production of grammatically accurate sentences reflecting Spanish WO in the clitic placement study and No PP Agreement in the past participle agreement study, the TT results revealed that the two groups behaved significantly differently in producing grammatically accurate sentences with Spanish WO ( $p < .001$ ) and No PP Agreement ( $p < .001$ ).

In short, L1 English learners with knowledge of French performed significantly less accurately than participants with no knowledge of French in their production of (morpho)syntactic features that allowed for lateral transfer, corresponding to the GJT scores. Furthermore, in contrast to the GJT results, the EN/FR/SP Group also performed significantly less accurately than the EN/SP Group in the production of grammatical Spanish sentences.

We now return to the hypotheses for RQ1(a) outlined in section 4.1.1 above:

1. The first hypothesis was confirmed: there was no significant difference in the experimental groups' assessment of grammatically accurate Spanish sentences either on the clitic placement GJT or on the past participle agreement GJT;
2. The second hypothesis was confirmed: the EN/FR/SP Group performed significantly less accurately than the EN/SP Group on both GJTs and TTs on sentences reflecting the (morpho)syntactic features of French tested; the EN/SP Group did not differ from the Spanish-speaking controls on either the clitic placement GJT or on the past participle agreement GJT;
3. The third hypothesis was part confirmed: there was a significant positive correlation between the EN/FR/SP Group's performance on the GJTs and the TTs in accepting and producing the (morpho)syntactic features of French tested on the clitic placement study, but a weak correlation on the past participle study.

So to answer research question RQ1(a) set out in section 4.1.1 above, we can confirm that lateral (morpho)syntactic transfer exists among instructed L1 English learners of Spanish with L2 French for both clitic placement and past participle agreement, with clitic placement the stronger feature overall.

We now turn to the results of second part of the first research question that addresses positive lateral transfer.

#### ***4.1.2 Can lateral syntactic transfer be positive as well as negative? RQ1(b)***

RQ1(a) addressed lateral (morpho)syntactic transfer and it was found to be present among L1 English learners of Spanish with L2 French. In other words, participants with knowledge of French transferred (morpho)syntactic features from their L2 French into Spanish, both at the level of recognition in the GJTs and also when translating sentences replicating the GJT tokens in the two TTs, both tasks at highly significant levels. This was a result of the participants' acceptance and production of erroneous non target-like forms, producing a negative transfer effect. Clearly, the fact that non target-like forms are produced means that identifying negative lateral transfer is straightforward. However, if we are to identify examples of positive lateral transfer at the level of syntax, we need to investigate further, which is the focus of RQ1(b). Having established the extent of lateral (morpho)syntactic transfer in the two studies of object clitic placement and past participle agreement respectively, we now turn to the results of our study of adverbial placement in order to answer RQ1(b).

As outlined in Chapter 3, this question examined the nature of adverbial placement, specifically adverbs of manner. In this section, the results are presented for both the GJT and TT by adverbial placement category, followed by a summary of findings in section 4.1.2.3. Let us first restate the four hypotheses in relation to this question:

1. The experimental groups will not differ from each other in their assessment of grammatically accurate Spanish sentences on the GJT;
2. The EN/FR/SP Group will perform more accurately than the EN/SP Group on the GJT in rejecting non target-like forms reflecting English adverbial placement;
3. The EN/FR/SP Group will also perform more accurately than the EN/SP Group in producing target-like forms on the TT reflecting Spanish and French adverbial placement.
4. The EN/FR/SP Group's performance on the GJTs will match that of the TT.

#### 4.1.2.1 Adverbial placement – Adverbs of manner

A reminder that the Spanish adverbs of manner tested were divided into two categories – Spanish/French word order [s v adv o] and English word order [s v o adv] – as in the following examples:

(a) Mi padre        toca        **mal**        el piano  
 My father<sub>SUB</sub>    play (3SG) V    bad<sub>ADV</sub>    the piano<sub>OBJ</sub>  
 ‘My father plays the piano badly’

(b) \*Mi hermano    no comprende                    la física        **bien**  
 My brother<sub>SUB</sub>    understand (3SG) V.NEG        Physics<sub>OBJ</sub>        well<sub>ADV</sub>  
 ‘My brother doesn’t understand Physics well’

These categories can be summarized as follows:

- (a) SP/FR Word Order [s v adv o] (Grammatical Spanish and French; ungrammatical English);
- (b) EN Word Order [s v o adv] (Grammatical English; ungrammatical Spanish and French).

#### 4.1.2.1.1 Grammaticality Judgment Task

As with the clitic placement and past participle studies, participants were scored as follows based on acceptance and rejection of the tokens presented:

- (1) For *accepting* a grammatical Spanish sentence as grammatical ([s v adv o]) or *rejecting* an ungrammatical sentence as ungrammatical, i.e. English word order ([s v o adv]);
- (2) For *rejecting* a grammatical Spanish sentence as grammatical or *accepting* an ungrammatical sentence as ungrammatical;
- (3) For “unsure”.

In other words, (1) represented an accurate response and (2) an inaccurate response.

As a first step in presenting the results of the GJT for the adverbial placement study, a summary of the raw data is provided in tables 4.5a and 4.5b below, showing the accurate (1), inaccurate (2) and unsure (3) response rate per token and percentage for both grammatically correct and incorrect Spanish word order for the 8 sentences presented to each group (see Appendix 3):

Grammatical Spanish (Spanish and French Word Order)									
Group	N	Score						TOTALS	
		1		2		3		Tokens	%
		Tokens	%	Tokens	%	Tokens	%	Tokens	%
<b>EN/FR/SP</b>	28	170	76	35	16	19	9	224	100
<b>EN/SP</b>	22	127	72	33	19	16	9	176	100
<b>SP (controls)</b>	36	245	85	18	6	25	9	288	100

*1 = accurate response; 2 = inaccurate response; 3 = unsure*

Table 4.5a

Ungrammatical Spanish (English Word Order)									
Group	N	Score						TOTALS	
		1		2		3		Tokens	%
EN/FR/SP	28	163	73	40	18	21	9	224	100
EN/SP	22	95	54	65	37	16	9	176	100
SP (controls)	36	247	86	26	9	15	5	288	100

1 = accurate response; 2 = inaccurate response; 3 = unsure

Table 4.5b

Table 4.5a shows that the EN/FR/SP Group produced slightly more accurate responses than the EN/SP Group on the Spanish and French Word Order category (170/224 tokens, 76% and 127/176 tokens, 72% respectively); table 4.5b shows that in assessing ungrammatical Spanish sentences reflecting English word order, the EN/FR/ES Group were far more accurate than the EN/SP Group (163/224 tokens, 73% and 95/176 tokens, 54% respectively). This information is presented visually in figure 4.11 below:

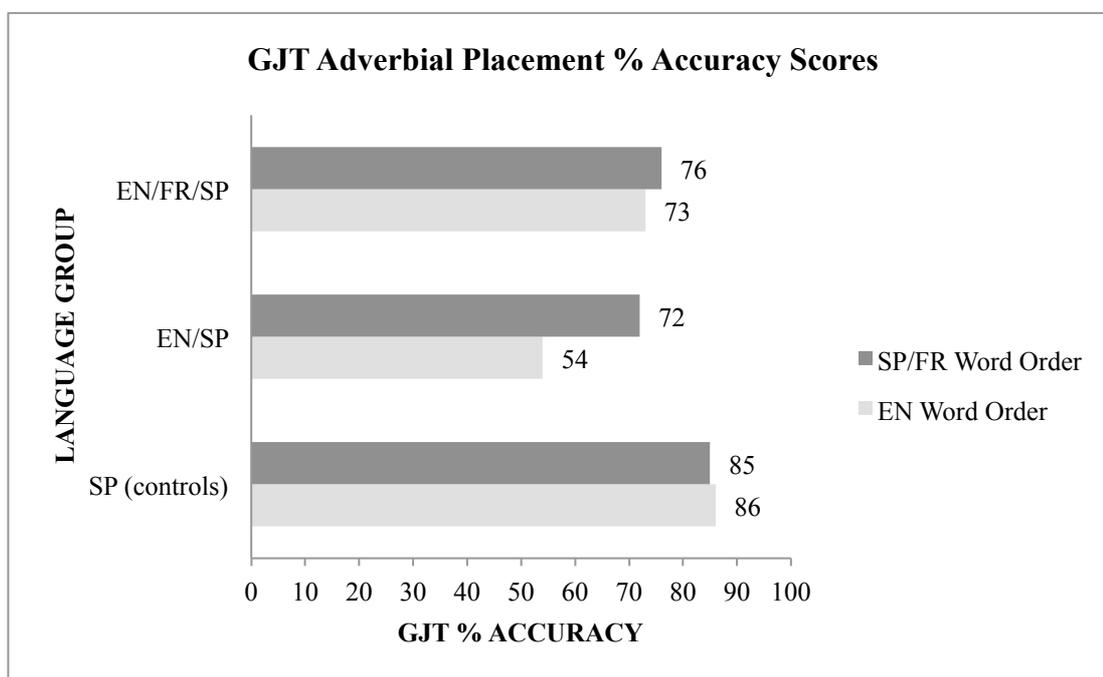


Figure 4.11

Before looking beyond the raw data and to prepare the ground for presenting the inferential statistics for the two adverbial placement categories, the GJT median accuracy scores are shown in figure 4.12, the most obvious deviation from the pattern

being that of the EN/SP group in accurately assessing sentences reflecting English word order:

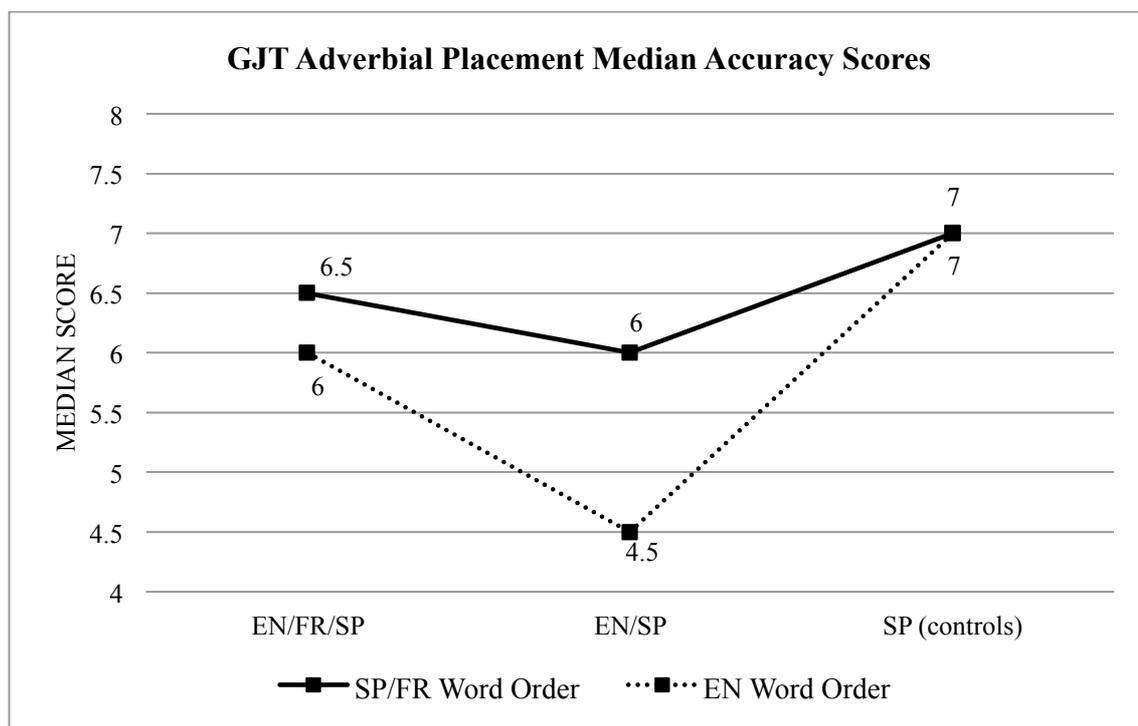


Figure 4.12

So far, the raw data show that the EN/FR/SP Group performed slightly more accurately than the EN/SP Group in correctly identifying grammatical Spanish sentences that reflected both French and Spanish word order with adverbs of manner ([s v adv o]). In assessing ungrammatical Spanish sentences reflecting English word order ([s v o adv]), however, the EN/FR/SP Group performed far more accurately than the EN/SP Group. The Spanish-speaking control group's median scores were identical for the two categories tested, which provides a useful point of reference.

The following two sections present the statistical findings of these results in order to establish some of the evidence required to answer the research question outlined in Section 4.1.2 above.

#### 4.1.2.1.1.1 Grammatical Spanish: Spanish and French word order

A Kruskal-Wallis test was run to determine whether there were differences in the accuracy score between the EN/FR/SP and EN/SP Groups and the Spanish-speaking

control group. The score was significantly different between all three groups,  $\chi^2(2) = 6.40, p < .041$ . *Post-hoc* analysis revealed statistically significant differences in the accuracy score between the EN/SP Group (*Mdn* = 6) and SP controls (*Mdn* = 7) ( $p = .038$ ) but not between the EN/FR/SP (*Mdn* = 6.5) and EN/SP Groups ( $p = .789$ ) nor between the EN/FR/SP Group and SP controls ( $p = .468$ ). In other words, the two experimental groups behaved similarly to each other, as did the EN/FR/SP Group and SP controls, but there were statistically significant differences between the performance of the EN/SP Group and the Spanish-speaking controls.

#### *4.1.2.1.1.2 Ungrammatical Spanish: English word order*

A Kruskal-Wallis test was run to determine whether there were differences in the accuracy score between the EN/FR/SP and EN/SP Groups and the Spanish-speaking control group. The score was significantly different between all three groups,  $\chi^2(2) = 34.22, p < .001$ . *Post-hoc* analysis revealed significant differences in the accuracy score between all three groups: EN/FR/SP (*Mdn* = 6) and EN/SP (*Mdn* = 4.5) ( $p < .006$ ), EN/FR/SP and SP controls (*Mdn* = 7) ( $p < .018$ ) and EN/SP and SP controls ( $p < .001$ ).

#### *4.1.2.1.2 Translation Task*

The TT was completed by the two experimental groups (EN/FR/SP and EN/SP) in the same session as the previous tasks. Participants were required to translate a total of 8 sentences from English into Spanish, replicating those presented in the GJT as in the examples below:

- (a) He plays football well.
- (b) She plays the guitar badly.

In terms of scoring, the same method was used as for the GJT as follows:

- (1) For the production of a grammatical Spanish sentence in terms of correct adverbial placement ([s v adv o]);
- (2) For the production of an ungrammatical Spanish sentence replicating English adverbial placement ([s v o adv]);
- (3) Incomplete or invalid response.

In other words, (1) represented an accurate response (“Spanish and French Word Order”) and (2) an inaccurate response (“English Word Order”).

As a first step in presenting the results of the TT for the adverbial placement study, a summary of the raw data is provided in table 4.6 below, showing the accurate (1), inaccurate (2) and incomplete or invalid (3) response rate per token and percentage for the 8 sentences presented to the two groups (see Appendix 4):

Translation Task Scores - Adverbial Placement									
		1		2		3		TOTALS	
Group	N	Tokens	%	Tokens	%	Tokens	%	Tokens	%
EN/FR/SP	28	176	79	39	17	9	4	224	100
EN/SP	22	103	59	56	32	17	10	176	100

*1 = accurate response; 2 = inaccurate response; 3 = incomplete or invalid response*

Table 4.6

The raw data presented in table 4.6 reveal that the EN/FR/SP Group produced far more accurate responses (1) reflecting French and Spanish word order (176/224 tokens, 79%) than the EN/SP Group (103/176 tokens, 59%). The EN/SP Group produced a greater percentage of inaccurate sentences (2) reflecting English word order (56/176 tokens, 32%) than the EN/FR/SP Group (39/224 tokens, 17%). The TT scores are presented visually in figure 4.13 below:

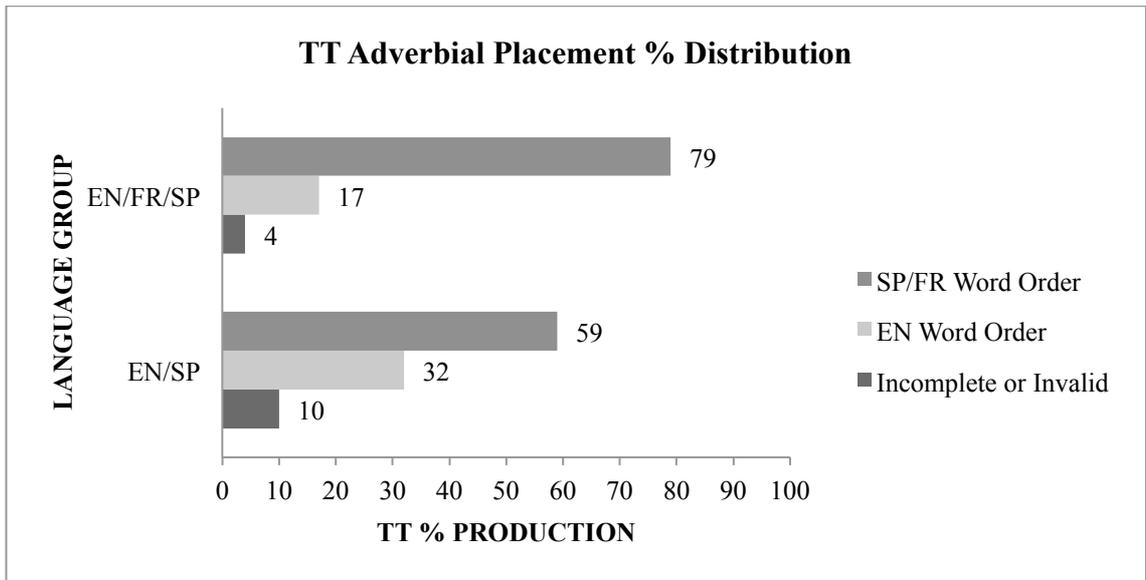


Figure 4.13

Before moving on, let us first consider the TT median scores for adverbial placement produced by the two groups in figure 4.14 below, as a first step in presenting the statistical analyses.

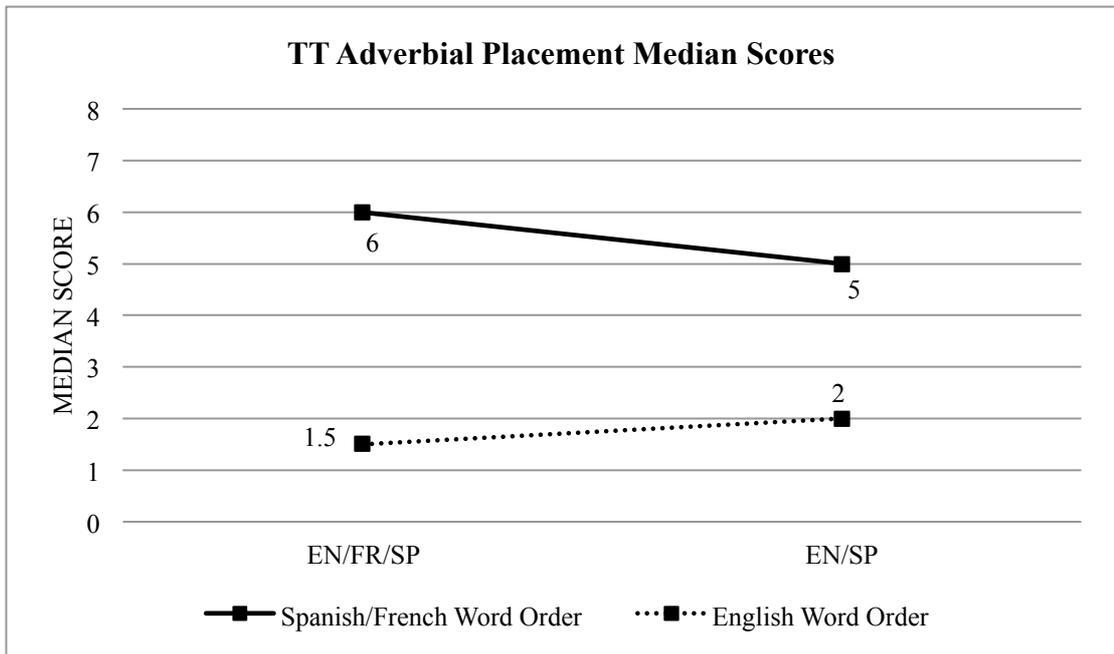


Figure 4.14

So far, we have seen from the raw data that the EN/FR/SP Group performed more accurately than the EN/SP Group in producing grammatical sentences reflecting Spanish and French adverbial placement ([s v adv o]) and ungrammatical sentences reflecting English word order ([s v o adv]). The following two sections present the

statistical findings of the TT results in order to build on the evidence gathered from the GJT in order to answer the research question outlined in Section 4.1.2 above.

#### *4.1.2.1.2.1 Grammatical Spanish: Spanish and French word order*

A Mann-Whitney test was run to determine whether there were differences in the score for grammatical Spanish sentences produced with Spanish and French adverbial placement (1) by the EN/FR/SP and EN/SP Groups. The score was statistically significant:  $U = 110, z = -3.97, p < .001$ .

#### *4.1.2.1.2.2 Ungrammatical Spanish: English word order*

A Mann-Whitney test was run to determine whether there were differences in the score for ungrammatical Spanish sentences produced with English word order (2) by the EN/FR/SP and EN/SP Groups. Again, the score was statistically significant:  $U = 453, z = 2.93, p < .003$ .

#### *4.1.2.1.2.3 Invalid or Incomplete responses*

A Mann-Whitney test revealed no statistically significant differences in the two groups' scores where responses to the TT were either invalid or incomplete,  $U = 385, z = 1.82, p = .068$ .

### **4.1.2.2 GJT – TT correlations**

A Spearman's rank-order correlation was run to assess the relationship between the EN/FR/SP Group's score (1) for accepting (GJT) and producing (TT) grammatical Spanish sentences that reflected French word order with the adverbs of manner tested. The results revealed a moderately strong and statistically significant positive correlation,  $\rho(26) = .447, p < .017$ .

#### 4.1.2.3 Summary of findings

A reminder that the study of adverbial placement specifically tested a number of adverbs whose word order in Spanish matches that of French in declarative sentences ([s v adv o]), but not that of English ([s v o adv]). It was hypothesized that L1 English participants with knowledge of French (the EN/FR/SP Group; n = 28) would perform more accurately than those with no knowledge of French (the EN/SP Group; n = 22) in producing target-like forms on the TT, resulting in positive lateral syntactic transfer. Given that grammatical Spanish sentences presented in the GJT would be recognizable as such by both experimental groups (regardless of prior knowledge of French), it was also hypothesized that the EN/FR/SP and EN/SP Groups would perform similarly on the GJT in identifying grammatical Spanish sentences, but the former more accurately in identifying ungrammatical Spanish sentences that reflected English word order. As with the clitic placement and past participle agreement studies, participants completed two tasks – a Grammaticality Judgment Task (GJT) and a Translation Task (TT). In order to test the hypotheses, participants were presented with 8 grammatical Spanish tokens reflecting Spanish and French order with adverbial placement ([s v adv o]) and 8 ungrammatical Spanish tokens reflecting English word order with adverbial placement ([s v o adv]) in the GJT and were scored on the basis of accurate (1), inaccurate (2) and unsure (3) responses; the TT consisted of 8 sentences for translation from English to Spanish, replicating the tokens presented in the GJT and were scored similarly, i.e. accurate (1), inaccurate (2) and incomplete or invalid (3).

Data from the GJT did not reveal significant differences between the performance of the EN/FR/SP and EN/SP Groups in identifying grammatical Spanish sentences with both groups performing well (76% and 72% respectively), but in the production of grammatical Spanish sentences in the TT, the difference between the two groups was highly significant and the EN/FR/SP Group performed far more accurately

than the EN/SP Group (79% and 59% respectively). The GJT revealed significant differences in the two groups' recognition scores of ungrammatical Spanish sentences replicating English word order with adverbs of manner, with the EN/FR/SP Group performing far more accurately than the EN/SP Group (73% and 54% respectively); this was reflected in the TT, which revealed significant differences between the two groups, with the EN/FR/SP Group producing just 17% of sentences with English word order, compared with the EN/SP Group's 32%.

In short, it was found that L1 English learners with prior knowledge of French performed more accurately – and at a statistically significant level – than L1 English participants with no knowledge of French when producing grammatical Spanish sentences that reflected Spanish and French word order with the adverbs of manner tested, as hypothesized; data from the GJT also revealed, as hypothesized, that the EN/FR/SP and EN/SP Groups performed similarly in identifying grammatical Spanish sentences, but the former significantly more accurately in identifying ungrammatical Spanish sentences that reflected English word order.

We now return to the hypotheses for RQ1(b) outlined in section 4.1.2 above:

1. The first hypothesis was confirmed: there was no significant difference in the experimental groups' assessment of grammatically accurate Spanish sentences on the GJT;
2. The second hypothesis was confirmed: the EN/FR/SP Group performed significantly more accurately than the EN/SP group on the GJT in rejecting more non target-like forms reflecting English adverbial placement;
3. The third hypothesis was confirmed: the EN/FR/SP Group performed significantly more accurately than the EN/SP Group in producing target-like forms on the TT reflecting Spanish and French adverbial placement;

4. The fourth hypothesis was confirmed: a significant positive correlation emerged between the EN/SP/FR Group's performance on the GJT and TT reflecting Spanish and French word order with the adverbs of manner tested.

So to answer research question RQ1(b) set out in section 4.1.2 above, we can confirm that lateral syntactic transfer can be positive as well as negative, as evidenced by the enhanced performance of the EN/FR/SP Group over the EN/SP Group in both recognising and producing grammatically accurate Spanish sentences that also reflect French word order.

#### **4.2 Interview Results**

Whereas the focus of the web questionnaires was on providing evidence and statistical significance of lateral (morpho)syntactic transfer, the semi-structured interviews were conducted in order to address individual foreign language learning experiences and strategies, as highlighted by Hufeisen in the *factor model* of L3 learning (Hufeisen & Marx, 2007).

The web questionnaire results showed that lateral transfer can be both negative (clitic placement and past participle agreement) and positive (adverbial placement) among intermediate L1 English learners of L3 Spanish with L2 French. The interviews were conducted among more advanced L1 English learners of L3 Spanish with L2 French (n = 10), eliciting foreign language learning strategies in explaining ungrammatical sentences and discussing foreign language learning experiences and learners' psychotypology.

As outlined in Chapter 3, the interviews contained three sections: the first section, directly eliciting learner strategies and interlingual connections, contained three pairs of sentences for discussion, as shown in sentences 1- 3 below. The aim of the first section in the interviews was to engage the participants in an initial discussion of a

number of grammatical features, similar to those tested with intermediate learners in the quantitative study, in order to investigate the interlingual connections available to them.

1 (a) Las chicas han comidas.

1 (b) Las chicas han salido.

2 (a) ¿Puedes lo explicar?

2 (b) Quiero lo hacer mañana.

3 (a) ¿Juegas al tenis bien?

3 (b) Me gusta ir al cine y ver a mis amigos mucho.

There was one ‘distractor’ in that sentence 1(b) was grammatically accurate. The first and second pair of sentences (1 – 2) drew on tokens presented in the past participle and clitic placement studies respectively; the third pair of sentences (3) drew on tokens presented in the adverbial placement study.

The second and third sections were set aside for more open-ended discussions of prior language learning experiences in order to evaluate the learners’ foreign language learning experiences, at both a grammatical and general level, in essence moving from a categorical *etic* perspective to a broader *emic* perspective (e.g. Groom and Littlemore, 2011).

Drawing on the individual foreign language learning experiences and strategies highlighted by Hufeisen and Marx (2007), the interviews addressed two broad research questions, the results of which are presented in turn in the following sections.

#### **4.2.1 How do learners make interlingual connections, compare and transfer?**

##### **RQ2(a)**

As outlined in 4.2 above, ten advanced L1 English learners of Spanish with L2 French were asked to comment on the grammaticality of three pairs of sentences to elicit interlingual connections and comparisons with their L2 French.

As the interviews were semi-structured, the same information was presented to each of the ten participants, but the interviewer intervened as a little as possible, allowing the participants to speak freely without interruption, occasionally asking for an example, a translation or an explanation, depending on the individual participant and the interviewer's sense of how the conversation was progressing. Some of the key participants' responses are presented in the following three sections by grammatical category.

##### **4.2.1.1 Past participle agreement**

Participants were asked to comment in as much detail as possible on the grammaticality of the sentences, making reference to their knowledge of French where possible. Table 4.7 below presents the key findings from the discussion of past participle agreement, following the presentation of the two sentences to the participants.

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<b>Interlingual Connections – Past Participle Agreement</b>		
	<b>Sentence 1(a)</b> <b>Las chicas han comidas</b>	<b>Sentence 1(b)</b> <b>Las chicas han salido</b>
<b>S01_M</b>	[...] there is no agreement because there, in French, it agrees when it's feminine like this sentence, well not with all verbs of course, but there are – there are a group of verbs, but in Spanish there isn't.	[...] this sentence is right because it's feminine and in Spanish there is no agreement at the end so it's always an 'o', well, I mean, like, if it's regular, but, no, wait, it's always an 'o' I think.

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- S02\_F** Um, well, the first sentence is in the past tense, it's like the passé composé in French, um, it's an auxiliary verb and a past participle that is used in the formation of this tense.[...] it should be 'las chicas han comidas', no wait, that's what it says, um, I mean 'las chicas han comido' because it doesn't – there's no, I don't know how to say it, um, there's no agreement in this sentence, I mean there should be no 'as', I mean it should end 'comido'.
- S03\_M** Well this is, er, it's like French because it's the, er, auxiliary and past participle it's the perfect tense. [...] it's 'comido' because 'comidas' doesn't agree, I mean 'comido' doesn't agree, it's not, I mean it's like French 'elle est', I dunno, 'elle est' er, 'sortie' and it needs, like, an 'e', an extra 'e', no I mean an 'e', just an 'e' on the end, er, because "she" is feminine.
- S04\_M** [...] in French, er, in French, it's, they, there are agreements with, er, with the past participles like, er, when it's a, er, one of the, those verbs with "être" and, er, well in Spanish there, er, there's like, er, only, only, er, one, er, yes, one er, auxiliary verb, like "han" in these, in those two sentences.
- S05\_F** Um, it's, er, the first one is, er, the first one, needs um, there's no, um, like, um, agreement? On the past participle? Um, so, yeah, it's, um, in, um, in French there is, like, an agreement, I mean, there sometimes, um, there can be, um, um, sometimes the past participle agrees with the, um, the, um, um, the, the, noun and I, um, I think in Spanish, um, this, um, um, doesn't, it doesn't happen. Um, yeah, that's, um, that's, like, it's correct in Spanish because, um, because there is, it, er, the past participle, um, there's no agreement on the past participle?
- S06\_M** Ok, er, well the first sentence is, um, 'Las chicas han comidas', so it, um, in Spanish this, there is, it, sorry! There shouldn't be an 'as' on the, er, on the past participle. In French there is, I mean there, er, sometimes the, er, there is an agreement with, er, the subject in French. Er, sentence 1(b), er, yeah, that looks good to me, it's what the other sentence should be because it ends, er, the past participle ends in an 'o'. Yeah, because if it's salir, like that sentence, then, then, er, then the French verb is, er, I mean like the same verb in French, I mean, like, 'to go out' in French is 'sortir' which is one of those, er, one of those verbs that is used with "être" and when there are, like, agreements with, er, with this tense, with the passé composé.
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<p><b>S08_M</b> OK, er, I know from, er, from French that the first sentence is er, like, er, the passé composé which, er, which is made up of an auxiliary verb and a, er, past participle. But, er, but in, er, Spanish there is, er, there is no, er, agreement in the, er, with the past participle so er, this, er, that first sentence is not right because, er, it, er, there can't be an 's' on the end of 'comidas'.</p>	<p>Er, the second sentence, er, is, well it's the same tenses, the, er, the perfect tense, like the passé composé in French but, er, yeah, well, this sentence is right, it's correct in Spanish because there's no agreement.</p>
<p><b>S09_F</b> Ok, well, um, I think, well in French there, um, it's the like passé composé that has, um, that has this, um, it's the same form, I mean, like, it's an auxiliary verb followed by a past participle but this, um, the first sentence is wrong because in Spanish this doesn't happen, er, there's no extra 's' but in French sometimes, I mean with some verbs there, they like agree?</p>	
<p><b>S10_M</b> Ok, so the first sentence means 'The girls have', er, 'have eaten them', except there's no 's' on 'comida', sorry I mean there's no 'as', it should be 'comido' that's like the past participle which doesn't agree in Spanish.</p>	<p>[...] the second sentence is, er, is 'The girls have gone out' and that's er, yeah, that one's good, because 'salido' ends in a 'o' like the one above does, I mean doesn't but, like, it should.</p>

Table 4.7

The table shows that all participants were able to compare and contrast the grammatical forms of the present perfect tense in Spanish and French, through both example and use of grammatical terminology, demonstrating a high level of metalinguistic awareness and effective use of metalanguage.

#### 4.2.1.2 Clitic placement

Similarly to Section 4.2.1.1, participants were asked to comment in as much detail as possible on the grammaticality of the sentences, making reference to their knowledge of French where possible, including translating from Spanish to French if this was deemed helpful. Table 4.8 below presents the key findings from the discussion of clitic placement, following the presentation of the two sentences to the participants.

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**Interlingual Connections - Clitic Placement**

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	<b>Sentence 2(a)</b> <i>¿Puedes lo explicar?</i>	<b>Sentence 2(b)</b> <i>Quiero lo hacer mañana</i>
<b>S01_M</b>	[...] ‘¿puedes lo explicar?’, er, ‘tu veux’, no, wait, ‘puedes’, er, ‘tu peux’, yes, ‘tu peux’ ‘le ex’, no, ‘l’expliquer’, yes, ‘tu peux l’expliquer’. Oh right, I see, it’s like French, the, yes, Ok, I get it.	
<b>S03_M</b>		[...] Oh I see, er, yeah, it’s like – it’s French, I mean the ‘le’, I mean the ‘lo’ is, er, in Spanish it’s the – it’s where it is in French before the infinitive.
<b>S04_M</b>	[...] in French it’s, er, it’s, er, the, er, the, er, er, er, the oh, what’s it called?, er, the pronoun, the pronoun, the pronoun goes, er, no, wait, the pronoun, oh hang on, that’s, er, that is the French, er, that’s where it goes in French in those, in both those sentences, it’s like the, er, where the French pronoun, er, has to, has to go.	
<b>S06_M</b>	[...] ‘¿puedes lo explicar’ and, um, ‘tu peux l’expliquer? So, er, er, the, well, er, wait, in French, sorry, yeah, no, sorry, sorry, er, in Spanish the pronoun is joined to the infinitive at the end and the, er in French, er, the pronoun is, er, it’s, it comes before the infinitive.	
<b>S08_M</b>	[...] So, er, well the, er, the word order in er, in, er, both of these sentences is wrong because, er, because it should be, er, the pronoun ‘lo’ should come at the end of the infinitive, like with the present participle. I guess this is er, this like how it is in French? [...] So yeah, it’s like in French the pronoun, well here it’s an ‘l’ apostrophe of course because, er, because the next word, er, the infinitive begins with a vowel, but it’s the right word order, I mean these sentences are the right word order for French and not for Spanish. [...] Yeah, I mean the Spanish sentences there are like French with, er, because the pronoun is, er, in front, I mean it comes before the infinitive.	The second sentence would be, er, ‘Je veux le faire demain’. Yeah, so it’s like French.

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Table 4.8

The table shows that participants were able to translate accurately from Spanish to French as an interlingual identification strategy and then make appropriate comments on the position of the object pronoun in French, again using their knowledge of metalanguage and metalinguistic awareness, resulting in the production of a grammatically accurate sentence in Spanish.



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<p>Spanish the adverb is at, um, after the verb.</p> <p><b>S10_M</b></p>	<p>[...] OK, er, er, ‘Me gusta mucho ir al cine y ver a mis amigos’, er, yeah because, like, it’s always, er, in French you say, er, ‘J’aime beaucoup’ and not, like, ‘J’aime’, er, something then, like, with 'beaucoup' at the end.</p>
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Table 4.9

The table shows that a number of strategies were used in making interlingual connections: knowledge of metalanguage, metalinguistic awareness and lateral transfer. Of the ten participants interviewed, only one made no adjustment to the placement of the adverb of manner.

In summary, during the first section of the interviews, participants were presented with three pairs of sentences. The purpose was to encourage participants to make use of their L2 French when discussing strategies in identifying errors and making interlingual connections in order to answer RQ2a outlined in Section 4.2.1 above. The second half of the interviews comprised two sections, forming RQ2b, outlined in Section 4.2.2 below.

***4.2.2 How do learners benefit from prior language learning experiences?***

***RQ2(b)***

The first section of this part of the interviews addressed knowledge of L2 French, leading on from the discussions with participants of the three pairs of sentences; the second section addressed general foreign language learning experiences, which gave the participants an opportunity to discuss prior language learning and psychotypology. The results of these discussions are presented in Section 4.2.2.1 (knowledge of L2 French grammar) and Section 4.2.2.2 (General foreign language learning experiences) to which we now turn.

#### 4.2.2.1 Knowledge of L2 French grammar

We have seen in the results of the discussions presented above that L3 learners of Spanish made good use of their L2 French when analysing several ungrammatical Spanish sentences. The purpose of the first section of this part of the interviews was to broaden the discussion of L2 (morpho)syntactic effects and investigate the influence of other L2 grammatical properties affecting the participants' Spanish interlanguage. The key findings of these discussions are presented in table 4.10 below.

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<b>Knowledge of L2 French Grammar</b>	
<i>Positive experiences</i>	<i>Negative experiences</i>
<b>S01_M</b> [...] I'm not sure really, I suppose, like, when we did some thing on the subjunctive, we'd already, well, sort of covered that a bit in French too, I mean, yeah, it was, like, it was similar, you know, like, the same categories?	[...] I, er, sometimes get confused, like, you know the sentences with the agreements, yes, these two, because it's like I, er, when I'm writing it, er, I think it's got an 's' or an 'es' or something like that on the end, er, in Spanish I mean, and then I, like, say, like, it's - I mean, it's not the same as French.
<b>S02_F</b> S02: Ok it's the imperfect ending on the end of the future, no the conditional tense, I mean the imperfect endings are used to form the future, no the conditional tense. INT: In which language? S02: In French and Spanish.	
<b>S03_M</b> I've, yeah, got to, I mean, I've, like, er, learnt the same, er, stuff, in French before, er, I mean, when I started Spanish, I knew about all the, - I mean the tenses and stuff were quite similar, well, not similar, but, like, it's, er, easy to see some patterns and similarities. [...] when we did the, er, was it, imperfect, no, conditional tense in Spanish it was, like, you have to, like, use the imperfect endings to form it, which is, er, like, what happens - what you do in French. [...] the adverb goes with the verb, next to the verb, so it's like you, er, you have that, you know it's like you, er, like you learn in French. Actually, no I think, er, - I think I learnt that rule in Spanish first, I dunno, I'm not sure, I don't remember.	

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- S04\_M** [...] the subject pronouns, well, when, er, you write them out, or I mean learn the verbs, the verbs and endings and stuff with them, then I mean you, er, you, er, you recognise, like, you, er, you, er, you can see that, er, well like the French is often, I mean the Spanish ones are, er, like the French, you know the, like, forms.
- [...] When I, when we started learning, er, when we did, er, the, er, perfect tense in, er, in, er, Spanish I started, I got like confused with the, with the agreements and the, you know like in French there is, er, there are, like, two auxiliary verbs, like, er, “avoir” and “être” and, like, those, er, the ones with “être” like agree and stuff? Er well, like, I, er started, er, I kept on, er like, er that sentence, that sentence there, yeah, I kept on like putting on extra ‘o’s and ‘a’s when I was, er, when I was like doing written work, er, so, like, yeah, I guess it’s not always good but, and also like the, er, like the, er, er, you have like ‘usted’ in Spanish? And it’s like, it’s like the same as he and she, I mean that’s, that was new from French I guess.
- S05\_F** [...] when I’m like writing an essay or something like that in, um, in Spanish or and I’m often, um, thinking like is that, um, Spanish or is that French, or is that, I don’t know, or is that like – is it the same in like both languages? I think, so, yeah, I, think I do, I think about that sort of thing. I mean of course, you know, I mean I don’t, like, do, that sort, like, make that sort of, I mean, I don’t think about that when, um, if, you know in an oral class or something like that because I mean it’s, um, there’s I mean, you know, there’s no time is there?
- S06\_M** I mean there’s, like, lots of time when if you think of how the Spanish works or you, er, think of how the French works, then it’s like, I mean you’ve got a good chance of working out, like, how it works, in either, er, in either French or Spanish.
- S07\_F** [...] I’m thinking of, like, the formation of, um, the formation of the, um, the, um, conditional tense because it’s imperfect endings, um, the imperfect endings are used, um, in both languages, um, to form the conditional.
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<b>S08_M</b>	<p>[...] you have, er, you, er, learn, like, the passé composé in, like, French and you learn that, er, there are some verbs that, like, agree and use, like, ‘être’, er, instead of ‘avoir’ and then, like, you learn in Spanish that there are, like, the same, there’s a similar structure but, er, but the past participles don’t agree. So you, er, so you, like, make connections between, er, between the languages.</p> <p>[...] there are things like using ‘tu’ and ‘vous’ in French and in Spanish there’s ‘tú’ and ‘usted’ in Spanish so I guess that’s something, I mean, like, the idea of, um, informal and formal, um, ‘you’ forms would, um I think I, um, it probably helped me to, um, to understand the concept ...</p>	<p>[...] but then, um, I was confused because for ‘usted’ it’s, like, you use third person and, um, third person singular, and, um in French, it’s, like, it’s, um, um, different!</p>
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Table 4.10

The table shows that participants were able to move beyond a discussion of the specific sentences presented to them in the first part of the interviews towards a greater introspective account of L2 grammatical influences and interlingual connections, whether broadly positive (e.g. tense formation) or negative (e.g. past participle agreement) or both (e.g. T-V distinction). Importantly, the participants were conscious of the grammatical similarities and differences between the two languages and were able to express these clearly, which provided useful evidence in answering RQ2b outlined in Section 4.2.2 above.

In order to strengthen this evidence, a second and final section investigated more general foreign language learning experiences, to which we now turn.

#### *4.2.2.2 General foreign language learning experiences*

This discussion allowed participants to reflect on their prior foreign language learning experiences beyond the grammatical influences expressed in the previous section. Following the interviews, the responses were transcribed and labelled as “Prior Language Learning” and “Psychotypology”; these are presented in table 4.11 below.

*Prior Language Learning*

*Psychotypology*

**S01\_M** [...] it's like the same thing, you know, the vocab tests, all those vocab tests, and the grammar, you know the, like, conjugations and stuff you have to do at the start? [...] it doesn't have to be French I suppose, maybe it could be, like, I dunno, like, Russian or something [...] I mean it's the same thing isn't it? I mean, like, it's the vocab learning, the grammar, the, I dunno, I mean, it's, like, you're doing the same thing for both.

**S02\_F** I find it's, like, the same sort of learning, it's just a new, a different language and I mean it's, um, it's, you know, you have to learn the vocab and the tenses and, um, the, um, grammar, you know and it's similar, I mean it's not like I don't know, learning, um, Chemistry or something like that.

**S03\_M** [...] the techniques are, I mean it's – you've got to learn, like, vocab and numbers and, dates and things when you begin but I - it was, like, I mean, it was, I already knew, like, the, er, the things that are easy to do, to learn and the, like, more difficult things, like, you know, all the, er, all the, learning all the irregular verbs or something so it's easy, it's easier...

**S04\_M** [...] it's the, you have the same kind of, er, same kind of classes, and preps and stuff, so yeah, it's, I mean you, er, you sort of know what to expect. [...] I got used to learning vocab lists and I often, like, recognise words because they're like that in French and stuff like that and then er, I mean it's easy to learn new, er, new tenses because that's what, er, that's what, er, you, er, you have to do all the time in, er, when, er when, er, learning er, when learning another, er, a new language.

I think it's – it was easier for me with Spanish, I mean learning Spanish when, um - because it's, I mean they're quite similar aren't they.

- 
- S05\_F** [...] when I learnt, um, French we, um, we did, um, we had to do, like, lots of, um, learning of, um, grammar, and, um, like tenses and stuff and, um, like, lots of vocabulary learning? Like, um, lists of vocab, um, er, every week, so yeah, I guess that when I started, like, learning, um, learning Spanish I was, like, I've done this, these things before? And, um, so, yeah, it was, like, well, I mean it was different, but it was like, um, it was, like, similar at the same time I guess.
- S06\_M** [...] it's like you're doing the same sort of thing twice, like it's the same things to er, to learn, like, er, you begin with the, you know, like, the, same sort of things, like, you know, 'hello', 'goodbye', er, yeah, you know, like 'how are you', er, how many brothers or sisters do you have?'
- S07\_F** [...] when you, when I started Spanish, it, um, it was, like, not long since I'd done the same things in French so, um, I knew, like, how to go about, um, like, the same routines.
- [...] when you learn, like, numbers and, um, days of the week and months of the year, I mean, it's clearly an advantage knowing, um, knowing, like, French, first because I mean, like, they're not, like, I mean they're not identical obviously but, like, the French is closer to the Spanish so, like, it's, like, easier to learn new things in Spanish with, um, I mean like if you only had English first because they're, like, I mean English is, um, less, um, it's not so like Spanish as French I guess.
- S08\_M** I guess it just makes things er, I mean it, like, helps to know the, er, the, way the, er, the way things work in one language is, like, how they work in another. [...] you know how to, er, like in French you learn rules and those rules can, er, like, help with the, er, the rules of a new language.
- I liked translating the sentences from French to Spanish, I've never, like, thought about it but it's, well I guess it could be easier because, like, they're similar languages so, yeah, I think that, er, it must be useful because, like, well it's maybe, like, even easier than, er, than, er, translating from English because, like, yeah the, er, the, er, French and Spanish are pretty similar.
- S10\_M** I like got used to, er, to, er, learning, like, loads of vocab and I suppose I kind of, er, you know, er, developed a, er, a good technique because when, er, when I, er, started learning, er, Spanish, er, I found the, er, the vocab learning sort of aspect of the, er, the, I mean I found learning vocab quite easy [...] I'd er, sort of found the best way to, er, to learn vocab by, by the time I started Spanish.
- [...] because French and Spanish are, like, similar languages it's, er, I mean the things you have to er, the things you have to learn are, like, the same for both so if, like, I'd, er, I'd begun, er, Spanish with, er, without knowing, er, French then it would have, like, been, like, er, I mean it was, like, easier because of it, so yeah I guess, like, it's, er, it's, er, it, like, makes the, er, the whole learning thing easier.
-

Table 4.11

The table shows that all participants recognised the benefit of prior foreign language learning when embarking on another. Inevitably many referred to experiences of French (their only prior foreign language learning experience), but it was interesting to note that one participant felt that the specific prior language was less important than the nature of foreign language learning itself and that another drew a distinction between foreign language learning and other subjects in the curriculum. Three participants referred to a perceived similarity between French and Spanish in assisting their acquisition of the latter.

#### **4.2.3 Summary of findings**

Ten advanced learners of L3 Spanish with L2 French participated in the semi-structured interviews. The first section investigated learners' ability to make interlingual connections, compare and transfer (RQ2a). Three pairs of sentences were presented to participants to initiate a discussion but intervention on the part of the interviewer was kept to a minimum. All participants demonstrated a high level of metalinguistic awareness and effective use of metalanguage; many were able to make interlingual connections and translate effectively from L2 to L3. The second and third sections investigated how learners benefit from prior foreign language learning experiences (RQ2b). The second section addressed the question from the point of view of L2 grammatical knowledge and the third section focused on general foreign language learning experiences. The purpose of these two sections was to give the participants as much flexibility and opportunity to reflect as possible and intervention on the part of the interviewer was minimal. In the second section, discussing L2 French grammar, participants were aware of the grammatical similarities and differences between French and Spanish and were able to identify both positive and negative L2 effects. In the third

section, all participants recognised the benefit of prior foreign language learning and several put this down to a perceived similarity between L2 French and L3 Spanish.

We now turn to a more detailed discussion of these results, drawing on some of the theoretical considerations outlined in Chapter 2.

## **Chapter 5**

### **DISCUSSION OF RESULTS**

This chapter discusses the findings from the two separate studies outlined in Chapter 4. It is therefore divided into two corresponding sections: Section 5.1 addresses the results from the quantitative study conducted among intermediate learners of Spanish and Section 5.2 addresses the results from the qualitative study conducted among advanced learners of Spanish. Both expected and unexpected results are discussed throughout and suggestions for further research are proposed at the end of each section.

#### **5.1 The quantitative study**

The aim of the quantitative study was to investigate and provide evidence and statistical significance of both positive and negative influences of L2 French on L3 Spanish, testing a number of (morpho)syntactic features. Let us first remind ourselves of the make-up of the participants. The EN/FR/SP Group (n=28) were native English secondary school pupils with five years' instruction in French and two in Spanish; the EN/SP Group (n=22) were native English secondary school pupils with two years' instruction in Spanish and no prior knowledge of French. Participants completed two exercises via a web-based questionnaire: a Spanish Grammaticality Judgment Task (GJT) and an English to Spanish Translation Task (TT), based directly on tokens presented in the GJT. A number of monolingual participants from the Spanish-speaking world – the SP Group (n=36) – also completed the GJT.

Let us now discuss the results by research question (RQ) for the quantitative study. Section 5.1.1 is devoted to clitic placement and past participle agreement (RQ1a); Section 5.1.2 discusses adverbial placement (RQ1b).

### ***5.1.1 Can lateral transfer be identified in both syntactic and morphological features? RQ1(a)***

Three hypotheses were presented:

1. The EN/FR/SP Group and the EN/SP Group will not differ from each other in their assessment of grammatical Spanish sentences on the GJT;
2. The EN/FR/SP Group will perform less accurately than the EN/SP group on the GJT and TT in assessing and producing sentences that reflect the syntactic and morphological features of French tested (a result of negative lateral transfer); the EN/SP Group will perform similarly to the SP group on the GJT;
3. There will be a positive relationship between the EN/FR/SP Group's performance on the GJT and the TT in accepting and producing the syntactic and morphological features of French tested.

#### *5.1.1.1 Hypothesis 1*

The first hypothesis was confirmed: when presented with grammatical Spanish sentences, participants were highly accurate in accepting these for both syntactic (clitic placement) and morphological (past participle agreement) features and there was no statistically significant difference between the performance of the two experimental groups for either the clitic placement GJT or the past participle agreement GJT. In other words, the independent variable – L2 French – did not play a part in the experimental groups' evaluation of grammatically accurate Spanish sentences displaying these features. This was as expected, given that both groups had been studying Spanish for two years and the sentences presented to them for each grammatical category would have been familiar to them. This was an important hypothesis to confirm before looking specifically at influences from French, as it established the participants' command of the sentence-types tested at both lexical and (morpho)syntactic levels, regardless of prior knowledge of French. In generativist terms, referring back to the FTFA (Full Transfer Full Access) and FFFH (Failed Functional Features Hypothesis) models

outlined in Chapter 2, Sections 2.2.2.1 and 2.2.2.2 respectively, there would appear to be no support for the latter, which “rejects the possibility of UG restructuring in L2 development” (Leung, 2003:199) and, by extension, in L3 development too (Leung, 2005:41).

#### *5.1.1.2 Hypothesis 2*

The second hypothesis was also confirmed and it was found that both syntactic (clitic placement) and morphological (past participle agreement) features were susceptible to lateral transfer in both recognition (GJT) and production (TT) settings.

It was established in Chapter 4 that for both clitic placement and past participle agreement, the difference between the two experimental groups’ performance on both the GJT and TT was highly significant; furthermore, the EN/SP Group did not differ significantly on either the clitic placement GJT or the past participle GJT from the SP group. In other words, similarly to the Spanish-speaking monolinguals, participants with no prior instruction in French were more accurate in recognising target-like sentences and rejecting non-target-like sentence than those with knowledge of French, confirming negative lateral transfer overall for the EN/FR/SP Group. Now, an analysis of individual grammatical features may allow us to determine the nature and extent of this transfer with greater precision, as well as linking these factors back to the generative models previously outlined in the literature.

##### *5.1.1.2.1 Clitic placement*

In assessing ungrammatical Spanish sentences reflecting French word order on the GJT, the EN/FR/SP Groups’ percentage accuracy scores (39%) were significantly lower than those of the EN/SP Group (87%) and SP group (94%). On the TT, 53% of sentences produced by the EN/FR/SP Group reflected French word order, compared with just 2% from the EN/SP Group. This suggests that the EN/FR/SP participants were

highly influenced by their knowledge of French. It is important to note that the four Spanish verbs tested (*querer – poder – saber – esperar*) and their French counterparts (*vouloir – pouvoir – savoir – espérer*) had no significant impact on the results: post-hoc analyses revealed highly significant differences between the EN/FR/SP and EN/SP Groups for each verb on the GJT and a Friedman test showed no statistically significant differences between the verbs used by the EN/FR/SP Group in producing French word order on the TT. We can be confident, therefore, in attributing the EN/FR/SP Group's results to the influence of French clitic placement in both recognition and production settings.

#### *5.1.1.2.2 Past participle agreement*

In assessing ungrammatical Spanish sentences reflecting French past participle agreement on the GJT, the EN/FR/SP Groups' percentage accuracy scores (46%) were again significantly lower than those of the EN/SP Group (74%) and SP Group (89%). On the TT, 23% of sentences produced by the EN/FR/SP Group reflected French past participle agreement, compared with 0% from the EN/SP Group. Although the lateral transfer effect was weaker than for clitic placement, we can nevertheless conclude that the EN/FR/SP participants were influenced by their knowledge of French in both recognition and production settings.

\* \* \*

In reviewing the clitic placement and past participle agreement results, we can confirm that prior instruction in French had a significant influence on Spanish at the level of syntax and morphology in both recognition and production settings. However, two questions remain: why were the EN/FR/SP participants influenced by French and why was the effect stronger for syntactic (clitic placement) than for morphological (past participle agreement) features? In order to answer these questions, let us first return to

the theoretical considerations of perceived and assumed cross-linguistic similarity outlined in Chapter 2.

In *accepting* an ungrammatical Spanish sentence that reflects French morphosyntax (GJT) or in *producing* an ungrammatical Spanish sentence that reflects French morphosyntax (TT), the learner is making an assumption of similarity, based on prior knowledge (e.g. Ringbom, 2007). Now, neither French word order nor French past participle agreement are grammatically correct in Spanish, so participants in the present study could not have *perceived* similarity from examples encountered in their L2 learning experiences, rather they *assumed* similarity between French and Spanish for the grammatical features tested. So this answers the question as to why the EN/FR/SP participants were influenced by their prior knowledge of French – it was an assumption of similarity. But why was the effect of this assumed similarity stronger for clitic placement than for past participle agreement? The answer can be found if we dig deeper into the notion of assumed similarity and consider Kellerman’s (1995) “transfer to nowhere” argument: the learner has a tangible understanding of the function of a pronoun in English, whether or not – as discussed in Chapter 2 – s/he equates this with the function of a Romance clitic. In other words, it is not a question of *if* the pronoun or clitic needs placing in a given sentence, but rather *where* it needs placing in either a recognition or production task; it so happens that in the GJT and TT of the present study, learners who had prior knowledge of French were highly influenced by French clitic placement. On the other hand, past participle agreement is a far less tangible concept, given that it is not a property of English grammar and is only grammatically correct in French under certain circumstances (see Section 2.2.5.2 of Chapter 2). As such, it may have been considered by the participants as a “mere grammatical embellishment” (Kellerman, 1995: 142), which would explain why the lateral transfer effect of past participle agreement was weaker than that of clitic placement, especially

in production on the TT: for clitic placement, for example, 53% of responses from the EN/FR/SP Group reflected French word order and 35% Spanish word order, whereas for past participle agreement, only 23% of responses from the same group corresponded with French past participle agreement, compared with 70% of responses resulting in grammatical Spanish sentences with no past participle agreement. It would equally explain the EN/FR/SP Group's accuracy differential on the GJT between clitic placement (39%) and past participle agreement (46%) – see Figures 4.1 and 4.5 in Chapter 4.

From a generativist perspective, according to the predictions of the extended FTFA model (Leung, 2005) outlined in Chapter 2, the L3 Spanish initial state could be either the L1 English final state or the L2 French steady state. In the present study where transfer from L2 French is hypothesized, the model predicts that the UG-constrained interlanguage grammar achieved at the L2 French steady state will transfer to the L3 Spanish initial state, which the clitic placement and past participle agreement results indeed confirm. However, the predictions of the FFFH model are necessarily rejected, as they point specifically to L1 transfer in any initial state, L2 or L3 (Leung, 2005: 41).

### *5.1.1.3 Hypothesis 3*

The third hypothesis was partly confirmed: there was a strong, positive correlation between the EN/FR/SP Group's performance on the GJT and TT on the clitic placement study, which was highly significant, but no relation was found on the past participle study. Although it was hypothesized that there would be a positive correlation overall, participants in fact treated syntactic features differently from morphological features for the reasons outlined above. In other words, although the outcome was not entirely as anticipated, it can certainly be explained with theoretical

considerations supporting the findings in practice.

### ***5.1.2 Can lateral syntactic transfer be positive as well as negative? RQ1(b)***

Four hypotheses were presented:

1. The EN/FR/SP Group and the EN/SP Group will not differ from each other in their assessment of grammatical Spanish sentences on the GJT;
2. The EN/FR/SP Group will perform more accurately than the EN/SP Group in rejecting non target-like forms reflecting English adverbial placement;
3. The EN/FR/SP Group will also perform more accurately than the EN/SP Group in producing target-like forms on the TT reflecting French and Spanish adverbial placement.
4. The EN/FR/SP Group's performance on the GJT will match that of the TT.

#### *5.1.2.1 Hypothesis 1*

The first hypothesis was confirmed: when presented with grammatical Spanish sentences, participants performed accurately (EN/FR/SP – 76% and EN/SP – 72%), resulting in no statistically significant difference between the two groups' performance. This was as expected: it was not anticipated that knowledge of French would affect the outcome, given that the placement of the adverbs of manner tested is the same for French as for Spanish; furthermore, all participants would have been very familiar with the lexical items presented to them. However, taking into account the responses from the SP controls who, as expected, scored most accurately (85%), a slightly more nuanced picture emerges: there was no statistically significant difference between the performance of the EN/FR/SP Group and the SP controls, but this was not the case between the EN/SP Group and the SP controls where a significant difference emerged. In other words L1 English participants with prior knowledge of French were closer to

the monolingual SP Group in judging sentences that matched both French and Spanish word order with adverbs of manner. This was an important first step in showing the positive influence of French during Spanish interlanguage development and one that lends support to both the L2 factor and the predictions of the extended FTFA model outlined above, whereby the L2 French steady state has transferred to the L3 Spanish initial state.

So the confirmation of this first hypothesis allowed us to establish that participants with knowledge of French were at a distinct advantage in recognising grammatical Spanish sentences that reflected both French and Spanish word order with adverbs of manner.

#### *5.1.2.2 Hypothesis 2*

The second hypothesis was also confirmed: the EN/FR/SP Group performed significantly more accurately than the EN/SP Group (73% and 54% respectively) in rejecting non target-like forms that reflected English adverbial placement. Unlike the first hypothesis, which was concerned with grammatical Spanish sentences familiar to the participants with or without knowledge of French, this hypothesis aimed to investigate responses to ungrammatical Spanish (and therefore French) sentences with adverbs of manner that reflected English word order. As a result, further support was found for the L2 factor: there was significant L1 transfer from English learners without French, whereas knowledge of French seemingly blocked L1 transfer effectively; equally, the results support the generative FTFA and FFFH models, which both predict full transfer of L1 English into L2 Spanish initial state for the EN/SP Group.

Although both experimental groups differed significantly from the monolingual Spanish controls, who performed highly accurately as expected (86%), this was more acutely seen among the EN/SP Group ( $p < .001$ ) than the EN/FR/SP Group ( $p < .018$ ).

### *5.1.2.3 Hypothesis 3*

The third hypothesis was also confirmed: the EN/FR/SP Group performed significantly more accurately than the EN/SP Group (79% and 59% respectively) in producing target-like forms in the TT reflecting Spanish and French adverbial placement. This lends further support to the L3 Spanish initial state as representative of the L2 French steady state following the predictions of the extended FTFA model, along with similar support for the L2 factor beyond the level of recognition, confirming the positive influence of French during Spanish interlanguage production, at least with the adverbs of manner tested.

### *5.1.2.4 Hypothesis 4*

The fourth hypothesis was also confirmed: there was a significant positive correlation between the EN/FR/SP Group's performance on the GJT and TT reflecting Spanish and French word order with the adverbs of manner tested, lending further support still to the combined predictions of the FTFA model and L2 factor. This was a particularly important hypothesis to confirm because it solidified the answer to the overall research question, adding to the results of the GJT in demonstrating the positive nature of lateral syntactic transfer at production level too.

\* \* \*

In summary, it was established that participants with knowledge of French were at a distinct advantage over those without, in both recognition and production tasks concerning the position of adverbs of manner. In answering the research question, the confirmation of all four hypotheses suggests that lateral syntactic transfer can indeed be positive as well as negative for the two typologically related languages under investigation.

There is nevertheless an important caveat that must be appended to these findings. Because of the complexity of testing a combination of grammatical and

ungrammatical sentences reflecting French, Spanish, and English adverbial placement (see Chapter 3, tables 3.5 and 3.7) within an acceptable timeframe for the participants, there were fewer tokens addressing RQ1(b) than for RQ1(a). It is therefore suggested that future research on non-native transfer with typologically related languages should both further examine adverbs of manner with other elicitation methods and also consider different grammatical features that have yet to be tested for positive and negative lateral transfer, such as the partitive article, common to both French and Italian (e.g. Posner, 1996).

We turn now to a discussion of the two research questions of the qualitative study.

## **5.2 The qualitative study**

The semi-structured interviews of the qualitative study were conducted to address the individual foreign language learning experiences and strategies outlined in our adopted *factor model* of L3 learning (Hufeisen & Marx, 2007), in order to answer the second research question.

Let us first remind ourselves of the make-up of the participants. The group comprised 10 L1 English learners of Spanish with L2 French, six boys and four girls, all aged 17. They had been studying French for six years and Spanish for three years and were considered upper intermediate to advanced learners of Spanish (B2) according to the CEFR, assessed by an internal school examination conducted in June 2013.

Let us now discuss the results by research question for the qualitative study. Section 5.2.1 is devoted to learners' ability to make interlingual connections, compare and transfer (RQ2a); Section 5.2.2 discusses the benefits that learners may perceive from their prior language learning experiences (RQ2b).

### *5.2.1 How do learners make interlingual connections, compare and transfer?*

#### *RQ2(a)*

Three pairs of sentences were presented to the participants, who were asked to comment on their grammaticality, referring to their knowledge of French where possible (see Appendix 5):

1 (a) Las chicas han comidas.

1 (b) Las chicas han salido.

2 (a) ¿Puedes lo explicar?

2 (b) Quiero lo hacer mañana.

3 (a) ¿Juegas al tenis bien?

3 (b) Me gusta ir al cine y ver a mis amigos mucho.

As outlined in Chapter 4, there was one ‘distractor’ in that sentence 1(b) was a grammatically accurate. This sentence was included early on to help generate an initial discussion. The first and second pair of sentences (1 – 2) drew on tokens presented in the past participle and clitic placement studies respectively; the third pair of sentences (3) drew on tokens presented in the adverbial placement study. We now turn to a discussion of the results by grammatical feature.

#### *5.2.1.1 Clitic placement and past participle agreement*

The participants were able to make interlingual connections effectively through extensive use of metalanguage or, where this was less in evidence, through metalinguistic awareness. Of course, it should be noted that participants were prompted at the start of the interviews to relate their discussions to their knowledge of French. As Bono (2011) points out, learners’ awareness of L2-L3 interplay and the levels of consciousness in doing so are difficult to establish and “learners are not always able to recognise crosslinguistic phenomena, let alone provide an elaborate explanation about

them” (p. 45). However, the interviews did in fact reveal that, with initial prompting, participants were able to compare and contrast L2 and L3 structures with alacrity, as well as make interlingual connections; the majority of the participants showed a good sense of metalinguistic awareness, which is “particularly relevant from a classroom-centred perspective” (Bono, 2011: 32).

As discussed in Chapter 2, Section 2.3.1, a further consideration within the boundaries of metalinguistic awareness concerns the notion of ‘transfer of training’ (e.g. Selinker, 1972, 1992), which is pertinent to the participants of the present study: just as intermediate learners become advanced learners, developing their knowledge and use of metalanguage whilst increasing their metalinguistic awareness, so too does a continued focus on forms through teacher interaction and instructed language-learning materials result in a heightened understanding of the interlingual connections that may be at play between the L2 and the L3.

In summary, with initial guidance and the use of interlingual identification strategies, learners were able to turn their prior knowledge of French to their advantage in assessing the grammaticality of Spanish sentences involving clitic placement and past participle agreements. However, further research – ideally of a longitudinal nature – is required to allow for a greater understanding of the developmental stages of interlanguage production (e.g. Sayehli, 2013) and to examine the true effects of metalinguistic awareness within an instructed language-learning environment.

#### *5.2.1.2 Adverbial placement*

The participants’ responses reflected those of the clitic placement and past participle agreement sentences, and likewise demonstrated extensive use of metalanguage, metalinguistic awareness and interlingual identifications strategies. Participants drew extensively on similarities of French adverbial placement in their discussions of the ungrammatical Spanish sentences that reflected English word order.

So in answering RQ2(a), it was found that when making interlingual connections, comparing and transferring linguistic knowledge at the level of (morpho)syntax, advanced L1 English learners of Spanish predominately drew on their knowledge of the typologically related L2 French. This was an important finding because it will assist the focus of future research within an instructed learning environment for the grammatical features tested, with perhaps an opportunity to tease apart a number of variables, such as sex, age, instruction type and exposure time.

### ***5.2.2 How do learners benefit from prior language learning experiences?***

#### ***RQ2(b)***

Following the discussion of the three pairs of sentences presented to participants in addressing RQ2(a), the purpose of RQ2(b) was to broaden the focus and engage in a wider discussion within two main areas: knowledge of L2 French grammar and general foreign language learning experiences. The results are discussed in turn in the following sections.

#### ***5.2.2.1 Knowledge of L2 French grammar***

Participants were presented with an initial question to begin the discussion:

Taking into account these sentences we've just looked at, as well as any other aspects that come to mind, do you think your knowledge of French grammar has been helpful to you when learning Spanish?

The majority of participants (8/10) were able to pinpoint specific aspects of French grammar that they felt had an influence on their Spanish learning experiences, indicative of instruction within a formal language learning environment, in particular in relation to tense or mood formation and usage where there is equivalence across the two Romance languages. Interestingly, two aspects (past participle agreement and T-V

distinction) were seen as both positive and negative effects, positive in term of making connections and negative because of the confusion caused by the differences. However, possibly of greater importance in evaluating the benefits of prior language learning experiences is that participants recognised that knowledge of L2 French grammar did indeed influence their Spanish learning and that they were conscious of grammatical similarities and differences between the two languages. Prior knowledge of a typologically related language enabled them to identify effective grammatical candidates for positive or negative transfer. This knowledge was clearly of benefit to the participants – “an essential aid, not a troublesome obstacle” (Ringbom, 2007: 2). As in the previous discussion, metalinguistic awareness and use of metalanguage featured highly and effectively in the participants’ own analysis of cross-linguistic effects. This is of importance for future research in this area and has pedagogical implications, which have been noted in the literature:

“[...] for L2 influence to become a learning accelerator, CLIN [crosslinguistic interaction] needs to be coupled with metalinguistic awareness, which is known to be particularly enhanced in multilingual speakers” (Bono, 2011: 26)

We return to the pedagogical implications of the findings of the present study in the concluding chapter.

### 5.2.2.2 *General foreign language learning experiences*

In this final section, participants were asked to comment on one question relating to their previous foreign language learning experiences:

Do you think you have an advantage learning a new language having already learnt another foreign language before?

Once the participants' recordings were transcribed, responses were assigned one of two categories: prior language learning (9/10 responses) and psychotypology (4/10 responses). Regarding prior language learning, two participants identified the development of learning strategies not with a specific language but with the language learning process itself, as opposed to an unrelated subject, such as Chemistry for example. In other words, the specific prior language was less important than the nature of foreign language learning; the participants showed an enhanced understanding of the language learning process through use of metalinguistic awareness, evidence of foreign language learning strategies and the acquisition of a new language system to compare and contrast with previous systems (e.g. Mehlhorn, 2007; Gass & Selinker, 2008); others referred subconsciously to their 'strategic competence' as defined by Le Pichon et al. (2010), i.e. "an awareness of strategies and subsequent willingness to use these strategies in order to communicate." (p. 449)

All four participants in the 'psychotypology' category commented that knowledge of French was beneficial because they perceived it to be closer to Spanish than English, at least at the level of lexis, indeed where this has been most commonly found in the literature (e.g. Ringbom, 2007: 78-79). Interestingly, there were no specific comments on perceived grammatical proximity, perhaps because this had been discussed and established in the previous sections of the interview.

One important variable repeatedly identified in the literature (e.g. Williams & Hammarberg, 1998; Hammarberg, 2001; Cenoz, 2001; Sanchez, 2011; García-Mayo,

2012; Sayehli, 2013) but not mentioned by the participants themselves is that of ‘recency’ or ‘last language effect’ in combining with the L2 factor to promote transfer. This may be because it was obvious to the participants and they in turn thought it was obvious to the interviewer. Murphy (2005), however, notes that the variable is in itself problematic and that it “may be a result of transfer-of-training if techniques used when learning the L2 are still active and available during third language acquisition” (p. 10). Such techniques of course *were* identified by the participants in the interview discussions, but in terms of addressing RQ2(b), they are seen as an integral part of the benefits of prior foreign language learning experiences.

So in answering RQ2(b), it was found that advanced L1 English learners of Spanish were conscious of the grammatical similarities and differences between their L2 French and the target language and were able to pinpoint these effectively through metalinguistic awareness and use of metalanguage; they were equally able to identify techniques specific to their prior language learning experience of French that they perceived to be of benefit in the acquisition of a further language.

To make any substantial claims as to the benefits of prior foreign language learning experiences, further research is needed with a greater number of participants across a wider range of abilities and, ideally, among learners with different language constellations.

## Chapter 6

### CONCLUSION

This chapter summarises the key findings outlined and discussed in Chapters 4 and 5, referencing the aim of the research introduced in Chapter 1. The significance of the research is restated in the light of the findings in terms of future development and pedagogical implications (Section 6.1) and finally a number of limitations are addressed (Section 6.2).

The quantitative study among intermediate (B1) instructed learners revealed that prior knowledge of French has a highly significant influence on L1 English learners of Spanish with the (morpho)syntactic features tested in recognition and production tasks. This influence was found to be both positive (adverbial placement) and negative (clitic placement and past participle agreement).

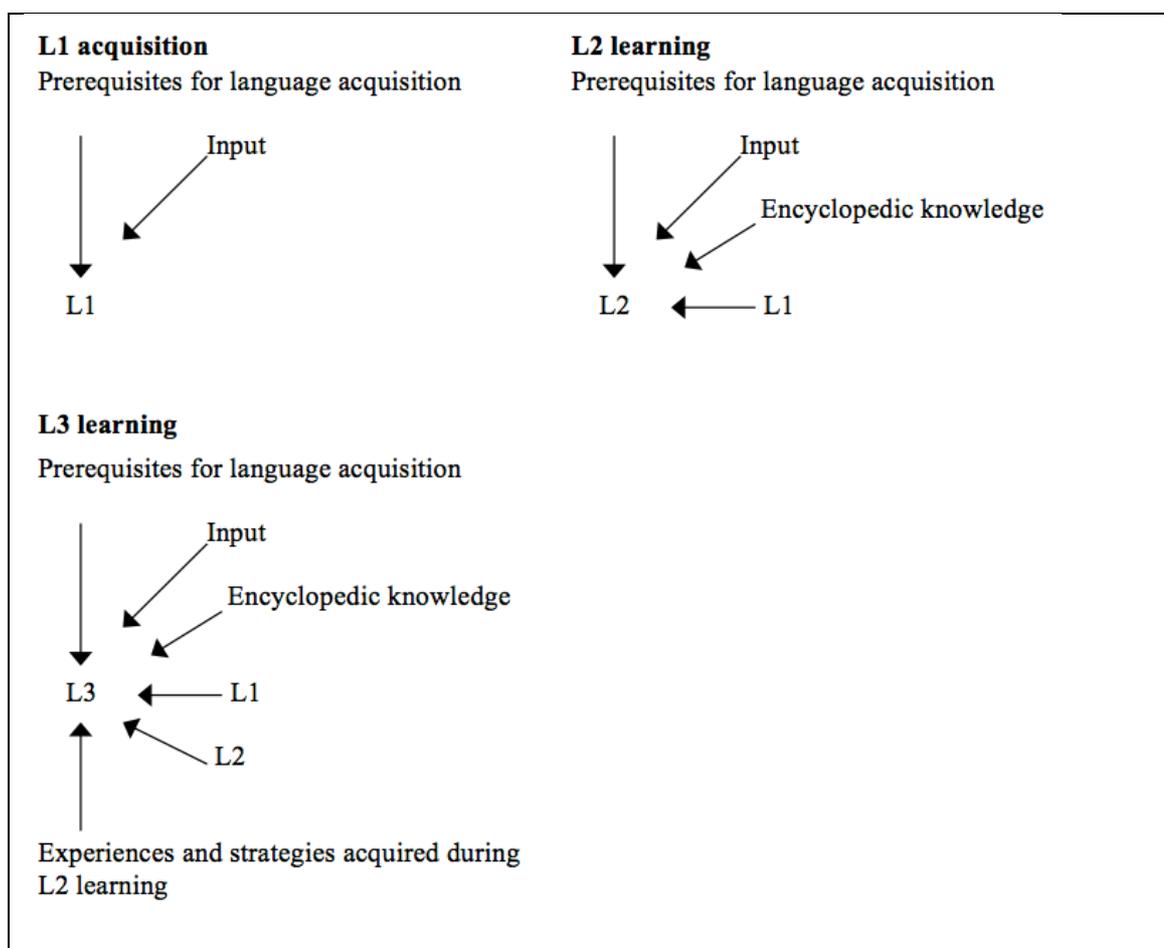
The qualitative study revealed that more advanced (B2) instructed learners were able to turn their knowledge of French to their advantage, predominately through use of interlingual identification strategies and a heightened understanding of interlingual connections at play between two typologically similar languages, afforded to them in an instructed language-learning environment; they were equally conscious of and able to identify the grammatical differences and similarities between the languages known to them through effective use of metalanguage and metalinguistic awareness.

#### 6.1 Implications for foreign language pedagogy

The most recent representation of L3 learning in the light of findings in the literature is that proposed by Bardel and Falk (2012), outlined briefly in Chapter 1, Section 1.1.2. Let us remind ourselves of this so-called model<sup>15</sup>, which draws on elements of Hufeisen's *factor model* (Hufeisen & Marx, 2007):

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<sup>15</sup> See Footnote 1, Page 11 regarding the use of 'model'.



Source: Bardel and Falk (2012: 69)

Figure 6.1 Model for L3 learning.

In highlighting the various components that make up L3 learning, the authors note:

“It can be assumed [...] that L3 learners, especially those who have learned the L2 in a formal setting, are aware of the fact they are learning a new language, and have acquired metalinguistic awareness (for instance awareness of the fact that there are differences and similarities between languages) and learning strategies that may facilitate foreign language learning. They are familiar with at least some of the efforts and methods that are required from a learner in order to succeed.” (p. 69)

This model, according to the authors, complements a neurolinguistic approach that draws on the distinction between procedural and declarative memory sources (e.g. Paradis, 2009), in turn lending support to the *L2 status factor* (see Chapter 2, Section

2.2.4.1) in that it implies “a higher degree of cognitive similarity between L2 and L3, than between L1 and L3” (Falk & Bardel, 2011: 61):

“According to Paradis’ perspective, In L1 procedural memory sustains linguistic structure (phonology, morphology, syntax and the lexicon) while declarative memory sustains vocabulary. While L1 grammar is implicitly acquired and sustained by procedural memory, L2 grammar (“to the extent that teaching of L2 is formal”, Paradis (2009: x)) is based on explicit knowledge, and sustained by declarative memory, which also takes care of vocabulary knowledge in both L1 and L2. This means that while vocabulary is sustained by declarative memory in L2 as well as in L1, there is a more obvious difference between L1 and L2 (*L<sub>n</sub>*) when it comes to phonology, morphology, syntax and the morphosyntactic properties of the lexicon. These latter components are acquired implicitly in L1, but learned explicitly in L2 (*L<sub>n</sub>*)”. (Bardel & Falk, 2012: 71)

Now, returning to the findings of the quantitative and qualitative studies of the present research, it must first be stressed that the two data sets cannot meaningfully be related to each other, given that two important parameters – the elicitation method and the proficiency levels – were different. In other words, the fact that negative lateral transfer from French regarding clitic placement was in evidence when testing intermediate learners on the web questionnaires but that incorrect placement was identified as such among advanced learners, who were explicitly asked to draw on their L2 French during the interviews, may very well indicate that the latter have simply learnt a specific rule of prescriptive grammar (see Section 6.2 below on the limitations of the present research). However, what is meaningful in drawing conclusions from the semi-structured interviews of the qualitative study in relation to Bardel and Falk’s (2012) model for L3 learning – along with the procedural/declarative and implicit/explicit distinctions outlined above – is that learners who were explicitly asked to notice inter-lingual similarities and differences were able to do so effectively. As such, it seems that under certain circumstances positive transfer may be facilitated and negative transfer may be highlighted and understood through cross-linguistic

comparisons. This has already been addressed in the SLA literature with reference to the L1, most notably by Cook (2001, 2008) and Jarvis and Pavlenko (2008) note:

“[...] one of the primary purposes of L1 use in the FL [foreign language] classroom is to facilitate positive transfer and the internalization of new concepts and to raise awareness of negative transfer through crosslinguistic comparisons” (p. 217)

It therefore makes sense to transfer this thinking more widely to the L3 classroom: we have seen from the findings of the present research that instructed learners are able to draw on specific knowledge of a typologically related L2 in the L3 learning process and, more generally, on their previous foreign language learning strategies and experiences. Despite the fact that “a number of attempts have been made to move away from isolation towards cooperation between the languages”, Jessner (2006) notes:

Whereas multilingualism research has shown that the individual language systems in the multilingual mind are activated together during third language production, in the ordinary language classroom contact with another language is still regarded as a hindrance to learning. With this in mind, language teachers try to keep knowledge of and about other languages, including the students’ L1(s), out of the classroom, assuming that this teaching method will prevent the activation of prior language knowledge in the students and ultimately fight confusion in the students’ minds.” (p. 123)

There is clearly some way to go before evidence from research translates into practice in the L3 classroom. Nevertheless, Bardel and Falk’s (2012) understanding of the instructed language-learning process is without doubt worth pursuing in future L3 research.

## **6.2 Limitations of the present research**

We must now consider a few limitations of the present research and be wary of making substantial claims based on these findings alone.

First, as outlined in Section 6.1 above, one particular shortcoming concerns any meaningful relationship between the data sets of the web questionnaires and the interviews. As such, these two cross-sectional studies need to be seen as separate entities. Secondly, the web questionnaires were necessarily restrictive in terms of the time expectation of participants: it was perhaps ambitious to attempt to cover three distinct morpho(syntactic) features testing positive and negative transfer in both recognition and production settings in order to answer the corresponding research questions adequately. Further limitations regarding the methodology of the quantitative study are outlined in Chapter 3, Sections 3.2.3.1 and 3.2.4.1 respectively.

In summary, if we are to understand fully the nature of non-native transfer at the level of morphology and syntax, future research needs not only to investigate a greater number of native and non-native languages, both typologically and non-typologically related, but also to consider a wider range of individual learner variables – gender and socioeconomic background, for example – alongside institution-based variables – such as the nature of instruction, class size and exposure time – as well as increasing the number of participants overall. Furthermore, future research should ideally involve more longitudinal studies (e.g. Sayehli, 2013) in order that the transition from initial to advanced stages of non-native language learning and related transfer effects may be more comprehensively observed.

It is expected, therefore, that the results of the present research will act as a catalyst in initiating further investigations into the nature of non-native transfer at the level of morphology and syntax within an instructed language-learning environment.

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## APPENDIX 1

### Quantitative Study: Web Questionnaire – Biographical Data (English)



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#### ***CONFIDENTIALITY CLAUSE***

All the information you provide during completion of the tasks on this website will be used for research purposes only and treated in strict confidence. Although your name and contact email are required, these will only be used to match your responses with any subsequent questionnaires you may complete, or to provide you with suitable feedback. Before the results are processed, your name and contact details will be deleted and replaced by an alpha-numeric code for internal identification purposes and will not appear in the write-up of this research; any information identifying respondents will not be disclosed to third parties under any circumstances.

If you are happy to continue, please click the Accept button below to begin; otherwise you will be redirected to the homepage.

ACCEPT / DECLINE

## PERSONAL DETAILS

*For related correspondence and feedback purposes only.*

---

**Q1-1** Surname:

---

**Q1-2** First Name:

---

**Q1-3** Email Address:

---

**Q1-4** Age:

---

**Q1-5** Gender:

---

## LANGUAGE LEARNING BACKGROUND

*Complete all the required fields below, indicating NOT APPLICABLE where necessary:*

---

**Q2-1 YOUR NATIVE LANGUAGE(S) - MOTHER TONGUE(S) (L1):**

*Dutch (1), English (2), French (3), German (4), Italian (5), Portuguese (6), Spanish (7), Other (8)*

---

**Q2-2** If Other, please specify:

---

**Q2-3** Current country of residence:

---

**Q2-4 YOUR FIRST MODERN FOREIGN LANGUAGE (L2):**

*Dutch (1), English (2), French (3), German (4), Italian (5), Portuguese (6), Spanish (7), Other (8)*

---

**Q2-5** If Other, please specify:

---

**Q2-6** How long have you been learning this language?

*Less than 5 years (1), More than 5 years (2)*

---

**Q2-7** Are you still learning this language formally in a classroom setting?

*Yes (1), No (2), NOT APPLICABLE (0)*

---

**Q2-8** When did you stop classes?

---

---

*This year (1), Last year (2), More than 2 years ago (3), NOT APPLICABLE (0)*

---

**Q2-9 YOUR SECOND MODERN FOREIGN LANGUAGE (L3):**

---

*Dutch (1), English (2), French (3), German (4), Italian (5), Portuguese (6), Spanish (7), Other (8)*

---

**Q2-10** If Other, please specify:

---

**Q2-11** How long have you been learning this language?

---

*Less than 5 years (1), More than 5 years (2)*

---

**Q2-12** Are you still learning this language formally in a classroom setting?

---

*Yes (1), No (2), NOT APPLICABLE (0)*

---

**Q2-13** When did you stop classes?

---

*This year (1), Last year (2), More than 2 years ago (3), NOT APPLICABLE (0)*

---

**Q2-14 YOUR THIRD MODERN FOREIGN LANGUAGE (L4):**

---

*Dutch (1), English (2), French (3), German (4), Italian (5), Portuguese (6), Spanish (7), Other (8)*

---

**Q2-15** If Other, please specify:

---

**Q2-16** How long have you been learning this language?

---

*Less than 5 years (1), More than 5 years (2)*

---

**Q2-17** Are you still learning this language formally in a classroom setting?

---

*Yes (1), No (2), NOT APPLICABLE (0)*

---

**Q2-18** When did you stop classes?

---

*This year (1), Last year (2), More than 2 years ago (3), NOT APPLICABLE (0)*

---

**Q2-19 YOUR FOURTH MODERN FOREIGN LANGUAGE (L5):**

---

*Dutch (1), English (2), French (3), German (4), Italian (5), Portuguese (6), Spanish (7), Other (8)*

---

---

**Q2-20** If Other, please specify:

---

**Q2-21** How long have you been learning this language?

---

*Less than 5 years (1), More than 5 years (2)*

---

**Q2-22** Are you still learning this language formally in a classroom setting?

---

*Yes (1), No (2), NOT APPLICABLE (0)*

---

**Q2-23** When did you stop classes?

---

*This year (1), Last year (2), More than 2 years ago (3), NOT APPLICABLE (0)*

---

**Q2-24** **KNOWLEDGE OR UNDERSTANDING OF CLASSICAL LANGUAGES:**

---

*Latin (1), Ancient Greek (2), Latin & Ancient Greek (3), NOT APPLICABLE (0)*

---

**Q2-25** Are you still learning these languages formally in a classroom setting?

---

*Latin only (1), Ancient Greek only (2), Latin and Ancient Greek (3), No (4), NOT APPLICABLE (0)*

---

## APPENDIX 2

### Quantitative Study: Web Questionnaire – Biographical Data (Spanish)



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ACEPTAR / RECHAZAR

## DATOS PERSONALES

*Sólo se utilizarán para correspondencia personal acerca de este estudio u observaciones relacionadas con el mismo.*

---

**Q1-1** Apellido:

---

**Q1-2** Nombre:

---

**Q1-3** Dirección de correo electrónico:

---

**Q1-4** Edad:

---

**Q1-5** Sexo:

---

## ANTECEDENTES LINGÜÍSTICOS

*Rellene todos los campos obligatorios a continuación, indicando NO APLICABLE donde sea necesario:*

---

**Q2-1 SU(S) LENGUA(S) MATERNA(S) (L1)**

*Holandés (1), Inglés (2), Francés (3), Alemán (4), Italiano (5), Portugués (6), Español (7), Otra (8)*

---

**Q2-2** Si otra, indique el idioma:

---

**Q2-3** País de residencia actual:

---

**Q2-4 SU PRIMERA LENGUA EXTRANJERA (L2)**

*Holandés (1), Inglés (2), Francés (3), Alemán (4), Italiano (5), Portugués (6), Español (7), Otra (8), NO APLICABLE (0)*

---

**Q2-5** Si otra, indique el idioma:

---

**Q2-6** ¿Cuánto tiempo lleva estudiando este idioma?

*Menos de 5 años (1), Más de 5 años (2), NO APLICABLE (0)*

---

**Q2-7** ¿Sigue estudiando este idioma en clase?

*Sí (1), No (2), NO APLICABLE (0)*

---

---

**Q2-8** ¿Cuándo dejó de estudiar este idioma?

---

*Este año (1), El año pasado (2), Hace más de 2 años (3), NO APLICABLE (0)*

---

**Q2-9 SU SEGUNDA LENGUA EXTRANJERA (L3)**

---

*Holandés (1), Inglés (2), Francés (3), Alemán (4), Italiano (5), Portugués (6), Español (7), Otra (8), NO APLICABLE (0)*

---

**Q2-10** Si otra, indique el idioma:

---

**Q2-11** ¿Cuánto tiempo lleva estudiando este idioma?

---

*Menos de 5 años (1), Más de 5 años (2), NO APLICABLE (0)*

---

**Q2-12** ¿Sigue estudiando este idioma en clase?

---

*Sí (1), No (2), NO APLICABLE (0)*

---

**Q2-13** ¿Cuándo dejó de estudiar este idioma?

---

*Este año (1), El año pasado (2), Hace más de 2 años (3), NO APLICABLE (0)*

---

**Q2-14 SU TERCERA LENGUA EXTRANJERA (L4)**

---

*Holandés (1), Inglés (2), Francés (3), Alemán (4), Italiano (5), Portugués (6), Español (7), Otra (8), NO APLICABLE (0)*

---

**Q2-15** Si otra, indique el idioma:

---

**Q2-16** ¿Cuánto tiempo lleva estudiando este idioma?

---

*Menos de 5 años (1), Más de 5 años (2), NO APLICABLE (0)*

---

**Q2-17** ¿Sigue estudiando este idioma en clase?

---

*Sí (1), No (2), NO APLICABLE (0)*

---

**Q2-18** ¿Cuándo dejó de estudiar este idioma?

---

*Este año (1), El año pasado (2), Hace más de 2 años (3), NO APLICABLE (0)*

---

**Q2-19 SU CUARTA LENGUA EXTRANJERA (L5)**

---

---

*Holandés (1), Inglés (2), Francés (3), Alemán (4), Italiano (5), Portugués (6), Español (7), Otra (8), NO APLICABLE (0)*

---

**Q2-20** Si otra, indique el idioma:

---

**Q2-21** ¿Cuánto tiempo lleva estudiando este idioma?

---

*Menos de 5 años (1), Más de 5 años (2), NO APLICABLE (0)*

---

**Q2-22** ¿Sigue estudiando este idioma en clase?

---

*Sí (1), No (2), NO APLICABLE (0)*

---

**Q2-23** ¿Cuándo dejó de estudiar este idioma?

---

*Este año (1), El año pasado (2), Hace más de 2 años (3), NO APLICABLE (0)*

---

**Q2-24** **CONOCIMIENTO O ENTENDIMIENTO DE LAS LENGUAS CLÁSICAS**

---

*latín (1), griego antiguo (2), latín y griego antiguo (3), NO APLICABLE (0)*

---

**Q2-25** ¿Sigue estudiando estos idiomas en clase?

---

*Sólo el latín (1), Sólo el griego antiguo (2), Los dos (3), No (4), NO APLICABLE (0)*

---

## APPENDIX 3

### Quantitative Study: Web Questionnaire

#### GRAMMATICALITY JUDGMENT TASK / TAREA DE JUICIO GRAMATICAL

Using the scale below decide on the grammatical accuracy of the following sentences: /  
*Utilice la escala abajo para indicar la gramaticalidad de las frases a continuación:*

<b>(1)</b> Definitely correct	<b>(1)</b> <i>Correcta sin duda alguna</i>
<b>(2)</b> Probably correct	<b>(2)</b> <i>Probablemente correcta</i>
<b>(3)</b> I'M NOT SURE	<b>(3)</b> <i>NO ESTOY SEGURO/A</i>
<b>(4)</b> Probably incorrect	<b>(4)</b> <i>Probablemente incorrecta</i>
<b>(5)</b> Definitely incorrect	<b>(5)</b> <i>Incorrecta sin duda alguna</i>

---

**PAGE 1/4**

**PÁGINA 1/4**

---

<b>Q3-1</b>	Los estudiantes no han llegados.	(1) - (2)   (3)   (4) - (5)
<b>Q3-2</b>	No juega bien al voleibol.	(1) - (2)   (3)   (4) - (5)
<b>Q3-3</b>	Esperamos verte pronto.	(1) - (2)   (3)   (4) - (5)
<b>Q3-4</b>	Las chicas han subidas al dormitorio.	(1) - (2)   (3)   (4) - (5)
<b>Q3-5</b>	Mi padre toca bien la guitarra.	(1) - (2)   (3)   (4) - (5)
<b>Q3-6</b>	¿Qué vas a hacer el sábado?	(1) - (2)   (3)   (4) - (5)
<b>Q3-7</b>	La chica ha entrada en la casa.	(1) - (2)   (3)   (4) - (5)
<b>Q3-8</b>	Los soldados han muertos.	(1) - (2)   (3)   (4) - (5)
<b>Q3-9</b>	Los profesores pueden nos acompañar.	(1) - (2)   (3)   (4) - (5)
<b>Q3-10</b>	No esperan te ver esta semana.	(1) - (2)   (3)   (4) - (5)
<b>Q3-11</b>	La profesora ha bajada para comer.	(1) - (2)   (3)   (4) - (5)
<b>Q3-12</b>	Los chicos no han venidos todavía.	(1) - (2)   (3)   (4) - (5)

---

<b>Q3-13</b>	Muchas personas han muertas en el accidente.	(1) - (2)   (3)   (4) - (5)
<b>Q3-14</b>	No lo quiero hacer hoy.	(1) - (2)   (3)   (4) - (5)
<b>Q3-15</b>	Los ingleses han idos de vacaciones a España.	(1) - (2)   (3)   (4) - (5)
<b>Q3-16</b>	La vecina ha subida para verme.	(1) - (2)   (3)   (4) - (5)
<b>Q3-17</b>	Las profesoras han vueltas al instituto.	(1) - (2)   (3)   (4) - (5)
<b>Q3-18</b>	Tú lo puedes terminar.	(1) - (2)   (3)   (4) - (5)
<b>Q3-19</b>	Los hombres no han llegados al pueblo.	(1) - (2)   (3)   (4) - (5)
<b>Q3-20</b>	Vas a bien descansar aquí.	(1) - (2)   (3)   (4) - (5)
<b>Q3-21</b>	Los puedo hacer sin problema.	(1) - (2)   (3)   (4) - (5)
<b>Q3-22</b>	La chica ha salida para hacer compras.	(1) - (2)   (3)   (4) - (5)
<b>Q3-23</b>	¿Me lo sabes explicar?	(1) - (2)   (3)   (4) - (5)
<b>Q3-24</b>	No todos se han levantado a las ocho.	(1) - (2)   (3)   (4) - (5)
<b>Q3-25</b>	Esperamos verlo en marzo.	(1) - (2)   (3)   (4) - (5)
<b>PAGE 2/4</b>		<b>PÁGINA 2/4</b>
<b>Q3-26</b>	¿Saben explicárnoslo?	(1) - (2)   (3)   (4) - (5)
<b>Q3-27</b>	No puede te lo decir.	(1) - (2)   (3)   (4) - (5)
<b>Q3-28</b>	Toco la guitarra mal.	(1) - (2)   (3)   (4) - (5)
<b>Q3-29</b>	Mi amiga ha salido para ir al cine.	(1) - (2)   (3)   (4) - (5)
<b>Q3-30</b>	Todas las chicas han ido al comedor.	(1) - (2)   (3)   (4) - (5)
<b>Q3-31</b>	¿Los chicos han venido para estudiar?	(1) - (2)   (3)   (4) - (5)
<b>Q3-32</b>	Muchos han muertos en el avión.	(1) - (2)   (3)   (4) - (5)
<b>Q3-33</b>	No lo sabemos hacer.	(1) - (2)   (3)   (4) - (5)

<b>Q3-34</b>	Mi madre ha subido para ver a la vecina.	(1) - (2)   (3)   (4) - (5)
<b>Q3-35</b>	Los estudiantes chilenos han llegado al colegio.	(1) - (2)   (3)   (4) - (5)
<b>Q3-36</b>	¿Sabes lo explicar?	(1) - (2)   (3)   (4) - (5)
<b>Q3-37</b>	¿Prefieres el café de Starbucks o el de Costa?	(1) - (2)   (3)   (4) - (5)
<b>Q3-38</b>	Sabemos lo hacer.	(1) - (2)   (3)   (4) - (5)
<b>Q3-39</b>	Toco muy mal el piano.	(1) - (2)   (3)   (4) - (5)
<b>Q3-40</b>	Comprenden muy bien la situación.	(1) - (2)   (3)   (4) - (5)
<b>Q3-41</b>	Ellos esperan me lo decir mañana.	(1) - (2)   (3)   (4) - (5)
<b>Q3-42</b>	Yo sé lo hacer.	(1) - (2)   (3)   (4) - (5)
<b>Q3-43</b>	Las chicas se han levantadas.	(1) - (2)   (3)   (4) - (5)
<b>Q3-44</b>	Habla inglés mal.	(1) - (2)   (3)   (4) - (5)
<b>Q3-45</b>	Yo sé explicarlo.	(1) - (2)   (3)   (4) - (5)
<b>Q3-46</b>	Comprendo la situación muy bien.	(1) - (2)   (3)   (4) - (5)
<b>Q3-47</b>	No juego al tenis bien.	(1) - (2)   (3)   (4) - (5)
<b>Q3-48</b>	Quieren te ver el año que viene.	(1) - (2)   (3)   (4) - (5)
<b>Q3-49</b>	Toca el piano bien.	(1) - (2)   (3)   (4) - (5)
<b>Q3-50</b>	Necesito comprarme otro teléfono celular.	(1) - (2)   (3)   (4) - (5)
<b>PAGE 3/4</b>		<b>PÁGINA 3/4</b>
<b>Q3-51</b>	¿Quieres me lo dar?	(1) - (2)   (3)   (4) - (5)
<b>Q3-52</b>	¿Puedes lo hacer esta tarde?	(1) - (2)   (3)   (4) - (5)
<b>Q3-53</b>	Le gusta mucho ir de compras.	(1) - (2)   (3)   (4) - (5)
<b>Q3-54</b>	¿Podemos nos ver esta noche?	(1) - (2)   (3)   (4) - (5)

<b>Q3-55</b>	No saben me lo decir.	(1) - (2)   (3)   (4) - (5)
<b>Q3-56</b>	Mi hermano no comprende muy bien la física.	(1) - (2)   (3)   (4) - (5)
<b>Q3-57</b>	¿Esperas lo hacer pronto?	(1) - (2)   (3)   (4) - (5)
<b>Q3-58</b>	¿Juegan bien al baloncesto?	(1) - (2)   (3)   (4) - (5)
<b>Q3-59</b>	Mañana vamos a ir a la costa.	(1) - (2)   (3)   (4) - (5)
<b>Q3-60</b>	No sé dónde vive Marisol.	(1) - (2)   (3)   (4) - (5)
<b>Q3-61</b>	El policía va a detener al criminal.	(1) - (2)   (3)   (4) - (5)
<b>Q3-62</b>	Espero te ver en México en octubre.	(1) - (2)   (3)   (4) - (5)
<b>Q3-63</b>	¿Siempre van al Japón en diciembre?	(1) - (2)   (3)   (4) - (5)
<b>Q3-64</b>	Hablo muy mal el inglés.	(1) - (2)   (3)   (4) - (5)
<b>Q3-65</b>	Queremos hacerlo pronto.	(1) - (2)   (3)   (4) - (5)
<b>Q3-66</b>	¡Quiero verte!	(1) - (2)   (3)   (4) - (5)
<b>Q3-67</b>	¿Quieres dármelo mañana?	(1) - (2)   (3)   (4) - (5)
<b>Q3-68</b>	Me gusta hacer deporte mucho.	(1) - (2)   (3)   (4) - (5)
<b>Q3-69</b>	Mis alumnos van a bien estudiar este año.	(1) - (2)   (3)   (4) - (5)
<b>Q3-70</b>	Voy a bien divertirme con ustedes.	(1) - (2)   (3)   (4) - (5)
<b>Q3-71</b>	¡Esto va a mal terminar!	(1) - (2)   (3)   (4) - (5)
<b>Q3-72</b>	¿Adónde te gusta ir de vacaciones?	(1) - (2)   (3)   (4) - (5)
<b>Q3-73</b>	Esta noche voy al cine con mi mejor amigo.	(1) - (2)   (3)   (4) - (5)
<b>Q3-74</b>	Mi asignatura preferida es la física.	(1) - (2)   (3)   (4) - (5)
<b>Q3-75</b>	No lo esperan terminar mañana.	(1) - (2)   (3)   (4) - (5)

<b>Q3-76</b>	Los alumnos han llegados al colegio.	(1) - (2)   (3)   (4) - (5)
<b>Q3-77</b>	¡Vamos a bien cenar esta noche!	(1) - (2)   (3)   (4) - (5)
<b>Q3-78</b>	Has mal comprendido.	(1) - (2)   (3)   (4) - (5)
<b>Q3-79</b>	María se ha preparado para ir a la fiesta.	(1) - (2)   (3)   (4) - (5)
<b>Q3-80</b>	Mi hermana no comprende las ciencias muy bien.	(1) - (2)   (3)   (4) - (5)
<b>Q3-81</b>	Penélope Cruz ha llegado a Londres.	(1) - (2)   (3)   (4) - (5)
<b>Q3-82</b>	¿Podemos empezarlo ahora?	(1) - (2)   (3)   (4) - (5)
<b>Q3-83</b>	He mal comprendido la situación.	(1) - (2)   (3)   (4) - (5)
<b>Q3-84</b>	Vamos a bien divertirnos en Londres.	(1) - (2)   (3)   (4) - (5)
<b>Q3-85</b>	Te lo esperan dar mañana.	(1) - (2)   (3)   (4) - (5)
<b>Q3-86</b>	Nosotros queremos lo terminar.	(1) - (2)   (3)   (4) - (5)
<b>Q3-87</b>	Mi madre siempre pone gafas para leer.	(1) - (2)   (3)   (4) - (5)
<b>Q3-88</b>	Juegan al fútbol bien.	(1) - (2)   (3)   (4) - (5)
<b>Q3-89</b>	¿La profesora no ha llegado en la clase?	(1) - (2)   (3)   (4) - (5)
<b>Q3-90</b>	No quiero lo hacer para mañana.	(1) - (2)   (3)   (4) - (5)
<b>Q3-91</b>	Los profesores han ido a dar clase.	(1) - (2)   (3)   (4) - (5)
<b>Q3-92</b>	No sé si han venido o no.	(1) - (2)   (3)   (4) - (5)
<b>Q3-93</b>	Quiero saber si las chicas han bajado para comer.	(1) - (2)   (3)   (4) - (5)
<b>Q3-94</b>	No pueden decírtelo.	(1) - (2)   (3)   (4) - (5)
<b>Q3-95</b>	¿María ha venida a verte?	(1) - (2)   (3)   (4) - (5)
<b>Q3-96</b>	Mi amiga ha venido a la clase.	(1) - (2)   (3)   (4) - (5)

---

---

<b>Q3-97</b>	Todos han salidos del colegio.	(1) - (2)   (3)   (4) - (5)
<b>Q3-98</b>	Los profesores han llegado al colegio.	(1) - (2)   (3)   (4) - (5)
<b>Q3-99</b>	Mi hermana ha bajado a la cocina para desayunar.	(1) - (2)   (3)   (4) - (5)
<b>Q3-100</b>	Este año voy a estudiar más.	(1) - (2)   (3)   (4) - (5)

---

## APPENDIX 4

### Quantitative Study: Web Questionnaire

#### TRANSLATION TASK

*Translate the following sentences into **Spanish**. Written accents are **NOT** required, but include these if you wish and know how to!*

---

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---

**Q4-1** My friend Natalia has returned to Spain.

---

**Q4-2** Do you like French?

---

**Q4-3** My mum has gone out to go shopping.

---

**Q4-4** Does he play football well?

---

**Q4-5** They have all arrived.

---

**Q4-6** I can do it.

---

**Q4-7** We're going to Cuba in the summer.

---

**Q4-8** You know how to do it.

---

**Q4-9** I know how to explain it to you.

---

**Q4-10** We don't know how to tell you.

---

**Q4-11** I play the piano badly.

---

**Q4-12** I hope to see you tomorrow.

---

**Q4-13** Has Mariá come to see you?

---

**Q4-14** Are you hoping to do it soon?

---

**Q4-15** Do you want to see me?

---

---

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---

**Q4-16**                    The girls have got up.

---

**Q4-17**                    The students haven't arrived.

---

**Q4-18**                    My dad speaks Spanish badly.

---

**Q4-19**                    When is your birthday?

---

**Q4-20**                    You can see them.

---

**Q4-21**                    Do you play tennis well?

---

**Q4-22**                    The tourists have gone on holiday.

---

**Q4-23**                    They hope to see us soon.

---

**Q4-24**                    He speaks English well.

---

**Q4-25**                    We want to finish it.

---

**Q4-26**                    Do they know how to explain it to them?

---

**Q4-27**                    I'm going to the cinema tonight.

---

**Q4-28**                    I want to see you.

---

**Q4-29**                    The boys have arrived at the school.

---

**Q4-30**                    Many have died in the accident.

---

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---

**Q4-31**                    The boys have not left yet.

---

**Q4-32**                    All the teachers have gone out for lunch.

---

**Q4-33**                    The boys have gone up to sleep.

---

**Q4-34**                    Can we begin it now?

---

**Q4-35**                    The teachers have returned to the school.

---

---

<b>Q4-36</b>	They cannot give it to you.
<b>Q4-37</b>	She plays the guitar badly.
<b>Q4-38</b>	I have a lot of exams this year.
<b>Q4-39</b>	I don't understand Physics very well.
<b>Q4-40</b>	She has arrived.
<b>Q4-41</b>	I hope to do it for you today.
<b>Q4-42</b>	They want to give it to you.
<b>Q4-43</b>	She has left today.
<b>Q4-44</b>	The girl has gone into the classroom.
<b>Q4-45</b>	He understands the situation very well.

---

## APPENDIX 5

### Qualitative Study: Semi-structured Interviews



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#### ***PARTICIPANT DECLARATION***

- I have been informed about the nature of this interview and willingly consent to take part in it.
- I understand that data from this interview will remain anonymous and I will not be identifiable in the write-up of the data nor in any publication that may ensue.
- I understand that I may request to terminate the interview at any time.
- I understand that the interview will be recorded and that the recording will be destroyed as soon as it has been transcribed.
- I am over 16 years of age.

**Participant:**

**Interview conducted on:**

- Q1.** *Comment in as much detail as possible on the grammar (e.g. tense, word order, agreement) of the following pairs of sentences. Refer to your knowledge of French where possible. You should bear in mind that not all sentences are grammatical.*

***Please begin by translating each sentence into English.***

1. (a) Las chicas han comidas.  
(b) Las chicas han salido.
  
2. (a) ¿Puedes lo explicar?  
(b) Quiero lo hacer mañana.
  
3. (a) ¿Juegas al tenis bien?  
(b) Me gusta ir al cine y ver a mis amigos mucho.

- Q2.** *Taking into account these sentences we've just looked at, as well as any other aspects that come to mind, do you think your knowledge of French grammar has been helpful to you when learning Spanish?*

- Q3.** *Do you think you have an advantage learning a new language having already learnt another foreign language before?*