

Subject inversion in non-native Spanish

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This study presents new empirical evidence on the L2 acquisition of Spanish SV-VS contrasts, a syntax-pragmatics interface phenomenon. Results from a context-dependant preference task involving unergative and unaccusative verbs in different focus situations (broad and narrow focus) reveal that beginner and intermediate English speakers prefer SV in all contexts. In contrast, advanced learners, who clearly know that VS is possible in Spanish, show a pattern of optionality with unergative verbs (in both broad and narrow focus contexts), whereas VS is correctly preferred with unaccusative verbs in both broad and narrowly-focused contexts. We argue that these results can be explained by a representational deficit according to which the VS order is overgeneralized to unergative verbs regardless of the discursive situation. We argue that learners' overuse of VS structures is exacerbated by the lack of clear evidence for the use of SV and VS forms in the native input.

Keywords: word order, inversion, intransitive verbs, unaccusatives, interfaces, subject, Spanish

1. Introduction¹

The acquisition of Spanish word order is an area of persistent difficulty for non-native speakers of Spanish (Ocampo 1990; Hertel 2003; De Miguel 1993; Camacho 1999; Liceras and Díaz 1999; Lozano 2006a, 2006b, 2013; Domínguez 2007, 2013; Domínguez and Arche 2008; Hertel and Pérez-Leroux 1999). Despite recent research on this issue, the reason why this area is problematic for learners even at advanced levels of proficiency still remains unclear. This study re-examines this issue

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by focusing on the effects that syntactic properties that license postverbal subjects and the broad/narrow focus distinction (whether the subject is focused or not) have on the distribution of SV/VS contrasts:

(1) Broad focus (*What happened?*)

- a. Juan estornudó (unergative SV)
Juan sneezed-past.3rd.sg
'Juan sneezed'
- b. Llegó Juan (unaccusative VS)
Arrived-past.3rd.sg Juan
'Juan arrived'

(2) Narrow focus (*Who sneezed?/Who arrived?*)

- a. Estornudó Juan (unergative VS)
Sneezed-past.3rd.sg Juan
'Juan sneezed'
- b. Llegó Juan (unaccusative VS)
Arrived-past.3rd.sg Juan
'Juan arrived'

Examining how non-native speakers acquire word order alternations such as in (1) and (2), a syntax-pragmatics interface phenomenon, directly contributes to our understanding of the role that linguistic interfaces play in second language acquisition (see Sorace 2011; Domínguez 2013) and what causes optionality (the existence of two or more competing forms with the same interpretation) in non-native grammars.

Two main accounts to explain problems in acquiring verb-subject inversion have been proposed in the literature. For some, the observed difficulty is caused by a representational deficit which affects syntactic properties of intransitive verbs; in particular, it has been argued that learners first assume that the underlying syntactic structure of unergative verbs (structures where the subject is generated in the specifier of vP) applies for unaccusative verbs (structures where the subject is generated in the sister position to the lexical verb) as well. This hypothesis was formalised by Oshita (2001) as the 'Unaccusative Trap Hypothesis' (UTH), and it is based on the presupposition that learners initially treat the subject as the external argument in all intransitive structures, therefore treating unaccusatives as unergatives. L2 speakers are reported to be able to recover from this initial misanalysis and fully acquire the target grammar (Zobl 1989; Sorace 1995; Hertel and Pérez-Leroux 1999; Toth 2000; Hirakawa 2003; Lee 2004; Montrul 2005). The reverse overgeneralisation pattern (i.e. the overuse of unaccusatives in unergative contexts) has also been found in advanced stages of acquisition (Yuan 1996; 1999; Hertel 2003).

For others, the source of the issue resides in the very fact that subject-verb order in Spanish is an interface phenomenon, governed by both pragmatic and syntactic constraints, and interface phenomena are argued to be more prone to instability and acquired later than other phenomena which only involve narrow syntax (Sorace 2000, 2003, 2004, 2005; 2011; Belletti, Bennati and Sorace 2007; Tsimpli, Sorace, Heycock and Filiaci 2004; Tsimpli 2007). This is known as the ‘Interface Hypothesis’ (IH) (Sorace 2005, 2011; Sorace and Filiaci 2006; Tsimpli and Sorace 2006). Consistent with the view that full access to UG is possible (Schwartz & Sprouse 1994, 1996), proponents of the IH argue that L2 speakers can successfully acquire syntactic representations of the target language and that problems arise from difficulties mapping syntax onto external grammatical modules (e.g. discourse-pragmatics). Failure to achieve this mapping gives rise to ambiguity and optionality in L2 grammars (Sorace 2005; Sorace and Serratrice 2009). Sorace argues that L2 speakers may not always have access to the computational resources necessary to coordinate and integrate knowledge from different linguistic domains when acquiring interface phenomena (such as postverbal subjects). As a result of this processing breakdown, learners can access both a form/structure available in the L1 and the corresponding form/structure in the L2, what Sorace (1993) calls *residual optionality* (see also Sorace 2011).²

Two recent studies on the L2 acquisition of Spanish postverbal subjects, Hertel (2003) and Lozano (2006a), have argued that advanced learners can acquire the syntactic properties which distinguish between unergative and unaccusative verbs (see also Zobl 1989; Sorace 1995; Hertel and Pérez-Leroux 1999) but present contradictory results regarding the acquisition of properties at the syntax-pragmatics interface. Hertel administered a written production task to eighty-one English speakers of Spanish at four proficiency levels (beginners, low-intermediates, advanced-intermediates and advanced). This study shows that use of VS increases with proficiency (first uses only observed in the advanced-intermediate group) and that advanced speakers use inversion in narrow-focus contexts, a result which does not support the main predictions of the IH. Hertel also shows that advanced learners show a high use (33.17%) of VS structures in unergative broad contexts (those where the SV structure should be preferred instead). This result, which cannot be accounted for by L1 transfer, Oshita’s UTH or the IH, is also found in other previous studies (Pérez-Leroux and Glass 1997, 1999; Papp 2000; Yuan 1996, 1999; Lozano and Mendikoetxea 2010; Domínguez 2013). The study reported in (Domínguez 2013) is particularly relevant as it is based on production data obtained from the same participants which took part in the present study. Using data elicited by a controlled interview, the

² Some recent SLA studies have shown that interface deficits are in fact selective and do not affect all structures at the syntax-pragmatics interface equally (see e.g. Lozano 2009; Rothman 2008, 2009).

results show that the use of VS in intransitive structures increases with proficiency although it does not reach nativelike rates (2.2% for beginners, 10% for intermediates and 26% for advanced learners, in contrast to the 58% observed in the native data). Consistent with Hertel's production results, this study reports that the advanced group use VS with unergative verbs at a rate of 18.3%, which is higher than the rate observed for the native group (7%).

In contrast, in Lozano's study (which is based on judgment data from advanced learners only) optionality is attested in all intransitive verbs in focused contexts. Lozano uses this result to argue for dissociation between syntax and pragmatics in L2 acquisition (the acquisition of syntax precedes the acquisition of pragmatics according to his argument). Although Lozano does not explain this result in detail, the advanced group in his study also prefer inversion with unergatives more often (69.2% for Greek speakers, and 69.7% for English speakers) than native speakers (46.7%). In our view this behaviour is not easily explained by a mere interface mapping issue and needs further examination.

The present study discusses new empirical evidence which suggests that problems in the acquisition of SV-VS contrasts can be caused by a syntactic deficit affecting formal properties that license postverbal subjects in Spanish. We also argue that surface order evidence is not enough to propose a misanalysis at the level of base generation, as Oshita (op. cit.) argues. Our study reports a new set of results, including data from different levels of proficiency and targeting a wider range of Spanish structures, to show that syntactic features which license null and postverbal subjects in Spanish can be subject to incomplete acquisition in non-native grammars.³ We also argue that there is no clear evidence in our results to support the claim that optional judgements are only observed for (syntax-pragmatics) interface structures.

In this study we also argue that the complexity of the conditions on subject inversion in Spanish, as well as the pseudo-optional nature of these conditions, conspire to make this area a real learning challenge for L2 learners that can lead to a representational deficit. We agree with Papp's (2000) claim that if input is perceived as being vague or not robust enough by non-native speakers, a stage of optional judgements can persist even at advanced levels of L2 acquisition (see also Hopp 2005). Since learners do not typically have access to explicit instruction on the different word alternations available in Spanish, they can only rely on the evidence available in the linguistic input to achieve full convergence in this area. An examination of the availability of SV-VS structures in the input is

³ See White (2011) for arguments in favour of extending the 'IH' to L2 speakers who have not reached near-native levels of proficiency.

therefore necessary in order to assess whether the fact that alternating (SV-VS) structures exist in the input can explain the patterns of optionality observed.

Taking this into consideration, in this study we also examine learners' preference for inversion in clitic left dislocations (CLLD) since these structures contain narrowly focused postverbal subjects (i.e. subjects are licensed postverbally and their use is constrained by discourse-pragmatic conditions), but, crucially, no alternative structure with a preverbal subject is available in the input. In CLLD a narrowly focused subject appears postverbally as a result of dislocating the presupposed object and moving it out of the core clause (Cinque 1990). A resumptive clitic pronoun coindexed with the dislocated object must appear adjacent to the verb as illustrated in (3b). As example (4) shows, the S-Cl-V order is excluded in these constructions⁴:

- (3) a. *Who has scored the goal?*
 b. [El gol]_i, lo_i ha marcado [_F Villa] O#,Cl-V-S
 the goal, it has-pr.3rd.sg scored Villa
 'Villa has scored the goal'
- (4) *El gol, [_F Villa] lo ha marcado O#,S-Cl-V

A sentence with a preverbal subject (e.g. *Villa lo ha marcado*/Villa has scored it) is a possible answer to (3a) in this context as well. In this structure, the subject (Villa) is focused and can have a contrastive or emphatic interpretation.

If the type of input itself can lead to optionality in this grammatical area, this will not be observed in the case of CLLD since the subject in this structure always appears in postverbal position. If, however, optionality is caused by a processing breakdown of computational resources caused by the

⁴ It is possible for the subject to appear in preverbal position (Cl,#S-V-O) in CLLD but only if it is a topic (i.e. it encodes presupposed material). This is evidenced by the fact that the ordering of 'el libro' and 'María' can be reversed, as expected if both are preverbal topics, in the following example:

- i. ¿Qué pasó con el libro de María?
 What happened with Mary's book?
 a. El libro, María lo devolvió a la biblioteca
 the book, María it return-past.3rd.sg to the library
 'María returned the book to the library'
 b. María, el libro, lo devolvió a la biblioteca

In contrast, focused subjects in CLLDs need to appear in final position. This is supported by the data collected in this study as native speakers overwhelmingly preferred the inverted Cl#,V-O-S structure (91% acceptance) and reject the non-inverted Cl#,S-O-V one (3% acceptance), which is a clear indication that these two forms are not in complementary distribution.

interface nature of the structures themselves, as proposed by the IH, problems accepting inversion with these structures will be observed.⁵ This hypothesis is explored in the empirical study introduced in Section 3.

The remainder of this article is organised as follows. Section 2 introduces an analysis of the syntactic and pragmatic properties which determine subject expression in Spanish; the empirical study, including the hypotheses and the rationale for the methodology used, are presented in Section 3. In Section 4 the analysis of main results obtained in the preference task are presented; the discussion of results and main conclusions are introduced in Sections 5 and 6 respectively.

2. Theoretical Considerations

2.1. Syntactic properties of subjects in Spanish

Spanish is a null subject language (5a), and in standard varieties subjects can appear in preverbal and in postverbal position ((5b) and (5c)). Subjects in VS and VOS structures are narrowly-focused. In contrast, English typically exhibits a canonical SVO word order whether the subject is narrowly-focused (5d) or not (5e)⁶

- | | | |
|--------|--|---------|
| (5) a. | Mi hermano está enfermo. (*Él) Tiene mucha fiebre
'My brother is sick. (He) has a high fever' | |
| b. | [_F La profesora llegó]/ Llegó [_F la profesora]
'The teacher arrived' | SV/VS |
| c. | [_F Juan ha comido mucha tarta]/ Ha comido mucha tarta [_F Juan]
'Juan has eaten a lot of cake' | SVO/VOS |
| d. | [_F John] has eaten a lot of cake | SVO |
| e. | [_F John has eaten a lot of cake] | SVO |

⁵ It is important to emphasise that the reason to include CLLD is not to examine the acquisition of these structures, but to find out whether L2 speakers show similar preferences as native speakers for the word order patterning exhibited in these structures (i.e. Cl#,V-O-S). See Valenzuela (2006, 2007) for specific research on the acquisition of the syntactic properties of these structures by L2 speakers of Spanish.

⁶Subject inversion is also possible in English, as in the so-called there-insertion (i) and locative inversion (ii) structures:

- i) There arrived three beautiful women
- ii) Under the chair lies a cat

The conditions for this order are more restricted than in Spanish and seem to be governed by different requirements. For a discussion on inversion in English see Hoekstra and Mulder (1990); Bresnan (1994); Collins and Branigan (1997); Broekhuis (2005); Mendikoetxea (2006).

Since Chomsky (1995), the standard analysis assumes that the specifier of TP needs to be filled in order to satisfy a D feature on T (i.e. the EPP). Spanish and English show that this feature can be satisfied by at least two different mechanisms: whereas the EPP must be satisfied by movement of a DP to [Spec, TP] in English, the EPP in Spanish can be satisfied by different means including movement of a DP or a null pronoun to [Spec, TP] as in (6a), or by merging a null expletive pronoun in this position, as in example (6b), (Rizzi 1986; Suñer 1992; Sheehan 2006). One of the main differences between English and Spanish is that the overt lexical subject does not always move to [Spec, TP] and can stay in situ as shown in example (6b):

- (6) a. $[_{TP} \text{ pro}_j / \text{Marta}_j \text{ llegó}_i \quad [_{VP} t_i t_j \quad]]$
 pro/Marta arrive-past.3rd.sg
 ‘Marta arrived’
- b. $[_{TP} \text{ pro}_j \text{ Llegó}_i \quad [_{VP} t_i \quad \text{Marta}_j]]$
 pro arrive-past.3rd.sg Marta
 ‘Marta arrived’

Recently, Holmberg (2005) has proposed to reanalyse the D feature of T (see Chomsky 1995) as an uninterpretable feature (as in Rizzi (1982) and contra Alexiadou and Anagnostopoulou (1998)). Sheehan (2006), following work by Holmberg (2003, 2005) and Roberts (2004, 2007), has proposed that null subjects in Spanish are regular (full) pronouns, which are fully specified for interpretable phi-features. The features of pro, which are identical to the features of I/T can then value the uninterpretable features of Agr under this analysis (see Roberts (2004) ‘Deletion under feature identity’). Under this analysis deletion is allowed only when T contains an uninterpretable feature and it agrees with its specifier in phi-features. This analysis, in turn, implies that in Spanish the EPP can be satisfied by movement of the overt subject or a null referential pronoun to [Spec, TP]. It is also well documented in the literature (Zubizarreta 1998; Goodall 2001) that a non-referential pronoun (expletive pro) and a null or overt adverbial can also fill [Spec, TP] and satisfy the EPP in Spanish. For instance, Zubizarreta (1998) argues that a fronted (null or overt) adverbial needs to occupy the [Spec, TP] position in VSO structures:

- (7) Ayer presentó María su renuncia
 ‘Yesterday Maria handed in her resignation’ (Zubizarreta 1998:101)

Furthermore, example (8) shows that bare NP subjects are only allowed with unergative verbs if a locative adverbial phrase appears in preverbal position (Torrego 1989; Borer 2005; Alexiadou 2007). Such an adverbial or locative can be null (Goodall 2001).

- (8) a. ??Saltan niños
 jump-pr.3rd.pl children
 ‘Children jump’
- b. Aquí saltan niños
 here jump-pr.3rd.pl children
 ‘Children jump here’

Sheehan argues that referential/non-referential pronouns (expletives) as well as the adverbials sitting in the standard subject position undergo deletion at PF due to economy principles which avoid the duplication of identical features (features on the pronoun and features on T). The idea, following Holmberg (2005:238) is that the nullness of a subject pronoun is in fact a phonological matter which is language-specific (subjects can be phonetically null in Spanish but not in English). This analysis can account for the fact that in Spanish subjects of transitive verbs only optionally move to the specifier position of TP and may remain in their base position, in particular when they are narrowly focused, while still maintaining that the EPP is active in Spanish. A VS ordering, as in sentence (8b), is achieved when the verb obligatorily rises to T (Pollock 1989; Chomsky 1995, Suñer (1992)), and the subject remains in its original base position (Contreras 1987; 1991; Zagana 1982; Koopman and Sportiche 1991). In contrast, since English does not license *pro*, (or *pro* cannot be phonetically unrealised in line with the analysis outlined above) no other element but the overt lexical subject can satisfy the EPP. This can explain why the availability of postverbal subjects in English, as exemplified in (8b), is ruled out.

In summary, under this analysis English and Spanish differ in the feature specification of T and whether the subject needs to be phonetically realised or not. The EPP can be satisfied in Spanish by various elements including a null referential pronoun, an expletive pronoun or an adverbial (null or overt). This shows that English speakers of Spanish need to acquire new syntactic properties related to subject verbal agreement and the EPP which license the availability of postverbal subjects.

2.2. Discourse-pragmatics effects on subject position

It is well-known that the different canonical permutations available in Spanish are not in free distribution, but are determined by specific discourse-pragmatic requirements. Specifically, an SV(O) order is appropriate when the whole sentence is in focus (i.e. in the so-called broad focus scenario), and a V(O)S order when only the subject is focused (i.e. the so-called narrow focus scenario). Sentences in (9) and (10) illustrate these two different syntactic structures with the corresponding information status of the subjects:

(9) a. $[_F \text{ Villa marcó un gol}]$ SVO
 Villa score-past.3rd.sg a goal
 ‘Villa scored a goal’

b. $[_{TP} S_j [_T V_i [_{VP} t_j [_{VP} t_i O]]]]$

(10) a. Marcó un gol $[_F \text{ Villa}]$ VOS

b. $[_{TP} \dots [_T V_i [_{VP} O_j [_{VP} S [_{VP} t_i t_j]]]]$

Following Ordóñez (1998) we assume that in VOS structures the object has moved to a shifted position, in a second specifier of small *v*, to the left of the subject base position. The subject in these sentences appears in a different structural configuration ([Spec, TP] in (9) and [Spec, vP] in (10)) and conveys different informational meanings. The inverted subject in example (10) has a different information status (i.e. it is narrowly focused and is the only element in a sentence carrying new information) than the subject in (9), the corresponding SVO canonical configuration. Thus, example (9a) can only be the answer to a question such as *What happened?* which requires the whole sentence to be focused. Likewise, sentence (10a) is only felicitous as the answer to a question such as *Who has scored a goal?* which requires the subject to be the only element in focus and assumes that the rest of the sentence is presupposed.

We follow Zubizarreta (1998) in proposing that two conditions force the subject to appear postverbally in VS/VOS, including the assumption that the focus must be associated with sentence stress (Chomsky 1971; Cinque 1993; Reinhart 1995, 1997, 2006, among many other) which in Spanish is assigned to the element in sentence-final position by default (Contreiras 1978; Zubizarreta 1998; Büring and Guitiérrez-Bravo 2001). The second important condition is that the prosodic properties of sentences cannot easily be altered in Spanish, in the sense that stress cannot be relocated to another position once it has been assigned sentence-finally. According to Zubizarreta (1998) relocation of main stress is not possible in Spanish because deaccenting of stressed material, a necessary condition for a stress shift to apply, is blocked by the fact that all material is visible to the algorithm which assigns main stress (a version of Chomsky & Hale’s (1968) ‘Nuclear Stress Rule’ in her analysis). In this respect English and Spanish resolve the focus-stress alignment in cases where the focused element is not the sentence-final element through different mechanisms: whereas English moves the sentence-final stress onto any other part of a sentence, Spanish allows movement of that element to the sentence-final position instead.

This is illustrated with sentences such as (10) where the subject, whose canonical position is sentence initial, is narrowly focused (i.e. answering a question such as *Who scored a goal?*). Since in Spanish sentence stress is always final, and stress cannot be shifted, subjects in preverbal position can never be aligned with sentence stress in their canonical SVO configuration and, consequently, they can never be narrowly focused in this position (if conveying information focus). Zubizarreta (1998) argues that in order to achieve focus-stress alignment on the subject (and allow a narrow focus reading) presupposed material can undergo movement out of the position where sentence stress is assigned. This movement, which this author characterises as being prosodically motivated, achieves the appropriate alignment of focus and stress (illustrated in example (10)) and legitimizes the alteration of the canonical SVO ordering.

In summary, the availability of different positions for subjects in Spanish is dependent on the syntactic characteristics of T and how the EPP is satisfied. These syntactic properties combine with discourse-pragmatics (focus marking operations in particular) in the selection of a pre- or a post-verbal subject. The interaction between syntactic and discourse-pragmatic properties is crucial for the understanding of how word order alternations work in Spanish, and the reason why this area is characterised as being at the interface between syntax and pragmatics.⁷

3. Intransitive verbs

Intransitive verbs are an interesting ground to test the acquisition of subject-verb orders since not all subjects are generated in the same position in these structures. Perlmutter (1978) distinguished two types of intransitive verbs with different syntactic structures: unaccusatives (such as ‘to come’, ‘to leave’, ‘to disappear’, and ‘to fall’) and unergatives (such as ‘to sleep’, ‘to swim’, ‘to yawn’, and ‘to dance’). In more recent studies the structure in unergative constructions includes the functional projection small *v*, usually assumed to convey causative-like properties (Hale and Keyser 1993; Chomsky 1995; 2001). In Spanish subjects of unergative verbs originate in the specifier of *v*P and can either stay in their base position (rendering a VS order) or move to the specifier of TP (rendering an SV order). Similarly to transitive VS structures, if the subject remains in situ, a null subject fills

⁷ The type of interaction between syntax and discourse/pragmatics we are assuming is consistent with the model of grammar discussed in Reinhart (2006) in which context, a module of the grammar in its own right, directly interacts with the computational system.

[Spec, TP] to satisfy the EPP. In contrast, in unaccusative structures, which lack *vP*,⁸ the subject is base-generated in the sister position to the lexical verb (i.e. [V, Comp]).⁹ Examples (11) and (12) illustrate the underlying structure for unergative and unaccusative verbs with both preverbal and postverbal subjects in Spanish:

(11) Unergative:

- a. [_{TP} [El león]_j rugió_i [_{vP} t_j [_{vP} t_i]]] SV
 the lion roar-past.3sg
 ‘The lion roared’
- b. [_{TP} S_j [_T V_i [_{vP} t_j [_{vP} t_i]]]]
- c. [_{TP} pro_j Rugió_i [_{vP} [el león]_j [_{vP} t_i]]] VS
 pro roar-past.3sg the lion
 ‘The lion roared’
- d. [_{TP} pro_j [_T V_i [_{vP} S_j [_{vP} t_i]]]]

(12) Unaccusative:

- a. [_{TP} pro_j salieron_i [_{vP} t_i [los jugadores]_j]] VS
 pro come out-past.3pl the players
 ‘The players came out’
- b. [_{TP} [Los jugadores]_j salieron_i [_{vP} t_i t_j]] SV
 the players come out-past.3pl
 ‘The players came out’

A further difference between unergative and unaccusative verbs is that although the preverbal lexical subject alternates with *pro* to fill [Spec, TP] in both structures in Spanish, subjects are preferred in postverbal position with unaccusatives (even in broad focus contexts), whereas subjects in unergative constructions tend to appear preverbally and are only preferred in postverbal position if narrowly focused (Contreras 1978; Suñer 1982):

(13) What happened?

- a. Juan se ha escapado (SV Unaccusative)
 Juan cl-self has-pr.3rd.sg. escaped
 ‘Juan has escaped’

⁸ As one anonymous reviewer notices, an analysis of unaccusative verbs with *vP* also exists in the literature. In this study we follow the standard analysis adopted in the generative literature.

⁹ One relevant consequence arising from this difference is that subjects are interpreted as themes with unaccusative verbs but as agents with unergatives. See Dowty (1991), Borer (1998; 2005), Ritter & Rosen (2000), and Travis (2000) for discussion.

- b. Se ha escapado Juan (VS Unaccusative)
 cl-self has-pr.3rd.sg. escaped Juan
 ‘Juan has escaped’
- c. El bebé se ha dormido (SV Unergative)
 the baby cl-self has-pr.3rd.sg. slept
 ‘The baby has fallen asleep’
- d. #Se ha dormido el bebé (VS Unergative)
 cl-self has-pr.3rd.sg. slept the baby
 ‘The baby has fallen asleep’

Even though the question in example (13) is about the whole event (i.e. the whole sentence is part of the focus) the VS order is preferred with unaccusative verbs. This shows that unaccusative broad focus structures are not subject to the same rigid focus-related constraints as their unergative narrow focus counterparts (see Zubizarreta 1998). On the other hand, subjects in unergative constructions appear in VS configurations if the discourse-pragmatic properties of the sentence require a narrowly focused subject as exemplified above. This is the reason why sentence (13d) is not appropriate in that particular context (it would be appropriate as an answer to *Who sleeps/is sleeping?*). This difference between unergative and unaccusative verbs is crucial in our study since it shows that convergence in this grammatical domain requires the acquisition of both general focus-related rules and specific syntactic characteristics of each type of verb.

3.1. Distribution of SV and VS in the input

We have established that subjects are licensed both pre and postverbally in Spanish and that the choice between preverbal and postverbal subjects with intransitive verbs is highly determined by context, as these structures have different informational content. This is a situation which can potentially complicate the acquisition of these forms if both structures (SV/VS) appear with similar frequency in the native input even though the distribution of VS and SV is clearly not optional for native speakers. In order to examine this possibility we have reviewed the frequency of use of preverbal and postverbal subjects with intransitive verbs by native speakers of Spanish from two sources: the corpus study presented in Mayoral Hernández (2006, 2008) and our own oral corpus of native Spanish data. Mayoral Hernández (2006, 2008) carried out a statistical analysis of the use of SV and VS in native Spanish to investigate whether a correlation between verb types (unergative and unaccusative) and subject position (preverbal and postverbal) exists. The Spanish native data were obtained from the written *Corpus de Referencia del Español Actual* (CREA) and the reported study

shows clear differences between the preference of use of postverbal subjects in unergative and unaccusative structures. In particular, this author reports that subjects are equally preferred in pre- (54.4%) and post-verbal positions (45.6%) with unaccusative verbs, whereas a clear preference for preverbal subjects was found with unergative verbs (78.55%). The results for both verb types are illustrated in the following table:

	Unergative Verbs	Unaccusative Verbs
Postverbal Subjects	32 (21.5%)	62 (45.6%)
Preverbal Subjects	117 (78.5%)	74 (54.4%)

Table 1. Subject distribution in unergative and unaccusative structures from Mayoral Hernández (2006)

Although these results support the claim that VS sentences are produced significantly more often with unaccusative verbs than with unergative verbs they also reveal that the unaccusative-VS correlation, typically taken for granted in theoretical accounts on unaccusativity, was not attested in the actual native data. Unaccusative verbs were used in structures with preverbal subjects more frequently than in VS structures. This result has clear implications for the acquisition of these forms as L2 speakers of Spanish do not get consistent evidence that *pro* tends to occupy [Spec, TP] with unaccusatives (as it is the case in the VS configuration). In the light of this result, we wonder about the legitimacy of the expectation that L2 Spanish speakers would prefer VS with unaccusatives, even in broadly-focused contexts. On the other hand, the apparently optional use of VS and SV with unaccusative verbs could indicate that learners' problems with inversion may be rooted in the lack of clear evidence in the input available.

Since the data in Mayoral Hernández were obtained from a written corpus, we also analysed the use of SV and VS structures with intransitive verbs in the spontaneous oral speech of 8 native speakers available from the SPLLOC (Spanish Language Learner Oral Corpus) database.¹⁰ In total 1597 verb tokens were analysed, out of which 3.6% were intransitive. Each intransitive verb was categorised as unaccusative or unergative using the unaccusativity/unergativity tests in Mayoral Hernández (2008)

¹⁰ The SPLLOC project (www.spllocsoton.ac.uk) is a corpus of L2 and native Spanish available to the research community. The native participants analysed in this study were from Spain and were recorded having a casual conversation with one of the investigators. The data were collected, recorded and transcribed following standard CHILDES conventions (<http://childes.psych.cmu.edu/>).

and extensively discussed in the literature (see Permutter 1978; Burzio 1986; Levin and Rappaport Hovav 1994; Hale and Kayser 2002; Mendikoetxea 2006).

Overall, our results show some agreement with the patterns of use of SV and VS reported in Mayoral Hernández's (2008) study: preverbal subjects were preferred with unergative verbs (57%), although the difference in SV-VS use is not significant for this type of verb ($p=0.7$), whereas no clear preference for VS was observed for unaccusative verbs ($p=0.69$).¹¹ Unaccusative verbs were used with preverbal subjects more often (54%) than with postverbal subjects (46%) in our study as well:

	Unergative Verbs	Unaccusative Verbs
Postverbal Subjects	3 (43%)	30 (46%)
Preverbal Subjects	4 (57%)	35 (54%)

Table 2. Subject distribution in unergative and unaccusative structures in the spontaneous oral speech of 8 native speakers

Since we are interested in the general properties of the native input, we also calculated the overall use of preverbal and postverbal structures across verb types. This showed that the overall percentage of use of SV and VS in the data was in fact quite similar (54.16% for SV and 45.83% for VS). A t-test confirmed that the difference is not statistically significant ($p=0.6$). We can conclude, based on this result, that although VS seems to be produced more often with unaccusative than with unergative verbs, the results do not confirm the existence of a clear SV-unergative and SV-unaccusative correlation in the oral input of native speakers. We argue that there is enough evidence to assume that SV/Vs contrasts may appear to be freely used with both unaccusative and unergative verbs in Spanish. This may be a factor contributing to the patterns of optionality observed for learners acquiring these structures.

The data shown on Table 2 regarding unergative verbs should be interpreted with care because of the small number of verbs found. Nevertheless, these results reflect those found in the study by Mayoral Hernández for unaccusative verbs and in line with findings in sociolinguistic and variationist studies

¹¹ The fact that our native speakers used more postverbal subjects with unergative verbs may be due to the small size of the sample in our study since only 7 instances of overt subjects with unergative verbs were produced.

showing the position of subjects to be less restricted than the syntactic literature traditionally assumes.¹²

4. The present study

The empirical study has two main aims, to clarify whether optionality only affects structures at the syntax-pragmatics interface (as proposed by the IH and attested in Lozano's study, but not in Hertel's), and to examine whether the type of input learners are exposed to plays a role in explaining persistent difficulties in acquisition (by testing inversion in CLLD as well).

4.1. Hypotheses

Given recent research on the role of the interfaces in the acquisition of word order variation the following two hypotheses were formulated:

1. If the syntactic conditions constraining subject inversion in Spanish are impaired, advanced non-native speakers may incorrectly overgeneralise VS structures to unergative structures in broad focus contexts although these are not affected by discourse-pragmatic conditions.
2. If only interface conditions constraining subject inversion in Spanish are impaired, non-native speakers would only show a gradience of acceptability of subject inversion in narrow focus contexts with both unaccusative and unergative verbs and clitic left dislocations (those structures affected by discourse-pragmatic conditions).

The analysis of the distribution of SV and VS forms in naturally occurring written and oral data has revealed similar rates of use of these forms in the input. This indicates a situation in which the type of input available may not be clear or robust enough and could lead to persistent problems for learners. This would not be the case with CLLD since the subject is always inverted and no inverted/non-inverted alternation is available in the input. This scenario leads to the formulation of a third hypothesis to be tested in this study:

¹² An anonymous reviewer indicates that the flexibility of subject position is already well documented in variationist studies on subject expression. Findings from such studies suggest that it is a complex phenomenon where syntactic licensing interacts with morphological, semantic and sociolinguistic factors (see e.g. Poplack 1980; Silva-Corvalán 1994; Gudmestad, House, and Geeslin 2013; Gudmestad and Geeslin 2013 among others).

3. Optionality will be observed in inverted structures with intransitive verbs (since SV and VS appear with similar frequency in the input) but not with clitic left dislocations (for which no non-inverted counterpart exists).

4.2. Participants

The participants are 60 native speakers of English learning Spanish as a second language. Learners were divided into three groups according to their proficiency levels (beginners, intermediate and advanced) corresponding to three different education levels in the UK school system: lower secondary school (Year 9), around 13 years of age and 180 hours of instruction, high school final year (Year 13), around 17 years of age and 750 hours of instruction, and university undergraduates (UG) during their final year of their Spanish degree (around 21 years of age and 895 hours of instruction). All participants completed a self-evaluation questionnaire on their linguistic and educational background. Only participants who had started learning Spanish in Year 7 in the UK school system, (around 11 years of age), and declared Spanish as their main foreign language were included in the study. Participants who considered themselves bilingual or had had exposure to Spanish at home from one of the parents were not included. The advanced group was formed by highly-motivated L2 Spanish speakers completing an undergraduate degree in Spanish studies and who had spent at least a year studying abroad in a Spanish speaking country. All of the advanced speakers had started studying Spanish at the age of 11 and had been studying Spanish for at least 8 years. Even though the three groups were chosen to represent three key learning stages in an instructed setting, any instruction effects on the results can be safely ruled out since the topic of word order variation (including focus and subject inversion specifically) is not part of the teaching curriculum at any level nor is it covered in the textbooks and class materials. The data from the control group, consisting of 20 native monolingual speakers of Spanish, was collected in Spain. A description of the participants of the study with proficiency levels and hours of instructions is shown in the following table:

L2 Spanish level	Typical age	Approximate Hours of Spanish instruction	Educational level (English system)
Beginners (Year 9) <i>n=20</i>	13-14	c 180 hours	Lower secondary school
Intermediate (Year 13) <i>n=20</i>	17-18	c 750 hours	Final year secondary school
Advanced (UG) <i>n=20</i>	21-22	c 895 hours	Final year undergraduates
Native speakers <i>n=20</i>	17-18	N/A	

Table 3. Participants in the study

4.3. Experimental Design

The data were collected using a context dependent preference test based on the contextualised production task and the acceptability judgement tests used by Hertel (2003) and Lozano (2006a) respectively. The test was designed to test non-native preference of structures with and without subject inversion in Spanish by asking participants to choose which of the two sentences could appropriately match the situation introduced by a brief context. This test has been proven to be successful in eliciting preferences in order to investigate whether learners use lexical semantic or pragmatic cues in their understanding of SV/VS contrasts. Since the aim of this study is not to address learner's understanding of how focus is encoded prosodically in Spanish¹³ we believe that a written preference task is a suitable instrument for this study with the advantage that it also allows us to make comparisons with previous research which utilised a similar procedure.

The experimental items were sentences including both transitive and intransitive (unergative and unaccusative) verbs in both broad and narrow focus contexts. The transitive sentences included SVO, VOS structures as well as CLLD, although in this study only the results for CLLD are discussed:

¹³ For an investigation on the acquisition of word order variation taking into account the specific prosodic markings of focus in English and Spanish see Zubizarreta and Nava (2010) and Nava and Zubizarreta (2009).

	<i>Broad Focus</i> <i>What happened?</i>	<i>Narrow Focus</i> <i>Who has V-ed?</i>	<i>Narrow Focus</i> <i>CLLD</i>
Unergative Verbs	SV [_F Juan ha roncado] Juan has snored	VS Ha roncado [_F Juan] has snored Juan	
Unaccusative Verbs	SV/VS [_F Juan ha llegado] Juan has arrived [_F Ha llegado Juan] has arrived Juan	VS Ha llegado [_F Juan] has arrived Juan	
Transitive Verbs	SVO [_F Juan ha traído el perro] Juan has brought the dog	VOS Ha traído el perro [_F Juan] has brought the dog Juan	Obj#, CI-V-S El perro, lo ha traído [_F Juan] the dog, it has brought Juan

Table 4. Target structures and expected preferences

Twenty-eight experimental items were included in the test according to two sets of variables: syntactic properties of verb (unergative, unaccusative and transitive) and discourse-pragmatic appropriateness of sentences (broad focus sentences or narrowly focused subjects). Overall, the test included 16 intransitive verbs including 8 unergative and 8 unaccusative verbs and 12 transitive verbs including 4 structures with CLLD. Half of the target structures were in broad focus (they were introduced by a question such as *What happened?* and half required an inverted, narrowly focused subject (they were introduced by a question such as *Who has V-ed?*). Following the experimental design used in similar studies (Hertel 2003; Lozano 2006a), only similar core unaccusative verbs were included in the test. The list of unaccusative and unergative verbs used in our experimental design is summarised in table 5:

Unergative Verbs	Unaccusative Verbs
bailar ('to dance')	entrar ('to enter')
gritar ('to shout')	llegar ('to arrive')
dormir ('to sleep')	salir ('to leave')
reír ('to laugh')	venir ('to come')
llorar ('to cry')	volver ('to return')
estornudar ('sneeze')	escapar ('to escape')
bostezar ('yawn')	romperse ('to break')
ladrar ('to bark')	caer ('to fall')

Table 5. Verbs included in the comprehension task

Due to the relevance of the discourse appropriateness of each target structure, a brief description of a situation and a question were introduced followed by the three options: a) a sentence displaying non-inverted SV order; b) a sentence with inverted VS order; and c) both options. The latter was included so that participants who could not discriminate between the different pragmatic properties associated with each word ordering were not forced to make a choice between one of the two options. Participants then had to choose which of the three choices could be an appropriate answer to each of the questions according to the situation presented by the contexts. An example situation is illustrated in (14):

- (14) You are at the zoo with some friends and you are admiring the lions. Whilst Isabel is in the toilet one of the lions yawns very close to where you are and you start laughing. When Isabel returns from the toilet she asks you: “¿Por qué te estás riendo?” (Why are you laughing?)”

What would you say?

- | | | | | |
|------------------------|-----------|---------------------|-------------------|-------------------|
| a) El león ha | bostezado | b) Ha | bostezado el león | c) Both sentences |
| the lion has-pr.3rd.sg | yawn | has-pr.3rd.sg | yawn the lion | |
| ‘The lion has yawn’ | | ‘The lion has yawn’ | | |

The instrument was piloted with a number of non-native and native speakers to test its appropriateness for all groups, including the younger learners, and modifications regarding the format and instructions were made accordingly. The stimuli were presented in random order. Similarly to previous studies relevant instructions and situational contexts were given in English to the non-native groups and in Spanish to the native group to ensure that the contexts would be fully understood. The participants were also instructed not to change their choices once a selection of one of the options was made.

4.4. Data Analysis

The responses given by each participant were counted and the mean average of each chosen option in each experimental condition (i.e. unaccusative/unergative broad focus, unaccusative/unergative narrow focus, and CLLD) was calculated. Mean values were then transformed into percentages. The statistical analysis was performed using a Poisson model. A paired sample t-test was used to obtain the p value when significant differences were found.¹⁴

¹⁴ We thank Dr. Beth Stuart for her advice with the statistical analyses in this study.

5. Results

Table 6 shows the percentages obtained for each of the three options across the five contexts tested. The unergative broad context is the only one where SV is expected, in all four of the other contexts inversion is expected to be preferred. The two narrow focused scenarios, those subject to properties at the syntax-pragmatics interface, are the ones where optionality should be observed according to the IH (see Hypothesis 2).

The results show that Y9 and Y13 learners systematically choose the non-inverted option in all contexts, even with CLLD. In contrast, the advanced group prefers the ‘Both’ option over the other two options in all contexts. This is even in the unergative broad contexts (49%) where inversion is not expected. Native controls clearly prefer inversion with CLLD (91%) and with unaccusative verbs (60% in broad focus contexts, and 71% in narrow focus contexts). Interestingly, their pattern of preferences is not so categorical for unergative verbs and although they prefer SV (58%) over VS (23%) in the unergative-broad focus contexts, they prefer SV and VS with similar frequency in the narrow focus context (43% and 45% respectively). Although the behavior of the UG is not completely nativelike, this group accepts the VS or ‘Both’ options (options not available in their L1) at a higher rate than the other two learner groups.

		UNERG BROAD (SV)	UNERG NARROW (VS)	UNACC BROAD (VS)	UNACC NARROW (VS)	CLLD
CONTROLS	VS	23%	45%	60%	71%	91%
	SV	58%	43%	14%	15%	3%
	Both	20%	13%	26%	14%	6%
UG	VS	24%	26%	35%	35%	64%
	SV	28%	31%	20%	16%	15%
	Both	49%	43%	45%	49%	21%
Year 13	VS	9%	5%	18%	13%	11%
	SV	69%	73%	43%	55%	65%
	Both	23%	22%	40%	33%	24%
Year 9	VS	8%	4%	20%	13%	31%
	SV	80%	87%	67%	67%	55%
	Both	12%	9%	13%	20%	15%

Table 6. Overall percentage of responses

Figure 1 shows a comparison of the acceptability of VS in the four scenarios where this is the preferred option. The rates of acceptability of VS are very low for the beginner and the intermediate groups in all four contexts showing that neither the type of verb, nor the type of discursive conditions, seem to have an effect on their choices. Although the advanced group show higher rates of acceptance

of inversion across all contexts than the other two learner groups, the difference between the results of the control and the UG groups is significant in all four scenarios ($p=0.04$ in unaccusative-broad focus, $p=0.007$ in unergative narrow focus, $p=0.04$ in unaccusative narrow focus, and $p=0.01$ in CLLD).

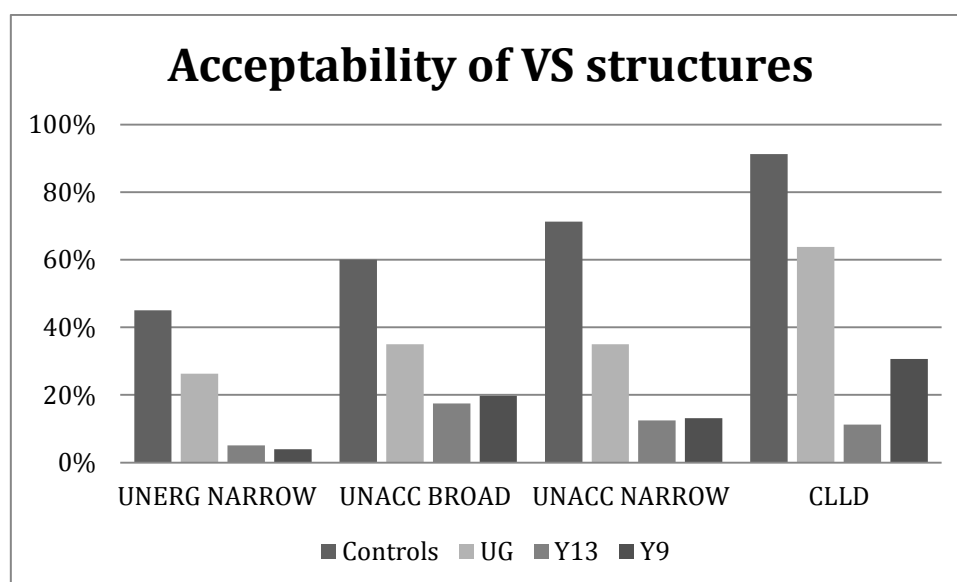


Figure 1. Rates of acceptability of VS structures in four contexts

Overall, these results show that although preference for inversion is observed in the results of the advanced group, their behaviour is not completely targetlike. This result is further examined in the following sections which provide a detailed analysis of responses for each of the five scenarios. To compare our results with that of previous research such as Lozano (2006a) in a straightforward manner, in some analyses we show SV and VS choices only. In these cases the ‘Both’ response is added to both the inverted and non-inverted responses.

5.1. Unergative Broad Focus (SV)

This is the only context in which the non-inverted structure is preferred due to the syntactic characteristics of the verb (unergative) and the informational content of the subject (not narrowly focused). The results in Figure 2 show that Y9 and Y13 learners chose the non-inverted option significantly more often than the inverted option ($p<0.0001$ for both), whereas the UG advanced group is the only group for whom there were no significant differences in their responses for the inverted and non-inverted option ($p=0.6$). This result by the advanced group is unexpected for this scenario since the subject does not need to appear postverbally to fulfil a discourse-pragmatic function. Native speakers were significantly more likely to accept the non-inverted than the inverted

option ($p < 0.0001$), a result which shows the UG behaving differently than the controls in this scenario.

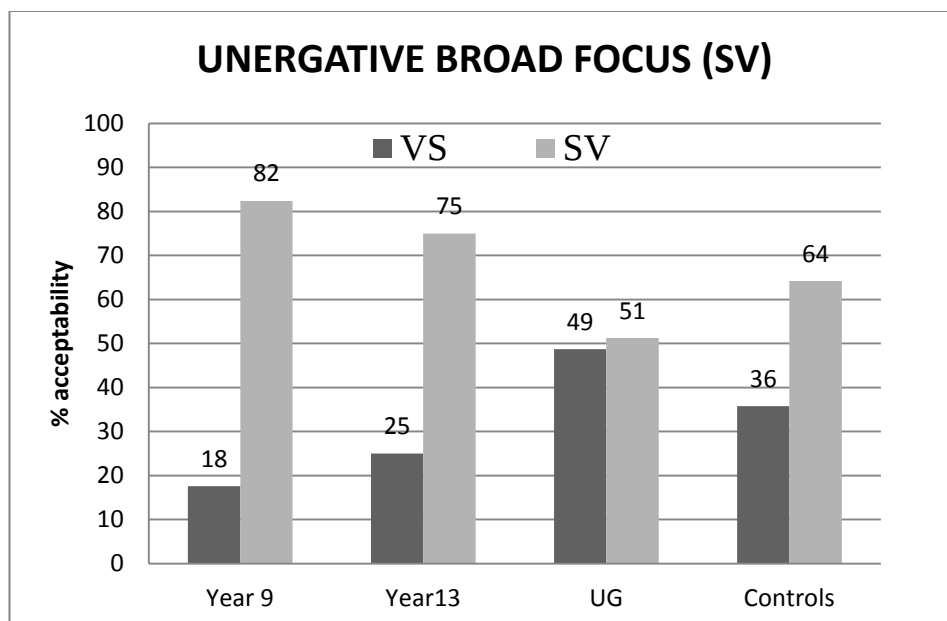


Figure 2. Percentage of acceptability of structures in unergative broad focus scenarios

One question that needs further examination is how the pattern of optionality of the UG group is obtained, whether there is a clear split between SV and VS among this group, or whether learners allow both options simultaneously in their grammars. Table 7 and Table 8 show the results obtained for the three options (SV, VS and 'Both') for each of the four verbs targeted for the controls and the UG groups.

	Dormir <i>sleep</i>	Bostezar <i>yawn</i>	Ladrar <i>bark</i>	Gritar <i>shout</i>	TOTAL	%
SV	11	16	11	8	46	57.5
VS	2	1	5	10	18	22.5
Both	7	3	4	2	16	20.0

Table 7. Distribution of responses across 4 unergative verbs in broad focus contexts (Controls)

	Dormir <i>sleep</i>	Bostezar <i>yawn</i>	Ladrar <i>bark</i>	Gritar <i>shout</i>	TOTAL	%
SV	5	6	7	4	22	27.5
VS	3	4	5	7	19	23.8
Both	12	10	8	9	39	48.8

Table 8. Distribution of responses across 4 unergative verbs in broad focus contexts (UG)

The controls prefer the expected SV structure at a rate of 57.5% , whereas the rest of the answers are split between VS and the 'Both' option. In contrast, the UG group preferred the 'Both' option (48.8%) over SV (27.5%) with all four verbs. These results reveal that advanced learners and controls are behaving differently: whereas 57.8% of the native speakers prefer SV, the preferred choice for half of the UG group is the 'Both' option (each individual allows both the inverted and the non-inverted structures in their grammars), indicating that SV and VS are optional for these speakers. Interestingly, 24% of the advanced learners chose the VS option, even though SV is expected in this context. Overall, the results show that most learners allow inversion in this context, in contrast to the behaviour of the native controls and the behaviour of their own L1. This result supports Hypothesis 1 which predicted that learners would choose inversion in unergative contexts at a higher rate than native speakers. It also contradicts Hypothesis 2 as optionality (as a result of learners choosing the 'Both' and VS options) is observed in this context even though the subject is not narrowly focused

5.2. Unergative narrow focus (VS)

In this scenario the narrowly-focused subject is preferred postverbally. We can see in Figure 3 that for Y13 and Y9 learners acceptance of non-inverted clauses was significantly higher than acceptance of inverted clauses ($p < 0.001$ for both), the option not available in their native grammar. In contrast, for native and advanced speakers there are no significant differences in the acceptance of inverted ($p = 0.6$) and non-inverted clauses ($p = 0.3$) which means that both groups show optional preferences for this structure. Lozano (2006a) also reported optional use of SV and VS in this scenario for all of his advanced speakers. The acceptance of SV by the native group (49%) is clearly unexpected as VS should be the preferred choice in this context. In Hertel (2003) the native speakers' production of VS structures was lowest in this scenario when compared to the other two scenarios where inversion is appropriate. This may indicate a higher than expected effect of verb type for SV use in this context which seems to be supported by the high use of SV with unergative verbs in the production data.

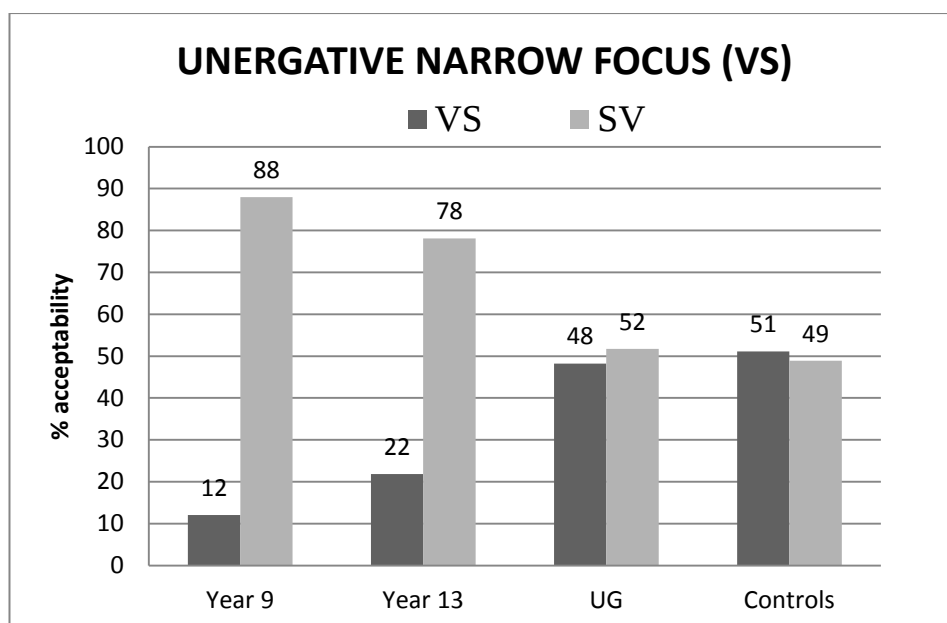


Figure 3. Percentage of acceptability of structures in unergative narrow focus scenarios

This is a scenario where the type of verb (unergative) favours a preverbal subject, but the type of pragmatic context (narrow focus on the subject) favours a postverbal subject. To some extent it is not entirely surprising that native controls were split in their choice in this context. An analysis of the results for each verb targeted shows that native speakers do not agree in their responses as SV is preferred at a rate of 45% and VS at a similar rate of 42.5%. Very low rates for the 'Both' option were observed (12.5%) for this group (see Table 9).

	Fumar <i>smoke</i>	Bailar <i>dance</i>	Estornudar <i>sneeze</i>	Llorar <i>cry</i>	TOTAL	%
VS	6	14	9	7	36	45.0
SV	12	3	7	12	34	42.5
Both	2	3	4	1	10	12.5

Table 9. Distribution of responses across 4 unergative verbs in narrow focus contexts (Controls)

In contrast, Table 10 shows that the advanced group preferred the 'Both' option (42.5%) over the SV (31.3%) and VS options (26.3%) across the four verbs tested:

	Fumar <i>smoke</i>	Bailar <i>dance</i>	Estornudar <i>sneeze</i>	Llorar <i>cry</i>	TOTAL	%
VS	3	8	6	4	21	26.3
SV	7	6	4	8	25	31.3
Both	10	6	10	8	34	42.5

Table 10. Distribution of responses across 4 unergative verbs in narrow focus contexts (UG)

Even though both the control and the advanced groups show optionality in this scenario (as illustrated in Figure 3), the results just examined show an important difference in the pattern of responses of these two groups: the optionality of the control group corresponds to a split in the behaviour of the group (around half of the native speakers prefer SV and the other half prefer VS). In contrast, half of the UG speakers allow both options, a result which indicates that the two structures are in fact optional in their grammars (which is not the case for native speakers).

5.3. Unaccusative Broad Focus (VS)

Figure 4 shows that Y9 learners and, to a lesser extent, Y13 learners had a significantly higher percentage of acceptance of the non-inverted clauses, with p-value of 0.01 and <0.001 respectively, showing behaviour consistent with their L1. Even though the rates for SV (45%) and VS (55%) are quite similar for advanced learners, there was a significant difference ($p=0.02$) in their acceptance of the inverted option over the non-inverted one. Native speakers also had a significantly higher percentage acceptance of the inverted clauses (68%) compared to the non-inverted clauses (32%), ($p<0.001$).

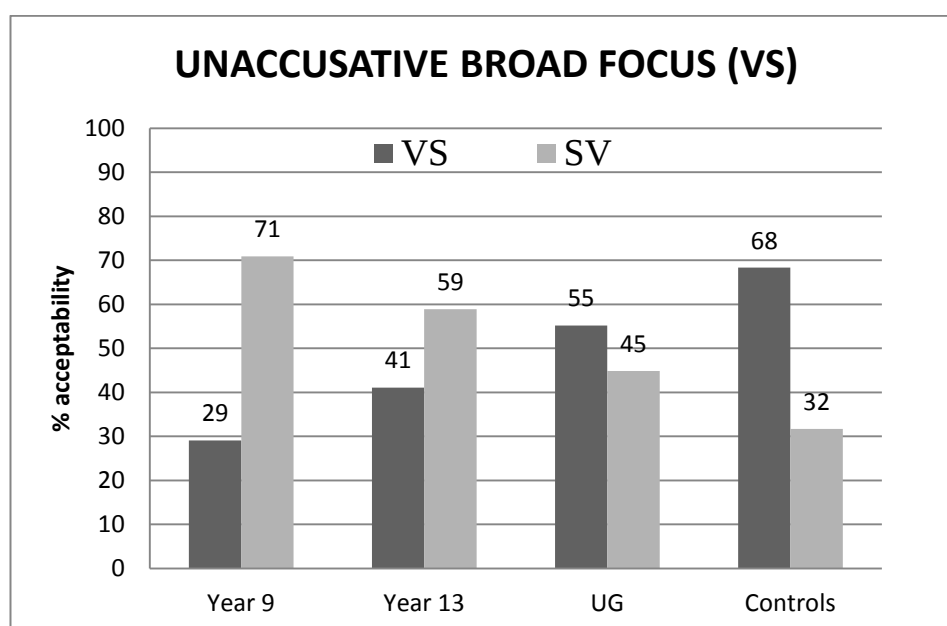


Figure 4. Percentage of acceptability of structures in unaccusative broad-focus scenarios

The fact that advanced learners prefer the inverted option significantly more often than the non-inverted option seems to support Hypothesis 2 (no optionality is expected by this hypothesis since the position of the subject is not affected by pragmatic constraints). However, the between-group analysis

reveals that the differences between undergraduates and native speakers were significant ($p=0.04$) which shows that the patterns of acceptance of inversion are different for these two groups.

Table 11 and Table 12, showing the responses for each verb targeted, cast some light on this difference. It appears that the native group preferred VS (71.3%) across all four verbs whereas the UG group preferred the ‘Both’ option at a rate of 48.8% over the VS option (35%).

Escapar <i>escape</i>	Llegar <i>arrive</i>	Romperse <i>break</i>	Entrar <i>come in</i>	entrar	TOTAL	%
VS	7	18	16	16	57	71.3
SV	6	2	3	1	12	15.0
Both	7	0	1	3	11	13.8

Table 11. Distribution of responses across 4 unaccusative verbs in broad focus contexts (Controls)

	Escapar <i>escape</i>	Llegar <i>arrive</i>	Romperse <i>break</i>	Entrar <i>come in</i>	TOTAL	%
VS	7	4	8	9	28	35.0
SV	5	2	4	2	13	16.3
Both	8	14	8	9	39	48.8

Table 12. Distribution of responses across 4 unaccusative verbs in broad focus contexts (UG)

The results for this scenario show that the beginner and intermediate groups behave consistently with the grammar of their L1 (i.e. not accepting the inverted option). The behaviour of the advanced group is more complex since as a group they accepted the preferred inverted option over the non-inverted one, but half of the learners in this group accepted both options indicating that SV and VS are optional in these speakers’ grammars, a result not expected by Hypothesis 2.

5.4. Unaccusative Narrow Focus (VS)

The within-group analysis shows that native speakers were significantly more likely to accept the inverted clause than the non-inverted clause ($p<0.001$), as expected (see Figure 5) in this scenario. The results show that advanced learners are more likely to select the inverted option over the non-inverted one ($p=0.03$), while intermediates and beginners were significantly more likely to accept the non-inverted clauses ($p<0.001$ for both), the only option available in their native grammars.

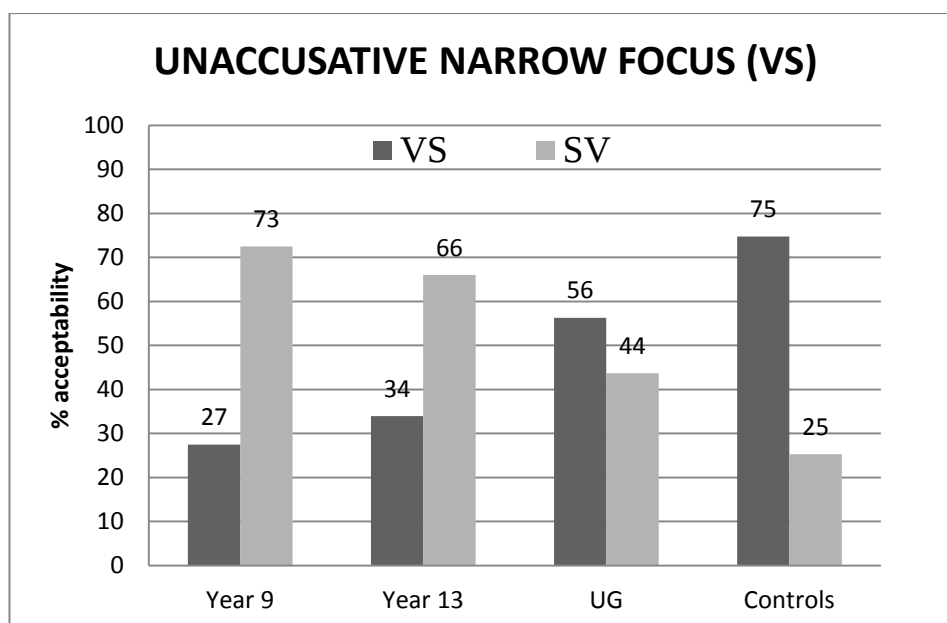


Figure 5. Percentage of acceptability of structures in unaccusative narrow focus scenarios

The between-group analysis reveals that the difference between Y13 and Y9 was not significant ($p=0.4$) suggesting that these two groups have similar patterns of accepting and rejecting the target structure. The difference between undergraduates and native speakers was found to be significant ($p=0.004$). This suggests that the advanced group may not be considered completely native-like even though they prefer the target option and show no optionality.

The subjects in this scenario were narrowly focused and therefore dependent on discourse-pragmatic constraints. Although in this scenario Hypothesis 2 predicts no significant differences between the two options for advanced speakers, the group results indicate that these speakers preferred VS significantly more often (no optionality). However, an analysis of the individual results for this group reveals once again that both forms are indeed optional in the grammar of some of these learners. The results in Table 14 show that 45% of advanced speakers selected the 'Both' option over SV (20%) and VS (35%). This contrasts with the responses of the control group as shown on Table 13, where VS was the preferred option (60%):

	Llegar <i>arrive</i>	Escapar <i>escape</i>	Caerse <i>fall</i>	Romperse <i>break</i>	TOTAL	%
VS	19	10	13	6	48	60.0
SV	1	5	0	5	11	13.8
Both	0	5	7	9	21	26.3

Table 13. Distribution of responses across 4 unaccusative verbs in narrow focus contexts (Controls)

	Llegar <i>arrive</i>	Escapar <i>escape</i>	Caerse <i>fall</i>	Romperse <i>break</i>	TOTAL	%
VS	8	9	7	4	28	35.0
SV	3	3	5	5	16	20.0
Both	9	8	8	11	36	45.0

Table 14. Distribution of responses across 4 unaccusative verbs in narrow focus contexts (UG)

The pattern of responses of the UG group in this context is similar to those reported in the previous three contexts: approximately half of the speakers in this group chose the ‘Both’ option, even in unergative broad focus contexts. This shows that although advanced speakers know that inversion is possible in Spanish (in contrast to beginner and intermediate speakers) they do not possess nativelike intuitions concerning the actual use of this structure.

5.5. Clitic left dislocations

Figure 6 illustrates the results of structures with CLLD. The within-group analysis shows native speakers and undergraduates to both be significantly more likely to accept the inverted form than the non-inverted or ‘Both’ options ($p < 0.0001$ for both natives and undergraduates). There was no significant difference for these groups between selection of the non-inverted and ‘Both’ options ($p = 0.2$ for natives, and $p = 0.1$ for UG). The fact that native speakers overwhelmingly rejected the non-inverted option (i.e. Cl,#S-V-O), in clear contrast with preference rates for the rest of structures, clearly supports the claim that this structure does not freely alternate with the inverted counterpart (i.e. Cl,#V-O-S) in native Spanish. In contrast, and in line with all the other results, the Y13 and Y9 groups were significantly more likely to choose the non-inverted form ($p < 0.0001$).

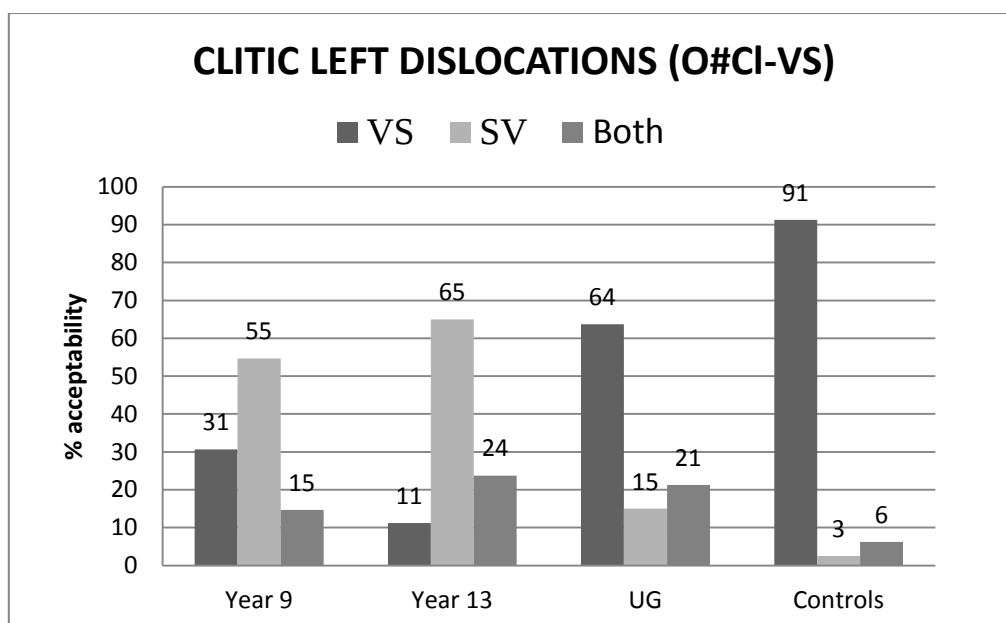


Figure 6. Percentage of accepted structures with clitic left dislocations

The between-group analysis reveals that native speakers and undergraduates were significantly more likely than Y13 or Y9 learners to select the inverted form. Differences between Y9 and Y13 learners were not significant ($p = 0.5$) for the non-inverted option.

These results show that advanced speakers are the only group who behaved nativelike preferring the target inverted form significantly more often than the structure with no inversion in the contexts presented in the test which necessarily require a narrowly focused subject. This result does not support Hypothesis 2, which predicts optionality in this scenario since the position of the subject is affected by discourse-pragmatic conditions, and supports Hypothesis 3, which does not predict optionality in this particular case due to clear evidence in the input for the availability of inversion.

6. Discussion

The results from this study show that acquisition of Spanish verb-subject inversion is a slow process (see also De Miguel 1993; Pérez-Leroux and Glass 1999; Hertel 2003; Domínguez 2013) as systematic preference for inversion is only observed in advanced stages of acquisition (see also Hertel 2003 and Lozano 2006a). The results indicate a clear difference in the choices of the advanced group, showing preference for the inverted structure, when compared to beginners and intermediates whose pattern of choices is always consistent with the grammars of their L1 (preferring the non-inverted option in all syntactic and pragmatic contexts). The results also show that although advanced speakers consider inversion as an option, they do not behave completely nativelike as they allow inversion

much more frequently with unergative verbs than native speakers, leading to cases of optionality. The overuse of VS structures in our study is consistent with similar results in previous studies (Hertel 2003; Pérez-Leroux and Glass 1997; 1999; Papp 2000; Yuan 1996; 1999; Lozano and Mendikoetxea 2010; Domínguez 2013).

The discourse-dependant preference task used in this study was modelled after previous research to test whether knowledge of inversion was dependant on properly acquiring the syntactic or the pragmatic conditions that constrain inversion in Spanish. Consistent with previous findings in the literature, it was first hypothesised that if advanced learners' syntactic representation of intransitive verbs was impaired, an overgeneralisation of inverted forms in unergative broad contexts would be observed. Although the present study was not designed to examine the actual cause of a syntactic impairment there are two possible ways in which learners could have a syntax-related deficit: either they do not raise the verb to T, or they incorrectly overuse *pro* in [Spec, TP] forcing the subject to stay in its base-generated [V, comp] position for unaccusative and [Spec, vP] for unergative verbs (which would appropriately satisfy the EPP but would inappropriately allow subjects to always appear postverbally). Since the first option predicts that the verb always stays in V even in broad focus contexts, it cannot really explain why some of the advanced learners chose VS with unergative verbs, as attested in our data (since this structure necessarily requires movement of the verb past the position where the subject is generated). We can, therefore, safely rule out this option.

The second possibility necessarily assumes that learners must have acquired the relevant syntactic properties of unaccusative verbs in Spanish (corroborated by the fact that advanced learners prefer inversion in all unaccusative contexts), but incorrectly assume that the subject can stay in situ in unergative broad focus contexts as well. In this scenario, subjects may be allowed to remain in situ because a null non-referential pronoun sitting in [Spec, TP] already satisfies the appropriate syntactic conditions, (i.e. the EPP) as in the VS scenarios. This analysis can appropriately account for the pattern of preference of those L2 speakers who chose VS in both unaccusative and unergative contexts, even in the broadly focused scenario. It also demonstrates that a syntactic deficit is a plausible explanation for the inappropriate preference patterns observed in our L2 data.¹⁵

We argue that if a representational deficit exists it would be the consequence of a misanalysis regarding syntactic properties of intransitive verbs (see Hypothesis 1). The unergative broad context is

¹⁵ Our data do not allow us to test whether the argument structure, (in particular where in the structure subjects are generated), that learners possess for Spanish unergatives and unaccusatives verbs is targetlike or not. In this respect, it may be the case that in addition to overgeneralising *pro* in [Spec, TP], learners are also assuming one single (unaccusative) structure for all intransitive verbs as well as. We leave it for future research to clarify whether this is indeed the case.

the only structure, out of the five tested, in which subjects tend to appear preverbally in Spanish as they move to the specifier of TP to satisfy the EPP. In the unaccusative case a null pronoun can (or must) fill this position, although *pro* alternates with the overt lexical subject in the broad-focus contexts. Consequently, a VS overgeneralisation in L2 grammars should be seen more clearly in unergative-broad focus contexts where the alternative SV configuration is preferred. The results discussed in this study support this hypothesis since advanced speakers show a preference for the inverted structure (VS) in unergative broad contexts (similar to some of the findings reported in Hertel (2003), Lozano (2006a) and Domínguez (2013)). This would be an unexpected finding if learners had completely acquired the syntactic properties of intransitive verbs since both the type of verb (unergative) and the pragmatic properties of this context (broad focus) coincide in favouring a structure with a preverbal subject (confirmed by the answers of our native controls).¹⁶ Furthermore, L2 speakers are partially selecting an option which is not available in their L1, which indicates that learners have successfully overcome any existing transfer effects.¹⁷ What is crucial for our study is that by overusing VS with unergative verbs a pattern of optionality ensues in the advanced group in a context where the subject is not narrowly-focused (i.e. the position of the subject is not determined by discourse pragmatic constraints). This is an unexpected finding for the predictions of the IH.

We also argue that any conclusions regarding the effects of verb type (i.e. syntactic properties of unaccusative and unergative verbs) on the acquisition of subject-verb inversion cannot be solely based on whether L2 speakers prefer VS with unaccusatives more frequently than with unergatives (as assumed in previous research), as this analysis would leave any overgeneralisation patterns (also emerging from a syntactic deficit) undetected. In our results, advanced L2 speakers correctly preferred VS with unaccusative in broad and narrow contexts but we cannot conclude that they have completely acquired the syntactic properties that license *pro* in unergative structures, as VS overgeneralization was observed in these contexts. These results show that the acquisition of the syntactic properties of intransitive verbs, which are known to affect early stages of acquisition, may be still problematic at advanced stages (as predicted by Hypothesis 1) even if inversion with unaccusative verbs is attested in the data of L2 speakers.

¹⁶ Preference for VS by the advanced group in unaccusative broad contexts (where the subject appears postverbally because of where it is generated not because it is narrowly focused) demonstrates that this group has acquired the relevant lexico-semantic properties of unaccusative verbs (and that the subject is originated in object position). It is also worth noting that the beginner and intermediate group allow for some inversion (29% and 41% respectively) which is a high acceptance rate when compared with the production data obtained by Hertel (2003) where beginner learners did not use any inversion. This difference between our results and Hertel's may be due the type of task used to elicit the data as inversion may be more difficult to elicit in production data at low proficiency levels.

¹⁷ We are describing a case of divergence in grammars that although quite advanced are still being developed; our analysis does not predict permanent impairment of syntactic representations during the ultimate-attainment stage.

The responses that we found in our beginner and intermediate data (preference for SV in all contexts) are compatible with the existence of a representational deficit at this stage. This is in line with previous research pointing out the existence of persistent problems in the L2 acquisition of the syntactic properties of unaccusative verbs (Balcom 1997; Hirakawa 1995, 2000, 2001; Kellerman 1978; Oshita 1997, 2001; Rutherford 1987; Sorace 1993a, 1994a, 1994b, 1995; Shomura 1996; Sorace and Shomura 2001; Yip 1995; Yuan 1996; Zobl 1989; Montrul 2005). Oshita's UTH predicts the existence of an early syntactic deficit affecting the structural conditions specific to unaccusative verbs (i.e. the position where subjects are generated in this structure) as learners assume one single syntactic structure for both unergative and unaccusative verbs. Since our beginner and intermediate speakers consistently prefer the non-inverted option (the only possible form in English) in all contexts, we can safely assume that they have not yet acquired the rules that license moved subjects in Spanish and that discourse has little effect at this stage in the acquisition process. In our data it is not until learners reach advanced levels of proficiency that they start to show convergence on (some of) the syntactic rules that allow subjects postverbally in Spanish.

The second prediction tested in this study was that the learners would behave differently to native speakers only in structures which are part of the syntax-pragmatics interface; in particular, optional forms would be allowed in these contexts. Our results show that, in line with what was reported in Lozano (2006a), a pattern of responses revealing optionality was indeed observed for the advanced group although not in all the contexts predicted by the IH. If a breakdown of computational resources was to affect discourse-pragmatic conditions optionality would have been found in all narrowly focused contexts (unergative/unaccusative narrow focus and clitic left dislocations) and not in broad focus contexts where subjects do not need to appear postverbally to be aligned with stress. Our results however, did not support this prediction as optionality was found for the advanced group with all unergative verbs including those in broad focus contexts and no optionality was found in any narrowly focused contexts with unaccusative verbs (in contrast to Lozano 2006a) or in clitic left dislocations. In all these cases the advanced group clearly preferred the correct inverted option over the non-inverted one despite the marked discursive properties of the subject. Based on these results we can conclude that optionality is not a problem which is exclusive to the acquisition of structures at the syntax-pragmatics interface, contra one of the main predictions of the IH.

A third and final prediction investigated whether learners would be sensitive to the lack of robust evidence in the input in acquiring the target structures. In order to test this possibility we also analysed learners' acceptance of clitic left dislocations. The subject always appears postverbally to fulfil a discursive function in these structures, but, unlike intransitive verbs, a non-inverted alternative is not available in the target input. Consequently, whereas it may be possible for learners to entertain the possibility that SV-VS are in free distribution in Spanish this can be safely ruled out for clitic left

dislocations. It was then hypothesised that if learners were affected by the type of evidence presented in the input they will not show optionality with CLLD for that reason. This was indeed attested in our data as advanced speakers consistently preferred the target inverted structure over the non-inverted one with clitic left dislocations, and no optionality was observed. This result indicates that not all phenomena at the syntax-pragmatics interface are persistently problematic as subject inversion is correctly preferred by the advanced group in this case. It also indicates that lack of transparency in the evidence available in the input can be a source of indeterminacy in non-native grammars.

The results of our advanced speakers show that the ‘Both’ option was systematically preferred by half of the advanced group in all intransitive contexts. This reveals that although learners are aware that inversion is possible in Spanish, their knowledge on when VS and SV are preferred with intransitive verbs is not categorical. This is evidenced by the fact that the same speaker allows both (SV-VS) options when this is not the case for native speakers.¹⁸ This agrees with Sorace’s (1993, 2006) view that residual optionality is a feature of advanced L2 grammars but unlike Sorace, we argue that the cause of such optionality is not always necessarily linked to a syntax-pragmatic interface effect. In our results optionality was observed in broad focus contexts and, crucially, was not found in CLLD, even though both structures belong to the syntax-pragmatics interface. Following Papp (2000) we argue that optionality at advanced stages persists if L2 input is non-robust, parametrically ambiguous or simply not transparent or systematic enough and that this situation can explain the asymmetry in the acquisition of the discursively marked structures in our study (see similar argument in Domínguez and Arche 2008). In particular, this can explain why learners show persistent difficulties acquiring the use of *pro* in intransitive clauses, whereas they behave in a native-like manner in discourse-marked contexts (narrow focus contexts). Crucially, the analysis of the native data showed that the linguistic evidence available for acquiring the syntactic properties of unergative and unaccusative verbs in Spanish is not completely transparent. In this respect L2 speakers may not get clear evidence that a lexical subject is preferred over *pro* with unergative verbs (native speakers show a rather similar 57% use of SV and 43% use of VS). This situation can explain why learners find the acquisition of SV-VS contrasts persistently difficult.

Our analysis is compatible with the view that L2 speakers eventually converge on the grammar of native speakers, and that this may well be the case with our advanced speakers as their experience in the L2 increases. Our main point is that the characteristics of the linguistic input can be the cause of delays during certain stages in the acquisition process due to learners’ sensitivity to the frequency and

¹⁸ Even though native speakers may vary on their preference for SV and VS in each context, their choices are categorical in the sense that they only allow one of the two options available.

consistency in which a certain structure appears, a possibility which UG/nativist approaches to L2 acquisition do not typically take into account. One exception is a recent study by Slabakova (2013) which also argues for a more careful examination of the input in studies following a generative framework. This author examined the acquisition of Spanish CLLD by English speakers, as well as English topicalization by Spanish speakers. These two structures were chosen because they pose the same type of difficulty to these two groups of speakers but appear with different frequency in the input (topicalization is half as frequent as CLLD according to evidence in this study). Slabakova found that learning topicalization is much more difficult than CLLD, a result which cannot be accounted for by the IH since both constructions are at the syntax-discourse interface. This author argues that L1 transfer and the relative frequency of the target structure combined can explain the results in her study, in particular *“if the constructions are the same in the two languages, they do not pose a problem to learners. If the constructions are not the same and transfer is misleading, only then frequency becomes a factor. Teasing apart the primacy of transfer or frequency certainly merits further research.”* (Slabakova 2013:25). The results discussed in the present study also indicate that the existence of alternate structures with similar frequency can lead to divergence in L2 grammars. They also support the view that a more careful look at the characteristics of the input received by non-native speakers is necessary to gain a better understanding of the acquisition process.

7. Conclusions

The following conclusions arise from the discussion of the results presented in the study. First, persistent problems in the acquisition of word order variation are not easily explained by a deficit at the syntax-pragmatics interface. In fact, the pattern of optionality observed in this study is more consistent with problems acquiring the licensing of *pro* in intransitive structures. Second, observed gradients of acceptability (i.e. optionality) in advanced grammars affect structures in broad focus contexts, contexts in which the subject can remain in preverbal position as it is not narrowly focused. This result does not support the view that optionality primarily affects structures at the syntax-pragmatics interface. Finally, we propose that the type of evidence in the input can explain why acquiring SV-VS contrasts in Spanish is an area of particular difficulty for L2 speakers.

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