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The Acquisition of Syntax in Romance Languages

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The Acquisition of Syntax in Romance Languages
Edited by Vincent Torrens and Linda Escobar

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Table of contents

Contributors	VII
The acquisition of syntax in Romance languages <i>Editors: Vincent Torrens and Linda Escobar</i>	IX
Part I. Clitics, determiners and pronouns	
The production of SE and SELF anaphors in Spanish and Dutch children <i>Sergio Baauw, Marieke Kuipers, Esther Ruigendijk and Fernando Cuetos</i>	3
On the acquisition of ambiguous Valency-Marking Morphemes: Insights from the acquisition of French SE <i>Isabelle Barrière and Marjorie Perlman Lorch</i>	23
Definite and bare noun contrasts in child Catalan <i>Anna Gavarró, Ana Teresa Pérez-Leroux and Thomas Roeper</i>	51
Null arguments in monolingual children: A comparison of Italian and French <i>Natascha Müller, Katrin Schmitz, Katja Cantone and Tanja Kupisch</i>	69
Prenominal elements in French-Germanic bilingual first language acquisition: Evidence for cross-linguistic influence <i>Maren Pannemann</i>	95
Part II. Verbs, auxiliaries and inflection	
A cross-sectional study on the use of "be" in early Italian <i>Claudia Caprin and Maria Teresa Guasti</i>	117
Patterns of copula omission in Italian child language <i>Elisa Franchi</i>	135
Looking for the universal core of the RI stage <i>Manola Salustri and Nina Hyams</i>	159
The acquisition of experiencers in Spanish L1 and the external argument requirement hypothesis <i>Vincent Torrens, Linda Escobar and Kenneth Wexler</i>	183
Early operators and late topic-drop/pro-drop <i>Jacqueline van Kampen</i>	203

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Part III. Movement and resumptive pronouns

- The acquisition of A- and A'-bound pronouns in Brazilian Portuguese 227
Elaine Grolla

- Acquiring long-distance wh-questions in L1 Spanish: A longitudinal investigation 251
María Junkal Gutiérrez Mangado

- Evidence from L1 acquisition for the syntax of wh-scope marking in French 289
Magda Oiry and Hamida Demirdache

Part IV. Syntax/discourse interface

- Acquisition of focus marking in European Portuguese: Evidence for a unified approach to focus 319
João Costa and Kriszta Szendrői

- Subject pronouns in bilinguals: Interference or maturation? 331
Manuela Pinto

Part V. L2 acquisition

- Is the semantics/syntax interface vulnerable in L2 acquisition? Focus on mood distinctions clauses in L2 Spanish 353
Claudia Borgonovo, Joyce Bruhn de Garavito and Philippe Prévost

- The development of the syntax-discourse interface: Greek learners of Spanish 371
Cristóbal Lozano

- Beyond the syntax of the Null Subject Parameter: A look at the discourse-pragmatic distribution of null and overt subjects by L2 learners of Spanish 401
Silvina Montrul and Celeste Rodríguez Louro

- Index 419

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The development of the syntax-discourse interface

Greek learners of Spanish*

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Recent acquisitional studies reveal that formal properties at the lexicon-syntax interface are in place before discursive properties at the syntax-discourse interface. It has been argued that this phenomenon results from learners' deficits with *interpretable* discursive features like [focus]. This study claims that the phenomenon derives from learners' deficits with the *uninterpretable* formal features responsible for regulating the occurrence of discursive focus, whereas learners' representation of *interpretable* focus features are intact. This claim was tested by conducting a study with Greek learners of non-native Spanish at three proficiency levels. Learners judged Subject-Verb and Verb-Subject order with intransitives (unergatives and unaccusatives), which is constrained both formally (Unaccusative Hypothesis at the lexicon-syntax interface) and discursively (presentational focus at the syntax-discourse interface).

Results confirm that, while the general 'syntax-before-discourse' observation is correct, learners' source of persistent deficits with discursive properties derives from the *uninterpretable* feature that regulates the syntactic realisation of focus. This implies that learners are sensitive to the (interpretable) [focus] feature, but are unable to grammaticalise it syntactically.

1. Introduction

The study of the acquisition of discursive properties like topic and focus at the syntax-discourse interface (also known as syntax-information structure interface) is an underexplored area in second language acquisition research. In particular, little is known about the acquisition of presentational focus, as can be observed in its lack of coverage in major works (Hawkins 2001 and White 2003 for L2 English; Montrul 2004b for L2 Spanish). This is not surprising as the study of discursive properties has not been favoured in the theoretical literature:

Notice that I am sweeping under the rug questions of considerable significance ... called "surface effects" on interpretation. These are manifold, involving topic-focus and theme-rheme structures ... and many others. (Chomsky 1995: 220)

This state of affairs has started to change recently with the appearance of a series of seminal works on the theory of discursive topic, contrastive focus and presentational focus (*inter alia*, Belletti 2001; Brody 1995; Casielles-Suarez 2004; Gundel 1998; Kiss 1995, 1998; Rizzi 1997b; Zubizarreta 1998). This has triggered the appearance of several studies on the acquisition of the discursive properties of the pro-drop parameter (null subjects and subject-verb inversion). Learners show deficits when the distribution of overt and null pronominal subjects is constrained by discursive factors (topic/focus) at the syntax-discourse interface, but not when they are constrained by purely syntactic factors (Montrul & Rodríguez-Louro 2004 and Pérez-Leroux & Glass 1997, 1999 in L2 Spanish contexts; Montrul 2004a and Satterfield 2003 in English-Spanish bilingual contexts; Serratrice 2004 and Serratrice et al. 2004 in English-Italian bilingual contexts; Tsimpli et al. in press for L1 Italian/Greek attrition). Similarly, it has also been observed that learners of Spanish show deficits with the discursive properties regulating Subject-Verb and Verb-Subject alternations (Hertel 2003; Lozano 2006).

It has been claimed that *interpretable* features like focus and topic are the source of such deficits at the syntax-discourse interface (Sorace 2004). In the current study, it will be shown that *uninterpretable* syntactic features are responsible for the observed deficits. In order to test this, we investigated the acquisition of the second property of the pro-drop parameter, SV/VS alternations, which are constrained at the lexicon-syntax interface by split-intransitivity (Unaccusative Hypothesis) and, crucially, by presentational focus at the syntax-discourse interface. Greek learners of Spanish were tested at three proficiency levels (upper intermediate, lower advanced and upper advanced). Results show that while learners display native-like knowledge of word order distribution at the lexicon-syntax interface from the earliest stages of acquisition tested, their knowledge at the syntax-discourse interface is persistently problematic as a result of learners' deficits with *uninterpretable* features, which are responsible for the distribution of word order in the discourse. To my knowledge, this is the only study to date testing the longitudinal development of word order constraints (lexicon-syntax interface and, crucially, syntax-discourse interface) in L2 Spanish by Greek natives at three stages of development.

2. Theoretical background

2.1 Word order distribution and the interfaces

The input Spanish learners are exposed to contains seemingly free alternations of Subject-Verb (SV) and Verb-Subject (VS) word orders, (1) and (2).¹ It is well known that (i) current Spanish textbooks do not address seriously the issue of word order alternations and that (ii) Spanish language instructors are typically unaware of the

factors at the interfaces (lexicon-syntax and syntax-discourse) that regulate word order (Hertel 2000, 2003; Lozano 2006). Hence, the input is underdetermining what the learner must know.

- (1) *Un niño vino / Vino un niño*
A boy arrived / Arrived a boy
'A boy arrived'
- (2) *Un niño lloró / Lloró un niño*
A boy cried / Cried a boy
'A boy cried'

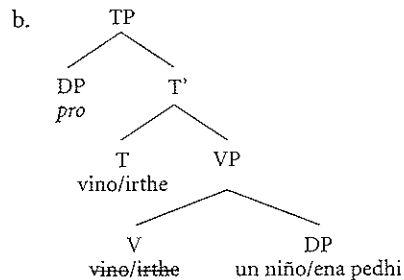
One of the constraints regulating word order alternations derives from properties operating at the lexicon-syntax interface. Since Perlmutter (1978), the *Unaccusative Hypothesis* (UH) splits intransitive verbs into two distinct lexical classes: unaccusatives (like *venir* 'to come/arrive', *llegar* 'to arrive', *existir* 'to exist', *suced* 'to happen', etc.) and unergatives (like *llorar* 'to cry', *estornudar* 'to sneeze', *saltar* 'to jump', etc.). While the (agent) subject of unergatives corresponds to the notional and grammatical subject of the verb, the (theme) subject of unaccusatives corresponds to the grammatical subject but is a notional object (see Alexiadou et al. 2004; Levin & Rappaport-Hovav 1995; Mendikoetxea 2000; Sorace 2000). One of the diagnostics of UH in Spanish and Greek is the syntactic distribution of SV and VS. Given a relevant 'out-of-the-blue context' where speaker A asks a global question like *¿Qué pasó?* (Spanish) / *Ti ejine?* (Greek) 'What happened?', the expected reply cannot contain topicalized or focused material, since, technically, the answer is an 'all focus' reply, where all the information is unknown to speaker A. In these environments, word order is constrained by the lexicon-syntax interface – the pragmatically acceptable word order with unaccusatives is VS in Spanish (3Bii) and in Greek (4Bii), while SV is pragmatically deviant, (3Bi) and (4Bi). By contrast, unergative VS is pragmatically anomalous in Spanish (5Bii) and Greek (6Bii), while SV in (5Bi) and (6Bi) is preferred. These theoretical data are supported by empirical data based on Spanish and Greek natives (Domínguez 2004; Georgiagentis 2004; Hertel 2003; Lozano 2006).

- (3) A: *¿Qué pasó?*
What happened?
- B: (i) *#Un niño vino* (#SV)
A boy arrived
- (ii) *Vino un niño* (VS)
Arrived a boy
- (4) A: *Ti ejine?*
What happened?
- B: (i) *#Ena pedhi irthe* (#SV)
A boy arrived
- (ii) *Irthe ena pedhi* (VS)
Arrived a boy

- (5) A: *¿Qué pasó?*
 What happened?
 B: (i) *Un niño gritó* (SV)
 A boy shouted
 (ii) *#Gritó un niño* (#VS)
 Shouted a boy
- (6) A: *Ti ejine?*
 What happened?
 B: (i) *Ena pedhi fonaxe* (SV)
 A boy shouted
 (ii) *#Fonaxe ena pedhi* (#VS)
 Shouted a boy

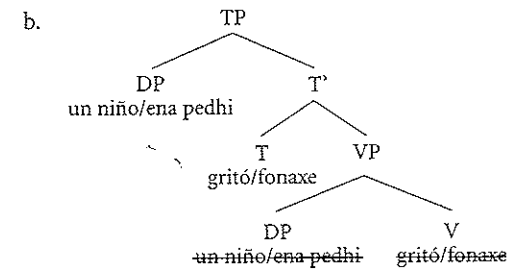
In short, unaccusatives require VS while unergatives require SV in Spanish and Greek. Following standard analyses (e.g. Alexiadou & Anagnostopoulou 1999; Eguren & Fernández-Soriano 2004; Zagona 2002), the derivation of the observed distributions in (3)–(6) is as follows: the subject of unaccusatives like *vino* (Spa)/*eftase* (Grk) ‘arrived’ in (7) is base-generated in object position, i.e. postverbally in [V,Comp], where it can remain, as the merging of a null expletive subject *pro* with T checks the EPP feature of T and allows long-distance agreement between T and the postverbal subject so that the phi and case features of the subject can be checked.² Notice that it is standardly assumed that the finite verb in these languages always rises from V to T, either in narrow syntax as traditionally assumed or in PF as assumed more recently (the precise analysis is irrelevant for the current study).

- (7) a. *Vino un niño / Irthe ena pedhi*
 (Spanish/Greek unaccusative)
 Arrived a boy



By contrast, the subject of unergatives like *gritó/fonaxe* ‘shouted’ in (8) is base-generated in [Spec,VP] and then raises to [Spec,TP] for feature-checking purposes.

- (8) a. *Un niño gritó / Ena pedhi fonaxe*
 (Spanish/Greek unergative)
 A boy shouted

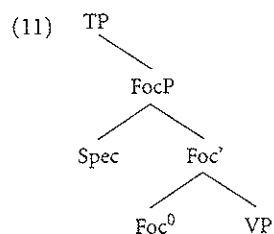


Recent studies have shown that SV/VS alternations are also constrained by discursive properties operating at the syntax-discourse interface. In presentational focus contexts, the focused constituent (which initially represents only one entity, unknown to the hearer, out of an unlimited set of entities), represents new information.³ Presentationally focused constituents can be elicited by a *wh*-question. In (9)–(10) and (14)–(15), the question headed by *quién* (Spanish) / *pjos* (Greek) ‘who’, requires a presentationally focused subject as an answer, i.e. the subject is new information to speaker A. Since Bolinger (1954), it is well known that presentationally focused elements must appear in sentence-final position in Spanish. In presentationally focused subject contexts, the subject then appears in sentence-final position (VS order), as its appearance in sentence-initial position would necessarily imply a contrastive focus reading (see Domínguez 2004). So, a presentationally focused subject is marked syntactically via VS, irrespective of verb type: unaccusative (9Bii) and unergative (10Bii), i.e. the unaccusative/unergative syntactic distinction is neutralized in focused contexts. These data are supported by theoretical and empirical studies based on Spanish natives (Domínguez 2004; Hertel 2000; Lozano 2006).

- (9) A: *¿Quién vino?*
 Who arrived?
 B: (i) *#[Un niño]_{Foc} vino* (#SV)
 A boy arrived
 (ii) *Vino [un niño]_{Foc}* (VS)
 Arrived a boy
- (10) A: *¿Quién gritó?*
 Who shouted?
 B: (i) *#[Un niño]_{Foc} gritó* (#SV)
 A boy shouted
 (ii) *Gritó [un niño]_{Foc}* (VS)
 Shouted a boy

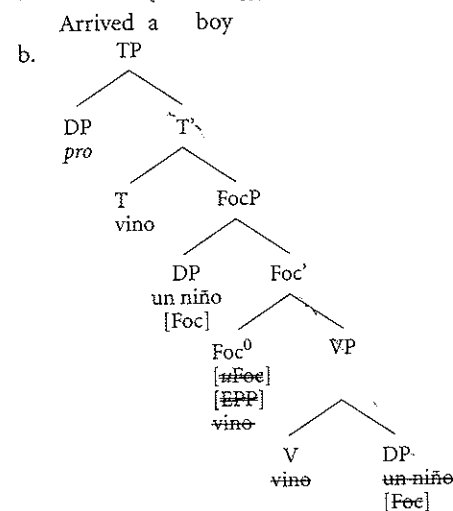
Consider now the derivation of presentationally focused subjects in Spanish. According to the TP-internal focus theory (Belletti 2001, 2003; Belletti & Shlonsky 1995), presentational focus is syntactically represented in Italian. The analysis can be also extended to Spanish (Lozano 2003, 2006). In particular, there is a designated Focus

Phrase (FocP) above VP and below TP for hosting presentational focused elements. The focus head (Foc⁰) merges with VP. In turn, the T head merges with FocP. Presentationally focused elements are displaced to [Spec,FocP] for feature-checking purposes. Belletti and associates' theory postulates a 'rich' VP periphery analogous to Rizzi's (1997b) rich CP left periphery, where several (recursive) topic phrase(s) but only one focus phrase are located. However, note a crucial difference between Belletti's vs. Rizzi's proposals – Belletti's focus system hosts presentationally focused elements, which differ interpretively and syntactically from Rizzi's contrastively focused elements (see Note 3).



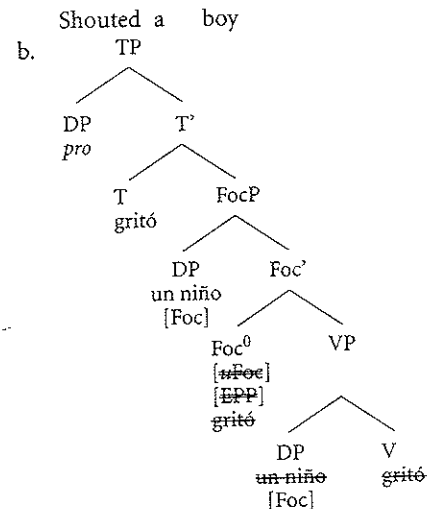
Under a 'probe-goal' approach to displacement (e.g. Chomsky 2004), consider the derivation of Spanish *Vino* [*un niño*]_{Foc} in (12), which will be relevant to interpret the results in the experimental section. Given that we are dealing with an unaccusative verb, V merges with the DP subject *un niño* 'a boy', creating VP (i.e. via pure merge). The subject *un niño* is presentationally focused, so it carries a valued [Foc] feature, which must be *interpretable*, as the external system of thought (Conceptual-Intentional system) needs to interpret it as new information. The focus head merges with VP (via pure merge). Note that the focus head contains an unvalued [*uFoc*] feature which is *uninterpretable* and an [EPP] feature, which will be responsible for the displacement of the focused element. By virtue of (i) having an unvalued focus feature and (ii) being the highest head at this point in the derivation, Foc⁰ would act as a probe (Earliness Principle) and would start searching for a matching goal in its domain to value its unvalued [Foc] feature.⁴ The unvalued feature of the probe agrees with the valued features of the matching goal *el niño* 'the boy'. The unvalued feature gets valued and then deleted.⁵ Crucially, the DP *el niño* then merges with the probing goal head by virtue of its [EPP] feature, i.e. the DP is displaced to the specifier of the probe (internal merge) and the [EPP] feature is deleted. In the resulting configuration, the focused subject is hosted in [Spec,FocP]. The interpretable [Foc] feature of *el niño* would proceed to spell-out, from where is sent to LF, which can interpret it as new information. The merge operation would keep on applying as usual until creating TP. Note that the finite V *vino* 'arrived' is displaced to T, as traditionally assumed (probably via Foc⁰, assuming some version of the Head Movement Constraint or, under more recent versions, due to PF operations). The case and phi features of the focused subject can be checked at long distance via *pro*, as argued earlier.

(12) a. *Vino* [*un niño*]_{Foc} (Spanish focused subject: unaccusative)



The scenario for unergative verbs with presentationally focused subjects (13) would be similar to the derivation described above for unaccusatives, except for the initial merge of DP with V.

(13) a. *Gritó* [*un niño*]_{Foc} (Spanish focused subject: unergative)



Note that while experimental data from Spanish natives indicate that left-peripheral contrastive focus shows a distinct prosodic pattern from neutral declaratives, "neutral declaratives and sentences with final narrow focus [i.e. either presentational or con-

trastive] are prosodically indistinguishable" (Dominguez 2004: 138). In other words, sentence-final presentational focus does not present special prosodic patterns in Spanish, contrary to what has sometimes been assumed in the literature (see Gundel 1998 and Szendrői 2004 for a general discussion of syntactic vs. prosodic approaches to focus).

Consider now Greek. The literature has shown that Greek, unlike Spanish, displays a wider range of syntactic possibilities for focus, since, e.g. transitive SVO can be interpreted as (i) all focus/neutral, (ii) presentational focus on the subject, (iii) presentational focus on the object, (iv) contrastive focus on the subject and (v) contrastive focus on the object.⁶ While these and other combinations are theoretically possible, Georgiafentis' (2004) seminal work has shown that in transitive constructions the presentationally focused subject is typically placed sentence initially (SVO), though sentence final position is an option (VOS). While theoretical proposals can account for this apparent optionality, three pieces of empirical evidence indicate that presentationally focused subjects appear sentence initially in Greek, i.e. SV(O) order. First, strong experimental data indicate that Greek natives clearly and significantly prefer SVO order to other orders (OVS, VSO, VOS, SOV, OSV) in contexts where the subject is presentationally focused. More interestingly, SVO is also preferred in contexts where other constituents are presentationally focused (focused object, focused verb), as well as in all-focus contexts (elicited with an out-of-the-blue question) and even in null contexts (with no eliciting question). Importantly, these facts hold in both written and spoken Greek (Keller & Alexopoulou 2001). This indicates that SVO is always preferred more than other word orders, irrespective of focus context and even in the absence of focus. Second, additional experimental evidence (Georgiafentis & Sfakianaki 2004) clearly shows that in presentationally focused subject contexts Greek natives prefer SVO order (64%) to OcliticVS order (36%). They also found that natives interpret the VOS order as a focused constituent other than the subject. This suggests that presentationally focused subjects appear sentence initially (SVO). Third, empirical data from phone conversations in native Greek (Antonopoulou & Sifianou 2003) indicate that SV order is the standard structure to introduce oneself over the phone (*o Thanasis ime* 'lit: the Thanasis am', i.e. 'This is Thanasis speaking'). In these cases, the subject *Thanasis* is presentationally focused, as it introduces out-of-the-blue new information in the situation. Additionally, SV is also the preferred order in phone conversations when elicited by a *wh*-question of the type *pjos...?* 'who...?', which is the standard question to elicit presentationally focused subjects (Question: *Pjos ine?* 'lit: who is?'; Answer: *o Janis ime* 'lit: the John is', i.e. 'It's John') (Georgiafentis 2004). These empirical data indicate that presentationally-focused subjects are marked in their canonical preverbal position in Greek (Georgiafentis 2004; Keller & Alexopoulou 2001; Kiss 1998) and prosodic mechanisms are responsible for licensing it (Georgiafentis 2004: 236ff.). In short, the presentationally focused subject is sentence initial (SV) and is licensed prosodically in Greek.

Returning to the constructions under investigation in this study, presentationally focused subjects with intransitive verbs appear in their canonical preverbal position in

Table 1. Summary of intransitive surface word order distribution in Spanish and Greek

	Unaccusative	Unergative
Neutral contexts	<i>Vino un niño</i> (Spanish VS) <i>Irthe ena pedhi</i> (Greek VS)	<i>Un niño gritó</i> (Spanish SV) <i>Ena pedhi fonaxe</i> (Greek SV)
Presentationally focused-subject contexts	<i>Vino un niño</i> (Spanish VS) <i>Ena pedhi irthe</i> (Greek SV)	<i>Gritó un niño</i> (Spanish VS) <i>Ena pedhi fonaxe</i> (Greek SV)

Note: presentationally focused subjects are shown in bold.

Greek, irrespective of verb type: unaccusative (14Bi) and unergative (15Bi) (see also Roussou & Tsimpli 2002). The resulting word order is SV.

- (14) A: *Pjos irthe?*
Who arrived?
B: (i) [*Ena pedhi*]_{Foc} *irthe* (SV)
A boy arrived
(ii) #*Irthe* [*ena pedhi*]_{Foc} (#VS)
Arrived a boy
- (15) A: *Pjos fonaxe?*
Who shouted?
B: (i) [*Ena pedhi*]_{Foc} *fonaxe* (SV)
A boy shouted
(ii) #*Fonaxe* [*ena pedhi*]_{Foc} (#VS)
Shouted a boy

To summarize, while presentational focus is a sentence-final, TP-internal syntactic phenomenon in Spanish, in Greek it is marked prosodically. This results in VS order in Spanish yet SV order in Greek in presentationally focused-subject environments. The different word order distributions discussed so far are summarized in Table 1.

2.2 L2 acquisition at the syntax-discourse interface: Word order

Recent research on the acquisition of the syntax-discourse interface has focused mostly on the discursive features regulating the distribution of the first property of the pro-drop parameter, namely, overt and null pronominal subjects. The results of these studies will be crucial to understand the results of the current study, which deals with the discursive features of the second property of the parameter, the distribution of SV and VS.

It is well known that learners of Spanish acquire the formal syntactic mechanisms licensing null referential pronominal subjects from early stages of acquisition (Liceras 1989; Liceras & Díaz 1989; Phinney 1987), yet recent studies have crucially revealed that these learners show deficits with the discursive properties (topic/focus) that regulate the distribution of overt and null subjects in the discourse. Typically, such deficits are persistently problematic at all stages of acquisition and may lead learners to di-

verge from natives even in end-states (Al-Kasey & Pérez-Leroux 1998; Montrul & Rodríguez-Louro 2004; Pérez-Leroux & Glass 1997, 1999; Pérez-Leroux & al. 1999). These observations are not coincidental as they have been attested in the attrited L1s of Spanish/English bilinguals (Montrul 2004a; Satterfield 2003) and Greek and Italian/English bilinguals (Tsimpli et al. in press), in English/Italian bilingual children (Serratrice 2004; Serratrice et al. 2004) in child L1 Spanish and Catalan (Grinstead 2004) and in L2 Chinese acquisition (Polio 1995).

For attrition contexts, Sorace has recently made the crucial observation that ‘aspects of grammar at the syntax-information structure interface are more vulnerable to attrition than purely syntactic ones’ (Sorace 2004: 143). That is, while the formal mechanisms responsible for the licensing of null subjects are impervious to attrition, the discursive properties constraining their distribution are a likely candidate for attrition at the syntax-discourse interface since ‘interfaces, because they are more complex than narrow syntax, are inherently more difficult to acquire’ (Sorace 2004: 144). While the precise etiology of these deficits at the syntax-discourse interface is far from clear in the L2 literature yet, it has been proposed for L1 attrition that it is the unspecification of *interpretable* discursive features operating at the Conceptual-Intentional interface that may be responsible for deficits such as optionality in the misuse of overt and null pronominal subjects:

Emerging optionality caused by attrition primarily affects morphosyntactic features that are interpretable at the interface with conceptual systems (LF): so ... attrition affects the distribution of referential pronouns because it is governed by features such as Focus and Topic Shift, which belong to the domain of pragmatics. The affected features may become unspecified as a result of the influence of English, giving rise to optionality. (Sorace 2004: 144).

The second property of the pro-drop parameter, the so-called subject-verb (SV) inversion, is also constrained by discursive features. Unlike the first property of the parameter, the second is a rather underexplored area. Hertel’s (2003) pioneering work tested the acquisition of SV and VS distribution in presentationally focused-subject contexts by English-speaking learners of Spanish at four proficiency levels. Beginner and low intermediate learners produced very low rates (below 5%) of VS to mark presentationally focused subjects with either unergatives or unaccusatives. By contrast, high intermediate and advanced learners did produce higher rates of VS, similar to what Spanish natives did. This was taken as an indication that the discursive properties constraining word order are acquired late. In an earlier study where the same subjects participated (Hertel 2000), results from a grammaticality judgement task indicate that only the advanced group showed native-like sensitivity to VS. Lozano (2006) also tested word order distribution in presentationally focused-subject environments. English-speaking and Greek-speaking advanced learners of Spanish were compared on an acceptability judgement task. Results reveal that advanced learners show optional behaviour in focused contexts, which suggests that the acquisition of discursive properties at the syntax-discourse interface is not readily acquired. The same has been

observed for English-speaking learners of Spanish at two proficiency levels (intermediate and advanced) (Lozano in press). In a production task, Belletti and Leonini (2004) also found that learners of L2 Italian (with certain L1s) acquire late the fact that presentationally focused subjects in Italian appear in sentence-final position (VS, as in Spanish).

To summarize, evidence suggests that L2 acquisition of the discursive properties regulating SV/VS distribution at the syntax-discourse interface is acquired late and can cause deficits even at advanced stages of development.

2.3 L2 acquisition at the lexicon-syntax interface: Word order

As shown earlier, SV/VS alternations are also constrained by lexico-syntactic properties (Unaccusative Hypothesis). Hertel and Pérez-Leroux (1999) found that beginner and advanced learners of L2 Spanish preferred SV with unergatives more than with unaccusatives, but VS with unaccusatives more than with unergatives. The same result was replicated at advanced levels (de Miguel 1993) and at four proficiency levels (beginner, low intermediate, high intermediate and advanced), both in an acceptability task (Hertel 2000) and in an oral production task (Hertel 2003). Similar results have been attested for English and Greek advanced learners of L2 Spanish (Lozano 2006). Converging evidence from these studies indicates that learners of Spanish are sensitive to the distribution of SV/VS order when constrained at the lexicon-syntax interface, irrespective of (i) whether the syntactic effects of unaccusativity are overtly manifested in their L1s and (ii) proficiency level (though, typically, only the advanced groups are statistically similar to Spanish natives).

3. Method

3.1 Subjects

As shown in the appendix, the experimental groups consisted of adult Greek native speakers learners of Spanish in several institutions in Athens (University of Athens, *Estudio Español* and *Centro de Lengua Española*) and were divided into three proficiency levels according to a standardized Spanish placement test, whose raw scores were converted into percentages (University of Wisconsin 1998): Upper advanced group ($n = 19$, proficiency range 100%–95%, mean proficiency 96%), lower advanced group ($n = 24$, proficiency range 94%–88%, mean proficiency 90%) and upper intermediate group ($n = 23$, proficiency range 87%–60%, mean proficiency 78%). The control group consisted of native Spanish speakers, mostly peninsular Spanish and a few from South America ($n = 19$, mean age = 26 years).

Table 2. Independent variables

Variable name	Variable type	Variable levels
Group	Between subjects	[1] Greek upper intermediate [2] Greek lower advanced [3] Greek upper advanced [4] Spanish natives
Word order	Within subjects	[1] SV [2] VS

Table 3. Constants

Constant name	Constant type
Context	Neutral Focused
Verb	Unaccusative Unergative

3.2 Experimental design

The independent variables consisted of *group* and *word order* (Table 2), while the context type (neutral and focused) and the verb type (unaccusative and unergative) remained constant (Table 3).

3.3 Instrument

A contextualized acceptability judgement test was employed, (16), where the context and the eliciting question (*¿Qué pasó?* 'What happened' or *¿Quién vino/gritó/etc.?* 'Who arrived/shouted/etc.?) bias for either of the two target replies, (16a) or (16b). Importantly note that either reply is perfectly grammatical on its own, but the context crucially biases for only one pragmatically acceptable reply, either (a) or (b), depending on the eliciting question and the verb type. Replies are followed by a 5-point Likert scale, ranging from -2 (completely unacceptable) to +2 (completely acceptable), as used in previous research (Hertel 2000; Montrul 1999; Yuan 1999).

- (16) Vas al cine a ver una película romántica. Durante la película, un niño, que está a tu lado, empieza a llorar. Al salir del cine, te encuentras con tu amigo Felipe, que dice que oyó llorar a alguien en el cine pero no sabe quién. Felipe te pregunta: ¿Quién lloró? Tú respondes:

(a) Lloró un niño. -2 -1 0 +1 +2

(b) Un niño lloró. -2 -1 0 +1 +2

[Translation]

You go to the cinema to watch a romantic film. During the film, a little boy (who is sitting next to you) starts crying. After the film, you meet your friend

Felipe outside the cinema. Felipe says he heard somebody crying but doesn't know who. So Felipe asks you: 'Who cried?' You reply:

(a) Cried a boy. -2 -1 0 +1 +2

(b) A boy cried. -2 -1 0 +1 +2

The test contained 24 target stimuli: unfocused contexts (6 unaccusative, 6 unergative) and presentationally focused-subject contexts (6 unaccusative, 6 unergative). Based on Sorace's (2000) *Unaccusative Hierarchy* and other theoretical studies, the following verbs were chosen as the best candidates for unaccusativity and unergativity after a pilot test administered to Spanish natives (unaccusatives: *llegar* 'to arrive', *entrar* 'to come in', *venir* 'to come/arrive', *volver* 'to come back', *escapar* 'to escape', *salir* 'to leave'; unergatives: *estornudar* 'to sneeze', *bañar* 'to dance', *gritar* 'to shout', *dormir* 'to sleep', *reír* 'to laugh', *llorar* 'to cry'). Training items as well as distractors were included ($n = 7$).

The materials were controlled to minimize order-of-presentation effects: SV appeared 50% of the time and VS the remaining 50%. Two versions of the test were administered: while they contained the same stimuli, the sequential order was different in each of them following Cowart's (1997) 'blocking procedure'. Target sentences contained beginners' vocabulary to ensure full understanding.

3.4 Procedure

Learners were presented with a set of instructions in Greek before the test took place (instructions were written in Spanish for Spanish natives). Instructions clearly indicated how to rate sentences, giving examples of several scenarios. This was followed by basic training items to test the validity of the scale. Then the actual test started: it was headed by another set of training items and then the actual test sentences. Learners took as long as they wished to finish the test, though they were indicated to annotate their 'first intuition' and not to go back and change their answers.

3.5 Data analysis

The normality of distribution was assumed for every group in each condition (Kolmogorov-Smirnov one-sample fit test, $p > 0.05$). A two-way 4*2 mixed ANOVA design was employed (see Table 2), where the first factor was *group* and the second factor was *word order*. Given the constants and variables, the ANOVA was performed four times in these contexts: unaccusative neutral, unergative neutral, unaccusative focused, unergative focused.

Since by hypothesis we are interested in testing whether learners are able to distinguish between SV and VS orders in presentationally focused subject contexts, as stated in (17), the mixed ANOVA was followed up by post-hoc comparisons via a repeated measures *t*-test.⁷ Where required, between-group post-hoc comparisons were performed with a between-group one-way ANOVA on *each level* of the word order variable.⁸

3.6 Predictions

Given the theoretical assumptions and previous L2 findings, it was hypothesized that acquisition of word order alternations at the syntax-discourse would be persistently problematic throughout development and even in the most advanced stages of acquisition, while word order alternations at the lexicon-syntax interface would be readily acquired. In particular, a precise prediction was set up, (17).

- (17) H_1 : in presentationally focused subjects contexts, Greek learners of Spanish will not show sensitivity to sentence-final presentational focus, thus not distinguishing between #SV and VS, irrespective of verb type (unaccusative/unergative). This is so even in the most advanced stages of development.

Technically speaking, (17) is a null hypothesis (H_0) since we are not predicting differences. Testing H_0 is a normal procedure, providing it can be shown that subjects show differences in some other condition(s). For this reason, we included out-of-the-blue neutral contexts, which will be compared with presentational focus contexts. In particular, we expect learners to show differences in neutral contexts by significantly preferring VS to SV in unaccusative neutral contexts, yet SV to VS in unergative neutral contexts. This could be due to either (i) their innate knowledge of the surface effects of the Unaccusative Hypothesis, as shown in previous research (Hertel 2003; Hertel & Pérez-Leroux 1999; Lozano 2006) or (ii) simply to surface transfer from their L1 Greek, whose surface SV/VN distribution in neutral contexts is identical to Spanish, as both languages are constrained by the Unaccusative Hypothesis. This dilemma is not at stake in this study, since we simply want to test whether SV/VN alternations cause competence deficits to learners when constrained by the syntax-discourse interface and, if so, what the etiology of such deficits is.

4. Results

4.1 Neutral contexts with unaccusative verbs

In neutral contexts with unaccusative verbs (Figure 1), the main effect of word order was highly significant ($F(1,81) = 49.14, p < .01$), the main effect of group was significant ($F(3,81) = 5.56, p = .002$) and the word order by group interaction was not significant ($F(3,81) = 1.14, p = .34$).

Given the main effect of word order, within-group analyses with t-tests confirm that learners clearly prefer VS to #SV with unaccusatives in neutral contexts at all levels of proficiency, similarly to what Spanish natives do, i.e. the difference between VS and #SV is significant for all learner groups ($p < .01$ for upper advanced, $p = .02$ for low advanced and $p < .01$ for upper intermediate) as well as for natives ($p < .01$).

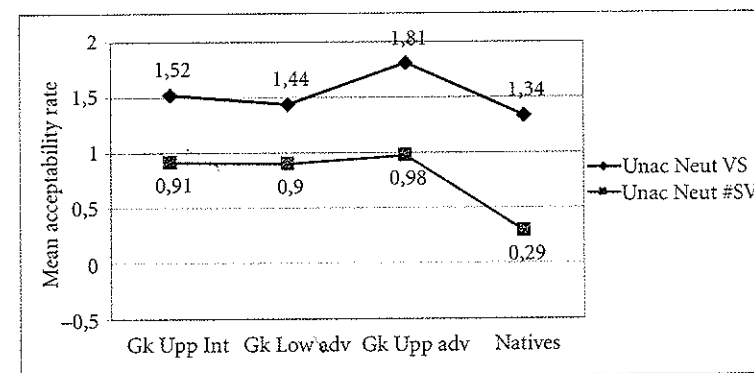


Figure 1. Unaccusative verbs in neutral contexts (word order by group)

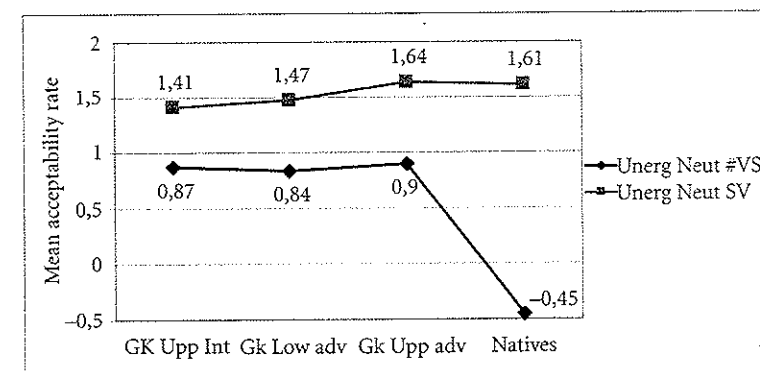


Figure 2. Unergative verbs in neutral contexts (word order by group)

Note that a visual inspection of pragmatically odd unaccusative neutral #SV order (Figure 1) reveals that its acceptance is lower for natives (mean = .29) than for learners (mean around .94). Post-hoc results for a between-group one-way ANOVA indicate that these differences are just about non significant (Natives–Upper intermediate, $p = .05$; Natives–Low Advanced, $p = .06$) and marginally significant for the most advanced group (Natives–Upper advanced, $p = .04$).

4.2 Neutral contexts with unergative verbs

In neutral contexts with unergative verbs (Figure 2), the main effect of word order was highly significant ($F(1,81) = 84.37, p < .01$), the main effect of group was also highly significant ($F(3,81) = 8.44, p < .01$) and the word order by group interaction was again highly significant ($F(3,81) = 10.44, p < .01$).

Within-group comparisons indicate that each group of learners prefer SV to #VS with unergatives in neutral contexts, similar to the natives' behaviour (Figure 2). Such difference in preference is significant across learners ($p < .05$ for each of the three groups) and for natives ($p < .01$).

Between-group analyses also show that the difference in acceptance of unergative SV between the learner groups and the natives remains relatively similar (with a slight rising trend towards the native norm). By contrast, the difference in acceptance of unergative #VS between learners and natives is sharp: while learners' acceptance rates remain stable across group (mean rates around .87), natives' mean acceptance rate is markedly low (-.45). This negative value means that natives are in fact *rejecting* pragmatically odd #VS in the 5-point Likert scale. Such marked contrast between the natives and the learners is highly significant ($p < .01$ for all comparisons: Natives–Upper advanced, Natives–Lower advanced, Natives–Upper intermediate).

4.3 Presentationally focused-subject contexts with unaccusative verbs

In presentationally focused-subject contexts with unaccusatives (Figure 3), the main effect of word order was highly significant ($F(1,81) = 33.82, p < .01$), the main effect of group was also highly significant ($F(3,81) = 8.32, p < .01$) and the word order by group interaction was highly significant as well ($F(3,81) = 9.22, p < .01$).

Within-group analyses (Figure 3) reveal that the least proficient learners (upper intermediate level) did not distinguish between unaccusative VS and #SV in focused contexts, as they accepted both word orders at identical rates (mean = 1.32). While both the lower and upper advanced groups distinguished between both word orders, the difference reached statistical significance in the most advanced group ($p = .02$), but not in the lower advanced group ($p = .08$). The native group clearly distinguished

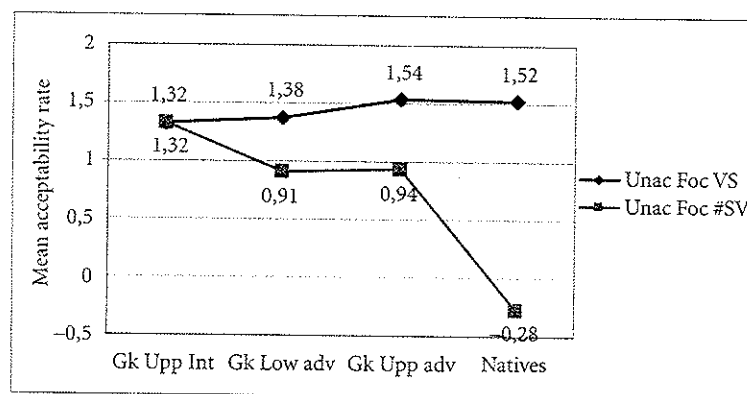


Figure 3. Unaccusative verbs in focused subject contexts (word order by group)

between both word orders, highly accepting VS (mean = 1.52) but rejecting #SV (mean = -.28). Such difference is highly significant ($p < .01$).

Similarly to what occurred in the pragmatically anomalous condition in previous contexts (Figure 1 and Figure 2), between-group comparisons in Figure 3 confirm that the observed difference between natives' #SV is significantly different from learners' #SV ($p < .05$ for all comparisons), while none of the learner groups statistically differs from the native group in their acceptance of the SV condition ($p > .50$ for all comparisons), which shows an increasing trend towards the native norm.

4.4 Presentationally focused-subject contexts with unergative verbs

In presentationally focused-subject contexts with unergative verbs (Figure 4), the main effect of word order is not significant ($F(1,81) = .03, p = .86$), the main effect of group was highly significant ($F(3,81) = 4.78, p < .01$) and the interaction between word order and group was also highly significant ($F(3,81) = 6.59, p < .01$).

A visual inspection of Figure 4 crucially reveals that all learner groups prefer the pragmatically anomalous unergative #SV to the pragmatically correct unergative SV, though the difference is intuitively small. Within-group comparisons indeed confirm the intuition that none of the learner groups is able to distinguish between VS and #SV with unergatives in presentational contexts ($p > .05$ for each comparison), which entails that learners are optionally allowing both SV and #VS simultaneously, hence the non-significant main effect of word order shown previously. This result is in sharp contrast with the natives' performance, as they show the opposite behaviour, i.e. they significantly ($p < .01$) prefer the pragmatically acceptable VS (mean = 1.25) to the pragmatically anomalous #SV (mean = .17).

Once again we find a familiar pattern in the pragmatically infelicitous condition between the learners and the natives, i.e. while there is no sharp contrast between the

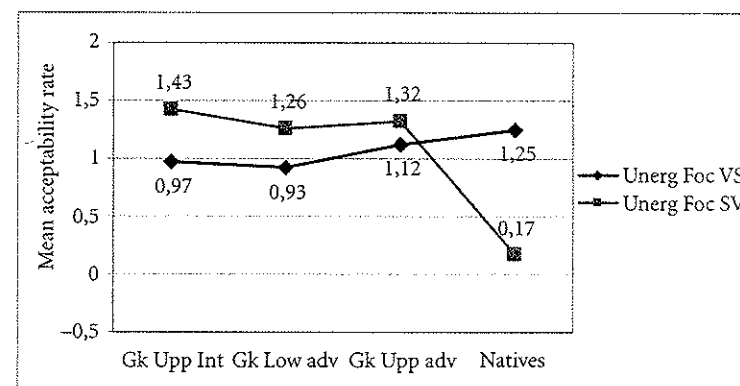


Figure 4. Unergative verbs in focused subject contexts (word order by group)

learner groups and the native groups in the pragmatically correct condition (VS), there is a visually marked contrast between the learners and the natives in the pragmatically odd condition (#VS), which is highly significant ($p < .01$ for each comparison).

5. Discussion

Recall from earlier sections that, while our main interest rests on focused contexts, we need to analyse neutral contexts for comparative purposes.

In neutral contexts with unaccusatives (Figure 1), learners clearly preferred VS to #SV, as Spanish natives did, which could imply that learners are sensitive to the constraints operating at the lexicon-syntax interface from (at least) intermediate stages of development. Such sensitivity to the syntactic effects of the Unaccusative Hypothesis (UH) is also operative from early stages in the L2 Spanish of English-speaking natives (Hertel 2000, 2003). In the Hertel studies it is safely claimed that learners' sensitivity to unaccusativity cannot be a direct consequence of their L1 since unaccusativity is not manifested overtly in English, hence it must be the consequence of universal constraints (i.e. UH) operating at the lexicon-syntax interface. It is difficult to decide the source of such sensitivity in our study as it could be due to two factors: either (i) our learners are sensitive to the universal constraints of the UH, or (ii) they are simply transferring from their L1 Greek into their L2 Spanish, since the surface syntactic manifestation of unaccusativity is identical in Greek and Spanish. While it has been argued that such sensitivity derives from universal constraints in the case of Greek learners of Spanish (at least in advanced stages, Lozano 2006), the debate is not crucial for the current purposes of this study, since the rationale is to use word order in neutral contexts simply as a comparative tool, as will be clear later.

The results for unergatives in neutral contexts (Figure 2) revealed that Greek learners of Spanish show a clear preference for SV to #VS, similar to the Spanish natives' patterns. Once again, this sensitivity from intermediate stages can be a direct consequence of the universal constraints operating at the lexicon-syntax interface which derive from UH, or they could simply be surface transfer from L1 Greek into L2 Spanish, since SV is preferred to #VS with unergatives in native Greek.

In presentationally focused-subject contexts with unaccusatives (Figure 3), the upper intermediate group allows both #SV and VS orders to the same extent, which results in clear optionality. While the low advanced group shows a mild distinction by preferring VS to #SV, the difference is not significant, which technically implies that they are allowing #SV and VS to the same extent, i.e. they show optionality. Apparently, discursive VS appears to be acquired late, since only the upper advanced group significantly prefers VS to #SV. This pattern is in line with the native pattern, though natives dramatically and significantly prefer VS to #SV. It may be also the case that this apparent native-like behaviour is simply a reflection of the learners' overgeneralization of unaccusative VS order from neutral to focused contexts, as found in previous research (Hertel 2003; Lozano 2006).

The crucial results come from presentationally focused-subject contexts with unergatives (Figure 4). Clearly, discursive VS has not been acquired, since learners show optionality at *all* levels of development, i.e. they equally prefer VS and #SV (see Sorace 2000 on optionality). Interestingly, a visual inspection of Figure 4 reveals that their acceptability pattern is the opposite of the Spanish natives' pattern: #SV is slightly but not significantly preferred to VS, yet natives strongly and significantly prefer VS to #SV. Optionality then pervades learners' intuitions at all levels of proficiency in focused contexts with unergatives (Figure 4) and in the two initial levels with unaccusatives (Figure 3). This implies that the most advanced learners' apparent native-like attainment in focused contexts with unaccusative verbs (Figure 3) is probably due to an overgeneralization, as suggested above.

To summarize, results from focused contexts with unaccusatives and unergatives suggest that Greek learners of Spanish show deficits with word order distribution at the syntax-discourse interface, while their intuitions converge with natives' when word order is constrained by universal properties at the lexicon-syntax interface.

Consider the possibility of surface transfer from L1 Greek as a possible explanation of the results. If learners were simply transferring, then we would expect the following. First, while learners' distinctions are admittedly significant in neutral contexts (VS > #SV with unaccusatives but SV > #VS with unergatives), we would expect such distinctions to be 'sharper' if they were transferring directly from their L1, i.e. their acceptability rates in the ungrammatical condition (unaccusative #SV and unergative #VS) would be expected to be lower, around the Spanish mean, as Greek and Spanish word order is constrained by identical mechanisms deriving from UH. This is contrary to fact, as shown in the results section. Secondly, even if we ignore the learners' lack of 'sharp' intuitions in neutral contexts and still maintain that transfer is taking place, we would expect learners to significantly prefer SV to VS with both verb types in focused contexts, since presentationally focused subjects appear in sentence-initial position in Greek with both verb types (SV order). This is contrary to fact, as reported in the results. In short, these results clearly indicate that learners' behaviour is not the result of surface L1 transfer in either neutral or focused contexts. This suggests that (i) universal properties deriving from UH (lexicon-syntax interface) constrain word order in neutral contexts at all levels of proficiency, as found in previous research (de Miguel 1993; Hertel 2000, 2003; Hertel & Pérez-Leroux 1999; Lozano 2003, 2006) and, most importantly (ii) that the source of learners' deficits in focused contexts (syntax-discourse interface) is other than L1 transfer.

Consider now random behaviour as a possible explanation of the data. The optional behaviour shown in focused contexts with unaccusatives (upper intermediate and low advanced groups) and with unergatives (all groups) clearly indicates that focused contexts are persistently problematic and result in learners' divergent knowledge, since neutral contexts typically result in (near) native-like behaviour. This cannot be attributed to learners' random behaviour, since in neutral contexts they systematically prefer SV > VS with unaccusatives but SV > VS with unergatives at all levels of proficiency, while their intuitions are optional in focused contexts: SV = #VS with both

unaccusatives and unergatives (except for the most advanced group that preferred VS > SV with unaccusatives). This suggests again that learners are sensitive to the universal constraints operating at the lexicon-syntax interface, while their intuitions are not fine-tuned in focused contexts that are constrained at the syntax-discourse interface. In other words, it appears that learners are sensitive to the fact that word order operates differently in neutral vs. focused contexts.

Finally, consider overgeneralization as possible explanation of the results. A comparison between neutral vs. focused contexts (Figure 1 and Figure 2 vs. Figure 3 and Figure 4) might initially give the impression that learners slightly overgeneralize the word order distribution from neutral contexts to focused contexts. Consider unaccusatives first. While in neutral contexts they clearly and significantly prefer VS > #SV, in focused contexts they show a similar trend starting at low advanced level (a mild but non significant VS > #SV preference) and reaches its peak at upper advanced level (a significant VS > #SV preference). Consider now unergatives. In neutral contexts learners significantly prefer SV > #VS. A slightly similar word order pattern can be observed in focused contexts, though, importantly, the difference never reaches statistical significance. In other words, learners are not simply overgeneralizing from neutral to focused contexts since, otherwise, we would expect the *same* patterns of behaviour in both neutral and focused contexts and not *slight* overgeneralization patterns. This suggests again that they may be aware that focused contexts are different from neutral contexts, but are unsure about how focus is syntactically marked.

In short, once we have discarded several factors as the possible source of learners' behaviour (namely, transfer, random behaviour and overgeneralization), results on optionality clearly indicate that the discursive properties constraining word order at the syntax-discourse interface are not as readily acquired as the properties at the lexicon-syntax interface, even at very advanced levels of proficiency. This confirms our hypothesis in (17) and entails that learners' representation for word order alternations in neutral contexts in Spanish must be similar to representations in (7) and (8), while their representations for focused contexts must be somewhat different from Spanish natives representations in (12) and (13), which will be discussed later.

What remains to be explained now is the precise etiology or source of learners' non native-like, optional behaviour at the syntax-discourse interface, which is persistently problematic. The crucial question is to determine the exact locus of the observed deficits in the current study. There are three possibilities, which we will examine: either the deficits are located outside the faculty for human language (i.e. in the conceptual-intentional module), or inside the computational system (i.e. at narrow syntax) or perhaps at the very interface between these two systems. Let us analyze each in turn.

Current acquisitional studies are debating the precise etiology of deficits at the syntax-discourse interface. It has been proposed that *interpretable* discursive features (like topic and focus) are responsible for the observed deficits in language attrition, since interfaces are more 'vulnerable' (Montrul 2004a; Serratrice 2004; Sorace 2004; Tsimpli et al. in press). In particular, interpretable features become 'unspecified', which results in optionality. The implication is that this deficit must be lo-

cated somewhere in the interface between the computational system (syntax) and the discourse/information-structure module (i.e. the Conceptual-Intentional System, CIS, an external module of thought). The consequence for the current study is that the interpretable [Foc] feature cannot be interpreted by CIS as a result of its being unspecified, i.e. unspecified [Foc] cannot be interpreted by CIS as new information. It follows that our acquirers are insensitive to the informational specification of discursive features, i.e. they do not know that a constituent specified as [Foc] must be interpreted as new information. There is no principled reason to believe that this is the case for the following reasons:

- i. It has been shown that L2 learners tend to draw upon information organization principles (topic/focus, theme/rheme) that are already present in their L1 (Murcia-Serra 2003). This entails that our learners must somehow know from their L1 Greek that certain elements in the discourse are specified as new information, since they contain an interpretable [Foc] feature that is interpreted by CIS as new information.
- ii. It is well known that information packaging into topic and focus is universal, though different languages may select different mechanisms to express it (syntactically, morphologically, prosodically or by a combination of these) (Vallduví 1995; Vallduví & Engdahl 1996). Then, there is no reason to assume that our learners' interpretable [Foc] feature is somehow unspecified, as they must know from their L1 Greek that certain elements are interpreted as new in the discourse, irrespective of whether such element is marked prosodically or syntactically in their L1.
- iii. Unlike children acquiring their L1 (Grinstead 2004), both the interfaces and the external systems of adults are in their final, fully-fledged state (Chomsky 1998). This implies that our learners' CIS module and its interface must be 'intact', i.e. they are well-formed and developed enough to interpret interpretable discursive features like [Foc]. Hence, there is no reason to believe that the deficits observed in our learners derives from the external module or from its interface.
- iv. A few Greek adult native speakers (who had participated in the test) were informally tested via email about their intuitions on the Greek sentences shown in (4), (6), (14) and (15) several weeks before the test. They correctly preferred VS to #SV with Greek unaccusatives and SV to #VS with Greek unergatives in neutral contexts, as well as SV > #VS with unaccusatives and unergatives in presentationally focused-subject contexts, as expected. This entails that, in their L1, adult Greek natives are sensitive to the pragmatically adequate word order that is required by the eliciting question (general out-of-the-blue questions and *wh*- questions). This is additional evidence supporting the idea that there is no reason to believe that the syntax-discourse interface of adult Greek natives is somehow defective in their non-native Spanish.

The arguments presented above indicate that (i) learners do not have any problems with the interpretable [Foc] feature and (ii) there is no reason to believe that the mechanisms responsible for the interpretation of such a feature (i.e. the syntax-discourse

interface and the discourse or information-structure module itself) are defective. The only possibility left is that the source of the observed deficits resides in the computational system. This has been claimed (though not fully developed) in a recent study where it was observed that learners show deficits with focused structures (Belletti & Leonini 2004). The authors point out that learners do not have problems in identifying the informational value of presentationally-focused subjects in L2 Italian, which leads the authors to believe that the difficulty must be grammatical in nature.

Given the above arguments, the source of optionality at the syntax-discourse interface must be located somewhere in the syntax (computational system). The source of the deficit cannot be the unvalued [μ Foc] feature of the focus head, whose only purpose is to probe for the matching goal (the interpretable [Foc] feature of the subject) and agree with it in order to be deleted. Given the above arguments, it is clear that this operation must have taken place since the CIS is able to interpret the [Foc] feature of the subject as interpretable, which implies that [μ Foc] must have been previously deleted in the course of the derivation.

The only remaining possibility is that learners are not sensitive to the *uninterpretable* [EPP] feature of the TP-internal focus head (Foc⁰), which is responsible for displacing focused elements to its specifier. Indeed, if such a feature is defective, presentationally focused subjects cannot be displaced to [Spec,FocP]. Note that in more recent terminology, the [EPP] feature corresponds to what has been termed 'internal' merge, whereby an object that was previously created via merge, is newly merged with a greater object. This is what was traditionally termed 'movement', which is seen now as a type of merge operation, and has to be distinguished from 'pure' merge, whereby an element from the lexicon is selected and is merged with a syntactic object. In particular, our learners may have problems with the internal merge operation responsible for displacing the focused element to a designated syntactic configuration. This amounts to saying that for our learners' internal merge (i.e. 'move') is more costly than pure merge when the former is motivated by [EPP] features that have a clear outcome on the discursive interpretation of the sentence. This is not surprising since it is well known in the theoretical literature that move is more costly than merge in terms of computation. In simpler terms, our learners are aware that the focused subject is interpreted as new information, but are unable to grammaticalize it syntactically via word order. These findings are in line with Lozano (2006, in press) who postulated that the strength of the focus head (or, in more recent terminology, the EPP feature of the focus head) is the locus of deficits at the syntax-discourse interface.

In the context of recent L2 acquisition theories, there have appeared several proposals to account for learners' non native-like patterns of acquisition. Given that our learners show an impairment, we will discuss only those theories subsumed under what is generally termed *Impairment Hypotheses* (see Hawkins 2001; White 2003 and Montrul 2004b for general overviews). One of the versions, the *Failed Functional Features Hypothesis*, FFFH (Hawkins & Chan 1997; Hawkins 2000), postulates that learners are unable to acquire L2 parametrizable uninterpretable functional features that are not present in their L1 beyond the Critical Period. It could be argued that our

learners are indeed unable to acquire the parametrizable and uninterpretable [EPP] feature of the focus head, hence the observed deficits at the syntax-discourse interface with the pragmatically odd construction in focused contexts. However, our learners do not show any deficits with the pragmatically felicitous construction in focused contexts, hence it could also be argued that learners have acquired the [EPP] feature. In other words, what our learners show is optionality, which is not predicted by the FFFH, since it simply predicts that the functional feature in question cannot be acquired. A different version of the Impairment Hypothesis is the *Local Impairment Hypothesis*, LIH (Beck 1998), which proposes that the strength value of functional features cannot be acquired, which leads to optionality. It could be argued that the LIH can straightforwardly account for the data, since our learners show optionality with the [EPP] feature of the focus head. This entails (in Beck's terminology) that they are having problems with the [strong] value of the focus head, which is ultimately responsible for the raising of the focused subject and, hence, leads to optionality. This is indeed what we find in the data. However, LIH would overpredict since, if this were the case, we would also expect verb raising to become optional (since, by hypothesis, the strong [V] feature of T would become impaired). This would lead to a chaotic behaviour by the learner, as both verb-to-tense raising *and* subject-to-focus raising would be expected to occur. This is not certainly the case, as we have shown earlier that results are not due to random behaviour.

To summarize, the developmental data shown here reveal that Greek learners of Spanish are unable to grammaticalize discursive focus syntactically, probably as a result of an impaired functional feature operating at the syntax-discourse interface. Future L2 research will need to provide more fine-grained accounts of these deficits at the discourse interface, since what current theories can provide is just a partial explanation of the data.

6. Conclusion

This study has contributed to the current debate of whether discursive properties operating at the syntax-discourse interface (like presentational focus) are persistently problematic in second language acquisition. It has been shown that this is the case for Greek learners of Spanish at three levels of proficiency. A possible source of these deficits has been attributed to learners' inability to grammaticalize discursive focus via word order. Further L2 evidence is needed to (dis)confirm this proposal.

Notes

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1. Only intransitive alternations (SV and VS) will be investigated in this paper.

2. While it is an indisputable fact that the subject of Spanish and Greek unaccusatives remains in postverbal position in neutral contexts, there is some debate as to the precise syntactic analysis. It is standardly assumed that the subject can remain postverbally in [Comp,VP] due to the presence of expletive *pro* in [Spec,TP] (e.g. Rizzi 1997a; Zagana 2002; amongst others). Alternative analyses argue that, either expletive *pro* cannot enter the derivation due to economy principles, since EPP is weak in pro-drop languages and does not need to be satisfied (Picallo 1998 for Spanish) or the EPP feature of T can be checked via the [D], Case and Phi features of V that raise to T (Alexiadou & Anagnostopoulou 1998 for Greek). I will follow the standard analysis since, whether an overt expletive is required in [Spec,TP] or not, it is irrelevant for the interpretation of the results in this study.

3. Importantly, *presentational* focus has to be distinguished from *contrastive* focus, as they show different syntactic and interpretive effects, which have been often overlooked in the literature. Interpretively, contrastive focus picks up an entity out of a very limited set of entities (which are known to both speaker and hearer) for contrastive purposes, while presentational focus picks up an entity out of an unlimited set of entities (which are unknown to the hearer) to express new information (Gundel 1998; Kiss 1998). Syntactically, contrastive focus is a left-peripheral, CP-domain phenomenon that has been widely investigated cross-linguistically, e.g. Spanish (Zubizarreta 1998; Domínguez 2004), Greek (Georgiāfentis 2004), Italian (Rizzi 1997b), Hungarian (Puskas 1997), etc., while presentational focus is a less well-known TP-internal phenomenon in Spanish (Lozano 2003), Italian (Belletti 2001), Hungarian and Basque (Horvath 1986), Malayalam (Jayaseelan 2001), etc. For semantic, syntactic and prosodic differences between presentational and contrastive focus, see Breul (2004), Gundel (1998) and Kiss (1998), and particularly Domínguez (2004) for Spanish and Georgiāfentis (2004) for Greek. Further note that presentational focus is also known as information focus in the literature (Kiss 1998) and that both contrastive and presentational focus have been termed narrow focus. I will use the terms contrastive and presentational throughout, yet only presentational focus is relevant in the current study.

4. Note that this operation would not violate the *Phase Impenetrability Condition* (PIC) since FocP is located at the very edge of the VP phase, which means that any computation below FocP still 'belongs' to the first phase.

5. Feature deletion is marked with double strikeout font, while displacement (copying and deletion) is marked with single strikeout font.

6. Crucially, there has been confusion in the Greek literature as to the syntactic analysis of focus since 'classic' studies (e.g. Tsimpli 1995) did not distinguish between the two types of focus (presentational vs. contrastive). While Kiss (1998) first observed this problem, recent work (Georgiāfentis 2004) clearly shows that presentational focus differs from contrastive focus in Greek in several respects (syntactically, semantically and intonationally). In this paper, I will be concerned with presentational focus only (see Note 3 for a distinction between presentational vs. contrastive focus).

7. Note that when performing a mixed ANOVA, SPSS allows post-hoc comparisons to between-subject factors only, and not to within-subject factors. Given our hypothesis in (17), the most suitable test to perform a within-subject factor post-hoc test is a repeated measures *t*-test (see Brace et al. 2000:195).

8. Post-hoc tests with a mixed ANOVA in SPSS only allow comparing the *overall* difference between, say, natives' #VS and SV against Greek upper advanced learners' #VS and SV. By contrast, a one-way ANOVA permits to compare the difference between, say, natives' #VS and Greek up-

per advanced #VS. Hence the need to use one-way ANOVAS for more fine-grained comparisons (see Brace et al. 2000).

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Appendix

Learners' bio-data

Greek upper advanced			Greek lower advanced			Greek upper intermediate		
Subject ID	Age (yrs)	Prof (%)	Subject ID	Age (yrs)	Prof (%)	Subject ID	Age (yrs)	Prof (%)
MB	25	100	DA	30	93	AG	19	86
DF	32	100	FP	22	93	GK	30	86
AP	31	98	FK	23	93	DP1	22	86
ZG	23	98	HB	22	93	DP2	23	86
ET	30	98	GA	21	93	SE	19	84
IM	22	98	EL	24	93	GM	23	84
KC	20	95	AMS	26	93	LV	21	84
MV	19	95	EG	30	91	EA	20	84
PF	21	95	MP	25	91	JK	25	84
FP	37	95	VR	25	91	KT	24	81
SJ	21	95	KP	28	91	AA	24	81
CP	22	95	MK	24	91	XZ	20	79
AD	23	95	KK	28	91	FA	21	79
KS	25	95	JA	33	88	AP1	36	79
FAK	21	95	ASM	20	88	AD	20	77
AC	25	95	TK	22	88	AP2	23	77
ED	19	95	CL	21	88	AFK	24	77
FT	21	95	AK	24	88	DK1	29	72
C	22	95	NL	20	88	EJ	21	70
			CT	25	88	DK2	21	67
			CQ	30	88	ND	21	67
			KZ	25	88	SK	30	60
			KT	23	88	PA	22	60
			NM	21	88			
MEAN:	24 yrs	96%	MEAN:	25 yrs	90%	MEAN:	24 yrs	78%