

Subject Position in Spanish in Contact with Catalan: Language Similarity vs. Interface Vulnerability

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1. Introduction

Recent years have witnessed an increased interest in the study of bilingualism and language contact from a theoretical point of view. These studies apply the architecture of language proposed in generative syntactic-theoretical accounts to the speech of these communities. The structure of the grammar proposed by Chomsky (1995) displays a lexicon, from which fully-inflected lexical items are selected forming a numeration (the lexical item + index of number of applications), then, the operations Merge and Move build the structure that is subsequently spelled-out. Full interpretation in the Logical Form (LF) and the Phonetic (or Phonological) Form (PF) are required for the derivation to converge at spell out. The LF and PF output interfaces with the Conceptual-Intentional component (CI) and the Articulatory-Perceptual component (AP). A grammar is, thus, compartmentalized into different modules; some of them internal (lexicon, phonology, syntax, morphology, and semantics) and some external (discourse/pragmatics). These modules are connected by interfaces, illustrated by arrows in Figure 1, from White (2009):

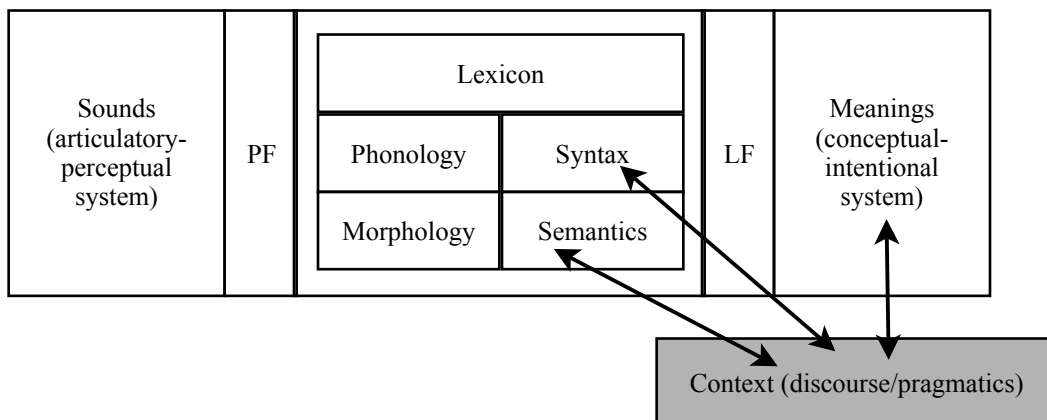


Figure 1: Internal and external interfaces. White (2009)

The notion of interface has proven of great utility in applied linguistics, where numerous researchers have focused on the syntax and its interfaces in second language speech. For instance, Sorace (2005) and Sorace & Filiaci (2006) have shown that the lexico-semantic and the discourse-pragmatic interfaces are vulnerable to interlingual influence. Moreover, Tsimplici & Sorace (2006) have shown that the discourse-pragmatic interface is more vulnerable to interlingual influence than the lexico-semantic interface. Tsimplici & Sorace (2006) examine focus fronting (at the lexico-semantic interface) and subject expression (at the discourse-pragmatic interface) in Russian learners of Greek. In Greek, focus fronting is associated with the left-peripheral position FocusP (Rizzi 1997). In Russian, on the other hand, fronting has been analyzed as inversion or as dislocation (Baylin 1999, 2003, cited in Tsimplici & Sorace 2006). Russian and Greek allow null subjects. In Greek, however, the overt

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pronominal subject is “marked” (i.e., regulated by discourse factors). In order to further test Tsimpli & Sorace’s (2006) assertions of the differential status of the interfaces, this paper examines a single phenomenon—subject position in unergative and unaccusative constructions in Spanish—which allows for the study of the lexico-semantic interface with syntax (these monovalent predicates display different mappings) and with the discourse-pragmatic interface with syntax (broad and narrow focus give rise to different word order preferences). In a related study, Zapata et al. (2005) consider subject position in the contact Spanish of heritage speakers in the U.S. Their participants revealed more target-like behaviors in distinguishing between unergative and unaccusative predicates (an internal interface property) than in distinguishing between broad and narrow focus (an external interface property). These results support Tsimpli & Sorace’s (2006) claim. However, it should be noted that in English the distinction between unergative and unaccusative predicates has syntactic reflexes, although word order is not one of them; the deployment of narrow subject focus, on the other hand, does not have syntactic reflexes, as it is largely conveyed through intonation. It is possible, then, that having syntactic reflexes of split intransitivity, which lies at the lexico-semantics interface with syntax, in English facilitates the acquisition of Spanish syntactic reflex (i.e., subject position preferences). At the same time, the lack of syntactic reflexes of narrow subject focus, which lies at the discourse-pragmatic interface, may complicate the task of the learner¹. That is, similarities between the languages at the lexico-semantic interface and differences between the languages at the discourse-pragmatic interface are confounded with the differential vulnerability of the two interfaces. Thus, the differences and similarities between the languages may explain Zapata et al.’s findings of heritage speakers’ differential difficulty in acquiring the external versus the internal interfaces explored. The present project addresses this question by examining subject position in Spanish in contact with Catalan. In both languages, subject position is a syntactic reflex of predicate type and focus. Unergative predicates display preverbal subjects in broad focus and postverbal subjects in narrow focus, while unaccusative predicates exhibit postverbal subjects, irrespective of focus type (Cf., Contreras 1976, Suñer 1982, Ordóñez 1997, Zubizarreta 1998). Thus, differences in word order preferences between unergative and unaccusative predicates can only be observed in broad focus, and the word order preferences between broad and narrow focus is only visible in unergative predicates.

2. Contact Spanish

Subject position across predicate types in Spanish in contact with English has been well studied. Montrul (2006), for instance, examined subject position (among other syntactic reflexes of split transitivity) across intransitive predicates in heritage speakers of Spanish with a grammaticality judgement task. The participants were asked to rate sentences on a 5-point scale (1= completely unacceptable, 5= perfectly acceptable). Results show that while native speakers statistically preferred postverbal subjects with unaccusative verbs, this preference did not reach significance in the heritage speakers. Thus, the lexico-semantic interface with syntax proved to be problematic for heritage speakers.

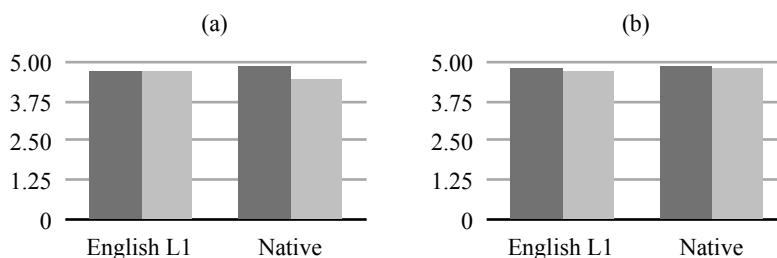


Figure 2: Montrul’s (2006) results: grammatical acceptability on a 5-point scale of preverbal (darker grey) and postverbal (lighter grey) subjects with (a) unergative and (b) unaccusative predicates in broad focus.

¹ The authors used a paper and pencil task. Therefore, although it is probable that the participants were using English-like focusing intonation, further research is needed.

Note that while Tsimplici & Sorace (2006) claim that the external interface is more permeable than the internal interface, they do not claim that the internal interface is not affected by interlingual influence. Thus, Montrul's (2006) results are not at odds with Tsimplici & Sorace's (2006) claim. To test their claim, however, it is necessary to examine both contrasts (unergativity and focus structure). Hertel (2003) uses a contextualized paper and pencil production task, transcribed in (1), where participants read a narrative context in English that implicated the reader as one of the characters in the story. Someone else in the story missed something and asks the reader either '¿Qué pasó?' 'What happened?' (eliciting a broad focus response) or '¿Quién V-ó?' 'Who V-ed?' (eliciting a narrow subject focus), to which a written response is given.

- (1) Contextualized paper and pencil production task (Hertel 2003)
 You and your friend Sergio are at a party. Sergio leaves to use the bathroom. While he is in the bathroom, Sara, the life of every party, arrives. When Sergio returns he notices that everyone seems much more festive.
 Sergio asks you: ¿Qué pasó?
 What do you answer? _____

The study comprised five groups of participants: four learner groups (beginner, low intermediate, high intermediate, and advanced learners of Spanish) and a native speaker control group (Spanish L1-English L2 speakers living in the US). The results, presented in figures 3a-3d, indicate a preponderance of preverbal subjects in all verb types and focus structures, even by the native speakers.

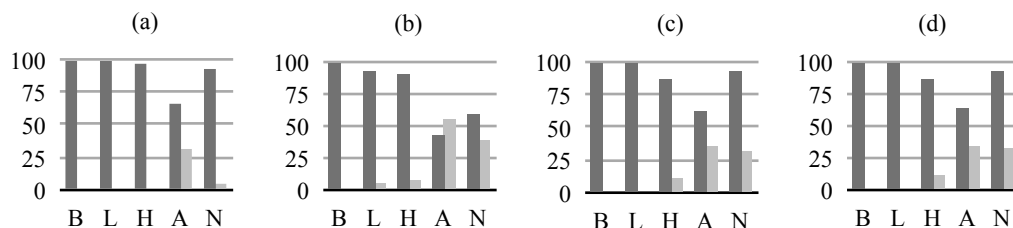


Figure 3: Hertel's (2003) results: subject position (preverbal = darker bar, or postverbal = lighter bar) in four conditions: (a) unergative broad, (b) unergative narrow, (c) unaccusative broad, and (d) unaccusative narrow. Participant groups: Beginner (B), Low intermediate (L), High intermediate (H), Advanced (A), and Native (N).

Significantly, in broad focus, only the native speakers and the advanced learners produced significantly more postverbal subjects with unaccusative than with unergative predicates. Thus the contrast between unergative and unaccusative predicates, reflected in subject position preferences, is only acquired by the advanced learners. In narrow focus, native speakers and high intermediate and advanced learners produced increasingly more postverbal subjects with both verb classes, i.e., high intermediate learners seem to be acquiring the word order preferences across focus contexts but not across predicate types. Hertel's findings thus appear to contradict Tsimplici & Sorace's (2006) prediction that learners will be more target-like in contrasts between unergative and unaccusative (observable in broad focus) than in contrasts between broad and narrow subject focus (observable with unergative predicates).

Zapata et al. (2005) conducted another study concerned with subject position in Spanish in contact with English. The difference with Hertel's (2003) is that instead of Spanish learners, the participants were Spanish heritage speakers. They adapted Hertel's (2003) contextualized production task to a preference task, where after the question, the participant was given three options: one with a preverbal subject, one with a postverbal subject, and a 'no preference' option. The results (Figure 4) indicate that Spanish heritage speakers are more target-like with the contrast between unergative and unaccusative predicates than with the contrast between broad and narrow focus (with unergative predicates in narrow focus participants select preverbal and postverbal subjects at similar rates). Thus, unlike Hertel's results, these results are in line with Tsimplici & Sorace (2006).

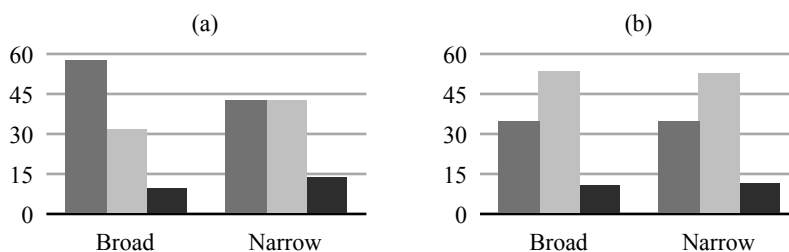


Figure 4: Zapata et al.'s (2005) results: subject position (preverbal = darker grey bar, postverbal = lighter bar, no preference = black bar) Spanish heritage speakers preferences in (a) unergative and (b) unaccusative predicates in broad and narrow subject focus.

Domínguez & Arche (2008), like Zapata et al. (2005), used a preference task based on Hertel (2003) to explore subject position preferences across predicate types and informational contexts in English L1 L2 learners of Spanish at three proficiency levels (beginners, intermediate, and advanced). As in Hertel (2003), there was a preponderance of preverbal subjects, even though all the sentences favored postverbal subject (i.e., unergative narrow and unaccusative broad and narrow conditions only). The native speakers favored postverbal subjects in all cases, although more so with unaccusative predicates. The advanced learners favor postverbal subjects with unaccusative predicates but fail to favor them with unergative verbs in narrow focus, while the rest of the learners prefer preverbal subjects in all conditions. Advanced learners were more target-like in the unergative vs. unaccusative contrast than in the broad vs. narrow focus contrast, as predicted by Tsimpli & Sorace (2006).

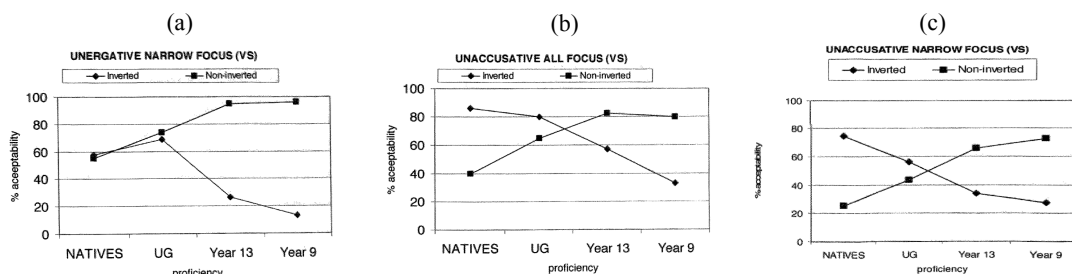


Figure 5: Domínguez & Arche's (2008) results: subject position (preverbal = square, postverbal = diamond) in (a) unergative predicates with narrow subject focus, (b) unaccusative predicates in broad focus, and (c) unaccusative predicates in narrow focus, in four groups: native speakers, advanced learners (UG), intermediate learners (Year 13), and beginners (Year 9).

Lozano (2006) examines L2 learners of Spanish with two different L1s, English and Greek. Greek exhibits postverbal subjects with unaccusative predicates in broad focus, in all other contexts, the subjects are preverbal. The difference between unergative and unaccusative are still evident in broad focus. However, unlike in Spanish, contrast in word order across informational contexts is evident only with unaccusative predicates. The task was very similar to the preference task used in Zapata et al. (2005) and Domínguez & Arche (2008), based on Hertel's (2003). Instead of a preference task, however, a 5-point scale grammaticality judgement task was used, where participants rated each of the two possible responses, as exemplified in (2):

(2) Contextualized grammaticality judgement task (Lozano 2006)

Tú estás en una fiesta con tu amiga Laura. Laura sale de la habitación y en ese momento llega la policía porque hay mucho ruido en la fiesta. Cuando Laura vuelve, te pregunta: '¿Quién llegó?' Tú contestas:

(a) La policía llegó. -2 -1 0 +1 +2

(b) Llegó la policía. -2 -1 0 +1 +2

You are at a party with your friend Laura. Laura leaves the room and at that moment the police arrive because the party is too noisy. When Laura comes back, she asks you: 'Who arrived?' You answer:

(a) The police arrived -2 -1 0 +1 +2

(b) Arrived the police -2 -1 0 +1 +2

As in the previous studies, there were four conditions (unergative broad, unergative narrow, unaccusative broad, and unaccusative narrow). In broad focus, all participants demonstrated target-like behavior; they preferred preverbal subjects with unergative predicates and postverbal subjects with unaccusative predicates. In narrow focus, native speakers preferred postverbal subjects with both predicate types, while both learner groups had no preference for preverbal or postverbal subjects. The difference between the learners and the native speakers was found in the acceptance of preverbal subjects, since all groups accept postverbal subjects (the target form in this condition) to the same extent. These data are thus in line with the assertions of Tsimpli & Sorace (2006).

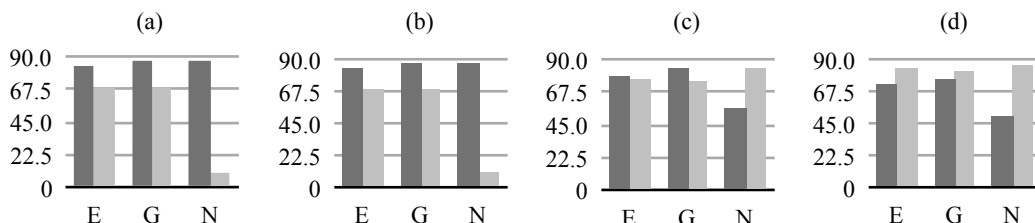


Figure 6: Lozano's (2006) results: subject position (preverbal = darker grey, postverbal = lighter grey) in four conditions: (a) unergative broad, (b) unaccusative broad, (c) unergative narrow, and (d) unaccusative narrow. The study had three groups of speakers: English L1 learners of Spanish (E), Greek L1 learners of Spanish (G), and Spanish native speakers (N).

To summarize this section, previous studies have examined word order preferences across intransitive predicate types (at the lexico-semantic interface) and informational contexts (at the discourse-pragmatic interface) in Spanish by second language learners and heritage speakers of Spanish. Such constructions are of particular interest because they allow for the study of the lexico-semantic interface and the discourse-pragmatic interface at once. The linguistic behaviors of heritage speaker Spanish in the U.S and of English L1 second language learners of Spanish were examined. In both cases Spanish is in contact with English, which has syntactic reflexes of unaccusativity (e.g. availability of resultative constructions, pseudopassives, cf. Levin & Rappaport Hovav 1995) but not of information structure (conveyed through intonation). Lozano (2006) also examined Greek L1 learners of Spanish. Greek, like Spanish, uses word order as a syntactic reflex of unaccusativity and information structure but with different preferences from Spanish. In particular, Spanish and Greek differ in word order preferences in narrow focus. English and Greek learners of Spanish behaved similarly: both groups were more successful in acquiring the contrast that lies at the lexico-semantic interface (unaccusativity) than in acquiring the contrast that lies at the discourse-pragmatic interface (information structure). This result supports Tsimpli & Sorace's (2006) claim that the external interface is more vulnerable to interlingual influence than the internal interface. Note, however, that Greek and English differ more from Spanish at the discourse-pragmatic interface than at the lexico-semantic interface. Therefore, it is possible that the similarity between the languages in one of the interfaces is facilitating its acquisition. To falsify Tsimpli & Sorace's (2006) hypothesis, it seems necessary to examine speakers of an L1 that resembles Spanish in properties of the discourse-pragmatic interface and differs from Spanish in properties of the lexico-semantic interface.

3. The present study

The present study examines Spanish and Catalan subject position preferences across predicate types and information structures in Spanish monolinguals and Catalan L1 bilinguals. As will be shown below, Spanish and Catalan exhibit the same word order preferences. However, they are significantly different from each other with unergative predicates in broad focus: Catalan significantly prefers preverbal subjects (87% of the time), whereas Spanish preference for preverbal subjects (58.2% of the time) does not reach significance (i.e., Spanish speakers use preverbal and postverbal subjects at similar rates in this condition). In brief, Spanish and Catalan have similar word order preferences dictated by the discourse-pragmatic interface but differ in the word order preferences at the lexico-semantic interface. Tsimpli & Sorace (2006) suggest that the discourse-pragmatic interface is more vulnerable to inter-lingual influence than the lexico-pragmatic interface. If this is so, Catalan-Spanish

bilinguals are predicted to exhibit more non-target-like behavior in the word order preferences at the discourse-pragmatic interface with syntax than at the lexico-semantic interface, even though the languages are more similar in the discourse-pragmatic interface than in the lexico-semantic interface. If the preference observed in Tsimpili & Sorace (2006) is due to L1 effects (language pair similarity), the opposite trend would be observed. The present study, therefore, examines Spanish subject position across intransitive predicate types (unergative and unaccusative) and informational contexts (broad and narrow subject focus) in the Spanish of Catalan-Spanish bilinguals in Minorca, Spain, in order to determine whether the external interface is more vulnerable to inter-language influence than the internal interface or whether the effect reported in previous studies is due to L1 effects. For this purpose, we report results from two experiments.

3.1. Experiment 1: Preference Task

The data for this experiment was collected in Minorca, the east-most island in the Balearic Islands (cf. de Prada Pérez 2009 for a fuller description of the community). Data from the Sociolinguistic Interview carried out by the Conselleria d'Educació i Cultura del Govern de les Illes Balears in 2003 indicates that Minorca has the highest percentage of population with knowledge of Catalan. In addition, the 2006 Census reports that Minorca has the lowest number of foreign-born among its population. This fact is relevant to the degree of bilingualism on the island. Blas Arroyo (2007) explains that immigration rates correlate with knowledge of Catalan, i.e. places with more immigrants have lower numbers of Catalan speakers. The extension of knowledge and use of Catalan is an important factor given the caveat that there are no monolingual Catalan speakers. The Spanish monolingual data was collected in Valladolid².

For this study 22 Catalan-Spanish bilinguals (16 Catalan L1 and 6 Spanish L1) and 18 Spanish monolinguals were recorded in Minorca and Valladolid respectively. The bilinguals had been living in Minorca for at least 11 years. Of the bilinguals, 16 participants were born in Minorca (8 always lived there, the rest lived in the Peninsula for 2-16 years); the remaining 6 participants who were not born in Minorca, had lived there for 11-40 years at the time of data collection. The participants were asked to self-rate their proficiency in both languages on a 7-point scale (1=minimum ability, 7=native-like proficiency). The Spanish L1 speakers rate their Spanish at an average of 7 and their Catalan at an average of 4.3 (range= 2-6). The Catalan L1 speakers rate their Catalan at an average of 6.8 (range= 6-7) and their Spanish at an average of 6 (range= 5-7).

Participants completed an oral contextualized preference task in Spanish, like the one used in Zapata et al. (2005) and Domínguez & Arche (2008), based on Hertel (2003). They were asked to read aloud their preferred response. If they accepted both, they were asked to read both aloud and indicate if they preferred both to the same extent or which one they preferred.

(3) Oral contextualized preference task

Usted y su hermana están envolviendo regalos para su amiga Marta. Su hermana va al armario en busca de cinta adhesiva y mientras ella no está, Marta aparece y ve los regalos. Ella se va inmediatamente y pretende no haber visto nada. Su hermana ha oído entrar a alguien, pero no sabe quién era. Ella le pregunta: ¿Quién ha entrado? Usted responde:

A. Ha entrado Marta.

B. Marta ha entrado.

You and your sister are wrapping presents for your friend Marta. Your sister goes to get tape from the closet and while she's not there, Marta shows up and sees the presents. She leaves immediately and pretends not to have seen anything. Your sister heard someone come in but she does not know who it was. She asks you: Who came in? And you respond:

A. Marta came in (lit. Has come-in Marta)

B. Marta came in (lit. Marta has come-in)

There were four conditions (unergative predicates in broad focus, unergative predicates in narrow focus, unaccusative predicates in broad focus, and unaccusative predicates in narrow focus). There were five items in each condition, with a total of 20 target situations. The task also included two

² Castilla y León and Cantabria are the two monolingual regions with the lowest immigration rates. Because no significant differences exist between these two regions, Valladolid (in Castilla y León) was selected for convenience.

practice situations and 55 situations testing other structures not reported in this paper. The responses were coded as preverbal/postverbal if they chose only the preverbal/postverbal form or the accepted both but preferred preverbal/postverbal subjects. If both responses were equally accepted, the item was not taken into account.

The results for the unergative predicates in broad focus are shown in Figure 7a. A 2 (subject position: preverbal, postverbal) x 3 (group: monolingual natives, Spanish L1, and Catalan L1 bilinguals) repeated-measures ANOVA returned a main effect for subject position, $F(1,38)=38.289$, $p<.01$, as well as a subject position by group interaction, $F(2,38)=8.312$, $p<.01$. Group did not reach significance ($F(2,38)=.289$, $p>.05$). In sum, all groups responded as expected, favoring preverbal subjects with unergatives in broad focus context. This favoring, however, did not reach significance in the monolingual speakers.

The results for the unergative predicates in narrow focus are shown in Figure 7b. A 2 (subject position: preverbal, postverbal) x 3 (group: monolingual natives, Spanish L1, and Catalan L1 bilinguals) repeated-measures ANOVA showed a main effect for subject position, $F(1,38)=64.947$, $p<.01$, and for group, $F(2,38)=5.093$, $p<.05$. No subject position by group interaction was found ($F(2,38)=2.231$, $p>.05$). Bonferroni post-hot tests revealed that the monolingual speakers differed significantly from the Catalan L1 speakers. Although all the groups significantly preferred postverbal subjects for unergatives in narrow focus contexts, the monolingual speakers favored postverbal subjects more than Catalan L1 speakers.

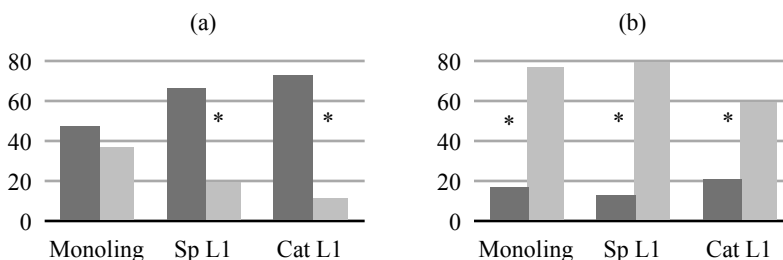


Figure 7: Experiment 1 results: Broad vs. narrow subject focus with unergative predicates. Subject position (preverbal = darker grey, postverbal = lighter grey) in (a) broad focus and (b) narrow focus in Spanish monolingual native speakers (Monoling), Spanish L1 bilinguals (Sp L1), and Catalan L1 bilinguals (Cat L1) with unergative predicates.

In summary, the bilinguals clearly make the contrast between broad and narrow focus with unergative predicates, selecting preverbal subjects in broad focus and postverbal subjects in narrow subject focus. Thus, this property, regulated at the discourse-pragmatic interface, seems to remain intact in these two groups of bilinguals.

To examine unaccusative predicates in broad focus, a repeated-measures ANOVA was conducted with a 2 (subject position: preverbal, postverbal) x 3 (group: monolingual natives, Spanish L1, and Catalan L1 bilinguals) factorial design. The results revealed no significant main effect for subject position, $F(1,38)=2774$, $p>.05$, group, $F(2,38)=.433$, $p>.05$, or a subject position by group interaction, $F(2,38)=2304$, $p>.05$. As shown in Figure 8a, unaccusative predicates favor postverbal subjects, irrespective of informational context. However, this preference only reached significance in the monolingual group.

Unaccusative predicates in narrow focus were examined through a 2 (subject position: preverbal, postverbal) x 3 (group: monolingual natives, Spanish L1, and Catalan L1 bilinguals) repeated-measures ANOVA. It returned a main effect for subject position, $F(1,38)=245.454$, $p<.01$, no main effect for group, $F(2,38)=2286$, $p>.05$, and no subject position by group interaction, $F(2,38)=2181$, $p>.05$. As illustrated in Figure 8b, all groups significantly preferred postverbal subjects in this condition.

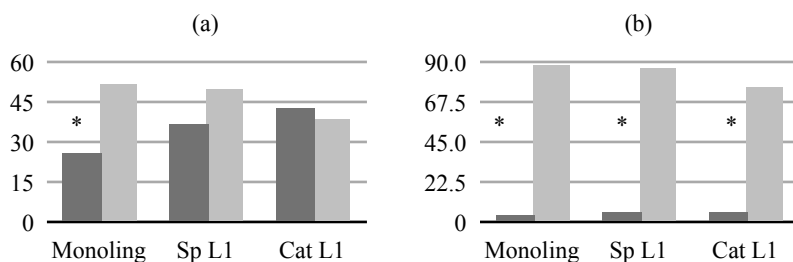


Figure 8: Experiment 1 results: Broad vs. narrow subject focus with unaccusative predicates. Subject position (preverbal = darker grey, postverbal = lighter grey) in (a) broad focus and (b) narrow focus in Spanish monolingual native speakers (Monoling), Spanish L1 bilinguals (Sp L1), and Catalan L1 bilinguals (Cat L1) with unaccusative predicates.

The results indicate that the monolinguals select the preferred word order in all conditions, although with unergative predicates in broad focus, this trend does not reach significance. This result is important because the native control groups in antecedent studies often did not show the expected preference, probably due to the fact that they were not monolingual speakers of Spanish, unlike the participants in this study. It is important to point out, too, that these preferences are not categorical in any case. Nonetheless, the preference for postverbal subjects with unaccusative predicates in narrow focus is much more categorical, for instance, than the preference for preverbal subjects with unergative predicates in broad focus, a matter that requires further research. In theoretical approaches, the non-categorical subject position preference has been wrongly portrayed as categorical. In variationist accounts, no difference has been reported for the variability in subject position across these four conditions. These results indicate that while subject position preference across predicate types and information structures is a variable phenomenon, it is more so with unergative predicates than with unaccusative predicates and more so in broad than in narrow focus. It is possible that the difficulty in acquiring word order preferences may be linked to the variability present in the input. The input with unaccusative predicates in narrow focus is much more consistent than the input with unergative predicates in broad focus, an issue that merits further attention.

The bilingual speakers largely exhibit the preferred word order, with the exception of Catalan L1 speakers with unaccusative predicates in broad focus (although the trend is not significant). Subject position preferences do not reach significance only in the unaccusative broad condition. The contrast that lies at the discourse-pragmatic interface, broad vs. narrow focus, visible only with unergative predicates is mastered by the bilinguals. Recall, however, that the monolinguals did not significantly prefer preverbal subjects in broad focus contexts. Therefore, even though the bilinguals master subject position preferences regulated at the discourse-pragmatic interface, they fail to reproduce the variability present in subject position with unergative predicates in broad focus. The bilinguals fail to produce the contrast in subject preferences regulated at the lexico-semantic interface (i.e., unergative vs. unaccusative predicates subject position preferences). The bilinguals significantly prefer preverbal subjects with unergative predicates but fail to prefer postverbal subjects with unaccusative predicates. This fact poses a sharp contrast with the Spanish in contact with English data, where participants were most target-like with unaccusative predicates. Experiment 2 examines this contrast in spontaneous data collected through sociolinguistic interviews to gain a better understanding of the bilinguals' behavior with this contrast. In addition, this first experiment raised the question of subject position preferences in Catalan. Thus, control Catalan data was collected and examined in Experiment 2.

3.2. Experiment 2: Sociolinguistic Interview

Experiment 1 shows that bilinguals are successful in selecting the appropriate subject position depending on the information structure. However, they exhibited more difficulty with achieving target word order preferences across intransitive predicates. This result is unpredicted considering Tsimpli & Sorace's (2006) proposal that the external interface presents more interlingual vulnerability than the internal interface. As discussed above, language similarity may be enough to explain the results attested in the preceding literature. Experiment 1 failed to include control data in Catalan. Thus, this experiment includes an examination of word order preferences in Catalan to explore the role of language similarity. The Spanish monolingual data was collected in Valladolid and the Spanish

bilingual data in Minorca, as in Experiment 1. The Catalan data was also collected in Minorca. However, there are no Catalan monolingual speakers in Minorca, and thus, the data were collected from Catalan-dominant speakers who used Spanish rarely and lived in Catalan-dominant areas (the villages of Fornells, Ferreries, and Alaior, at the center of the island).

There were four participant groups for Experiment 2: Catalan data control group (n=12), Spanish data control group (n=12), Catalan L1-Spanish L2 Spanish data group (n=12), and Spanish L1-Catalan L2 Spanish data group (n=11). Each group had 2 male and 2 female participants in each of the three age groups (Age Group 1= 13-35; Age Group 2= 36-64; Age Group 3= 65 and over), except the Spanish L1 bilinguals, who only had one male in age group 3. The bilinguals self-reported on their L1 and L2 speaking and listening proficiency on a 7-point scale (1= minimal ability, 7= natively proficiency) and on their L1 and L2 use on an 8-point scale (1=every day, almost all day; 2=every day, sporadically throughout the day; 3=a few times a week; 4=once a week; 5=one or twice a month; 6=once or twice a year; 7=every few years; 8=never). The Catalan L1 bilinguals report an average speaking proficiency of 5.29 (range= 4-7) and an average listening proficiency of 6.87 (range=6-7). The Spanish L1 bilinguals rate their L2 speaking proficiency at an average of 4.09 (range=1-7) and their listening proficiency at 6.72 (range=5-7). Catalan L1 bilinguals' L1 use average is 1.50 (range=1-2) and L2 use average is 2.67 (range=1-5). Spanish L1 bilinguals' L1 use average is 1.73 (range=1-2) and L2 use average is 4.09 (range=2-8). Spanish L1 bilinguals speaking proficiency in Catalan is lower than Catalan L1 bilinguals speaking proficiency in Spanish, a faithful reflection of the sociolinguistic profile of Minorca. Spanish L1 bilinguals also use their L2 less than Catalan L1 bilinguals use their L2.

The participants took part in an oral interview consisting of a language history questionnaire, a sociolinguistic interview, based on Tagliamonte (2006) and adapted to the culture, and a survey of language attitudes and ideologies (not discussed here). The language history was used to classify the participants into groups. During the sociolinguistic interview, participants talked about personal experiences (their studies, jobs, families, trips, hobbies) as well as about their hometown, traditions, celebrations, typical dishes, etc. Sample items are offered in (4).

- (4) Ethnolinguistic interview, sample items
- a. ¿Cómo se celebran las fiestas patronales aquí?
'How do you celebrate your patron saint here?'
 - b. ¿Has tenido la oportunidad de ir a la escuela? Háblame un poco de como era tu vida cuando eras pequeño/a. ¿Cómo era un día normal en la escuela ¿Recuerdas algún profesor que te haya marcado positivamente? ¿Cómo era? ¿Y uno que no te gustara mucho? ¿Por qué? ¿Cómo era? ¿En qué lengua eran las clases? ¿Tenías un grupo de amigos en la clase con los que jugaras en el recreo o por la tarde? ¿Cuántos erais? ¿Cómo eran tus amigos? ¿A qué jugabais? ¿Cómo se jugaba?
'Have you had the opportunity to go to school? Tell me a little bit about your life when you were a child. How was a regular day at school? Do you remember a teacher that marked you in a positive way? What was s/he like? And did you have one that you did not like that much? Why? What was s/he like? What language were classes held in? Did you have a group of friends in class to play during recess or in the evening? How many were there? What were your friends like? What did you play? How did you play that?'

For the purpose of analysis, all lexical subjects (N=649) with intransitive predicates in broad focus in the sociolinguistic interview were coded for subject position and predicate type.

For the unergative predicates, a 2 (subject position: preverbal, postverbal) x 4 (group: monolingual natives, Spanish L1 bilinguals, Catalan L1 bilinguals, and Catalan data control) repeated-measures ANOVA showed a main effect for group, $F(3,43)=29.277$, $p < .01$, and a subject position by group interaction, $F(3,43)=30.994$, $p < .01$. No main effect was found for subject position, $F(1,43)=2.429$, $p > .05$. A Bonferroni post-hoc analysis reveals that the Spanish L1 bilinguals are different from all the other groups. All the groups selected preverbal subjects, although this preference only reached significance in the Catalan L1 bilinguals and the Catalan data control group.

The results are very similar to those in Experiment 1; (i) all speakers favor preverbal subjects, (ii) the Spanish monolingual control group prefers preverbal subjects but the trend does not reach significance, and (iii) Catalan L1 bilinguals produce significantly more preverbal subjects in this condition. The only difference is that the Spanish L1 bilinguals significantly favored preverbal subjects

in Experiment 1, and the preference does not reach significance in Experiment 2. The Catalan data control group, too, selects more preverbal subjects in this condition, even more so than the Catalan L1 bilinguals do in Spanish.

This experiment reveals important differences between Spanish and Catalan in the variability observed in subject position preferences. Catalan selects preverbal subjects 87.5% of the time, reaching significance. Spanish exhibits preverbal subjects 58.2% of the time, not reaching significance. Thus, subject position preference is more categorical in Catalan than in Spanish. With this idea in mind, the Catalan L1 bilingual data can be easily explained; Catalan L1 bilinguals display intermediate rates between Spanish and Catalan. The differences between Spanish L1 bilinguals between the two experiments require further research, as the group is heterogeneous with respect to their proficiency and use of Catalan.

Unaccusative predicates were examined through a 2 (subject position: preverbal, postverbal) x 4 (group: monolingual natives, Spanish L1 bilinguals, Catalan L1 bilinguals, and Catalan data control) repeated-measures ANOVA. It revealed a main effect for subject position, $F(1,43)=163.567$, $p<.01$, group, $F(3,43)=29.277$, $p<.01$, as well as a subject position by group interaction, $F(3,43)=7.535$, $p<.01$. A post-hoc Bonferroni analysis showed that the Spanish monolingual control group differed from all the other groups. All the groups favored postverbal subjects. However, this trend did not reach significance in the Spanish monolingual control group.

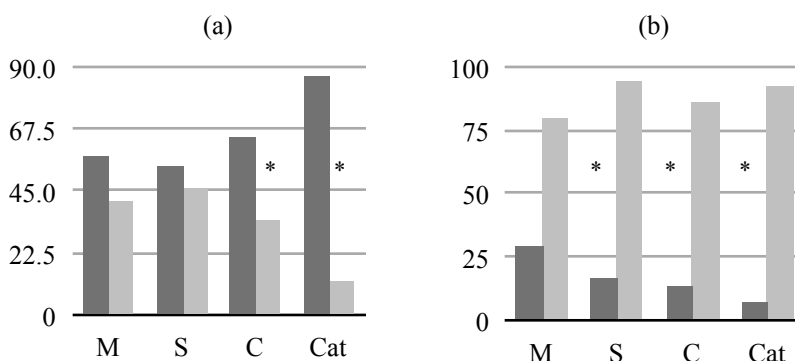


Figure 9: Experiment 2 results: subject position (preverbal = darker grey, postverbal = lighter grey) across intransitive predicate types: (a) unergative, (b) unaccusative in the Spanish monolingual control group (M), the Spanish L1 bilingual group (S), the Catalan L1 bilingual group (C), and the Catalan data control group (Cat).

Unergative predicates favor preverbal subjects (not significant for the Spanish monolingual control group and the Spanish L1 bilinguals) while unaccusative predicates display postverbal subjects (not significant for the Spanish monolingual control group). Thus, all groups distinguish between unergative and unaccusative predicates in broad focus. Nonetheless, there are differences in the degree of preference for preverbal subjects with unergative predicates in the monolinguals and the Spanish L1 bilinguals.

The difference between unergative and unaccusative predicates is expressed in all groups by word order. This preference, however, does not reach significance in the Spanish monolingual control group. These data indicate that this preference is much more variable in Spanish than in Catalan, where it is more categorical. The case of the Spanish L1 bilinguals is not clear, probably due to the heterogeneity of the group. The case of the Catalan L1 bilinguals shows difficulty in acquiring the variability present in Spanish subject position preferences across predicate types.

4. Summary and conclusions

This paper has examined subject position across intransitive predicates and informational contexts in bilingual speech. The focus on subject position is due to the fact that it lies at the lexico-semantic interface (contrast between unergative and unaccusative predicates subject position preferences) and at the discourse-pragmatic interface (contrast between broad and narrow focus subject position preferences). Tsimpli & Sorace (2006) propose that the discourse-pragmatic interface is more vulnerable to interlingual influence than the lexico-semantic interface. Thus, subject position across

predicate types and informational structures provides the ideal ground to test this claim. A review of studies of English L1 learners of Spanish as well as Spanish heritage speakers seems to confirm Tsimpli & Sorace's (2006) assertions. However, it is possible that the larger invulnerability of the lexico-semantic interface is due to facilitation from the L1 (language pair similarity), which after all also has syntactic reflexes of unaccusativity. This paper has addressed this question by examining Spanish in contact with Catalan. While Spanish and Catalan exhibit the same word order preferences, they differ in how categorical these preferences are across intransitive predicate types. Thus, the languages are more different in the contrast between unergative and unaccusative predicate subject position preferences, at the lexico-semantic interface, than in the contrast between broad and narrow subject focus, at the discourse-pragmatic interface. The results show that, contrary to Tsimpli & Sorace's (2006) prediction, Catalan-Spanish bilinguals exhibit more difficulty in replicating the Spanish monolingual grammar regarding subject position across predicate types than across informational contexts. This result indicates that Tsimpli & Sorace's (2006) interpretation of the results may be due to the language pairing similarities or differences rather than differences in vulnerability between the discourse-pragmatic interface and the lexico-semantic interface. It may be the case that one of the interfaces is harder to acquire than the other but in the data discussed here, this interface difficulty is outranked by language pair similarities and differences. A hypothesis left for future research is whether those areas identified as more vulnerable to interlingual interference can be accounted for by the variability present in the monolingual grammar. Monolingual speakers not only showed evidence of variability in their preferences but this variability is much more marked in one of the conditions than the others. This previously unnoticed trend may account for differences between bilingual and monolingual speech existing only in certain areas of the grammar.

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