

Interface Heritage Speech across Proficiencies: Unaccusativity, Focus, and Subject Position in Spanish

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1. Introduction

One of the longstanding questions in the field of linguistics is what factors shape bilingual speech. In an effort to satisfy this question, a number of external and internal factors have been identified. While previous research has catapulted our knowledge on this topic, additional work is still needed. Of special interest to our project is a proposal put forth and refined throughout the last decade, the *Interface Hypothesis* (IH, Sorace & Filiaci 2006), which states that language contact effects are restricted to syntax interfaces with other modules, and not the core or narrow syntax. Although initially designed to test L2 learners (Sorace 2011), Montrul & Polinsky (2011) have recently argued for the extension of its applicability to test Heritage Speakers (HSs). The benefits of testing HSs are manifold: not only is it an understudied community if compared to L2 learners, but conducting experimental studies that target HS is of extreme importance due to its usefulness in “theory testing and building within diachronic linguistics, sociolinguistics, L1 attrition, adult language acquisition, formal syntactic theory and more” (Rothman 2009: 162). Within this formalist approach, the architecture of the grammar includes different modules (phonology, syntax, morphology, semantics, and the external component, pragmatics) that interact in what is referred to as interfaces. Most of the studies focus on phenomena that lie at the syntax interfaces with the lexico-semantic and discourse-pragmatic modules. For instance, several authors have examined the L2 acquisition of the null vs. overt subject alternation in Spanish, reporting difficulty in integrating syntactic and pragmatic information in L2 and HS production (Montrul 2004, Montrul & Rodríguez-Louro 2006, Pérez-Leroux & Glass 1999, Rothman 2007, Sorace & Filiaci 2006). A refinement of this theory is instantiated in the much debated revised Interface Hypothesis (IH), which states that the discourse-pragmatic interface with syntax is more vulnerable to interlingual influence than the lexico-semantic interface (Tsimplici & Sorace 2006). Subject position in Spanish constitutes an interesting testing ground for this latter hypothesis as it is controlled both by the argumental structure of the predicate (unergative and unaccusative predicates select different subject positions), which lies at the lexico-semantic interface with syntax, and by the discourse contexts, in particular, the focus structure, which lies at the discourse-pragmatic interface with syntax. The revised IH makes the prediction that bilinguals should differ more from monolinguals in the subject position preferences that are regulated by focus structure (i.e., in narrow subject focus) than by the lexical properties of the intransitive predicate. Interestingly, numerous studies have examined Spanish subject position in L2ers and some in HSs (Dominguez & Arche 2008, Hertel 2003, Lozano 2006, Montrul 2003, 2004, 2005, 2006, Zapata et. al 2005). These studies report subject position preferences that diverge from monolingual preferences. However, these results are not discussed in light of the predictions made by the IH. In addition, proficiency has not always been taken into account in HSs. Thus, this project expands and improves on previous research by examining (i) subject position preferences with intransitive predicates across informational contexts in HS Spanish,

* We are grateful to Jason Rothman for his helpful comments and suggestions. We would like to acknowledge Domonique Rora, Murielle Joseph, Radhika Jotshi, Alex Glover, Jake Wolinsky, and Delano Lamy for their invaluable help. Finally, we would also like to thank Susana Braylan for allowing us access to her classes. Any remaining errors are our own.

an understudied group regarding subject position, (ii) across proficiencies, which was not a variable in all previous studies, and (iii) to test the predictions of both versions of the IH.

2. The Interface Hypothesis

In the last decade, a generative approach to language acquisition noticed that narrow syntax phenomena, such as the possibility of producing null subjects, was acquired early on while those syntactic phenomena ruled by discourse, such as the alternation between null and overt subjects, exhibited residual optionality in near-native L2ers. This proposal, which was initially applied to L2 acquisition, was later applied to bilingual L1 acquisition, L1 attrition, language breakdown, and diachronic change. Even though the most cited phenomenon examined was subject expression, other structures have received extended attention. Within the syntax interface with the lexico-semantic interface lies the mapping of evidential systems onto TAM systems in contact situations. Sánchez's (2004) article focusing on Quechua-Spanish bilingualism reveals a mapping of evidentiality onto the Spanish preterite-imperfect distinction. Another structure that lies in the lexico-semantic interface with syntax is the reverse mapping of psychological predicates, where the dative-marked experiencer is obligatorily doubled by *and* agrees with a dative clitic and the nominative-marked theme controls the verbal agreement (e.g. "A Mike *le gustan los burritos*;" Mike likes burritos). Montrul (1997), for instance, reported that English L1 speakers displayed difficulty with this reverse mapping in an interpretation task. Evidence of optionality was also present in heritage speaker production (Dvorak & Kirschner 1983, de Prada Pérez & Pascual y Cabo 2011, and Toribio & Nye 2006). Projects examining structures at the discourse-pragmatic interface with syntax abound. Zapata, Sánchez & Toribio (2005) examine the interpretation and production of unergative and unaccusative predicates, topicalization and clitic left dislocation, reporting a stable core syntax and vulnerable interfaces in HS Spanish. In spite of the general agreement that the IH holds, the revised version of the IH needs further testing. Thus, we study subject position across predicate types and information structures as it allows us to examine both interfaces within the same phenomenon.

As described in the following section, the data discussed in the present article lie at the syntax interface with the lexico-semantics and discourse-pragmatics, thus, contributing to the current discussion on the IH.

3. Subject position with intransitive predicates across informational contexts

3.1. Unaccusativity, focus and subject position in Spanish

Subject position in Spanish lies in the lexico-semantic (internal) interface with syntax since it depends on the two intransitive predicate types: unergative and unaccusative predicates (Contreras 1976, Suñer 1982). As seen in (1), in a broad focus context, subjects precede unergative predicates but follow unaccusative predicates.

- (1) a. *¿Qué pasó? Juan estornudó.* 'What happened? John sneezed'
 b. *¿Qué pasó? Llegó Juan.* 'What happened? John arrived'

At the same time, subject position in Spanish also lies in the discourse-pragmatic (external) interface with syntax since it depends on the information structure of the clause (Ordóñez 1997, Zubizarreta 1998):

- (2) a. *¿Qué pasó? Juan estornudó.* 'What happened? John sneezed'
 b. *¿Quién estornudó? Estornudó Juan.* 'Who sneezed? John sneezed'
 c. *¿Quién llegó? Llegó Juan.* 'Who arrived? John arrived'

In (2a) the subject precedes the unergative predicate in broad focus. It is postverbal, however, in narrow subject focus (2b-c). According to these theoretical accounts, subject word order in Spanish can be summarized as preverbal with unergative predicates in broad focus and postverbal with unergative predicates in narrow focus and with unaccusative predicates, irrespective of focus. These subject position preferences are further supported by experimental data from Valladolid Spanish even

though these preferences are not as categorical as they may seem in the theoretical analyses (de Prada Pérez 2010). As can be seen in Figure 1, with unergative predicates in broad focus the preference for preverbal subjects (47.37% vs. 36.84% postverbal) does not reach significant values, while the preference for postverbal subjects (77.89% vs. 17.9% for preverbal subjects) in narrow focus does. With unaccusative predicates, participants significantly preferred postverbal subjects 51.58% of the time (compared to 26.31% preverbal subjects) in broad focus and 88.42% of the time (compared to 4.21%) in narrow focus. These data are relevant for our project as we assume that the most categorical distinctions are more salient. Since HSs are exposed to reduced input, we predict, taking into account these data, that they will be more monolingual-like in their judgment of postverbal subjects in narrow focus than in broad focus.

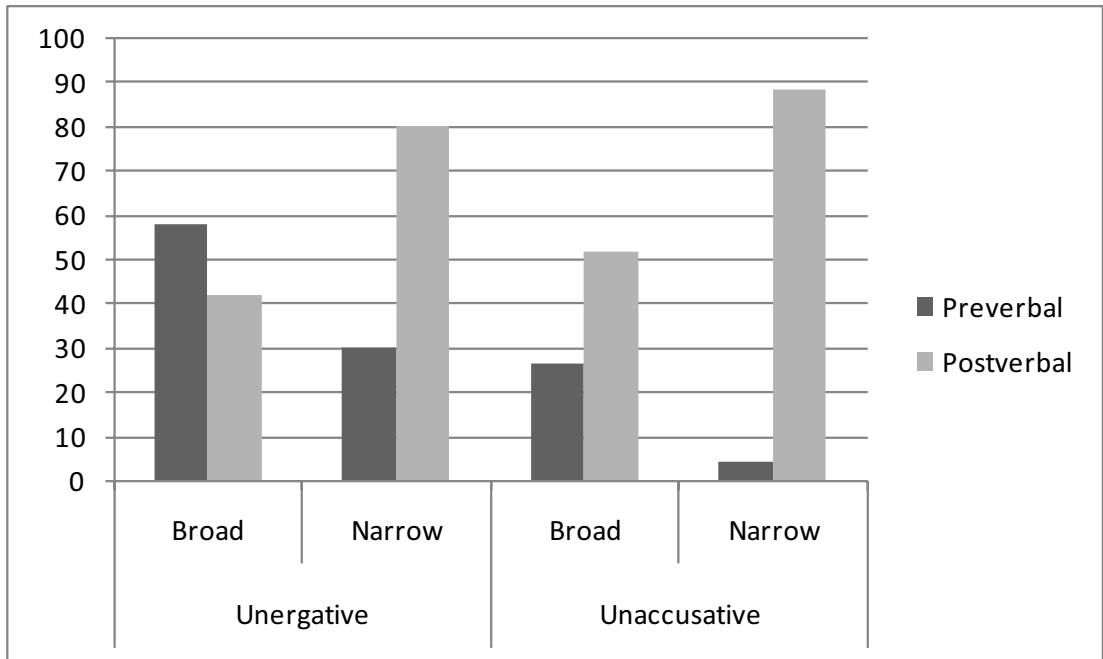


Figure 1. Subject position preferences in monolingual Spanish

The fact that subject position in Spanish lies at two interfaces, together with its probabilistic nature, has attracted attention to bilingual speaker subject position preferences. The following section, thus, reviews antecedent results.

3.2. Subject position in bilingual Spanish

The second language acquisition of subject placement in Spanish has been widely examined among both L2ers (e.g. Domínguez & Arche 2008, Hertel 2003, Lozano 2006, Montrul 2005) and HSs (e.g. Montrul 2003, 2004, 2006). Hertel (2003), for instance, uses a contextualized paper and pencil production task (3), where participants read a context that implicated the reader as one of the characters in the story. Someone else in the story missed an event and asked either ‘what happened?’ (broad focus) or ‘who Ved?’ (narrow subject focus). The items were controlled for predicate type as well, thus, yielding four conditions in the design; unergative predicates in broad and narrow focus, and unaccusative predicates in broad and narrow focus. The participant had to write down the response:

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

Lozano (2006) analyzes linguistic judgments of subject position in English and Greek L1 advanced learners of Spanish. Greek exhibits postverbal subjects with unaccusative predicates in broad focus, in all other contexts, the subjects are preverbal. The difference between unergative and unaccusative is 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 similar to the production task used by Hertel (2003) in that there was a context where the participant was involved, somebody misses an event and asks either *¿qué pasó?* ‘what happened’ or *¿quién Vpret?* ‘who Ved?’. Instead of a production task, however, a 5-point scale contextualized grammaticality judgment task was used to avoid the unexpected responses reported in Hertel (2003), where participants rated each of the two possible responses:

(4) Contextualized grammaticality judgment 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 predicates in broad focus, unergative predicates in narrow focus, unaccusative predicates in broad focus, and unaccusative predicates in narrow focus). In broad focus, all participants behave target-like; they prefer preverbal subjects with unergative predicates and postverbal subjects with unaccusative predicates. In narrow focus, native speakers prefer postverbal subjects with both predicate types, while both learner groups have no preference for preverbal or postverbal subjects.

Domínguez & Arche (2008) tried to replicate Hertel’s (2003) study using a preference task to explore subject position preferences across predicate types and informational contexts in L2 learners of Spanish at three proficiency levels (beginners, intermediate, and advanced). As in Hertel (2003), there is a preponderance of preverbal subjects, even though all the sentences favored postverbal subjects (i.e., unergative predicates in narrow focus and unaccusative predicates in broad and narrow conditions only). The native speakers favor 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.

To summarize, research on the acquisition of subject position in Spanish by English L1 learners indicates their difficulty with accepting postverbal subjects with unaccusative predicates (Montrul 2006, however, see Lozano 2006 for conflicting results), with their production, except for advanced learners (Domínguez & Arche 2008, Hertel 2003), and with the production and acceptance of postverbal subjects in narrow focus (Domínguez & Arche 2008, Hertel 2003, Lozano 2006). Similar results have been reported for Spanish HSs.

Zapata et al. (2005) used a contextualized preference task based on Hertel (2003) to examine subject position preferences across predicate types and informational contexts in HSs of Spanish. The results indicate that Spanish HSs are more target-like in the contrast between unergative and unaccusative predicates than in the contrast between broad and narrow focus (with unergative predicates in narrow focus participants select preverbal and postverbal subjects at similar rates).

These results indicate preferences that are in line with those of monolinguals, except in the case of unergative predicates in narrow focus. Nonetheless, it is difficult to interpret the HS results without

taking into account the speaker proficiency. Therefore, the present study will examine subject position across predicate types and focus structures in HSs of different proficiencies.

4. The present study

The present study examines contact effects in subject position in the speech of Spanish HSs across predicate types and information structures. In the process, we will consider previous findings from the literature, as well as test the aforementioned theoretical approach (IH). With this in mind, in this section, we will first present our research questions followed by their respective hypotheses. Second, we will describe our methodology giving details about participants, materials, and procedure. Lastly, we will present and discuss the results.

4.1. *Research questions and hypotheses*

Three research questions guide the present study:

- i. Does Spanish-English language contact affect subject position preferences in Spanish? According to IH, we predict that this language contact situation will affect general patterns of subject position preferences among HSs revealing outcomes that differ from those of monolingual Spanish speakers.
- ii. Do speakers exhibit more monolingual-like subject position preferences at the internal interface, that is, in the contrast between unergative vs. unaccusative predicates, than at the external interface (i.e. in the contrast between broad vs. narrow focus)? According to the revised IH, we predict that contrast at the internal interface (predicate type) should be easier to acquire than contrast at the external interface (focus type), and, as a result, speakers will exhibit more monolingual-like subject position preferences.
- iii. Do advanced HSs exhibit more monolingual-like subject position preferences? Since less cross-linguistic influence has been attested in more-balanced bilinguals (e.g. Lambert 1990; Flege et al. 2002; & Argyri & Sorace 2007), we predict that as proficiency increases, so do the preferences become more monolingual-like.

In order to address the previous questions and to test the validity of our hypotheses, we designed a methodology which we detail next. This methodology has been successfully tested among L2 learners and HSs in previous studies (Dominguez & Arche 2008; Hertel 2003; Lozano 2006; Zapata et al. 2005).

5. Methodology

A total of 61 HSs as well as 10 Spanish native speakers participated in this study. The control group was formed by unbalanced Spanish-English bilinguals born and raised in a Spanish speaking country but with knowledge of English. All HSs were undergraduate and graduate students attending advanced Spanish classes at the University of Florida. Ranging in age from 18 to 24 (average 20;1), all participants were US-born or had arrived in the US at a very early age (before age 2). Regarding dialectal differences, our participants reported the following distribution: 42% had a least one parent of Caribbean origin and 58% had Non-Caribbean parents. A standardly-used Spanish proficiency test (a revised version of DELE) further divided them into advanced (n=25), intermediate (n=23), and low (n=13) proficiency categories.

In addition to the language proficiency task, participants were asked to complete a contextualized grammaticality judgment test. This task, containing 72 stimuli, was divided into three equal parts, one of which consisted of critical items that tested subject position. The remaining two parts were distracters which tested various grammatical structures but have not been included in this study. Consequently, for the purpose of this study, participants judged the answers to 24 contextualized questions. We tested four conditions with six items each: i) unergative predicates in broad focus, ii) unergative predicates in narrow focus, iii) unaccusative predicates in broad focus, and iv) unaccusative predicates in narrow focus. Each item consisted of a contextualized question introduced by a short

paragraph in English. If it had been written in Spanish, the paragraph would have included preverbal or postverbal subjects, thereby priming the participant. Using English consistently primes the participant for preverbal subjects, thus, controlling for that effect. For each question, participants had to provide a judgment on four possible answers that varied on the position of the subject and on subject-verb agreement: one grammatical preverbal, one grammatical postverbal, one ungrammatical preverbal, and one ungrammatical postverbal. The answers for each question included a 4 point scale that measured the participant's level of acceptability of the grammatical constructions (-2= completely ungrammatical, -1= somewhat ungrammatical, 1= somewhat grammatical, 2= completely grammatical). In addition, they had the option of choosing a fifth alternative ('I don't know/I am not sure'). Examples (5-8) below illustrate instances of these variables.

(5) Unergative Narrow

Your boss goes away for a business trip. You and your coworker, Alex, have an idea to surprise her when she returns. She comes back and exclaims at how clean and neat everything is. She turns to you and asks, "Who worked?" You respond:

- a) *Trabajó Alex.*
- b) *Alex trabajaron.*
- c) *Alex trabajó.*
- d) *Trabajaron Alex.*

(6) Unergative Broad

You and two friends are studying for your final exams in your apartment. While you are studying, one of your friends decides to take a nap. After just twenty minutes of sleep, she suddenly wakes up and asks, "What happened?" You respond:

- a) *Habló Adriana.*
- b) *Adriana habló.*
- c) *Adriana hablaron.*
- d) *Hablaron Adriana.*

(7) Unaccusative Narrow

You and some friends are at a restaurant. The waitress, who is also a classmate, comes and takes your order. While she is in the kitchen your friend, Ramón arrives late. The waitress returns, notices an extra chair, and asks, "Who arrived?" You respond:

- a) *Ramón llegó.*
- b) *Llegaron Ramón.*
- c) *Llegó Ramón.*
- d) *Ramón llegaron.*

(8) Unaccusative Broad

You and your little cousin Priscilla are playing tag outside. Not paying attention, she trips over a tree branch and runs in the house crying. Your aunt asks, "What happened?" You respond:

- a) *Se cayeron Priscilla.*
- b) *Priscilla se cayó.*
- c) *Se cayó Priscilla.*
- d) *Priscilla se cayeron.*

Responses to these and the remaining questions from the entire survey were systematically coded and the resulting data was submitted to statistical analysis. The results from these tests are illustrated in the following section.

6. Results

In this section we report on the participant answers, which were submitted to statistical analysis using SPSS. It is important to point out that all participants consistently rejected the ungrammatical sentences, which are not included in the analysis. The fact that we had ungrammatical sentences may have enhanced the acceptance of both preverbal and postverbal options since they are both grammatical (especially by comparison with the ungrammatical ones), although one of the options was pragmatically odd. We make reference to the monolingual data presented in figure 1, and repeated here

for convenience. Recall that the materials used then were similar but not exactly the same as the ones used here (preference task vs. grammaticality judgment task).

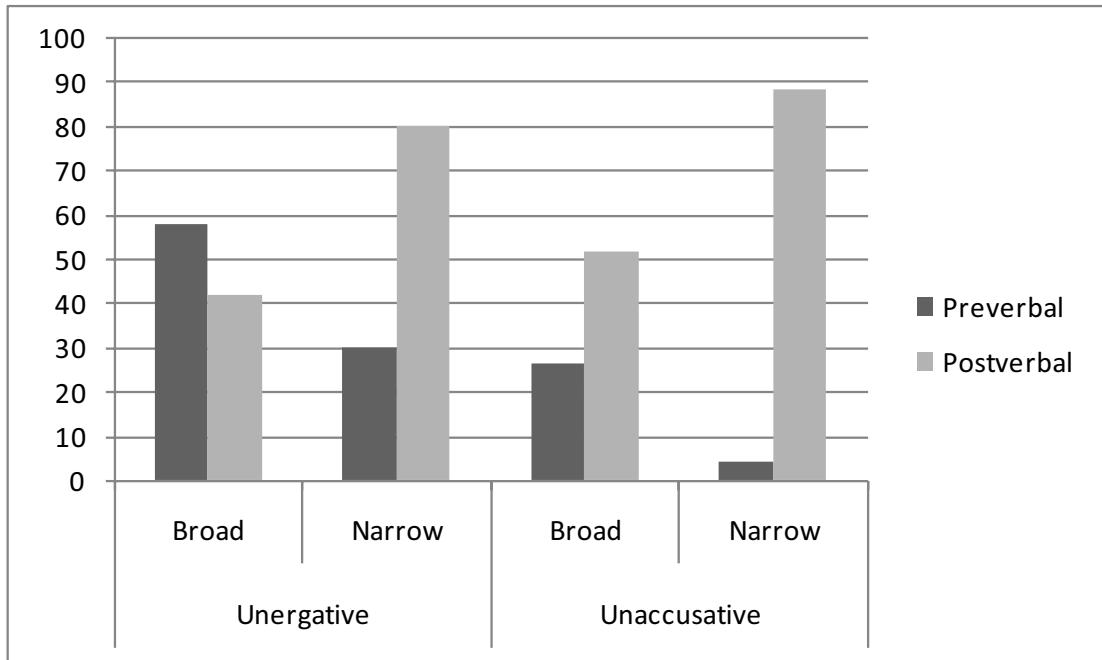


Figure 2. Subject position preferences in monolingual Spanish

In line with previous research, overall results reveal indeterminacy regarding subject position among our participants. A series of four 2 (subject position: preverbal, postverbal) x 4 (group: HS advanced, HS intermediate, HS low and control) repeated-measures ANOVA were run (one per condition: unergative predicates in broad and narrow focus and unaccusative predicates in broad and narrow focus). Figure 3 shows the results for unergative predicates in broad and narrow focus.

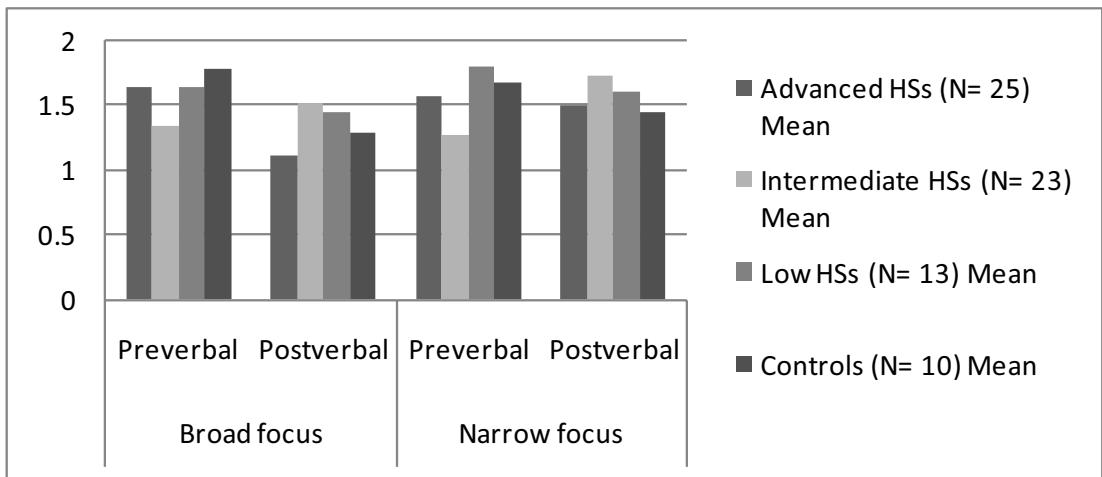


Figure 3. Subject position preferences with unergative predicates

With unergative predicates in broad focus a main effect was found for subject position ($F(1)=6044, p=0.017$). No main effect was found for group ($F(2)=.957, p=.389$). However, a subject position by group interaction was returned ($F(2)=4766, p=.012$). We further examined the interaction through paired-samples t-tests between preverbal and postverbal judgments in each of the 4 conditions by each group. The analysis revealed a significantly higher judgment for preverbal than postverbal subjects in the advanced HS group, $t(24)=3102, p=.005$, and the control group, $t(9)= 2369, p= .042$,

but not in the intermediate, $t(22)=-1032$, $p=.313$, or low proficiency HS groups, $t(12)=1185$, $p=.259$. Comparing with the monolingual data, it seems that this difference, which did not reach significance in the monolingual group, reaches significance only in the advanced HS and control groups. Thus, we could argue that this variable preference is only achieved at higher proficiencies.

With unergative predicates in narrow focus, a 2×4 repeated-measures ANOVA indicates no main effect for subject position ($F(1)=.203$, $p=.654$) or for group ($F(2)=1310$, $p=.277$) and a subject position by group interaction ($F(2)=4472$, $p=.015$). This interaction was further examined through paired samples t-tests between preverbal and postverbal judgments in each of the 4 conditions by each group. The analyses revealed a significantly higher judgment for postverbal than preverbal subjects in the intermediate HS group, $t(22)=-2341$, $p=.029$, and no significant preference in the advanced HS group, $t(24)=3102$, $p=.005$, the low proficiency HS group, $t(12)=1109$, $p=.289$, or the control group, $t(9)=1076$, $p=.310$. Comparing these data with the monolingual data reveals indeterminacy. It could be argued that the speakers may not rate postverbal subjects higher than preverbal subjects but that they still have different preferences between broad and narrow focus. To test this hypothesis, paired-samples t-tests were run to compare the judgments of preverbal/postverbal subjects in broad vs. narrow focus. The results indicate that postverbal subjects are rated significantly higher in narrow than in broad focus in the advanced, $t(24)=-2335$, $p=.028$, intermediate, $t(22)=-3215$, $p=.004$, and low proficiency HSs, $t(12)=-2668$, $p=.020$. Thus, we can claim that the distinction between broad and narrow focus is maintained in these speakers. Now we turn to the unaccusative data, represented in Figure 4.

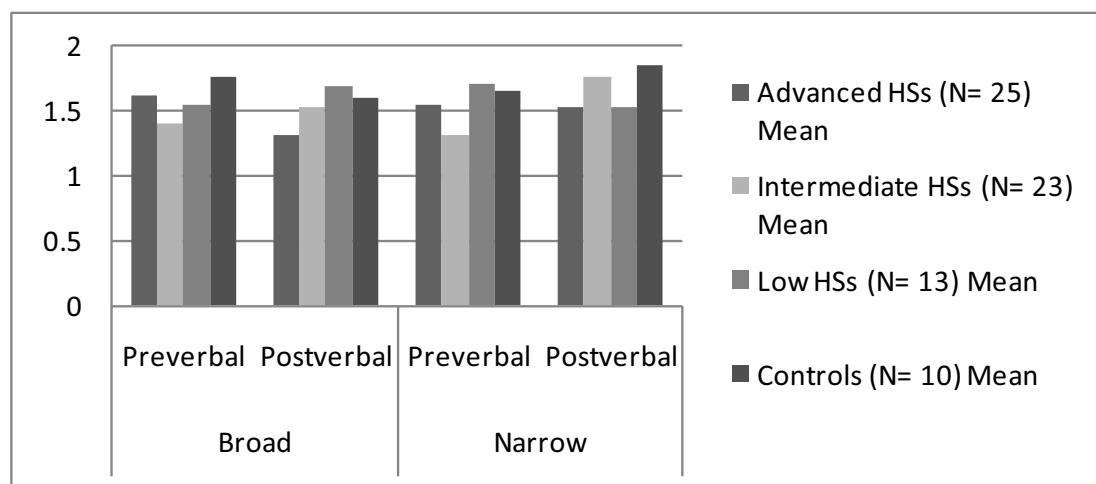


Figure 4. Subject position preferences with unaccusative predicates

With unaccusative predicates in broad focus, a 2×4 repeated-measures ANOVA indicates no main effect for subject position ($F(1)=1012$, $p=.318$) or for group ($F(2)=.751$, $p=.476$), and no subject position by group interaction ($F(2)=2890$, $p=.063$). Paired-samples t-tests reveal that only the advanced HS group judges preverbal subjects significantly higher than postverbal subjects, $t(24)=2638$, $p=.015$. Recall that monolingual speakers from the previous study significantly preferred postverbal subjects in this condition, although the preference was not as marked as in the narrow focus conditions.

With unaccusative predicates in narrow focus, a 2×4 repeated measures ANOVA reveals no main effect for subject position ($F(1)=.778$, $p=.381$) or group ($F(2)=.589$, $p=.558$) and a subject position by group interaction ($F(2)=3584$, $p=.033$). The paired-samples t-tests run per group in this condition reveal a significant higher value for postverbal subjects than preverbal subjects only in the intermediate HS group ($t(22)=-2212$, $p=.038$). Comparing these results with the monolingual data from our previous study indicates some variability in the bilingual data. Recall that the monolingual speakers had an almost categorical preference for postverbal subjects in this condition. It is possible, though, that these speakers are still encoding the notions of unaccusativity and focus but on a different scale. In order to test the possibility that word order may still be used to distinguish between broad and narrow focus as well as between unergative and unaccusative predicates, a series of paired-samples t-tests were run. The results indicate that the control group rates preverbal subjects significantly higher

in broad than narrow focus, $t(9)=2689$, $p=.025$, and postverbal subjects significantly higher in narrow than broad focus, $t(9)=-2293$, $P=.048$. Thus, it seems that HSs do not distinguish between broad and narrow focus with unaccusative predicates. More importantly, postverbal subjects are rated higher in unaccusative than unergative predicates in broad focus in the low proficiency HS group, $t(12)=-2501$, $p=.028$, and the control group, $t(9)=-2692$, $p=.025$. Lastly, the control group rates postverbal subjects significantly higher in unaccusative predicates in narrow focus and in unaccusative predicates in broad focus, $t(9)=-3582$, $p=.006$.

All in all, comparisons with the monolingual data reveal differences probably due to the type of task. In summary, all HS groups rate postverbal subjects significantly higher in narrow than in broad focus, thus, evincing a differentiation between broad and narrow focus. However, the picture is not so clear regarding the use of subject position across predicate types: only the low proficiency speakers rate postverbal subjects higher in unaccusative than unergative predicates. Note that the control group and the low proficiency group are the only groups that rate preverbal and postverbal subjects differently depending on both predicate type and focus. A noticeable difference between the data presented in this project and the data in de Prada Pérez (2010) is in the higher ranking of preverbal subjects in general. This is not surprising given that all participants are in contact with English, which only allows preverbal subjects. In addition, the context was in English to avoid giving away subject position, possibly priming preverbal subjects across conditions and speakers. Crucially, the difference between broad and narrow focus is still encoded in subject position, however, the variability is much higher in the bilingual speaker, that is, the word order is even less categorical than in the monolingual grammar. Thus, we may not get a significant preference for preverbal/postverbal subjects but the use of preverbal/postverbal subjects is higher in one condition over the other.

The results observed up to this point yield very interesting tendencies which are further elaborated and discussed in the following section.

7. Discussion

With these results in mind we return to our research questions and hypotheses. The first two research questions tested the predictions of the IH that (i) subject position, as it relates to the interfaces, would be a locus of interlanguage influence and (ii) HSs would exhibit more monolingual-like judgments of subject position at the internal (unergative vs. unaccusative contrast) than at the external interface (broad vs. narrow focus). It is important to first note that all groups accept preverbal and postverbal subjects, which indicates knowledge of the featural specifications of Spanish (core syntax), which differ from the contact language, English. Thus, these data are consistent with the IH with regards to the impermeability of the core syntax. At the same time, comparisons with the monolingual data from de Prada Pérez (2010) indicates quantitative and qualitative differences in HS speech as it relates to the judgments of preverbal and postverbal subjects across predicate types and focus structures. First, one option (preverbal or postverbal subjects) is generally not ranked significantly higher than the other option, indicating optionality in bilingual grammars. We show, however, that this optionality does not imply a loss of functionality in subject position, i.e., subject position still indicates differences in information structure. In particular, all HS groups judge postverbal subjects significantly higher in narrow focus than in broad focus with unergative predicates. At the same time, this optionality results in a loss of functionality in subject position; subject position is not an indication of predicate type. These results can contribute to the IH. There are restrictions on inter-linguistic influence: the core syntax of Spanish is not altered by contact with English. However, inter-linguistic influence is observed both quantitatively and qualitatively. There is an overall move towards preverbal subjects across conditions. In fact, there is a loss of functionality of subject position to distinguish predicate types (internal interface). However, there is no loss of functionality of subject position to indicate focus structure (external interface). Thus, in these data, properties at the internal interface are more vulnerable to inter-language influence than structures at the external interface, contra the revised IH. We propose an explanation based on the categoricity present or absent in the monolingual data. The probabilistic nature of subject position in broad focus was predicted to pose a higher degree of difficulty on Spanish-English heritage speakers. The results support our hypothesis.

Lastly, the third research question inquired about the role of proficiency and predicted that more-proficient speakers would be more monolingual-like in their subject position preferences as less cross-linguistic influence is attested in more-balanced bilinguals (Lambert 1990, Flege et al. 2002, and

Argyri & Sorace 2007). This prediction is not confirmed for these participants. There were no evident differences across proficiency groups. We interpret the native speaker control data as indicating quantitative (if not qualitative) differences between this group and the monolingual group in de Prada Pérez (2010). Being that these data may be representative of the input HSs receive, it is not surprising that the diminished input, which is already changed under contact with English, is further affected by contact with English in the HSs. This results in qualitative changes in the distribution of preverbal and postverbal subjects in Spanish and, more specifically, in the loss of function of subject position as an indicator of predicate type. Thus, we propose a combination of internal and external factors to predict language contact outcomes: (non)categoricity of the structure in the monolingual grammar, quality and quantity of input, and contact with English. While these data are indicative of these factors, we encourage further testing of these factors in other structures and other language pairings.

8. Conclusion

The data presented here were discussed in light of two versions of the IH and tested proficiency as an individual variable. The results indicate vulnerability in subject position preferences in Spanish HSs. However, we report no evidence of selective interface vulnerability.

These data can inform research on bilingual syntax and bilingual acquisition in three important ways. First, we observe a trend towards preverbal subjects, probably due to the contact language, which does not imply a loss of distinction; the HSs still use subject position differently in broad and narrow focus. However, we perceive a loss of distinction, in general, between unergative and unaccusative predicates. Second, we show that the external interface is less vulnerable than the internal interface for these HSs with this structure. These results contradict the IH but can be explained by the categoricity of subject position preferences reported in de Prada Pérez (2010) for monolingual Spanish. Third, these language contact outcomes are explained by a myriad of internal and external factors. Assuming the reduced exposure to input in HSs, speakers may have an easier time acquiring more categorical distinctions (narrow focus is more categorically selected with postverbal subjects than unaccusative predicates) since the input is, then, more consistent and easier to accommodate. In the case of the more variable distinction, because the input is less consistent, speakers with reduced input may not have had enough input as to replicate the grammar they were exposed to. We are assuming that the quantity of the input is reduced, but looking at the control data, which could very much represent the input HSs receive, we find evidence of influence from English. Therefore, we interpret the HSs data as a result of compounding reasons: input that differs from the monolingual data both quantitatively and, arguably, qualitatively and intense contact with English. We consider the fact that no clear proficiency effects are present in these data as indicative of this compound of reasons: at higher proficiencies the input may have been better in quantity but not necessarily in quality and the (non)categoricity of subject position makes it the target of contact-induced changes.

All in all, the language contact outcomes attested to in our data can be accounted for by taking into account dominant-language influence (an extension of SV) and the categorical or probabilistic nature of subject position preferences in monolingual speech. As explained above, we assume that the categorical nature of preference facilitates acquisition and makes it less vulnerable to interlanguage influence.

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Selected Proceedings of the 14th Hispanic Linguistics Symposium

edited by Kimberly Geeslin
and Manuel Díaz-Campos

Cascadilla Proceedings Project Somerville, MA 2012

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This paper can be cited as:

Prada Pérez, Ana de and Diego Pascual y Cabo. 2012. Interface Heritage Speech across Proficiencies: Unaccusativity, Focus, and Subject Position in Spanish. In *Selected Proceedings of the 14th Hispanic Linguistics Symposium*, ed. Kimberly Geeslin and Manuel Díaz-Campos, 308-318. Somerville, MA: Cascadilla Proceedings Project. www.lingref.com, document #2674.