

©Marcela Depiante and Ellen Thompson  
Coyote Papers 21 (2013)  
UA Linguistics  
Tucson, AZ, U.S.A.

# Preposition Stranding in Heritage Speakers of Spanish<sup>1</sup>

Marcela Depiante  
University of Wisconsin, Eau Claire  
depiama@uwec.edu

Ellen Thompson  
Florida International University  
thompson@fiu.edu

## Abstract

In this research, we explore the linguistic structure of the Spanish of Heritage Speakers, those who have acquired Spanish as the home language in a minority language context (Iverson, 2010). We contribute to the discussion of the properties of Heritage Languages here by examining Preposition Stranding in Heritage Speakers versus native monolingual speakers of Spanish. We claim that the distinct behavior of Heritage Speakers of Spanish supports the claim that Heritage Languages may differ from native monolingual language in the narrow syntax, affecting uninterpretable features of the grammar.

---

<sup>1</sup> We would like to thank for all of their help: Joshua Brown and Beth Kranz from the University of Wisconsin, Eau Claire, Reyneiro Hernandez Castro from Miami Dade College, Jorge Hankamer from UCS anta Cruz, Roberto Aranovich from M\*Modal, Amui Chong, Simone deLemos and Stephanie Pi from Florida International University, and Ivan Nunez. We would also like to thank the audience at ALC6 in Tucson, Arizona for comments and suggestions. All errors are our own.

## 1 Introduction

We follow Iverson, 2010, who claims that a Heritage Language is a “minority language in its context and home language of the heritage speaker”. A linguistically-informed theory of Heritage Languages seeks to discover and explain the properties that Heritage Languages share. As noted by Montrul 2004: “...of particular interest for linguistic theory is to identify potential vulnerable areas of grammatical knowledge, and to seek reasons to explain why systematic patterns of ...(difference)..., if they exist, look the way they do” (Montrul, 2004; see also Polinsky, 1997; Sorace, 2000; Toribio, 2001; Montrul, 2002; Tsimpli et al, 2003).

### 1.1 Interface Hypothesis

An influential model of the theory of Heritage Languages is presented by Sorace 2000, and developed in Tsimpli et al. 2004. According to this approach, properties that appear in Heritage Languages are constrained by the Interface Hypothesis:

- (1) Interface Hypothesis (Sorace 2000; Tsimpli et al 2004): Changes in heritage speaker syntax are restricted to areas of the grammar where the syntax interfaces with interpretable domains; discourse/pragmatics or semantics.

### 1.2 Contra – Interface Hypothesis

There has been much discussion in the literature regarding the status of the Interface Hypothesis (Bhoacker 2007; Montrul & Iolnin 2010; Ivanov, 2009; Perez-Leroux et al. (to appear); Rothman, 2009; Slaboakova & Ivanov, to appear). For example, Cuza 2008, 2009 discusses experimental evidence showing that Heritage Speakers of Spanish show a high level of acceptance and production of ungrammatical WH-questions in Spanish in cases where subject-verb inversion is obligatory. Heritage Speakers produce and accept the sentence in (2) in Spanish in which the verb has not raised to the head of IP, which is ungrammatical in monolingual Spanish as shown (3) (except in some Caribbean dialects) and is acceptable in

English as shown in (4):

- (2) ¿Qué Juan compró? (Heritage Spanish)
- (3) a. ¿Qué compró Juan? (Monolingual Spanish)  
What bought John?  
'What did John buy?'
- b.\*¿Qué Juan compró?  
What John bought?  
'What did John buy?'
- (4) a. What did John buy? (Monolingual English)  
b.\*What bought John?

Cuza explains this as the influence of English syntax upon Heritage Spanish, in a domain which is clearly purely syntactic, and is therefore predicted to not show variable behavior, according to the Interface Hypothesis.

More recently, Montrul and Ionin (2010) investigate the Interface Hypothesis by exploring two areas of syntactic difference in the Heritage Spanish of speakers exposed to English. They examine the distribution of definite plural nouns in Heritage Spanish as compared to native Spanish and native English speakers. The first construction that Montrul and Ionin discuss involves definite plural nouns in subject position of present-tense clauses. These phrases are argued to behave distinctly in Spanish and English. Spanish allows definite plural subjects in this environment to be interpreted as generic or as specific, as illustrated in (5a), depending on the pragmatic situation. Spanish does not permit bare plural subjects, as shown in (5b). However, English only allows a specific interpretation for a definite plural noun in subject position of a present-tense clause, as shown in (6b) and has a bare plural to express the generic interpretation in (6a). Thus, definite plural subjects do not depend on pragmatics for their interpretation in English.

- (5) a. Los tigres comen carne.

Generic: ‘In general, all tigers eat meat.’

Specific: ‘There are particular tigers that eat meat.’

b. \*Tigres comen carne.

(6) a. Tigers eat meat.

Generic: ‘In general, all tigers eat meat.’

\*Specific: ‘There are particular tigers that eat meat.’

b. The tigers eat meat.

Specific: ‘There are particular tigers that eat meat.’

\*Generic: ‘In general, all tigers eat meat.’

The second construction that Montrul and Ionin explore involves “Inalienable Possession”. In Spanish, it is possible to find definite determiners in these contexts, such as in:

(7) María levantó la mano  
Mary raised the hand  
‘Mary raised her hand.’

On the other hand, English does not allow the definite determiner in this position to have the inalienable possession interpretation, as is shown in (8):

(8) Mary raised the hand.  
#Meaning: ‘Mary raised her hand.’

Montrul and Ionin argue that this contrast in the expression of inalienable possession between Spanish and English is purely syntactic, and not determined by pragmatics.

Hence, according to the Interface Hypothesis, if features of heritage languages are restricted to the pragmatic/semantics interface, there should be a contrast in the behavior of these two constructions in Heritage Spanish – the definite plural subjects should show influence from English and the inalienable possession constructions should not. They show

that in fact the opposite is the case: Heritage Spanish speakers master the Spanish setting with respect to the behavior of the definite determiner in generic and specific contexts, which is a matter of pragmatics, but they do not master the Spanish setting of the distribution of definite determiners in the inalienable possession construction, and instead show the influence of English in this construction.

Cuza (2008, 2009) formulates the “Contra-Interface Hypothesis”, according to which purely syntactic features are affected by the influence of the dominant language, in this case English:

- (9) **Contra-Interface Hypothesis:** (Cuza 2008, 2009)  
Heritage language syntax may differ from monolingual syntax in the narrow syntax, affecting uninterpretable features of the grammar.

In this work, we investigate experimentally the acceptability judgments of Heritage Speakers of Spanish in an English-dominant environment, and we show how these contrast systematically with the acceptability judgments of native monolingual Speakers of Spanish. Therefore, we argue that this evidence supports the Contra-Interface Hypothesis.

## 2 Research Questions

We investigate the acceptability of Heritage Spanish speakers versus native Non-Heritage Spanish speakers with respect to the possibility of Preposition Stranding in three different types of constructions.

### 2.1 Preposition Stranding

As has been discussed in the literature, English allows Preposition Stranding in Root WH-Questions, as shown in (10)-(11):

- (10) What guy did Mary dance with?

(11) Who does your boyfriend have faith in?

On the other hand, Spanish does not allow Preposition Stranding in Root WH-Questions; (12) and (13) are unacceptable in Spanish.

(12) \*¿Qué muchacho bailó María con?

What guy danced Maria with

'What guy did Maria dance with?'

(13) \*¿Quién confía tu novio en?

Who trusts your boyfriend in?

'Who does your boyfriend trust?'

Similarly, English allows Preposition Stranding in Embedded WH-Questions, as seen in (14) and (15):

(14) Mary doesn't know where the new students are from.

(15) Mary doesn't understand who Paul agrees with.

Spanish, in contrast, does not allow Preposition Stranding in Embedded WH-Questions either, as seen in (16) and (17):

(16) \*María no sabe dónde son los nuevos estudiantes de.

Maria not knows where are the new students of

'Maria doesn't know where the new students are from.'

(17) \*María no entiende quién está Pedro de acuerdo con.

Maria not understands who is Pedro of agreement with

'Maria doesn't understand who Pedro is in agreement with.'

The third construction of concern here in which English allows Preposition Stranding is

Relative Clause Constructions, as in (18)-(21):

- (18) This is the woman that John came close to.
- (19) There is a story that Mary read about.
- (20) The children are visiting the house that Paul lived in.
- (21) There is a story that Mary read about.

As expected, Spanish does not allow Preposition Stranding in this environment either (note that English does not have the equivalent structure to this example):

- (22) \*Esa es la mujer que Juan se acercó a.  
This is the woman that Juan approached to  
'This is the woman that John approached.'
- (23) \*Hay un lugar que los estudiantes necesitan ir a.  
There is a place that the students need to go to  
'There is a place that the students need to go.'

We assume, following Abels 2003 and Almeida and Yoshida 2007, that the possibility of these constructions is determined by purely syntactic features. Hence, the Interface Hypothesis predicts that Heritage Speakers of Spanish do not show variation from monolingual Spanish speakers with respect to these constructions, while the Contra-Interface Hypothesis predicts that Heritage Speakers may show influence from English on their behavior with respect to these constructions.

### **3 Experimental Design**

#### **3.1 Subjects**

Two groups of subjects participated in the study: one group of Heritage Speakers of Spanish

and one group of Non-Heritage Spanish speakers.

### **3.1.1 Heritage Speakers of Spanish**

Twenty-eight Heritage Speakers of Spanish participated in this study. These are undergraduate students from Florida International University in Miami. They range in age from 18-25 years old. Twenty-six are children of Cuban-born parents, and one is from a Puerto Rican family and one from a Venezuelan family. All were raised in the US and grew up speaking Spanish at home while attending school in English.

### **3.1.2 Non-Heritage Speakers of Spanish**

Twenty-one native (non-heritage) Spanish speakers participated in the study. These are students from a beginner-level course in English as a Second Language at Miami Dade College. Of these, nineteen were born and raised in Cuba, and two were from Colombia. They range in age from 18-50. These subjects are recent immigrants to Miami, having been in the United States from approximately four months to two years. All of these subjects have attended school exclusively in Spanish.

## **3.2 Experimental Methodology**

The study consists of an acceptability judgment task. Subjects fill out an eighty-three question questionnaire using the Qualtrics system. The questionnaire is completely in Spanish. Eight of these questions inquired about subjects' schooling and linguistic background. Thirty six questions are our test questions and fifteen questions are distracters (distracters are comprised of acceptable and unacceptable sentences.) There were also twenty four other questions which tested other constructions which are not analyzed in this paper.

Subjects are seated at a computer and presented with the initial eight questions on their backgrounds. Next, each test sentence is presented randomly on the screen one at a time. Subjects are asked to rate the sentence on a scale: 1. *Acceptable*; 2. *Poco natural*; 3. *Rara*; 4. *Completamente inacceptable*; 5. *No sé*. The translation of this scale into English is the

following: 1. Acceptable; 2. Slightly unnatural; 3. Strange; 4. Totally unacceptable; 5. I don't know. When the final data were computed, we collapsed the data for responses 1 and 2 (*Acceptable* and *Poco Natural*) into one: *Acceptable*; and we collapsed the data for responses 3 and 4 (*Rara* and *Completamente inacceptable*) into one: *No Acceptable*. If a subject chose responses 3, 4 or 5 when shown a sentence, they were prompted to write a possible alternative sentence.

The test questions are divided into three groups to test the acceptability or lack of acceptability of preposition stranding in each one of the following constructions in Spanish:

1. Root WH-Questions
2. Embedded WH-Questions
3. Relative Clause WH-constructions

For each construction type, there are twelve distinct tokens, using the prepositions *a*, *en*, *con*, *sobre*, *de*, *por*. These prepositions are maintained across the three different grammatical constructions used. In each set, each preposition is used in six constructions in which it is selected by the main verb, as well as in six constructions in which it is not, in order to be able to determine whether the selected and non-selected Prepositional Phrases behave the same way.

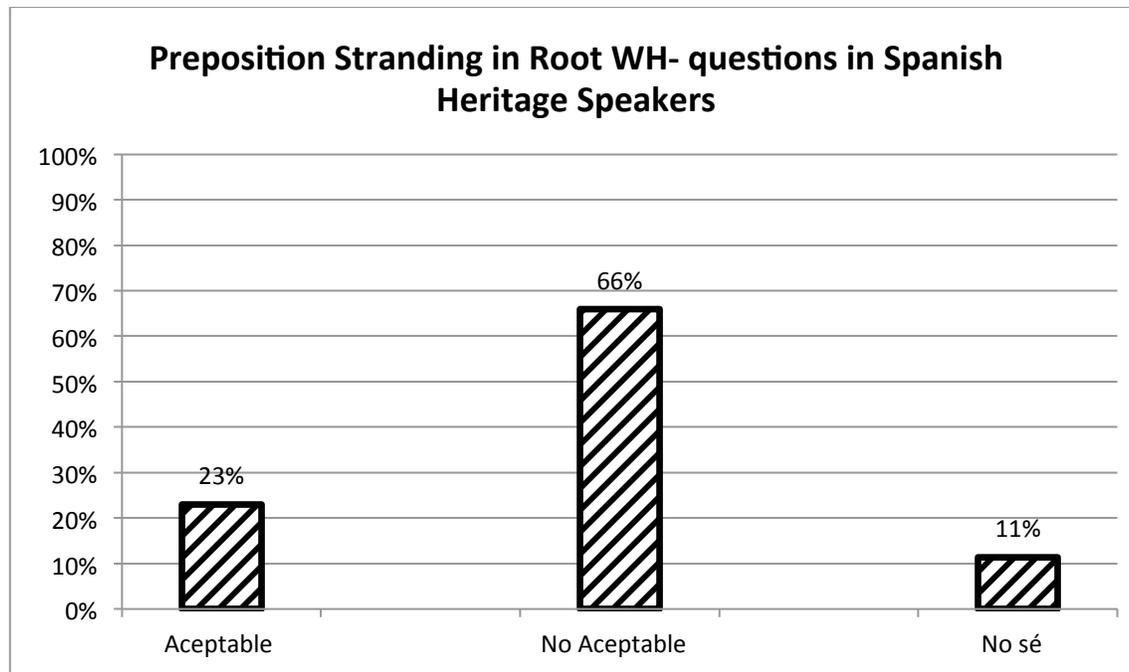
## 4 Results

### 4.1 Root WH-Questions

In Figure 1 below; we present the results of the Spanish Heritage Speakers' acceptability judgments of preposition stranding in Root WH-questions. The percentage of responses judged "acceptable/*acceptable*" is 23%, the percentage of responses judged "unacceptable/*no acceptable*" is 66% and 11% of responses are "I don't know/*No sé*". The percentages are based on total number of responses. As explained in the previous section, for each grammatical construction there are twelve tokens. Six of these tokens use the prepositions *a*, *en*, *con*, *sobre*, *de*, *por* in selected contexts and the other six tokens use the same prepositions in unselected contexts. In the Heritage Speaker group there were a total of 28 speakers. Therefore, the total number of possible responses for this task is 336 (12 x 28). The actual total number of

responses that was obtained in this task for the heritage speaker group was 324, since some responses were skipped over.

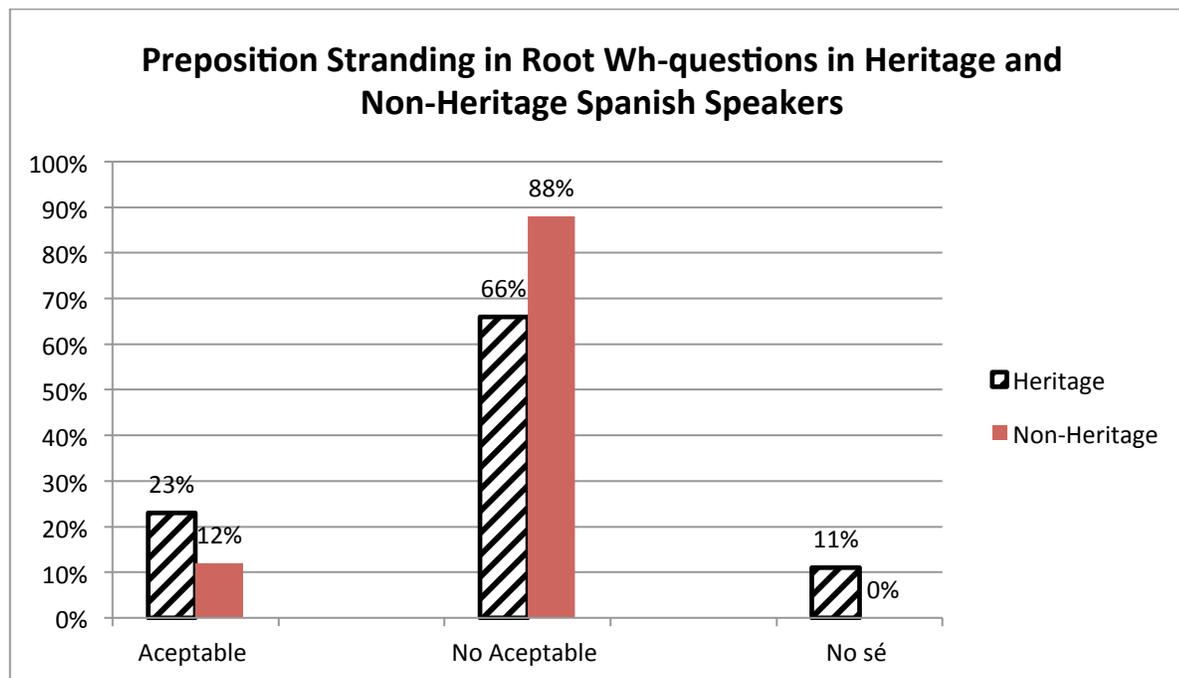
Figure 1



In Figure 2 below, we show the results of this task for the Heritage Speakers and Non-Heritage Speakers. Non-Heritage speakers of Spanish provided the following judgments: “acceptable/*aceptable*” -12%, “unacceptable/*no aceptable*”-88%, and “I don’t know/*No sé*” – 0%. The percentages are based on total number of responses. As mentioned earlier, for each construction there are twelve tokens. Six of these tokens use the prepositions *a*, *en*, *con*, *sobre*, *de*, *por* in selected contexts and six use the same prepositions in unselected contexts. In the Non-Heritage Speaker group there were a total of 21 speakers. Therefore, the total number of possible responses for this task is 252 (12 x 21). The actual total number of responses in this category for the Non-Heritage Speakers is 212 because some responses were skipped over.

A Pearson Chi-Square test performed on these data shows that the difference between the two groups is statistically highly significant: Pearson Chi-Square = 14.83, DF = 1,  $p \leq 0.001$ .

Figure 2

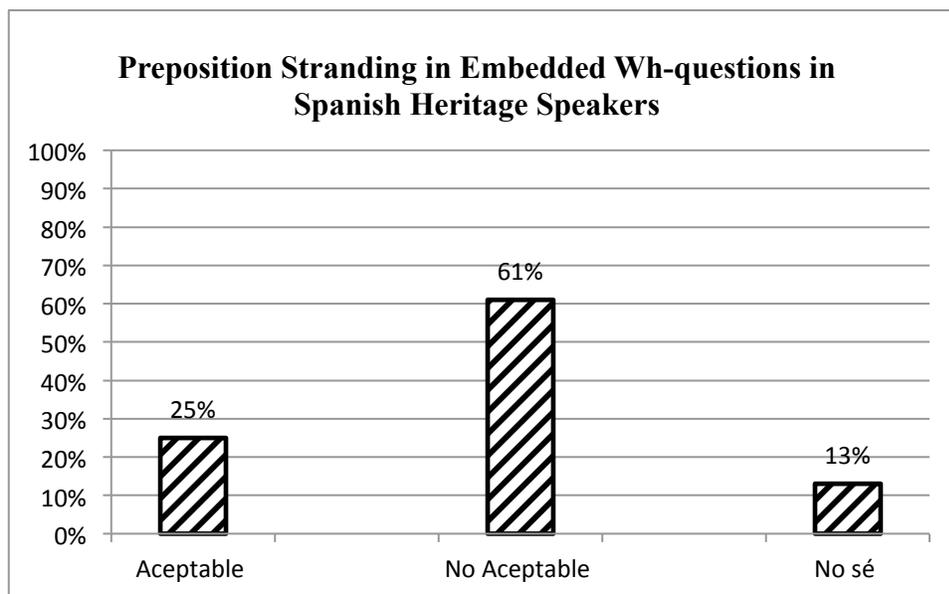


## 4.2 Embedded Wh-questions

Subjects judged sentences with preposition stranding in embedded Wh-questions - disallowed in Spanish and allowed in English. In Figure 3 below; we present the results of the Spanish Heritage Speakers' acceptability judgments on preposition stranding in Embedded WH-questions. The percentage of responses judged "acceptable/acceptable" is 25%, the percentage of responses judged "unacceptable/no acceptable" is 61% and 13% of responses are "I don't know/No sé". The percentages are based on total number of responses. As explained in the previous section, for each grammatical construction there are twelve tokens. Six of these tokens use the prepositions *a*, *en*, *con*, *sobre*, *de*, *por* in selected contexts and the other six

tokens use the same prepositions in unselected contexts. In the Heritage Speaker group there were a total of 28 speakers. Therefore, the total number of possible responses for this task is 336 (12 x 28). The actual total number of responses obtained in this construction for the Heritage Speakers is 320, since some responses were skipped over.

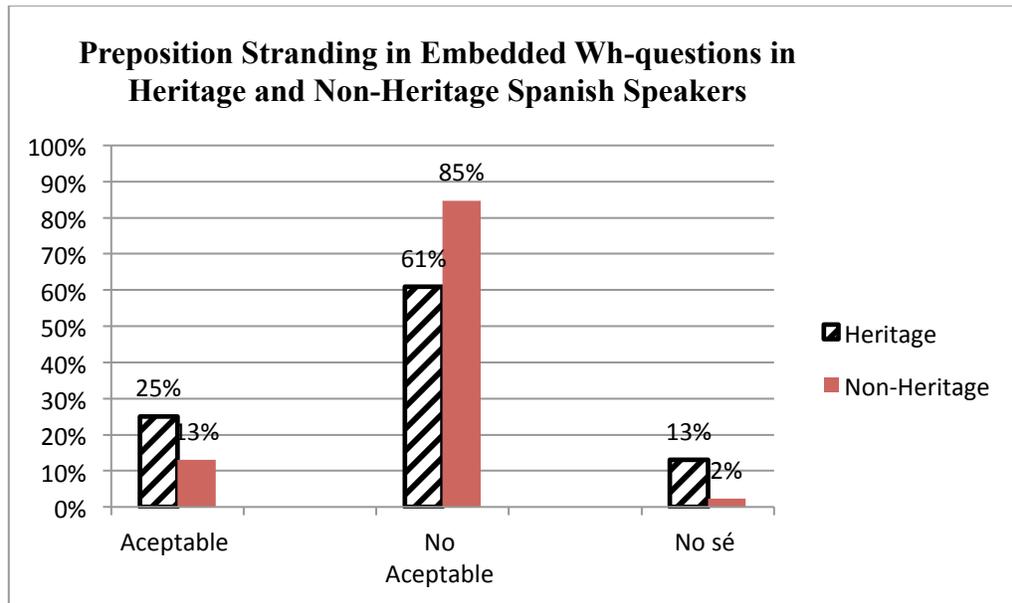
Figure 3



In Figure 4 below, we show the results of this task for both groups: the Heritage Speakers and Non-Heritage Speakers. Non-Heritage speakers of Spanish provided the following judgments: “acceptable/*aceptable*” - 13%, “unacceptable/*no aceptable*”- 85% and “I don’t know/*No sé*” 2%. The percentages are based on total number of responses. As explained in the previous section, for each grammatical construction there are 12 tokens. Six of these tokens use the prepositions *a, en, con, sobre, de, por* in selected contexts and six use the same prepositions in unselected contexts. In the Non- Heritage speaker group there were a total of 21 speakers. So, the total number of possible responses is 252 (12 x 21). The actual total number of responses in this task for the non-heritage speakers is 222, since some responses were skipped over.

A Pearson Chi-Square test done on these data shows that the difference between the two groups is statistically highly significant: Pearson Chi-Square = 16.86, DF = 1,  $p \leq 0.001$ .

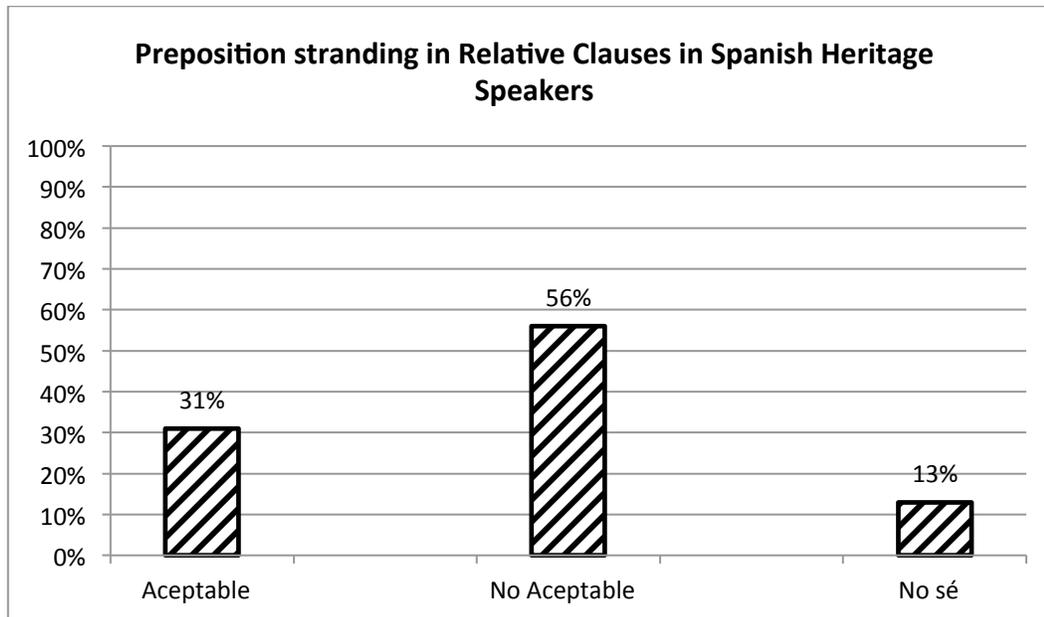
Figure 4



### 4.3 Relative Clauses

In Figure 5 below, we present the results of the Spanish Heritage Speakers’ acceptability judgments on preposition stranding in Relative Clauses. The percentage of responses judged “acceptable/acceptable” is 31%, the percentage of responses judged “unacceptable/no acceptable” is 56% and 13% of responses are “I don’t know/No sé”. The percentages are based on total number of responses. Recall that for each construction there are twelve tokens. Six of these tokens use the prepositions *a*, *en*, *con*, *sobre*, *de*, *por* in selected contexts and the other six tokens use the same prepositions in unselected contexts. In the Heritage Speaker group there were a total of 28 speakers. Thus, the number of possible responses for this particular task is 336 (12 x 28). The actual total number of responses in this task for the heritage speakers is 327, since some responses were skipped over.

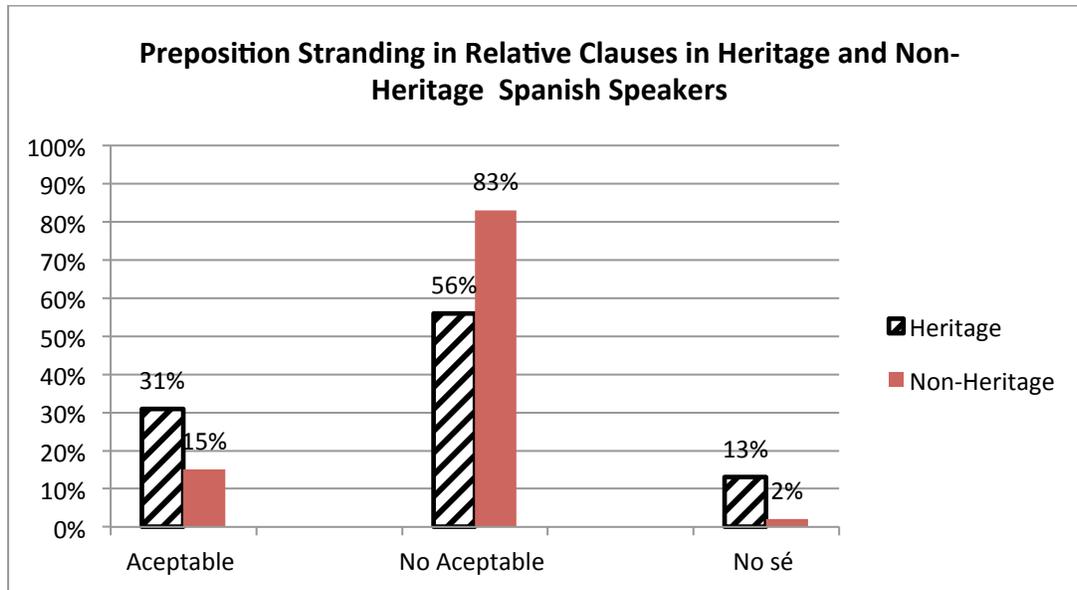
Figure 5



In Figure 6 below, we show the results of this task for the Heritage Speakers and Non-Heritage Speakers. Non-Heritage speakers of Spanish provided the following judgments: “acceptable/*aceptable*” - 15%, “unacceptable/*no aceptable*” - 83% and “I don’t know/*No sé*” - 2%. The percentages are based on total number of responses. As explained earlier, for each grammatical construction there are twelve tokens. Six of these tokens use the prepositions *a*, *en*, *con*, *sobre*, *de*, *por* in selected contexts and six use the same prepositions in unselected contexts. In the Non-Heritage speaker group there were a total of 21 speakers. Therefore, the total number of possible responses for this task is 252 (12 x 21). The actual total number of responses obtained for this task from the Non-Heritage speakers is 229, since several responses were skipped over.

A Pearson Chi-Square test performed on these data shows that the difference between the two groups is statistically highly significant: Pearson Chi-Square = 28.80, DF = 1,  $p \leq 0.001$ .

Figure 6



## 5 Discussion

We have found that Heritage Speakers of Spanish in an English environment differ systematically in their acceptability of structures from monolingual speakers of Spanish in Preposition-Stranding constructions in: (i) Root WH-Questions, (ii) Embedded Wh-Questions, and (iii) Relative Clauses. Heritage speakers of Spanish seem to show syntactic influence from English in this domain, which provides evidence against the Interface Hypothesis (Sorace 2000; Tsimpli et al 2004) approach to heritage language. The project shows that changes in heritage speaker syntax are NOT restricted to areas of the grammar where the syntax interfaces with interpretable domains; discourse/pragmatics or semantics.

## 6 Conclusion

In this paper, we reported on an investigation into the properties of Heritage Speaker Spanish. In particular, we found that to a certain degree, Heritage Speakers of Spanish accept

Preposition Stranding, a construction disallowed in native Spanish but allowed in English. Heritage Speakers accept this construction to a certain degree in: (1) Root WH-Questions, (2) Embedded WH-Questions, and (3) Relative Clauses.

Our findings are compatible with the Contra-Interface Hypothesis (Cuza 2008, 2009), according to which changes in Heritage Speaker Syntax are NOT restricted to areas of the grammar where the syntax interfaces with interpretable domains. This work thus adds to the growing body of literature that raises questions for the Interface Hypothesis for Heritage Languages.

## References

- Abels, K. (2003). *Successive Cyclicity, Anti-Locality, and Adposition Stranding*, Doctoral dissertation. University of Connecticut.
- Almeida, D., and Yoshida, M. (2007). "A Problem for the Preposition Stranding Generalization". *Linguistic Inquiry*, 38(2).
- Bohnacker, U. (2007). "On the 'vulnerability' of syntactic domains in Swedish and German". *Language Acquisition*, 14(1), 31–73.
- Cuza, A., (2009). "Incomplete Acquisition and L1 Attrition of Subject Verb Inversion in Spanish: Optionality Outside the Interfaces." *Linguistic Symposium on Romance Linguistics (LSRL33)*, University of Arizona, March.
- Depiante, M. (2000). *The Syntax of Deep and Surface Anaphora: A Study of Null Complement Anaphora and Stripping/Bare Argument Ellipsis*. Doctoral dissertation, University of Connecticut.
- Ivanov, I. (2009). "Topicality and Clitic Doubling in L2 Bulgarian: A Test Case for the Interface Hypothesis". In M. Bowles, T. Ionin, S. Montrul and A. Tremblay (Eds.), *Proceedings of the 10th Generative Approaches to Second Language Acquisition Conference (GASLA)*, 17–24. Somerville, MA: Cascadilla Proceedings Project.
- Iverson, M. (2009). "Knowledge of Noun-Drop across Various Lexical and Functional Categories in Heritage Spanish Bilinguals". In J. Crawford, K. Otaki, and M. Takahashi (Eds.), *Proceedings of GALANA 3*, 98-106. Somerville, MA: Cascadilla Press.
- Merchant, J. (2001). *The Syntax of Silence: Sluicing, Islands and the Theory of Ellipsis*.

- Oxford University Press.
- Montrul, S. (2002). "Incomplete Acquisition and Attrition of Spanish Tense/Aspect Distinctions in Adult Bilinguals". *Bilingualism: Language and Cognition*, 5(1), 39–68.
- Montrul, S. (2004). "Subject and Object Expression in Spanish Heritage Speakers: A Case of Morphosyntactic Convergence". *Bilingualism: Language and Cognition* 7 (2), 2004, 125–142.
- Montrul, S. (2008). *Incomplete Acquisition in Bilingualism: Re-examining the Age Factor*. Amsterdam: John Benjamins.
- Montrul, S. (2009). "Incomplete Acquisition of Tense-Aspect and Mood in Spanish Heritage Speakers". *The International Journal of Bilingualism*, 13(2), 239–269.
- Montrul, S. & Ionin, T. (2010). "Transfer Effects in the Interpretation of Definite Articles by Spanish Heritage Speakers". *Bilingualism: Language and Cognition*, 13, 449-473.
- Pavlenko, A. (2000). "L2 Influence on L1 in Late Bilingualism". *Issues in Applied Linguistics*, 11(2), 175-205.
- Perez-Leroux, A.T., Cuza, A. & Thomas, D. (to appear). "Clitic Placement in Spanish/English Bilingual Children". *Bilingualism: Language and Cognition*.
- Polinsky, M. (1997). "American Russian: Language Loss meets Language Acquisition". In W. Browne et al. (Eds.), *Formal Approaches to Slavic linguistics*, 370–407. Ann Arbor: Michigan Slavic Publications.
- Roca, A. (1997). "Retrospectives, Advances, and Current Needs in the Teaching of Spanish to United States Hispanic Bilingual Students". *ADFL Bulletin*, 29, 37–43.
- Rothman, J. (2009). "Pragmatic Deficits with Syntactic Consequences: L2 Pronominal Subjects and the Syntax-Pragmatics Interface". *Journal of Pragmatics*, 41, 951–973.
- Slabakova, R. & Ivanov, I. (to appear). "A More Careful Look at the Syntax-discourse Interface". *Lingua*.
- Sorace, A. (2000). "Differential Effects of Attrition in the L1 Syntax of Near-native L2 Speakers". In C. Howell, S. Fish & T. Keith-Lucas (Eds.), *Proceedings of the 24th Boston University Conference on Language Development*, 719–725. Somerville, MA: Cascadilla Press.
- Sorace, A. (2004). "Native Language Attrition and Developmental Instability at the Syntax-discourse Interface: Data, Interpretations and Methods". *Bilingualism: Language and Cognition*, 7, 143–145.

- Sorace, A. (2005). "Selective Optionality in Language Development". In L. Cornips & K. Corrigan (Eds.), *Syntax and variation: Reconciling the biological and the social*, 46–111. Amsterdam: John Benjamins.
- Sorace, A. & Filiaci, F. (2006). "Anaphora Resolution in Near-native Speakers of Italian". *Second Language Research*, 22:3, 339–368.
- Toribio, A.J. (2001). "On the Emergence of Code-switching Competence." *Bilingualism: Language and Cognition*, 203-231.
- Tsimpli, I.M. & Sorace, A. (2006). "Differentiating Interfaces: L2 Performance in Syntax-semantics and Syntax-discourse Phenomena". In D. Bamman, T. Magnitskaia, and C. Zaller (Eds.), *Proceedings of the 30th annual Boston University Conference on Language Development*, 653–664. Somerville, MA.: Cascadilla Press.
- Tsimpli, I.M., A. Sorace, C. Heycock, and F. Filiaci. (2004). "First Language Attrition and Syntactic Subjects: A Study of Greek and Italian Near-Native Speakers of English". *International Journal of Bilingualism*, 8, 257-277.