

On the universality of *wh*-islands: Experimental evidence from Spanish

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There are longstanding claims that extraction from *wh*-clauses is allowed in many Romance and other typologically similar languages (e.g., Rizzi (1982), Almeida (2014), Stepanov et al. (2018)), unlike English cases like (1) (a *wh*-island effect).

(1) *Who did you wonder [when [Joe called ___]]?

These claims are potentially troublesome if one assumes that island effects stem from more basic properties of the grammar, since it is then not clear why cross-linguistic differences should arise. Whether such differences truly exist, however, is not as well established as it might seem. First, even within a language, the strength of *wh*-island effects depends greatly on factors such as the nature of the *wh*-phrase and the intervening DPs (e.g., Pesetsky (1987), Kluender (1998)), so it is difficult to ensure a true “apples-to-apples” comparison across languages. Second, we can now precisely quantify the size of *wh*-island effects through careful experimentation (e.g., Sprouse et al. (2016)), but relatively few languages have been analyzed in this way so far.

Here we try to shed light on this issue by conducting a careful acceptability experiment with Spanish, a language sometimes claimed to allow *wh*-island violations (e.g., Torrego (1984)). We use subject- and object-extraction to show that Spanish is in fact sensitive to both *wh*-islands and *whether* islands and that the size of these island effects is comparable to what is found in languages like English. These results suggest that there may not be as much cross-linguistic variation in this area as previously thought.

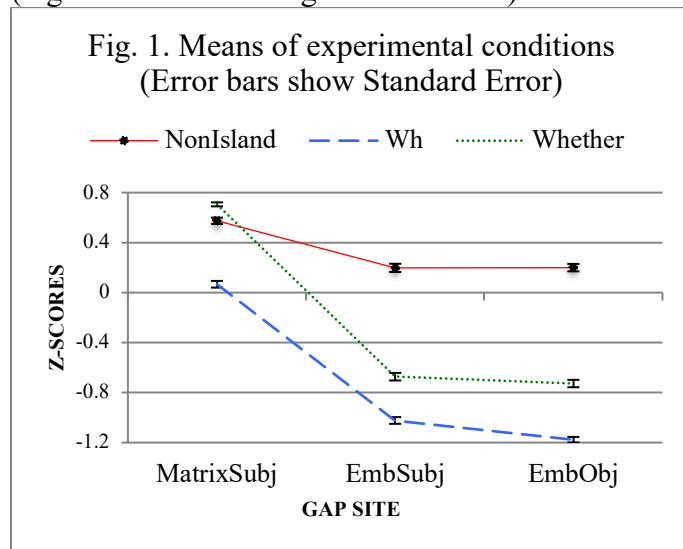
METHOD Experimental items were all *wh*-questions, with EMBEDDED CLAUSE (non-island, *wh*-island, and *whether* island) crossed with GAP SITE (matrix subject, embedded subject, and embedded object). Sample stimuli are in (2) (ISLAND = *wh*-island or *whether* island).

- (2) a. ¿Quién ___ piensa [que José llamó a sus padres]? [NON-ISLAND | MATRIX SUBJECT]
‘Who thinks that Jose called his parents?’
b. ¿Quién piensas [que ___ llamó a sus padres]? [NON-ISLAND | EMB. SUBJECT]
‘Who do you think called his parents?’
c. ¿A quién piensas [que José llamó ___]? [NON-ISLAND | EMB. OBJECT]
‘Who do you think Jose called?’
d. ¿Quién ___ se pregunta [cuándo/si José llamó a sus padres]? [ISLAND | MATRIX SUBJECT]
‘Who wonders when/whether Jose called his parents?’
e. ¿Quién te preguntas [cuándo/si ___ llamó a sus padres]? [ISLAND | EMB. SUBJECT]
‘Who do you wonder when/whether called his parents?’
f. ¿A quién te preguntas [cuándo/si José llamó ___]? [ISLAND | EMB. OBJECT]
‘Who do you wonder when/whether Jose called?’

36 lexical sets were distributed into 9 counterbalanced lists using a Latin square design (4 tokens of each condition) plus an additional 9 lists with reversed order. 72 filler items were added to each list. All 59 participants were native Spanish speakers, were tested in their native country, and were living in that country at the time of the experiment. Participants rated the acceptability of the sentences using a 7-point scale (1 = *mal* ‘bad’ and 7 = *bien* ‘good’).

RESULTS The means (transformed to z-scores) for each of the 9 conditions are presented in Figure 1. When comparing non-island to *wh*-island embedded clauses, there are significant interactions between EMBEDDED CLAUSE and GAP SITE for both the matrix subject vs. embedded subject and matrix subject vs. embedded object comparisons ($p < .001$ for both). Significant interactions of the same type also obtain when comparing non-island to *whether* island

embedded clauses ($p < .001$). These interactions indicate the existence of *wh*-island and *whether* island effects in Spanish for both subject and object extraction. The size of these island effects as calculated by DD (*differences-in-differences*) score (Sprouse et al. (2016)) is given in Table 1. (higher DD score = larger island effect)



	Subject extraction	Object extraction
<i>wh</i> -island	.71	.87
<i>whether</i> island	1.00	1.06

When examining just the embedded subject and embedded object GAP SITE conditions, there is also a main effect for EMBEDDED CLAUSE ($p < .001$), with extraction from *whether* islands being more acceptable than extraction from *wh*-islands. Differences in GAP SITE between embedded subject and embedded object are not significant.

Table 1. DD score effect sizes

DISCUSSION The results show that Spanish exhibits clear island effects for both *wh*-islands and *whether* islands, regardless of whether extraction is from the embedded subject or object position. Moreover, both the size of these effects and the level of acceptability of the island violation are comparable to what has been found for English (Sprouse et al. (2016) obtain a DD score of 0.4 for *wh*-islands in English and a mean z-score rating of -0.79 for the island-violating condition), suggesting close similarity in the behavior of *wh*-islands in the two languages. Even the difference between *wh*-islands and *whether* islands (generally taken to be significantly weaker than *wh*-islands in English) patterns very similarly between English and Spanish. Some languages have been claimed to show “subliminal” island effects for *wh*-islands, where there is an interaction but the island-violating condition is still relatively acceptable (Almeida (2014)), but this does not look plausible for Spanish. The experiment suggests that *wh*-island violations are highly unacceptable in Spanish (z-score ratings of -1.02 for subject extraction and -1.18 for object extraction), on a par with filler items such as (3).

(3) *¿Qué de la proposición de la semana pasada piensas?

‘What of the proposition of last week do you think?’

Overall, the results seen here suggest that we should be skeptical of earlier reports that Spanish is not sensitive to *wh*-islands (or is not sensitive to the same degree as English or other languages). Spanish is only one language, of course, but it lends support to the view that the *wh*-island phenomenon follows from more basic properties of language and is not subject to significant cross-linguistic variation.

REFERENCES Almeida, D. 2014. Subliminal *wh*-islands in Brazilian Portuguese and the consequences for syntactic theory. Kluender, R. 1998. On the distinction between strong and weak islands: A processing perspective. Pesetsky, David. 1987. *Wh*-in-Situ: Movement and Unselective Binding. Rizzi, L. 1982. Violations of the *wh*-island constraint and the subjacency condition. Stepanov, A. et al. 2018. Two (non-) islands in Slovenian: A study in experimental

syntax. **Sprouse, J. et al. 2016.** Experimental syntax and the variation of island effects in English and Italian. **Torrego, E. 1984.** On inversion in Spanish and some of its effects.