

## For which speakers do you wonder whether *si* is a syntactic island?

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Filler-gap dependencies are generally unbounded in distance yet subject to locality restrictions with certain structures, known as syntactic islands. For example, in (1) the long-distance dependency is licit, but a superficially similar dependency with a nominal complement is not (2). Islands have been the subject of intense research, but many questions remain. One concerns cross-linguistic differences: some island constraints, like (2), hold in many languages, while others are more variable. For instance, English *whether* presents a barrier to some (but not all) extractions, whereas Spanish *si* ‘whether,’ as in (3), is generally claimed not to (Torrego, 1984).

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|--|--------------------------|
| (1) ¿Qué tarea escuchaste que Mateo copió ___?                     | <b>Non-island</b>        |
| ‘Which homework did you hear that Mateo copied ___?’               |                          |
| (2) *¿Qué tarea escuchaste <b>el rumor de que</b> Mateo copió ___? | <b>Complex NP Island</b> |
| ‘Which homework did you hear the rumor that Mateo copied ___?’     |                          |
| (3) ¿Qué tarea quieres saber <b>si</b> Mateo copió ___?            | <b>Whether island</b>    |
| ‘Which homework do you want to know whether Mateo copied ___?’     |                          |

The cross-linguistic variation exhibited by *whether* islands is “poorly understood” (Szabolcsi & Lohndal, 2017), and for Spanish the evidence is mixed, with effects ranging from minimal (Pañeda & Kush, 2022) to strong (Rodríguez & Goodall, 2020). English, which often serves as the comparison case, yields similarly mixed results (Michel, 2014; Sprouse et al., 2016). As Sprouse and Villata (2021) point out, the field has not reached a consensus on interpreting these varying effect sizes; they argue “there is real empirical value in systematically re-testing languages for island effects ... to establish the range of variation across languages and ... dependency types.”

To that end, we contribute new experimental evidence on *si* islands in Spanish and compare them to *whether* islands in English. Furthermore, we aim to mitigate some sources of variation that can limit comparability across studies. Different experiments generally test different materials and populations, but we tested the same participants across languages by recruiting Spanish/English bilinguals, and we used uniform materials that were translation equivalents to reduce possible confounds from task effects.

We recruited a single group of Spanish/English bilinguals ( $n = 47$ , data collection ongoing) via Prolific. All reported living in the United States, speaking Spanish in childhood, and spending most of their time before age 18 in the United States. Because Spanish is a minority language in the US context, which can result in language shift toward majority English and consequent Spanish loss, we screened participants for Spanish proficiency by setting a minimum threshold on a Spanish proficiency test and by excluding those who failed two of three screening items (sentences whose known ratings are at the extremes of the scale).

We tested Complex NP islands (2) and *whether* islands (3) in Spanish and English, using a 2x2 factorial design crossing Island (Island/Non-island) and Gap (Matrix/Embedded). Participants judged two sentences per condition, with no lexicalization repeated. (They also judged 24 fillers per language.) Testing took place in a single uniform session, with the order of the languages rotated by participant. Ratings were z-score transformed, and we calculated a differences-in-differences (DD) score as a measure of effect size.

A linear mixed-effects model for each island and language revealed significant interactions between Island and Gap Position, and an interaction plot (Fig. 1) reveals the characteristic

island pattern in all cases. For both languages, however, the Complex NP islands produce strongly unacceptable ratings and large effect sizes (as expected), while the *whether* islands do not provoke strongly unacceptable ratings and evince moderate effect sizes. Despite higher ratings for *whether* island violations in Spanish, both languages display a similar pattern.

Because our participants are bilingual, it is reasonable to ask whether the observed similarity might be due to cross-linguistic influence. However, we compared these results to those of monolingual US English speakers ( $n = 39$ ) and native Spanish speakers in Mexico ( $n = 96$ ) on a similar task and noticed no substantial divergences. We do not think cross-linguistic influence is playing an outside role.

Moreover, the group-level effects may be masking differences. Examining the distribution of scores by individual (Fig. 2; following Pañeda & Kush, 2022), we observe (rightmost panels) that the ratings for the *whether* island violation in Spanish cluster at the positive end of the scale, albeit not as strongly as those for the non-island cases, while in English we observe a bimodal distribution, indicating substantial variation in the sample, with ratings split nearly evenly.

The individual-level analysis

suggests a cross-linguistic contrast that group-level means obscured: English *whether* islands provoke greater variation in ratings, while a much larger proportion of participants accepts the island violation in Spanish. Crucially, because we collected the data for both languages from the same participants using parallel materials, this contrast is unlikely to be due to differences between tasks or samples. Instead, we conclude that the variation we observe provides meaningful evidence regarding variation in the properties of *whether* islands in Spanish and English, which is an empirical contribution toward the larger enterprise of uncovering the source of cross-linguistic variation in island effects.

**References** • Michel, D. (2014). *Individual Cognitive Measures and Working Memory Accounts of Syntactic Island Phenomena* [Dissertation]. University of California, San Diego. • Pañeda, C., & Kush, D. (2022). Spanish embedded question island effects revisited: An experimental study. *Linguistics*, 60(2), 463–504. • Rodríguez, A., & Goodall, G. (2020). *On the universality of wh-islands: Experimental evidence from Spanish* [Poster]. Linguistic Symposium on Romance Languages. • Sprouse, J. et al. (2016). Experimental syntax and the variation of island effects in English and Italian. *Natural Language & Linguistic Theory*, 34(1), 307–344. • Sprouse, J., & Villata, S. (2021). Island Effects. In G. Goodall (Ed.), *The Cambridge Handbook of Experimental Syntax* (pp. 227–257). Cambridge University Press. • Szabolcsi, A., & Lohndal, T. (2017). Strong vs. Weak Islands. In M. Everaert & H. C. van Riemsdijk (Eds.), *The Wiley Blackwell Companion to Syntax* (pp. 1–51). Wiley. • Torrego, E. (1984). On Inversion in Spanish and Some of Its Effects. *Linguistic Inquiry*, 15(1), 103–129.

Fig. 1: Interaction plots

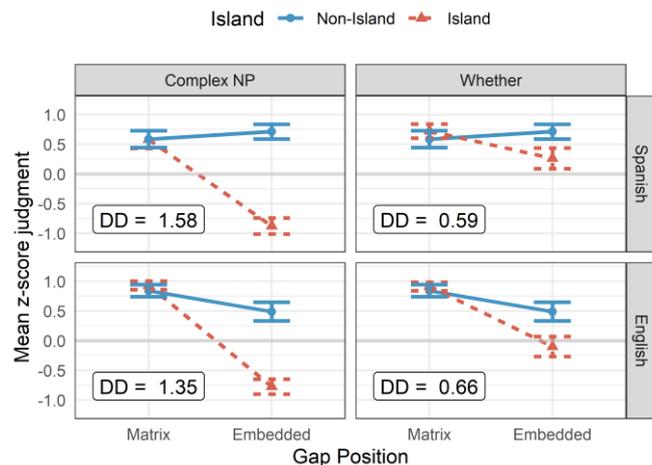


Fig. 2: Density plots

