

Do islands affect only filler-gap dependencies? Evidence from Spanish

Alejandro Rodríguez and Grant Goodall (UC San Diego)

There are many types of long-distance dependencies in natural language (e.g., anaphoric or cataphoric use of pronouns), but filler-gap dependencies have often been thought to be the only type that is sensitive to islands, perhaps because they are the only type that involves a gap (Ross 1967). If islands result from processing limitations, as sometimes thought, this would suggest that it is the processor's difficulty with gaps in particular that induces the island effect. It is thus noteworthy that some dependencies without gaps have sometimes been claimed to be sensitive to islands. Clitic Left-Dislocation (CLLD), as shown in (1), a kind of topicalization structure in Spanish and some other languages in which a clitic pronoun is used instead of the expected gap, is one prominent example of this.

- (1) **A la vecina**, la señora **la** invitó.
the neighbor the lady CL.3sf invited
'The neighbor, the lady invited her.'

CLLD has been claimed to be like *wh*-arguments with respect to island-sensitivity: very sensitive to strong islands (e.g., relative clause islands), but barely sensitive at all to weak islands (e.g., *wh*-islands) (Cinque 1990, López 2009). Formal acceptability experiments have nonetheless been able to detect an effect with *wh*-arguments and weak islands (Sprouse et al. 2016), so if CLLD is similar, we should be able to find an effect there as well, given an appropriately designed experiment. Here we do exactly that, comparing *wh*-dependencies and CLLD in Spanish with regard to two types of weak islands.

Experiment: Experimental items were prepared using a 2 x 3 x 2 design, crossing the factors DEPENDENCY TYPE (*wh*-dependency vs. CLLD), CLAUSE TYPE (non-island vs. *whether* island vs. *wh*-island), and DISTANCE (short vs. long). 48 lexicalized sets were distributed into 12 counterbalanced lists using a Latin square design (4 tokens per condition) plus 12 additional lists in reverse order. 50 native Spanish speakers, all living in their native country at the time of the experiment, rated the acceptability of experimental items plus 54 filler items using a 7-point scale. Sample stimuli are given in (2) and (3).

Results: We constructed a linear mixed-effects model (LMEM) using the “lmer” function in the “lme4” package in R. The results show a super-additive interaction between CLAUSE TYPE and DISTANCE (Sprouse et al. 2012) for both *whether* and *wh*-islands in *wh*-dependencies ($p < 0.01$ and $p < 0.001$ respectively), as shown in **Fig. 1**, but not in CLLD ($p = 0.449$ and $p = 0.859$ respectively), as in **Fig. 2**.

Discussion: As expected, *wh*-dependencies in Spanish exhibit clear effects with both *wh*- and *whether* islands. CLLD, on the other hand, shows no evidence of such sensitivity to islands. The standard view in the syntax literature has been that island effects arise with filler-gap dependencies and with a handful of similar structures. Here we have taken one of those other structures and shown that despite earlier claims, it does not display the sensitivity to weak islands that we would expect if it behaves similarly to *wh*-arguments. This is important, because the main distinguishing characteristic of CLLD is that there is no gap, so our results suggest that it is something about gaps (e.g. detecting them or integrating the filler into them) that induces island effects. Further work is necessary to know whether CLLD will be similarly insensitive to other types of islands, or whether other structures without gaps will be island-insensitive in the same way, but the results here lend credence to the idea that island effects arise if and only if there is a gap.

REFERENCES: Cinque 1990. Types of \bar{A} -dependencies. López 2009. A Derivational Syntax for Information Structure. Ross 1967. Constraints on variables in syntax. Sprouse et al. 2012. A test of the relation between working memory capacity and syntactic island effects. Sprouse et al. 2016. Experimental syntax and the variation of island effects in English and Italian.

SAMPLE STIMULI (ISLAND = *wh*-island or *whether* island)

(2) WH-DEPENDENCY

- a. ¿**Quién** __ cree [que la señora invitó a la vecina]?
 who __ think.3s [that the lady invited the neighbor]?
 `Who thinks that the lady invited the neighbor?' [NON-ISLAND | SHORT]
- b. ¿**A quién** crees [que la señora invitó __]?
 whom think.2s [that the lady invited __]
 `Who do you think the lady invited?' [NON-ISLAND | LONG]
- c. ¿**Quién** __ se pregunta [si la señora invitó a la vecina]?
 who REFL wonder.3s [whether the lady invited the neighbor]
 `Who wonders whether the lady invited the neighbor?' [ISLAND | SHORT]
- d. ¿**A quién** te preguntas [si la señora invitó __]?
 whom REFL wonder.2s [whether the lady invited __]
 `Who do you wonder whether the lady invited?' [ISLAND | LONG]

(3) CLLD-DEPENDENCY

- a. Creo [que la señora invitó a la vecina]
 think.1s [that the lady invited the neighbor]
 `I think that the lady invited the neighbor' [NON-ISLAND | SHORT]
- b. **A la vecina**, creo [que la señora la invitó]
 the neighbor, think.1s [that the lady CL.3sf invited]
 `The neighbor, I think that the lady invited her.' [NON-ISLAND | LONG]
- c. Me pregunto [si la señora invitó a la vecina]
 REFL wonder.1s [whether the lady invited the neighbor]
 `I wonder when the lady invited the neighbor.' [ISLAND | SHORT]
- d. **A la vecina**, me pregunto [si la señora la invitó]
 the neighbor, REFL wonder.1s [whether the lady CL.3sf invited]
 `The neighbor, I wonder whether the lady invited her.' [ISLAND | LONG]

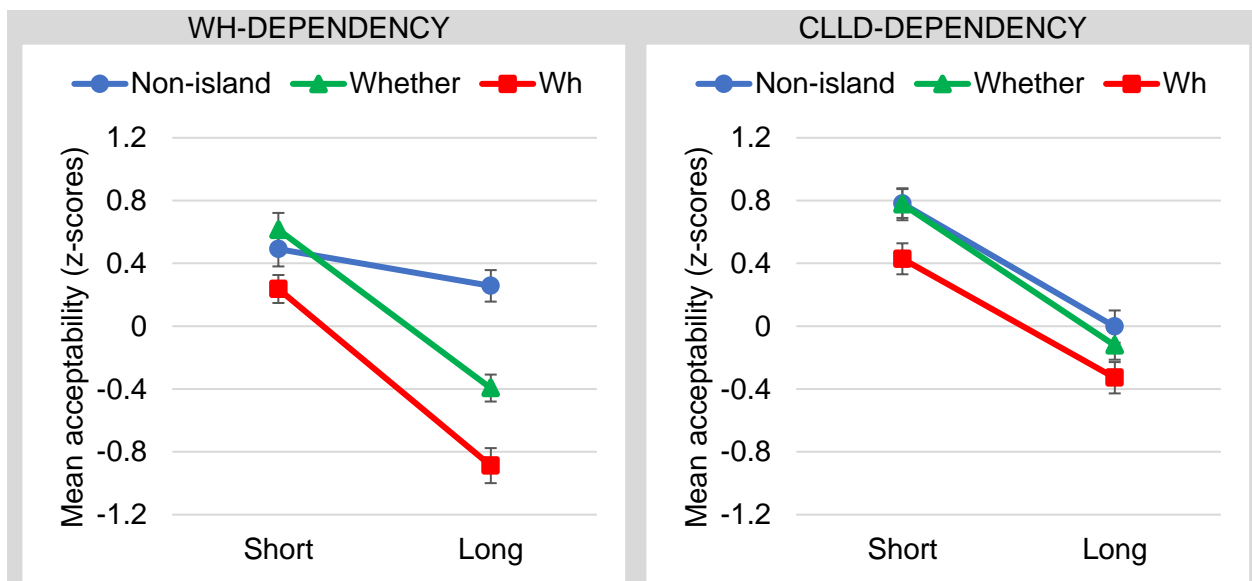


Fig. 1. Mean acceptability of experimental conditions in z-scores (Error bars show SE)

Fig 2. Mean acceptability of experimental conditions in z-scores (Error bars show SE)