A Rare Structure at the Syntax-Discourse Interface: Heritage and Spanish-Dominant Native Speakers Weigh In

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Accepted author version posted online: 03 Mar 2014. Published online: 03 Mar 2014.

To cite this article: Tania Leal Mendez , Jason Rothman \& Roumyana Slabakova (2014): A Rare Structure at the Syntax-Discourse Interface: Heritage and Spanish-Dominant Native Speakers Weigh In, Language Acquisition

To link to this article: http://dx.doi.org/10.1080/10489223.2014.892946

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A Rare Structure at the Syntax-Discourse Interface: Heritage and Spanish-Dominant Native Speakers Weigh In

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Abstract: The present study examines knowledge of the discourse-appropriateness of Clitic Right Dislocation (CLRD) in a population of Heritage (HS) and Spanish-dominant Native Speakers in order to test the predictions of the Interface Hypothesis (IH; Sorace 2011). The IH predicts that speakers in language contact situations will experience difficulties with integrating information involving the interface of syntax and discourse modules. CLRD relates a dislocated constituent to a discourse antecedent, requiring integration of syntax and pragmatics. Results from an acceptability judgment task did not support the predictions of the IH. No statistical differences between the HSs’ performance and that of L1-dominant native speakers were evidenced when participants were presented with an offline task. Thus, our study did not find any evidence of “incomplete acquisition” (Montrul 2008) as it pertains to this specific linguistic structure.
1. Introduction

In the context of language acquisition, Heritage Speakers (HSs) have been most frequently compared, for different reasons, to both adult L1-dominant native speakers and adult second language (L2) learners with the same language pairings. Like L1 child acquirers, HSs acquire the heritage language passively during infancy and early childhood, in family-related or other socially nurturing situations (Silva-Corvalán 1994; Toribio 2001; Valdés 2005). However, although age of exposure is similar for both L1 child and HS acquirers, issues related to language development and maintenance are quite different, resulting in important linguistic performance differences between the two groups in adulthood. Over the last decade, much of the work in the subfield of formal linguistic approaches to HS acquisition has endeavored to understand the variables that give rise to these differences in language outcomes.

Unlike L1 child acquirers, HSs are necessarily bilingual. A crucial difference, however, is that the heritage language is not the dominant language of the society. Because the heritage language is non-dominant, once HSs are exposed to the majority language, their exposure to the heritage language normally decreases over time, often significantly. In certain extreme cases, exposure to the heritage language is completely restricted.¹ Such a reduction could, in principle, arrest the

¹ As Domínguez (2007) notes, these restrictions (as well as other characteristics of the input) vary from child to child and may also depend on linguistic and non-linguistic factors, including the language of the parents and siblings, preference in the use of a certain language, etc.
development of the heritage language (Montrul 2008) or, when combined with other cognitive factors inherent to bilingualism (e.g. inhibitory control), change the developmental trajectory of HS grammars without necessarily assuming arrested development (Putman & Sánchez, in press).

Qualitative differences related to the linguistic input HSs receive may also contribute to monolingual vs. HS differences. In general, HSs do not receive a formal education in the heritage language, which delimits the type and contextualization of the linguistic input they receive, especially when compared to speakers from monolingual environments (Rothman 2007, Pires & Rothman 2009, Pascual y Cabo & Rothman 2012). Moreover, the input that HSs receive is mainly provided by speakers who themselves may be undergoing a process of language change (i.e. attrition) because of distance from their native language and their emerging bilingualism in language contact. Thus, HSs receive input that may include grammatical innovations that do not form part of the input children in monolingual environments receive (Sorace 2004, Pascual y Cabo & Rothman 2012, Pascual y Cabo 2013). Additionally, it is possible that some differences obtain as a result of individual attrition in HSs—that is, erosion of linguistic knowledge acquired in childhood. When HSs are tested in adulthood, some previously acquired knowledge could be altered or entirely absent (Polinsky 2011).

In light of this discussion, it is perhaps not surprising that HSs often identify as being more comfortable and/or proficient in the dominant societal language—often chronologically their L2—than in their native (heritage) language (Montrul 2008, Rothman 2009). Relative comfort,
fluency, and dominance aside, HSs are native speakers of their heritage language, nonetheless. Crucially, by definition, these speakers are not monolingual. For this reason, we view HSs as a natural developmental test case of native L1 acquisition under restricted linguistic input.

Turning to the comparison with second language acquisition (L2A), one crucial difference between HSs and (adult) L2 learners involves age of exposure. While HSs are exposed to the heritage language in early childhood, L2 learners are typically exposed to the L2 when the L1 has already fully developed (usually after puberty). Moreover, L2 learners are typically exposed to the L2 in a school setting, where they receive metalinguistic explanations of the target language. Unlike HSs, L2 learners can receive little real language input outside the classroom, especially during the formative (early) stages. Therefore, for different reasons, both groups are subject to relative input limitations in terms of quantity and register variety.

There is a wealth of evidence documenting the fact that HSs and L2 learners display behavior that is different from that of L1-dominant speakers who have received schooling in their L1 and speak the majority language. In terms of attainment (in the L2 or the heritage language), HSs and L2 learners further resemble each other in that proficiency can vary widely, on an individual basis. Despite these similarities between L2 learners and HSs, some studies have shown that, in certain domains, HSs perform more like L1-dominant controls than like proficiency-matched L2
learners.\textsuperscript{2} It has been argued that these results can be explained in terms of increased temporal experience at being bilingual (Pascual y Cabo & Rothman 2012).

Nevertheless, the differences between HSs and L1-dominant speakers do not appear to be either all-encompassing or inevitable. In the realm of phonetics, although there is a dearth of instrumental studies, there is anecdotal evidence of HSs sounding native-like (Polinsky & Kagan 2007). Additionally, there is evidence that HSs’ phonetic productions are closer to native productions than those of L2 learners who learned the second language after puberty (Au, Knightly, Jun, & Oh 2002). In terms of morpho-syntax, the findings are mixed. While some studies find that HSs show fewer differences from L1 native controls than L2 learners (e.g. Montrul 2004, 2006), others have found no differences between the performances of HSs and L2 learners related to age of exposure (e.g. Knightly, Ju, Oh & Au 2003, Mikulski 2010).

The study of heritage languages has influenced theoretical debates in L2 acquisition, especially as it pertains to age of exposure as a sufficient explanation to account for ultimate attainment asymmetries between L2 learners and L1-dominant native speakers (see Montrul 2012 \textit{inter alia}). As mentioned earlier, a recurrent finding in heritage language research is that, in spite of early exposure, and unlike L1 child acquirers, HSs do not uniformly show knowledge that is indistinguishable from that of monolingual adult native speakers in the heritage language. The

\textsuperscript{2} Moreover, Carreira & Potowski (2011) underscore that HS-L2 learner juxtapositions should never be overall comparisons, but should be made for specific areas of grammar and tasks.
key implication for L2A is that an early exposure may not be either sufficient or decisive when it comes to ultimate attainment (Montrul 2008).

Within generative L2A research, there have been several proposed explanations for the disparities found between HSs and monolingual native speakers. One influential proposal, advanced by Montrul (2002, 2008), labels these instances of acquisition as “incomplete.” The logic is that the differences between HSs and L1-dominant native speaker norms constitute evidence of incomplete acquisition, which can arise either because of language attrition (if the properties in question were already acquired once the majority language was introduced) or because of “arrested development” (Montrul 2006) in the heritage grammars (in case the properties in question were not fully acquired due to a function of decreased language input and/or language use).

The term “incomplete acquisition” has been problematized recently (Pascual y Cabo & Rothman 2012; Putman & Sánchez in press) on the basis that the comparison between monolingual native speakers and (bilingual) HSs is intrinsically unwarranted. Pascual y Cabo and Rothman (2012) argue that the input HSs receive is not comparable to the input monolingual speakers receive. In addition to language contact (once HSs are exposed to the majority language), and unlike monolingual native speakers, HSs’ main source of input are speakers who themselves might demonstrate various degrees of cross-generational attrition. Several studies have shown evidence that the role of input in HS competence is substantial and can account for results that, while appearing to diverge from monolingual norms, are in fact in agreement with the input to which these speakers are exposed (Pires & Rothman 2009, Prada Pérez & Pascual y Cabo 2011,
Pascual y Cabo 2013). Thus, Pascual y Cabo & Rothman propose that HS competence is not “incomplete” but merely “different” than monolingual competence, where the term “difference” does not mean intrinsically target-deviant, but is rather used in a evaluatively neutral way.  

The comparison between HSs and adult L2 learners has led to many L2 language acquisition hypotheses being tested in different populations of HSs. The goal of the present study is to test one such hypothesis, the Interface Hypothesis (IH; Sorace & Serratrice 2009), which deals with selective optionality at ultimate attainment. This selectivity refers to non-nativelike variability with regard to linguistic properties lying at the syntax-discourse interface. Sorace (2003) defines optionality as “the existence of two or more variants of a given construction that are identical in meaning and have a clear correspondence in form” (p. 135). To be sure, Sorace notes that optionality is not limited to L2 learners, although in her view, L1 optionality is of a different nature. L1 child acquirers pass through stages where forms that are mutually exclusive for adult grammars can coexist. Crucially, however, L2 optionality is taken to be part of the grammatical competence of individual speakers and considered distinct from native speaker variability because while (monolingual) L1 child acquirers seem to grow out of developmental

3 An anonymous reviewer rightly notes that “different” as opposed to “incomplete” is a matter of perspective. For example, for administrators/teachers who must comply with standards for education or employment, HSs’ language may be viewed as “incomplete” rather than simply “different.” While we acknowledge that this must, unfortunately, be the case for a sector of the population, we believe that from the point of view of descriptive and applied linguistics, “complying with a standard” should not be our starting point by default.
optionality, L2 learners do not. Sorace therefore argues that L2 “residual” optionality can be found in L2 learners even at the highest proficiency levels (near-natives).

In order to test the IH in a population of HSs (see also Montrul & Polinsky 2011, Pascual y Cabo, Lingwall & Rothman 2012 for other examples), this study explores the acquisition of Clitic Right Dislocation (CLRD), a structure that relates a dislocated phrase and a clitic-doubled object to a previously appearing antecedent and requires the integration of syntax and discourse pragmatics. Our results show that the HSs in our sample did not demonstrate any evidence that this—arguably difficult—integration of linguistic modules resulted in statistical differences between HS performance and that of L1-dominant native speakers (when presented with an offline task). As such, our study did not find any evidence of incomplete acquisition as it pertains to this linguistic structure.

2. The Interface Hypothesis

The Interface Hypothesis (IH) makes use of a linguistic distinction between internal and external interfaces, arguing that external interfaces are especially prone to optionality in non-native grammars. The IH assumes a modular view of language (Fodor 1983, Jackendoff 2002), where

4 There has been substantial debate regarding the difficulty of determining which modules (and thus, interfaces) are involved in any given linguistic structure (see Montrul, 2011 for an elaborate critique). We agree with Montrul (2011) that this is not a negligible problem. Sorace (2011) acknowledges this point herself, albeit without providing an alternative solution besides calling
interfaces are defined as the points of interaction between modules, either between distinct
language modules or between language modules and other cognitive domains. Interfaces
between language modules (e.g. syntax, semantics, morphology, phonology) are labeled
internal, while external interfaces (e.g. syntax-discourse) involve interactions between language
modules and other (non-linguistic) cognitive domains.

In its latest instantiation (Sorace 2011), the IH sheds light on the possible reason for this
selective optionality: it could come about due to processing limitations intrinsic to bi- and multi-
lingualism. These insights are based on research on inhibitory control (e.g. Green 1986) as well
as on studies on the dual activation of languages in bilinguals (Bialystok 2009, Spivey & Marian
1999, Marian et al. 2003). According to the IH, processing limitations arising as a by-product of
bilingualism are anticipated to remain a source of linguistic indeterminacy, even at the most
advanced proficiency levels. Crucially, the IH also predicts that, in addition to having an effect
on L2 near-native speakers, processing limitations may also bring about emerging optionality for
attrition subjects (in their L1).

for additional research. Indeed, determining which interfaces are involved should be ascertained
a priori, if the hypothesis is to be testable (see Gürel, 2011). While we agree with the spirit of
this critique, we believe that the methodology used to test the hypothesis can alleviate some of
these concerns. For example, while CLRD involves agreement (therefore, it could be argued, the
morphology-syntax interface), we do not test agreement per se. A production task could, at least
in principle, conflate these factors.
Although testing the IH in a population of HSs seems like a natural ramification of the hypothesis, Sorace (2011) explicitly stated that testing HSs was invalid, arguing that the hypothesis was not intended to include either development or inter-generational attrition. Several researchers (Lardiere 2011, White 2011), however, have made the case for testing the IH in both HSs and L2 learners at various stages of development. The inclusion of particular populations to the exclusion of others has been questioned more generally, in part because neglecting development has been argued to be unwarranted (White 2011). Additionally, Montrul and Polinsky (2011) take exception with Sorace’s exclusion of HSs partly because HSs were once child bilinguals—a population that Sorace has argued falls under the predictions of the IH. Previous studies (e.g. Montrul 2004, Silva-Corvalán 1994) have shown important differences between HSs and L1-dominant speakers with respect to syntax-discourse structures, which could logically be accounted for by the IH. Currently, Sorace has conceded that HSs are an apt population to test the IH “as long as the differences between individual and intergenerational attrition are clear” (Sorace 2012: 214), noting that HSs might receive not only less input (as a natural byproduct of bilingualism), but also input that is qualitatively different, if the sources of said input are speakers who might be undergoing attrition themselves.

3. The structure under study: Clitic Right Dislocation in Spanish

The focus of the current study is Clitic Right Dislocation (CLRD) in Spanish. CLRD is located at the syntax-discourse interface because it crucially involves syntactic and discursive properties,
making it suitable for testing the IH. This structure is an expression of Spanish topicalization (the informational status of the dislocated constituent is a topic) although, as we will discuss later, it is far from the most frequently employed (Villalba 2011). Unlike Clitic Left Dislocation (CLLD), which has been widely analyzed in the linguistic literature (e.g. Arregui 2003, Contreras 1976, Casiellez-Suárez 2004, Suñer 2006, Zubizarreta, 1998) and tested in empirical studies using native and non-native populations in multiple languages (e.g. Donaldson 2011, Ivanov 2012, Valenzuela 2006), CLRD has been only occasionally discussed in the formal literature (Cecchetto 1999, López, 2009, Villalba 2011). In addition, there has been a scarcity of empirical studies involving this structure (but see Slabakova et al. 2011, for L2 acquisition). This study endeavors to fill this gap.

To exemplify CLRD, note the contrasts among (1-3). (1) is an example of a transitive sentence in Spanish with no dislocations, while (2) is an example of Clitic Left Dislocation (CLLD). Note that (1) and (2) differ only in the presence of the accusative clitic las and the word order. (3) is an example of CLRD. In example (1), no context is provided because nothing needs to be mentioned previously. The example (1) sentence could work as an answer to a wh-question (e.g. ‘What did you do with the shirts?’) or in an out-of-the-blue context (e.g. ‘What happened?’). The examples shown in (2) and (3), however, would not be felicitous out of the blue. A necessary (but insufficient, as we will discuss below) condition is that these dislocations appear in a discursive context where the dislocated element has been previously mentioned (i.e. the dislocated element is a topic). Las camisas ‘the shirts,’ which has been previously mentioned in the discourse, moves to the left in (2), while staying low in example (3). In the gloss, “CL” stands for clitic.
Before delving into the information structure properties of CLRD, we will briefly touch on the properties of Spanish clitics. Spanish clitics, which are phonologically dependent elements that generally appear before verbs, can have a variety of grammatical functions and can represent both arguments (e.g. direct objects) and non-arguments (e.g. benefactives). Spanish (argumental) clitics can correspond to subject (nominative), object (accusative), or indirect object (dative) arguments (Zagona 2002). Within formal linguistics, Spanish accusative clitics are understood to
be bundles of features specified for number, gender, and case (Harris, 1996). While first and second person dative and accusative clitics are homonyms, there are differences in the third person clitics. Third person accusative clitics can bear gender and number agreement (lo, la, los, las), while third person dative clitics only bear number features (le, les). In terms of placement restrictions, the distribution of clitics is regulated by finiteness (Zagona 2002). When the verb is finite (4), the clitic must immediately precede the verb. When the verb is nonfinite (e.g. infinitive), the clitic must follow it (5).

(4) CONTEXT: Who brought the car?

María lo trajo.

Maria Cl brought

‘María brought it.’

*María trágolo.

(5) CONTEXT: What is your daughter doing with the car?

Ella pagó por arreglarlo.

she paid for fix.Inf.Cl

‘She paid to have it repaired.’

With a class of verbs that take infinitival complements (known as “restructuring”; Rizzi 1982), clitics can either precede the finite verb (6) or follow the infinitival complement (7).
(6) CONTEXT: What can you do with the car?

Puedo venderlo.

I-can sell.Inf.Cl

(7) Lo puedo vender.

Cl I-can sell.Inf

‘I can sell it.’

In terms of ordering restrictions, Spanish clitics follow fixed sequences when more than one appears. (8) is a simplified version of a clitic ordering template in Spanish (Zagona 2002:16, based on Perlmutter 1971).


In terms of the prosody of CLRD, two important characteristics of this structure are: i) a pause separating the dislocated element to the right from the rest of the sentence before it, and ii) deaccenting of the dislocated material (López, 2009). Unfortunately, there are very few instrumental prosodic studies that have analyzed the prosodic structure of dislocations in Spanish. While there is at least one recent study on the prosody of CLLD (Feldhausen, to appear), there are no such studies on CLRD in Spanish. To our knowledge, however, these descriptive characteristics have not been contested in the literature.
In terms of information structure, although CLLD and CLRD both require that the dislocated element be a topic, there are additional differences regarding what each structure requires. While the semantic relationship between the dislocated element and the discourse antecedent in CLLD is relatively free, CLRD places more restrictions on this relationship. CLLD will allow for the dislocated element to be either exactly the same (share the same identity), constitute a subset of a larger set, or represent a part of a larger entity (part-whole). On the other hand, CLRD is only felicitous when there is a strict relation of identity between the discourse antecedent and the dislocated constituent (Villalba 2000).

Nevertheless, this requirement of strict semantic identity may not be the only discourse requirement for CLRD to be felicitous. Previous investigations (Slabakova et al. 2011) found that the Spanish L1-dominant native speakers in the sample, which included native speakers from seven different countries, performed at chance on the CLRD experimental items, both when the dislocated constituent and the antecedent were identical (which was expected to be felicitous when the clitic was present) and when the dislocated element represented a subset of the larger set (expected to be infelicitous). Slabakova et al. (2011) noted that the CLRD stimuli used in the test did not represent “discursively ideal” examples, which could account for the uneven performance of L1-dominant native speakers.

In order to get a clearer idea of the status of CLRD in the grammar of L1-dominant native speakers, we designed the experimental tokens included in this study based on further insights from the linguistic literature (López 2009, Sedano 2006, Vallduví 1992). Vallduví (1992) suggests (for Catalan) that CLRD, in addition to requiring an identity relationship between the
dislocated constituent and the antecedent, also requires an emphatic correction of the non-
dislocated part of the sentence. An example of a redesigned CLRD token, which we termed
Affective, is in (9).

(9) CLRD Affective

Mariana y Omar son hermanos y heredaron varios muebles a la muerte de su padre. Como
Mariana tiene una casa más grande, ella se quedó con la mayoría de ellos. El problema es que
muchos estaban deteriorados y Mariana no sabía qué hacer con ellos. Omar va a visitarla un día y
cree reconocer una silla en la sala.

‘Mariana and Omar are siblings and they inherited several pieces of furniture after their father
died. Because Mariana has a larger house, she kept the majority of them. The problem is that
many pieces of furniture were damaged, and Mariana initially didn’t know what to do with them.
One day, Omar goes to visit her; he thinks he recognizes a chair in the living room.’

O: Veo que por fin decidiste arreglar la silla de papá.

‘I see that you finally decided to fix dad’s chair.’

(a) M: No. La regalé, la silla odiosa esa. Lo que arreglé fue el sofá que tanto me gustaba.

no Cl I-gave the chair ugly that. CL that fixed was the sofa that so me pleased

(b) M: No. # Regalé, la silla odiosa esa. Lo que arreglé fue el sofá que tanto me gustaba.

no I-gave the chair ugly that. CL that fixed was the sofa that so me pleased
‘No, I gave that hideous chair away. What I did repair was the sofa that I liked so much.’

Note that in (9), the semantic relationship between the discourse antecedent and the dislocated element is identical (*la silla* ‘the chair’). The only difference between the felicitous and the infelicitous sentences (options (a) and (b), respectively) is the presence of the accusative clitic *la*. The linear order in option (b) (*V-O, regalé-la silla*) is grammatical in Spanish, although, unlike CLRD, it does not involve a pause that prosodically separates the object. These sentences do not, unlike CLRD, require for the object to be topicalized and may be somewhat marked because of the repetition. In this condition, the sentence following the CLRD (*Lo que arreglé fue el sofá que me gustaba*) corrects part of the previous context (*Veo que por fin decidiste arreglar las silla*). In this case, the speaker clarifies that what she fixed was not the chair (which she gave away), but the sofa (which was the one she liked).

Additionally, we included a second condition, CLRD-Clarifier, based on several CLRD examples we found through a cursory Internet search. In this condition, the dislocated element was also identical to the antecedent (*los ratones* ‘the mice’ in the example below). Following the examples we found, we designed the tokens to have a dislocated constituent which could have two different possible antecedents based on the phi features involved (i.e. the two possible antecedents, ‘the mice’ and ‘the insects,’ bore the same number and gender features as the clitic). In a limited corpus search, Sedano (2006) found several real-life CLRD examples that appear compatible with this possibility (i.e. the dislocated constituent serving a clarifying function).
However, Sedano specifically rejects the idea that CLRD has a disambiguating function. In our experimental tokens, the dislocated phrase could, arguably, be used to clarify which of the two possible antecedents agreed with the doubling clitic. We included these new stimuli to test this possibility empirically. Example (10) illustrates a sample token of the CLRD-Clarifier condition.

(10) CLRD-Clarifier

Eduardo y Mariana son estudiantes de en la facultad de veterinaria en la Universidad. Esta tarde, están a cargo de catalogar a los animales en el laboratorio. Eduardo llegó tarde y le pregunta a Mariana:

‘Eduardo and Mariana are veterinary students at the university. This afternoon, they are in charge of cataloging the animals in the lab. Eduardo arrived late and asked Mariana:’

E: ¿Ya catalogaste los insectos y los ratones?

‘Did you catalogue the insects and the mice already?’

(a) M: Sí, los catalogué, los ratones, pero no he tenido tiempo de catalogar los insectos.

yes CL I-catalogued the mice but not I-have had time of catalog the insects

(b) M: #Sí, catalogué, los ratones, pero no he tenido tiempo de catalogar los insectos.

yes I-catalogued the mice but not I-have had time of catalog the insects

5 We direct the reader to Sedano (2006) for the specific argumentation.
'I did catalogue the mice, but I didn’t have time to catalogue the insects.'

In example (10), the relevant bit is that the dislocated constituent *los ratones* ‘the mice’ bears the same phi features (masculine, plural) as the other possible antecedent *los insectos* ‘the insects’.

In order to avoid ambiguity, once the clitic (*los*) is produced, the speaker could signal which laboratory animals (mice or insects) were already catalogued.

To summarize, CLRD is a structure that is located at the syntax-discourse interface and involves both syntactic and discursive knowledge. Knowledge of the (contextual) appropriateness of CLRD is crucial in order the test the IH. To show successful knowledge of this structure means that speakers need to be aware that, although a particular string might be grammatical, it might not be appropriate given the preceding context. In order to test this knowledge, we used a contextualized acceptability task.

4. Research Questions

In light of the previous discussion of research on the acquisition of linguistic structures at the syntax-discourse interface, this study proposes to answer the following research questions:

(i) In which discursive context do L1-dominant native speakers readily accept CLRD?

(ii) To what extent can HS learners’ behavior show evidence of L1-dominant native-like knowledge of the discourse-appropriateness of CLRD, an infrequent structure involving long-distance dependencies at the syntax/discourse interface?

(iii) Does knowledge of the appropriateness of CLRD correlate with proficiency?
5. Experimental study

5.1 Participants

A total of eighty-nine participants completed a set of web-based tests that were uploaded to a server maintained by an independent survey service. The control group was comprised of twenty-six L1-dominant native speakers of Spanish (9 Mexico, 7 Cuba, 4 Colombia, 3 Puerto Rico, 2 Spain, and 1 Peru; mean age: 40.2, 17 females, 9 males). 6 A total of sixty-four HSs participated in this study. All but 17 HSs were born in the U.S.—the rest migrated there in early childhood (mean arrival age: 1.9 years). Using a standardized proficiency test previously used in the generative literature (White et al. 2004, Montrul 2004), we divided the HS group (n = 63) into two groups: advanced (n = 29, mean age 20.2, 23 females, 6 males), and intermediate (n = 34, mean age 19.6, 27 females, 7 males). The independent measure of proficiency consisted of fifty multiple-choice items involving knowledge of vocabulary and grammar. Our accuracy range cutoffs were 40-47 (out of 50) for the advanced HS group and 30-39 for intermediate HS.

6 Given that López (2009) conjectured that CLRD might not be part of Mexican Spanish, we performed statistical tests (two-way repeated measure ANOVAs) in order to determine whether the Mexican Spanish speakers performed any differently than the rest of the L1-dominant native Spanish speakers. We found no statistical differences between the Mexican group and the group including the rest of the L1-dominant native speakers. For this reason, we report the results of the L1-dominant native group as a whole.
5.2 Methods

Our main task was an untimed felicity judgment task. Participants also completed a proficiency task, which tested vocabulary and grammar, a clitic knowledge task (described below), and a background questionnaire. In the acceptability judgment task, test items were presented audio-visually: as text on the computer with an accompanying audio recording. Except for the instructions, which were presented in Spanish and English, the acceptability judgment task was entirely in Spanish. Each token consisted of a brief situation (context), ending in a short dialogue. The dialogue included a question and two possible answers. The answers were identical and differed in the presence/absence of the clitic only. Each condition included 5 tokens. The test included a total number of 40 contexts, with 80 total sentences to be rated. Participants were instructed to rate the felicity of each answer on a Likert scale from 1-4 (“Very strange” to “Perfect”). An “I don’t know” option was also provided. A negligible amount of “I don’t know” and blank answers were excluded from the analysis (n = 31, or 0.58% of the data). Examples of the two types of CLRD test items were presented in (9) and (10).

Because syntactic knowledge of clitics is necessary for the acquisition of CLRD, we also used a multiple choice clitic test as a criterion for inclusion in the study. To avoid priming effects, it was administered after the felicity judgment task. The clitic test was comprised of 10 multiple-

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7 Our materials included only third-person accusative clitics, singular and plural (lo, la, los, las), because first- and second-person clitics (me, te, se, nos, os) overlap in form with the dative and reflexive clitics.
choice items with 5 choices each (50 points). Each item followed a context dialogue item containing a question (no audio included). Critically, the answer to this question required the use of accusative clitics. Each question was followed by five different answer options, some of which were ungrammatical either due to the position of the clitic in relation to the verb or due to the clitic ordering (when multiple clitics were present). Items and answers were randomized per participant. Participants had to score at least 70% accuracy (35/50) in order to be included. No participants scored below our benchmark, so there were no exclusions due to the clitic test. A sample item from our clitic task is found in (11).

(11) **INSTRUCTIONS:** Each dialogue below is incomplete. Choose any answer that you consider to sound natural and appropriate. **There may or may not be more than one correct answer.**

Pedro: ¿Cuánto cuesta la bicicleta, está barata?

Pedro: How much is this bike? Is it cheap?

Vendedor: Está en oferta, ________.

It’s on sale, __________

- [ ] a) puedo vender en $200
- [x] b) puedo vendérsela en $200
- [ ] c) se puedo vender en $200
d) se la puedo vender en $200

e) puedo se la vender en $200

‘I can sell it (to you) in $200).

In example (11), two answers were correct (b, d). Some of the answers were incorrect either because no clitics were included (a), one clitic was missing (c), or because the clitics were in the wrong order (e).

The data was collected in two separate sessions. All HSs participants took the felicity judgment task for partial credit, under supervision in a laboratory (50-minute session), while completing the questionnaire and proficiency test online on their own time (within a week). The outcomes of the tests were identified by a numerical code only. The L1-dominant native speaker controls took all portions of the experiment via the Internet. During the second data-collection session, participants answered a detailed background questionnaire describing their language learning history and language use as well as other non-identifying demographic information.

Spanish L1-dominant native speakers from various countries (Chile, Colombia, Mexico, and Honduras; 3 males, 2 females) recorded the test items in order to avoid any undesired (mental) prosodic stress or pauses. The audio portion is critical because some of the dislocated structures

8 We did not include Peninsular Spanish L1-dominant native speakers because we predicted that HSs would be less familiar with them. In the background questionnaire, only one HS reported having a family member from Spain.
included as conditions have special intonation patterns. In the case of CLRD, a break between the clause and the dislocated constituent is absolutely necessary. Otherwise, participants could (based on word order) misanalyse an ungrammatical CLRD item (lacking a clitic) as an acceptable non-dislocated structure. The felicity judgment task tested other linguistic structures, including CLLD, as well as fillers. We will report the results of the CLRD results only (CLRD-Clarifier and CLRD-Affective).

6. Results

6.1 Group Results

Figure 1 displays mean ratings of CLRD-Clarifier, as in example (10) above. Mean judgments for CLRD-Affective, as in example (9), are displayed in Figure 2. We performed a two-way repeated-measures ANOVA using Type of sentence with a clitic (felicitous) or without one (infelicitous) as a within-participants variable and Group as a between-participants variable. There was an effect of Type of sentence ($F(3, 258) = 54.658, p < .0001$), and no effect of Group (L1-dominant native, heritage advanced, heritage intermediate; $F(2, 86) = 1.687, p = 0.191$). In addition, we found a significant interaction between Type and Group ($F(9, 252) = 9.208, p < 0.0001$). We looked into the significant interaction further.

In the CLRD-Clarifier condition, which Sedano (2006) predicted would be unacceptable both with and without clitics, the mean ratings were in the middle of the scale for both test sentences. Sidak pairwise comparisons revealed that none of the participant groups distinguished between
the felicitous and infelicitous choices ($p = .971$ for the L1-dominant native speaker group; $p = .999$ for the HS advanced group; and $p = 1$ for the HS intermediate group). In addition to agreeing with Sedano’s (2006) intuitions, these results are compatible with prior empirical results from L1-dominant native populations (Slabakova et al. 2011). In the CLRD Emphatic Mention condition, however, all participant groups made the relevant distinctions, accepting the felicitous combinations and rejecting infelicitous ones, albeit to slightly different degrees ($p = .004$ for the L1-dominant native speakers; $p = .0001$ for both of the HS groups).

### 6.2 Individual results

In this section, we report on individual differences on both of the conditions tested, CLRD-Clarifier and CLRD-Affective. As mentioned earlier, CLRD-Clarifier was not expected to be felicitous, according to Sedano’s (2006) intuitions. We report on the number of individuals whose scores differed by a full point (out of four) between the felicitous and infelicitous sentences. Table 1 displays the number of individual participants per group who were aware of the (in)felicity distinction. Perhaps surprisingly, almost 40% of the L1-dominant native speakers did not make the distinction (using our specific measure) in the CLRD-Affective condition, which was expected to be felicitous with the clitic. The HS advanced group performed a little better (69%), while the HS intermediate group performed worse on this individual measure (23%). As mentioned earlier, however, all of the participant groups, including the L1-dominant group, successfully distinguished between the two types of test sentences in this condition, even if the individual performances were not as discerning or homogeneous. Our (admittedly
arbitrary) cutoff point might also have had an impact on this number. We will comment further on this point in the discussion section.

The individual results in the CLRD-Clarifier condition, which was not expected to be felicitous under Sedano’s (2006) intuitions, confirm the group results, with none of the participant groups discerning between the clitic and cliticless sentences above 20%.

7. Discussion

In order to test the IH, our experimental study examined (native) knowledge of a syntactic structure at the discourse-syntax interface: Clitic Right Dislocation. CLRD requires that the dislocated constituent bear an anaphoric relation to the previous discourse, and it requires an (agreeing) clitic. For each item of the felicity judgment task, we presented one felicitous option (with a doubling clitic) and one infelicitous option (without the clitic). Options were presented in text and also as audio recordings. We included two CLRD conditions: CLRD-Clarifier and CLRD-Affective.

In the CLRD condition that was expected to be felicitous (CLRD-Affective), all participant groups, L1-dominant native controls and HSs, regardless of proficiency level, were able to distinguish reliably between the felicitous and infelicitous constructions. Note that CLRD is extremely infrequent in the input (Villalba 2011) to the extent that some researchers have raised questions regarding its existence in Spanish (e.g. Jiménez Juliá 2000). While there are no large-scale corpus studies on CLRD, Sedano (2006) performed a corpus search and found several examples both in spoken corpora and in print. Sedano argues that the function of CLRD is not
that of a “clarifier” between two referents when the antecedents are ambiguous because they share phi features (gender and number). Our CLRD-Disambiguating condition set out to test that possibility, and, as predicted by Sedano (2006), none of the groups were able to successfully distinguish between the felicitous and infelicitous sentences.

In the CLRD-Affective condition, while all the groups were able to evince a significant difference between the felicitous and infelicitous sentences, it is worthy of note that the L1-dominant native speakers have a relatively low mean average for the felicitous sentences (2.72 out of 4). In addition, the individual data mirrors this result—only 59% demonstrate a full point (out of four) difference between felicitous and infelicitous sentences. Both HS groups, on the other hand, seemed to have less trouble rating the sentences as felicitous (3.17/4 for advanced and 3.32/4 for intermediate). The individual data, however, shows that even in the HS advanced group, about 30% of the individual participants did not make the distinction between the sentences, using our arbitrary cut-off measure.

A possible explanation for the relatively low mean averages of L1-dominant native speakers might be found in the tokens themselves. In Sedano’s (2006) CLRD database, one salient characteristic of her examples is that the antecedent is relatively far away from the dislocated constituent. The example below is taken from Javier Marías’s novel *Tu rostro mañana I: Fiebre* y lanza. The antecedent ‘that bureaucratic photo’ is underlined, as is every allusion to it.

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9 English translation by Margaret Jull Costa (New Directions, English edition).
Nunca creí que existiera esa burocrática foto a la que había oído aludir, de pequeño tamaño. Quiero decir que se conservara en ninguna parte o que se guardara o que la tuviera mi madre Elena a quien tocó encontrarla, que la hubiera pedido en la cheka a los comisarios políticos del 36 y se la hubieran dado, cuando la edad de ella sería de veintidós años, la mayor de ocho años, pero aún todavía muy joven. Y cuando la descubrí casualmente, mucho tiempo después de su muerte, envuelta en un extraño trocito de raso [...] mi impulso inicial fue no mirarla, la foto (p. 207-8).

As can be gleaned from this example, our stimuli did not approximate the substantial distance present between the discourse antecedent (esa burocrática foto ‘that bureaucratic photo’) and the dislocated constituent (la foto ‘the photo’). Namely, while the antecedent was separated from the CLRD instance for more than 21 short lines, our examples presented the CLRD in the following line. In this example, the CLRD could function as a clarifier, given that,

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10 Ten more lines of text intervene where the photo is referenced multiple times.
between the original antecedent and the dislocated constituent, there are at least three other possible antecedents that are also feminine and singular (su madre Elena, la cajita metálica, la bandera de la República). However, given our results, it is more likely that CLRD is used to place an affective emphasis on this referent, which has been central to the discourse for many lines. While we will not speculate on the nature of the function of CLRD here (see Sedano 2006, for a proposal), it appears that our tokens represent a somewhat ‘impoverished’ context when compared to this example. It is possible that our L1-dominant native speakers are thus sensitive to this additional constraint on antecedent and CLRD distance, and their slightly lower ratings reflect this preference. Given that there are no extensive corpora studies concerning CLRD, we can only speculate that this possible constraint is indeed part of the CLRD profile. CLRD is used very infrequently in Spanish (Villalba 2011), and there are very few real-life examples to analyze. Critically, however, the L1-dominant native speakers as a group evinced clear distinctions between the two conditions. Remarkably, so did the HSs. If our conjecture above is on the right track, it might be that HSs are less bothered by the (lack of sufficient) preceding context, or are less sensitive to the required distance between discourse antecedent and CLRD.

An important aspect regarding CLRD is precisely its apparent paucity in the input. Although there is a shortage of corpus/frequency-based studies on CLLD (but see Quesada 1997 and Slabakova in press), it is argued to be prevalent in both spoken and written registers, whereas CLRD is attested only rarely. It is therefore remarkable that, in spite of its rarity in the linguistic input, the HSs in our study, as a group, did not evince any statistical differences from the L1-dominant native group with respect to this infrequent construction. While this result does not support the predictions of the IH, it raises relevant questions regarding what constitutes enough
evidence for HSs to acquire a construction, especially in light of the type of exposure that HSs have to the heritage language.

As mentioned earlier, the most recent version of the IH maintains that the asymmetries between L1-dominant native speakers and HS bilinguals are rooted in processing difficulties. Given that we did not collect reaction time data or any other type of online (real-time) behavior, we are unable to conjecture whether these same HSs would perform differently under time pressure. Further research is needed in order to rule out such a possibility. What is demonstrable from these data is that HSs do not have a disadvantage at this interface when tested offline.

A final word about our methodology involves our presentation choice. Given that we wanted to provide an equivalent contrast to previous testing materials (Slabakova et al. 2011, Slabakova et al. 2012), we presented the choices (felicitous vs. infelicitous) simultaneously, as was done in our previous investigations. While this was done in the interest of avoiding test fatigue, we acknowledge that a better presentation mode (especially for the L1-dominant native speakers) would display a single sentence per story, given that this task is much less likely to tap into any metalinguistic knowledge. Even though CLRD is a construction that is taught neither as an L1 nor as an L2 construction, presenting simultaneous choices might trigger a conscious effort to evaluate the choices in a more prescriptive manner, which is not a desired factor.

8. Conclusion

Our study tested CLRD, a structure at the syntax-discourse interface, in two groups of Heritage Speakers (intermediate and advanced) in order to support or challenge the Interface Hypothesis.
as applied to HS acquisition. Regarding the predictions of the IH, the most relevant result is that the HSs in our sample successfully demonstrated knowledge of the discourse appropriateness of CLRD-Emphatic Mention, which means they do not appear to have problems with the syntax-discourse interface when there are no time constraints. This was the case even though CLRD is a very infrequently attested property that is not taught in the classroom, neither as an L1 nor as an L2 construction. Due to the fact that the HSs perform in line with the L1-dominant native speakers, one can conclude, albeit indirectly, that there is no evidence that the input these groups receive is qualitatively different for this domain. This is relevant given Sorace’s (2012) response to Montrul & Polinsky’s (2011) challenge that the IH can and should be applied to HS acquisition. Sorace (2012) agreed that the IH can be applied and makes the same predictions if and only if one can be confident that the crucial input for a given domain the HS receive has not been altered by previous attrition from their input providers. Our results suggest that the input quality is similar across these groups, yet still no difference obtains. Our results also show evidence that the performance of the HSs in our sample cannot be labeled as “incomplete,” again given that the data did not evidence any differences between the group performances of the native L1-dominant and heritage speaker groups.

Works Cited


Table 1. Number of individuals who demonstrated a contrast between felicitous and infelicitous CLRD sentences (percentages in parentheses).

<table>
<thead>
<tr>
<th></th>
<th>✓ CLRD – Affective</th>
<th># CLRD – Clarifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1-dominant Native Speakers</td>
<td>20 (59%)</td>
<td>7 (21%)</td>
</tr>
<tr>
<td>Heritage Advanced</td>
<td>20 (69%)</td>
<td>2 (7%)</td>
</tr>
<tr>
<td>Heritage Intermediate</td>
<td>6 (23%)</td>
<td>5 (19%)</td>
</tr>
</tbody>
</table>
Figure 1. Mean ratings of CLRD-Clarifier acceptability in context
Figure 2. Mean ratings of CLRD-Affective acceptability in context