

# Complex Wh-questions in Non-native Spanish and Non-native German: Does Input Matter?

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## 1. Introduction

Complex wh-interrogatives are realized in natural languages as long-distance wh-questions as in (1), but also as instances of the wh-scope type as in (2), or the wh-copy type as in (3).<sup>1</sup>

- (1) Whom do you think Marsias has met?
- (2) \*What do you think whom Marsias has met?
- (3) \*Whom do you think whom Marsias has met?

Languages such as German are said to have both (2) and (3), as shown in (4) and (5).

- (4) Was glaubst du wen Marsias getroffen hat?  
\*What do you think who Marsias has met?
- (5) Wen glaubst du wen Marsias getroffen hat?  
\*Who do you think who Marsias has met?

Wh-scope and/or wh-copy constructions have been attested in L2 grammars where neither the native nor the target grammar exhibits them (Gutierrez 2005; Schulz 2006; Slavkov 2006, 2009; Wakabayashi & Okawara 2003; Yamane 2003), which, in principle, discards both transfer and input as evidence for triggering the production and/or acceptance of these constructions. In order to account for their presence, the aforementioned authors have discussed competence explanations (i.e. they constitute a default or possible option which is innately available) or processing explanations (i.e. the grammatical equivalents pose problems either for the parser in general or for working memory in particular). It has also been argued that evidence for these constructions could be provided by abstract morpho-syntactic features or related constructions via transfer from the L1, as in the case of the wh-scope English constructions produced and accepted by the Japanese learners of English in Schulz's (2006) study. However, there is no clear-cut evidence favoring one explanation over another, and comparable experimental data gathered from different non-native grammars is not available. Furthermore, while more instances of the scope type than of the copy type have been attested in the aforementioned English L2 data, we do not have empirical evidence as to the status of these two constructions in native and non-native German.

This paper seeks to provide an account of the status of complex wh-questions in the grammars of French and English speakers learning Spanish and German as foreign languages. The first issue that we want to address is whether wh-scope and wh-copy constructions will be attested in the L2 Spanish grammar of French and English speakers, even though, as was the case with the English L2 grammars

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<sup>1</sup> Even though other instances complex-wh-interrogatives have been identified in the literature (e.g. null scope), we will only deal with these three types.

referred to above, neither the L1s nor the L2 exhibit them. The L2 German grammar, on the other hand, may exhibit these constructions because they will be available in the input, though not in formal instruction. In order to address the issue of universal availability versus direct input, we compare the status of the complex wh-constructions which are possible in German but not in Spanish—as shown in (4-5) versus (6-7)—to the status of long-distance wh-questions as in (1) and (8). Complex wh-constructions such as the one in (8) are the preferred or primary option in many natural languages, including Spanish and the participants' L1s (English and French).

- (6) \*¿Qué piensas a quién ha conocido Marsias?  
What do you think who Marsias has met?
- (7) \*¿A quién piensas a quién ha conocido Marsias?  
 \*Who do you think who Marsias has met?
- (8) ¿A quién piensas que ha conocido Marsias?  
 Who do you think Marsias has met?

When confronted with these three types of constructions, if direct input plays a role, the acceptance patterns of L2 Spanish and L2 German speakers should be different, since only the L2 German speakers may have been exposed to the three types of structures in the target language. Alternatively, if universal availability determines the participants' preferences, these constructions will have a similar status in the two non-native grammars. Namely, we expect to find an acceptability hierarchy which favors the universally available wh-constructions as in (1) and (8), followed by the scope-type as in (4) and (6) and then by the copy-type as in (5) and (7). This is also the hierarchy that we expect to find in the case of the L1 German participants in our control group. As for the L1 Spanish control group, and given the fact that wh-scope and wh-copy are not grammatical in Spanish, we expect that they will categorically reject these constructions.

The rationale to hypothesize a possible acceptability hierarchy from more to less acceptance (long-distance > scope > copy) is three fold: first, it is justified typologically because medial (scope and copy constructions) co-exist with—but do not exist independently of long-distance wh-questions in natural languages and because more languages display scope than copy;<sup>2</sup> second, it is justified in terms of previous non-native acquisition data because this is the hierarchy displayed by the adult English L2 acquisition results discussed by Gutierrez (2005) and Slavkov (2009); and third, because the fact that scope constructions can be interpreted as instances of two questions may lead to them being interpreted as grammatical in languages where only the long-distance option is considered grammatical.

## 2. Accounting for wh-scope and wh-copy in language acquisition

Both wh-scope and wh-copy have been attested in experimental data obtained from children learning L1 English (Thornton 1990), Dutch (van Kampen 1997), French (Oiry & Dermidache (2006), Basque (Gutierrez 2004), and Spanish (Gutierrez 2006). In all cases it has been argued that, in spite of the fact that neither wh-scope nor wh-copy are available in the corresponding adult grammars, children produce these constructions because they are attested in natural languages, which implies that they represent a Universal Grammar (UG) option provided by the innate computational system.

Neither wh-scope nor wh-copy have been reported to occur in spontaneous speech in L2 acquisition and there are no studies dealing with the role of direct input in the second language acquisition of these constructions. However, wh-scope and/or wh-copy have been elicited in the English L2 grammars of L1 Japanese speakers (Okawara 2000; Wakabayashi & Okawara 2003; Yamane 2003), L1 bilingual Basque/Spanish speakers (Gutierrez 2005) and French L1 speakers (Slavkov 2006, 2009). As in the case of the L1 studies, all of these authors account for their presence as evidence that L2 learners have access to all UG options, namely, to possible grammars of natural languages. In contrast, Schulz (2006), who found that L1 German and Japanese learners of English

<sup>2</sup> Wh-scope and wh-copy constructions also co-exist with *in situ* wh-questions in languages such as Hindi where the *in situ* option is the “default” mechanism for forming wh-complex interrogatives (Lutz, Müller and von Stechow (2000).

produced and accepted wh-scope constructions, attributed their presence to transfer.<sup>3</sup> Both Schulz (2006) and Slavkov (2006) discard processing explanations for the presence of wh-scope and wh-copy in L2 English grammars. However, Slavkov (2009) doesn't discard the possibility that L2 learners' avoidance of long-distance wh-movement in production tasks be due to the processing pressures involved in these tasks.

The fact that all instances of wh-scope and wh-copy constructions attested in English non-native grammars occurred under experimental conditions and at very low rates—but for the cases that could be attributed to transfer from L1 German—suggests that rather than being default options, these constructions may be triggered under specific experimental conditions. So, the first issue that we want to investigate is whether non-native as well as native speakers of Spanish will accept them in a grammaticality judgment task. If native speakers accept them, we will be able to attribute this behavior to the actual experimental task since native speakers are supposed to have clear-cut intuitions with respect to the ungrammaticality of these constructions in Spanish. In fact, the control group of English native speakers who completed the multiple choice task used by Slavkov (2009) rejected all instances of wh-scope and wh-copy constructions and only accepted the long-distance complex wh-questions that are grammatical in English (and in Spanish).

The second issue that we want to address is whether input plays a role. In other words, we would like to find out whether English and French learners of German resemble or approach native German speakers with respect to the level of acceptance of wh-scope and wh-copy constructions. Given the fact that these constructions are not formally taught in the classroom, a German native versus a German non-native pattern of acceptance which differs from the Spanish counterparts would provide evidence for the role of input.

Given the hierarchy of preference “*long-distance wh-questions* > *wh-scope* > *wh-copy*” that emerges from some of the abovementioned L2 studies (Okawara 2000; Wakabayashi & Okawara 2003; Slavkov 2009), the third issue that we want to investigate is whether the L1 and L2 Spanish and the L1 and L2 German data provide evidence for this hierarchy<sup>4</sup>.

Before we describe the study, it is important to outline how the analyses of these constructions proposed by linguistic theory can be translated into learnability issues.

### 3. Complex wh-questions as long-distance dependencies

Long-distance dependencies are constructions which depict constituents that have been “displaced” from their canonical position (Chomsky 1995). This is the case with *who* in (8) which has been displaced from its object position (*t*) in the subordinate clause to the first position in the matrix clause.

(9) *Who<sub>i</sub> do you think Marsias has met t<sub>i</sub>?*

While the Spanish and German equivalents of (9) are grammatical, the wh-scope and wh-copy equivalents are only grammatical in German, and shown in (10) and (11), respectively.

(10) Was glaubst du wen Marsias getroffen hat?  
 \*What do you think who Marsias has met?  
 \*¿Qué piensas a quién ha conocido Marsias?

(11) Wen glaubst du wen Marsias getroffen hat?  
 \*Who do you believe who Marsias has met?  
 \*¿A quién piensas a quién ha conocido Marsias?

<sup>3</sup> As we will see below, Japanese does not exhibit these constructions but shares with German the availability of wh-feature separation which has been said to depend on the productivity of a certain type of indefinite quantifiers.

<sup>4</sup> Okawara (2000) and Wakabayashi & Okawara (2003) report that their participants produced instances of wh-scope constructions but not instances of wh-copy constructions and Slavkov (2009) reports more acceptance of wh-scope than of wh-copy constructions.

Cheng (2000) has proposed that wh-scope and wh-copy constructions as in (10) and (11) are possible in languages with wh-movement which also allow the separation of the wh-phrase from the wh-feature, as shown in (12).

- (12) Was glaubt [<sub>IP</sub> du [<sub>CP</sub> wen<sub>i</sub> [<sub>IP</sub> Marsias t<sub>i</sub> getroffen hat]  
 WH believe you whom Marsias met has  
 Whom do you believe Marsias has met?

This further implies that every C position has to be filled with a wh-Comp, otherwise, the sentence is ungrammatical, as shown in (13).

- (13) \*Was glaubst [<sub>IP</sub> du [<sub>CP</sub> **dass** [<sub>IP</sub> Samir meint [<sub>CP</sub> wen<sub>i</sub> [<sub>IP</sub> Marsias t<sub>i</sub> getroffen hat]  
 WH think you **that** Samir believes whom Marsias met has  
 Who do you think that Samir believes that Marsias has met?

Cheng (2000) argues that wh-feature separation is possible in German due to the productivity of indefinite quantifiers such as *irgendwer* where the core element *wer* (who) attaches to a non wh-feature.

Travis (2008) considers these indefinite quantifiers evidence for proposing the existence of feature movement since in German, as in Japanese, this type of feature is detachable, as shown in (14).

- |      |          |             |               |                   |
|------|----------|-------------|---------------|-------------------|
| (14) |          | Core        | Wh-phrase     | Ind. quantifiers  |
|      | Japanese | <i>dare</i> | <i>dare-Ø</i> | <i>dare-ka</i>    |
|      | German   | <i>wer</i>  | <i>wer--Ø</i> | <i>irgend-wer</i> |

[Travis 2008: 34]

However, Japanese neither has wh-scope nor wh-copy constructions because, as argued by Cheng (2000), for languages to exhibit these two constructions two conditions have to be met: (i) they have to have wh-movement and (ii) they have to display a productive use of the morphological structure shown in (14). Japanese only meets the latter condition. Nonetheless, Schulz (2006) accounted for the presence of wh-scope in the English L2 of Japanese speakers as resulting from transfer since, according to her, the Japanese speakers transferred the wh-feature available in Japanese to their L2 English and, consequently, accepted and produced wh-scope constructions.

As for the relationship between the three types of constructions, some researchers argue that both wh-scope and wh-copy are instances of long-distance wh-questions as (1), (8) or (9), while others argue that this is only the case for wh-copy but not for wh-scope (Lutz, Müller & von Stechow 2000). For instance, Felser (2004) and Bruening (2006) using data from German and Passamaquoddy, respectively, argue that wh-scope and wh-copy behave differently with respect to some verbs and also with respect to the nature (animate/inanimate) of the arguments they can refer to. This behavior leads these authors to propose that wh-scope and wh-copy are different constructions. In fact, Bruening (2006), following Dayal (2000), argues that cross-linguistically, in wh-scope constructions the matrix wh-word does not move from the embedded clause but represents an independent question from the embedded one, as shown in (15).

- (15) [**Was** glaubst du t] [**Wen** Marsias t getroffen hat?]  
**What** do you think t? **Who** Marsias met t?

The matrix **was** in (15) questions the propositional complement of the matrix verb and the embedded question acts as a restriction on the proposition that **wen** ranges over. Under this analysis, wh-copy constructions but not wh-scope constructions are considered instances of long-distance questions as in (16), where it is proposed that there is only one question because **wen** does not range over propositions but rather over individuals, as shown in (17).

- (16) Wen glaubst du wen Samir t getroffen hat?  
 \***Who** do you think **who** Samir has met t?

- (17) [Wen glaubst du [Wen Samir t getroffen hat?]  
Who do you think Samir has met t?

To account for the fact that rather than appearing in the *in situ* position the wh-copy moves, some researchers have analyzed copy constructions as instances of successive cyclicity: the wh- word moves from the canonical position to the complementizer of the embedded clause and then to the complementizer of the matrix clause. However, rather than being deleted from the embedded position, the medial copy is also spelled-out.

To propose a different analysis for wh-scope and for wh-copy has at least two relevant implications in terms of learnability. The first one is that even if learners are not exposed to wh-scope or wh-copy constructions in German, some kind of “indirect” input may be provided by the productivity of indefinite quantifiers where feature separation is morphologically depicted, as shown in (14) above. This could be the case for German but not for Spanish. The second implication is that if wh-scope is interpreted as an instance of two different questions, the output would be grammatical both in English and Spanish. Thus, Spanish native and non-native speakers may interpret wh-scope differently from wh-copy constructions.

#### 4. Beyond Universal Grammar: the study

Taking the position that non-native grammars, like native grammars, are constrained by the principles of UG, a position that even those who defend the Fundamental Difference Hypothesis (Bley-Vroman 2009) seem to endorse these days, implies that any construction which is possible in a given natural language can also occur in any non-native grammar. However, this assumption does not explain why wh-scope and wh-copy have only been attested in experimental data. Is it because of their complexity? Is it because long-distance dependencies contain trace chains and are therefore difficult to process, as proposed by Clahsen & Felser (2006)? Since more instances of the two constructions were elicited via grammaticality judgments tasks and multiple choice tasks than via production tasks, will it be the case that it is the type of task that triggers their presence in the non-native grammar? Is this a phenomenon that occurs only in the English non-native grammars? Furthermore, since it seems to be the case that transfer (the L1 German participants in Schulz’s (2006) study) leads to a higher production, will input also have a similar effect?

##### 4.1. Research questions and hypotheses

None of the above questions have been answered so far. In this paper, we investigate whether wh-scope and wh-copy occur in the L2 Spanish grammar and the L2 German grammar of English and French speakers in order to answer the following research questions:

1. Do complex wh-questions of the scope and copy type occur in L2 Spanish? Do they occur in L1 Spanish?
2. Do complex wh-questions of the scope and copy type occur in L2 German? Do they pattern with L1 German?
3. Are long-distance wh-questions the preferred option, as in the case of L2 English?
4. Are there more instances of the scope type than of the copy type, as in L2 English?

The status of the three types of complex wh-questions in the languages that are part of our study is summarized in (18).

(18)	Long-distance	Scope	Copy
L1 English	+	—	—
L1 French	+	—	—
L1 Spanish	+	—	—
L1 German	+	+	+

As shown in (18) L1 Spanish has long-distance wh-questions, which implies that these are the only constructions for which L2 learners of Spanish will receive input. Thus, our first hypothesis is as follows:

#1 L2 Spanish [-input] [-transfer]. Since neither input nor transfer will play a role in the acceptance of wh-scope or wh-copy by L2 Spanish speakers, L2 Spanish will look like L2 English: very low acceptability of wh-scope and wh-copy and an overwhelming preference for long-distance constructions. Native Spanish speakers should only accept long-distance wh-questions. As for long-distance wh-questions we expect them to be the preferred option for both the L1 French and the L1 English speakers because they will be part of the input and they may be transferred from the L1s.

#2 L2 German [+input] [-transfer]. If input plays a role, since all three constructions are grammatical in German, L2 German should resemble L1 German and be different from L2 English and L2 Spanish.

#3 Universal availability. If the universal typological hierarchy “*long-distance > scope > copy*” governs the status of these constructions in non-native grammars, both L2 Spanish and L2 German will display a similar pattern of acceptance.

## 4.2. The experiment

### 4.2.1. Participants

We administered the task to four groups of speakers: (i) a non-native Spanish group of 18 French and English speakers who were studying Spanish at the University of Ottawa. They were in advanced classes and were selected on the basis of the institutional placement test; (ii) a control group of 12 native Spanish speakers, 10 living in Spain and 2 living in Canada; (iii) a non-native German group of 8 French and English speakers who were studying German at the University of Ottawa. They were also in advanced classes and were selected on the basis of the institutional placement test, and (iv) a control group of 6 native speakers of German, four of whom live in Spain and 2 of whom live in Canada.

All the participants completed a language background questionnaire intended to determine whether they were English dominant, French dominant or French/English bilinguals<sup>5</sup> and, more importantly, in order to make sure that they had not been exposed to German or other languages which would depict wh-scope or wh-copy.

### 4.2.2. Grammaticality Judgement task

The Grammaticality Judgment (GJ) task was made up of complex interrogatives whose wh-words were either arguments (subject [SU] and direct object [DO]) or adjuncts (WHEN and WHERE). All instances of DOs had the feature [+human] to avoid the homophony that exists in Spanish between *qué*, the [-human] wh-interrogative, and *que*, the complementizer.

Instances of items intended to elicit grammaticality judgments on long-distance, wh-scope and wh-copy Subject (SU) and Adjunct (WHERE) interrogatives are shown in (19) and (20), respectively. Participants were asked to judge the actual question, which appeared boldfaced and with a much larger font, according to the ranking 1 to 9 which appeared below each entry.<sup>6</sup>

<sup>5</sup> Although, in principle, we expect similar behavior from English, French and English/French bilinguals, we wanted to have this information to make sure that in they in fact display a similar behavior and, if they didn't, to determine whether the French (and maybe the bilinguals) differ from the English dominant speakers in their acceptance of wh-scope, since some authors (Mathieu 1999, Reis 2000) have argued that French sentences such as (i) are instances of null scope. Due to space limitations, we will not investigate this issue here.

(i) Tu crois quoi que Samir a trouvé t?

<sup>6</sup> 1 = completely unacceptable, sounds strange / 3 = relatively unacceptable, but not completely / 5 = uncertain, cannot decide / 7 = relatively acceptable, but not as good as (9) / 9 = completely acceptable, sounds natural.

(19) SUBJECT (SU)<sup>7</sup>

Beth: I am going to ask Margaret to help me with my Physics.

John: Wasn't Carmen going to help you?

Beth: *I think that Carmen is too busy.*

- (a) Who does Beth think is too busy? [long-distance]  
 (b) What does Beth think who is too busy? [scope]  
 (c) Who does Beth think who is too busy? [copy]

(20) ADJUNCT WHERE<sup>8</sup>

John: Arthur always studies in the cafeteria.

Beth: And does that bother you?

John: *Well, I think that he should study at the library.*

- (a) Where does John think that Arthur should study? [long-distance]  
 (b) What does John think where Arthur should study? [scope]  
 (c) Where does John think where Arthur should study? [copy]

The distribution of the various sentence contexts and verbs used in the experiment is shown in (21).

(21) Sentence contexts	to think	to say	to believe	
SU	(8)	(8)	(8)	24
DO	(8)	(8)	(8)	24
WHEN	(8)	(8)	(8)	24
WHERE	(8)	(8)	(8)	24
			<b>Total</b>	<b>96</b>

Each participant saw 96 items covering all possible contexts. There were also three lists so that each participant saw all 96 contexts but only one of the 3 (a, b, c) possible questions (see examples 19 and 20).

## 5. Results and discussion

The native Spanish speakers' preferences for long-distance, wh-scope and wh-copy interrogatives appear in chart I. It shows that there is a clear preference for the long-distance interrogatives that are the only grammatical option in Spanish. An ANOVA performed on the results shows that the differences between the three question types are significant ( $F(2, 22) = 39.914, p = .000$ ). Pairwise

<sup>7</sup> In Spanish, the actual experimental item was:

Bea: Voy a pedirle a Margarita que me ayude con la física.

Juan: ¿No te iba a ayudar Carmen?

Bea: - *Pienso que Carmen está demasiado ocupada.*

- (a) ¿Quién piensa Bea que está demasiado ocupada? [long distance]  
 (b) ¿Qué piensa Bea quién está demasiado ocupada? [scope]  
 (c) ¿Quién piensa Bea quién está demasiado ocupada? [copy]

<sup>8</sup> In Spanish, the actual experimental item was:

Juan: Arturo siempre estudia en la cafetería.

Bea: - ¿Y te preocupa eso?

Juan: *Bueno, yo pienso que debería estudiar en la biblioteca.*

- (a) ¿Dónde piensa Juan que debería estudiar Arturo? [long distance]  
 (b) ¿Qué piensa Juan dónde debería estudiar Arturo? [scope]  
 (c) ¿Dónde piensa Juan dónde debería estudiar Arturo? [copy]

comparisons using the Bonferroni correction indicate that there are significant differences between long-distance and scope ( $p = .000$ ) and long-distance and copy ( $p = .000$ ) but not between scope and copy ( $p = .820$ ).

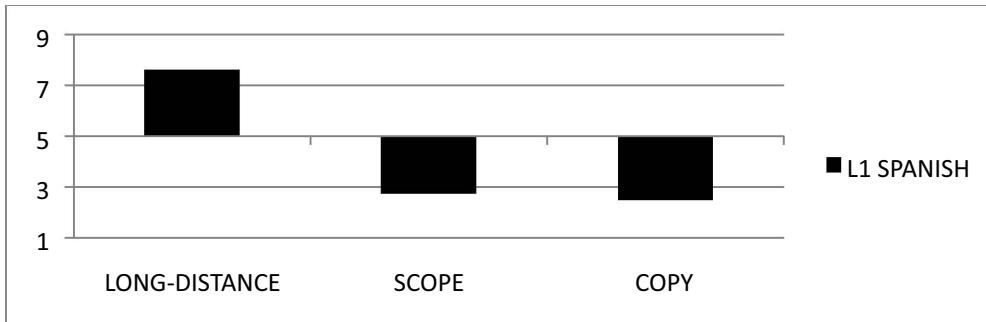


Figure I. Acceptance of long-distance, scope and copy by L1 Spanish speakers

These results are as expected in terms of the overall pattern they present. There is some rejection of the long-distance constructions, even though they are grammatical in Spanish, but this is not surprising because there may be other intervening factors which affect the judgment. However, we did not expect the native Spanish speakers to accept wh-scope and wh-copy because both constructions are ungrammatical in Spanish. In fact, these constructions, which are also ungrammatical in English, were totally rejected by the English native group in the multiple choice task used by Slavkov (2006, 2009). Thus, we assume that acceptance of these constructions is an effect of the GJ task. The rate of acceptance of wh-scope was a little higher than that of wh-copy, but there are no significant differences between the two.

The grammaticality judgments elicited from the non-native Spanish group are shown in chart II.

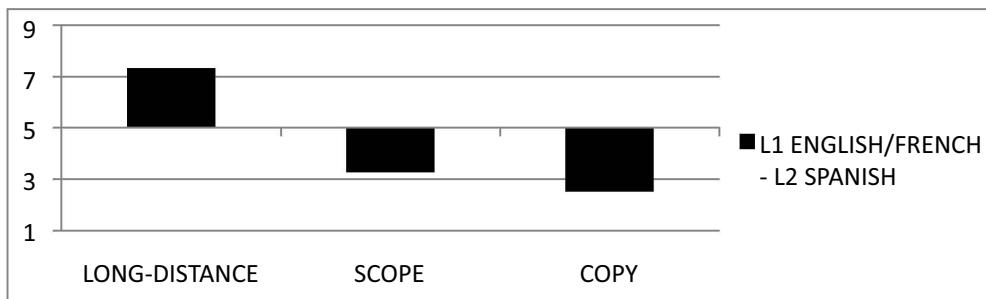


Figure II. Acceptance of long-distance, scope and copy by L2 Spanish speakers

The results are similar to those produced by the control group, both in terms of the pattern of acceptance and in the ANOVA results, since here too the differences between the three question types are significant ( $F(2,34) = 56.822$ ,  $p = .000$ ). Pairwise comparisons using the Bonferroni correction yield significant differences between long-distance and scope ( $p = .000$ ) and long-distance and copy ( $p = .000$ ), and no significant differences between scope and copy ( $p = 1.000$ ), exactly the same as in the case of the control group. In other words, the potential indeterminacy of intuitions which could have led non-native speakers to accept scope and copy at a higher degree does not show when we compare these three types of interrogatives. Thus, positive transfer (the L1s behave exactly like Spanish) and input from Spanish in the case of the L2 Spanish group, and the nature of the task lead to convergence between the L1 and the L2 Spanish groups. A 2x3 factorial ANOVA (Spanish L1 – Spanish L2) on the two sets of data statistically confirms this convergence, since the differences between groups are not significant for any of the three types of questions (long-distance:  $p = .401$ ; scope:  $p = .683$ ; copy:  $p = .780$ ).

The native German speakers' preferences for long-distance, scope and copy questions are shown in chart III. As expected, the pattern is very different from that of the Spanish control group, since all three types of interrogatives are said to be grammatical in German. The low acceptance of copy may be drawn by the fact that this construction is considered very colloquial.

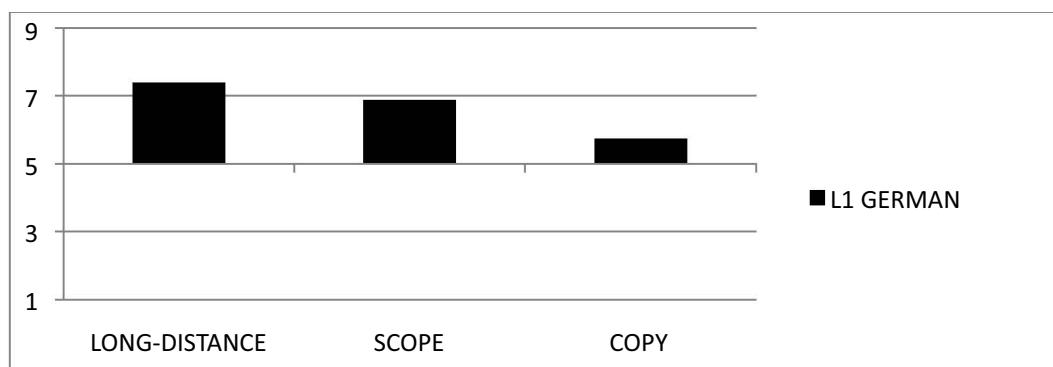


Figure III. Acceptance of long-distance, scope and copy by L1 German speakers

An ANOVA performed on the results shows that the differences between the three question types are significant ( $F(2,10) = 4.789$   $p = .035$ ). Pairwise comparisons using the Bonferroni correction yield significant differences between long-distance and copy ( $p = .014$ ) and no significant differences between long-distance and scope ( $p = 1.00$ ) or between scope and copy ( $p = .420$ ). In other words, both long-distance and scope seem to have a comparable status in native German in terms of usage, while copy is less accepted, though it is still accepted at a much higher rate than in native Spanish, as expected.

The L2 German group shows a high acceptance of long-distance constructions and acceptance of scope constructions though not as high as the native counterparts (chart III versus chart IV). An ANOVA performed on the L2 German data shows that differences between the three question types are significant ( $F(2, 14) = 18.433$   $p = .000$ ). Pairwise comparisons using the Bonferroni correction show significant differences between long-distance and copy ( $p = .000$ ) and between scope and copy ( $p = .000$ ) but no significant differences between long-distance and scope ( $p = .214$ ).

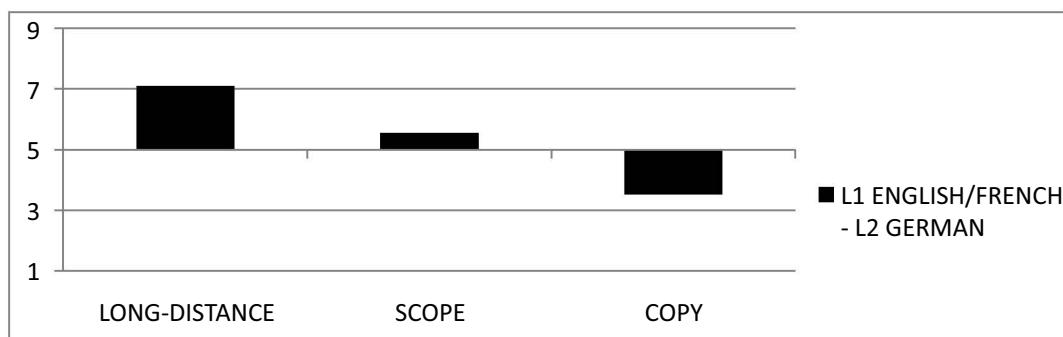


Figure IV. Acceptance of long-distance, scope and copy by L2 German speakers

This pattern of results places the L2 German group close to the L1 German group with respect to the acceptance of long-distance and scope constructions, which seems to suggest that input plays a role. However, a factorial ANOVA multivariate shows that the differences between the L1 and the L2 German group are not significant for long-distance ( $p = .6185$ ) but are significant for copy ( $p = .005$ ) and for scope ( $p = .04$ ). In other words, there are still significant differences between the L1 German group and the L2 German group in their acceptance of scope and copy, but given the fact that the significance for scope is close to .05, we could infer that the non-native speakers are approaching the natives. It could also be the case that a larger number of participants might make this difference become non-significant. The fact that none of these constructions are targeted in classroom instruction or in teaching materials makes it more relevant to see that there is a tendency on the part of the L2 German speakers (but not in the case of the L2 Spanish speakers) to accept scope constructions, which may indicate that something along the lines of the feature separation proposal may work for the interpretation of scope but not for the interpretation of copy. Alternatively, we could account for this acceptance as evidence that these constructions are interpreted as two questions, as in the analysis proposed by Bruening (2006), which appears in (14). However, this would imply that only exposure to

German data can trigger this interpretation. This dilemma could be resolved by carrying out an on-line task intended to determine whether scope questions are interpreted as instances of long-distance interrogatives or as instances of two questions, an issue that is in our immediate research agenda.

## 6. Conclusions

Based on the linguistic analyses of the three types of interrogatives, on their status in the native and non-native grammars included in our study, as well as on previous research carried out on the status of the three types of interrogatives in L2 English, we formulated four research questions and three hypotheses. With respect to the research questions, the results of our study led us to provide the following answers:

1. The question of whether complex wh-questions of the scope and copy type occur in L2 Spanish cannot be answered negatively because, though at a significantly lower rate than the long-distance questions, there is some marginal acceptance. What is surprising is that scope and copy also occur in L1 Spanish, where we expected total rejection. We would like to argue that this is triggered by the GJ task.

2. The second question was whether complex wh-questions of the scope and copy type occur in L2 German, and the answer is that they do, though at significantly different rates. Namely, scope is accepted at a significantly higher rate than copy. As for the question of whether they pattern with L1 German, we can say that they do for long-distance questions but not for copy. With respect to scope, and even though the difference in acceptance rate between the L1 German and the L2 German groups is statistically significant, it nevertheless goes in the same direction (i.e. the construction is rated positively).

3. We must conclude that for all groups long-distance wh-questions are the preferred option, as in the case of the L2 English data discussed in the aforementioned literature. In the case of the L1 German group, both long distance and scope are highly accepted and the differences are not significant.

4. As for the question of whether there is more acceptance of the scope type than of the copy type constructions as in L2 English, the answer is yes but the difference is only significant for the L1 German group.

Both parts of Hypothesis #1 are confirmed in relation to the L2 Spanish speakers since: (i) long-distance wh-questions were the preferred option for both the L1 French and the L1 English speakers because they are part of the input and may be transferred from the L1s and (ii) some wh-scope and wh-copy constructions are accepted. However, the hypothesis is not confirmed in relation to the L1 Spanish speakers because they also accepted some wh-scope and some wh-copy constructions, a fact that we attribute to the task.

Hypothesis #2 is only partially confirmed, in that L2 German resembles L1 German in relation to the acceptance of long-distance and the high acceptance of scope (though with the latter they are still significantly different –though they almost approach non-significance). L2 German does not resemble L1 German in relation to copy constructions.

Hypothesis #3 is not confirmed because the universal typological hierarchy “*long-distance > scope > copy*” does not govern the status of these constructions in non-native grammars, since L2 Spanish and L2 German do not display a similar pattern of acceptance.

We could then conclude that input seems to play a role at the advanced level of proficiency since L2 German approaches L1 German in terms of the high acceptance of scope interrogatives, while L2 Spanish patterns with L1 Spanish for all three constructions. We can also conclude that the task itself seems to play a role for both the native and the non-native speakers. Otherwise, there is no explanation as to why L1 Spanish speakers would accept wh-scope or wh-copy constructions. Furthermore, the lack of significant differences between the acceptance of wh-scope and wh-copy in the case of the L1 and the L2 Spanish speakers does not lend support for the analysis of scope interrogatives as instances of two different questions. However, further research is needed to provide more conclusive evidence that this is the case.

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