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On the L2 acquisition of Spanish subject-verb inversion

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Abstract

This study explores the acquisition of Spanish subject-verb inversion in *wh*-questions by Dutch L2 learners. The optional or obligatory application of this rule in Spanish *wh*-questions depends on the argument versus adjunct status of the *wh*-element. In Dutch, subject-verb inversion is obligatory in matrix clauses only and it is not subject to argumental restrictions. The empirical basis of this study comes from a Grammaticality Judgment Task offered to 46 participants: 33 Dutch learners of L2 Spanish and 13 Spanish native controls. The results indicate that the L2ers' performance is significantly different from native-like behavior at two different levels of proficiency.

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1. Introduction

This study examines the acquisition of subject-verb inversion in Spanish *wh*-questions by Dutch learners of L2 Spanish. In Spanish, subject-verb inversion occurs in both matrix and embedded *wh*-questions. Crucially, the argument versus adjunct status of the *wh*-element determines whether the inversion rule applies obligatorily or not. Dutch also has subject-verb inversion, yet this rule only applies in matrix clauses, does so obligatorily, and is not sensitive to the argument-adjunct distinction.

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As has been widely observed in previous studies (e.g. Barbosa, 2001; Suñer, 1994; Torrego, 1984; Zubizarreta, 1998, among others), subject-verb inversion is obligatory in constituent questions where the direct object has undergone *wh*-movement:

1. ¿Qué compró Juan/*Juan compró en la tienda?
what bought Juan/Juan bought in the store?
2. Me pregunto a quién presto Juan/*Juan prestó el diccionario.
I wonder to whom lent John/John lent the dictionary
3. Torrego (1984) made the important observation that when the fronted *wh*-element is an adjunct, inversion is optional, both in matrix (3) and embedded (4) *wh*-clauses.

4. ¿Cómo Juan ha conseguido/ha conseguido Juan poner allí a su hijo?
how John has made/has made John his son fit in there?
5. ¿Me puedes decir cómo la constitución ha contribuido/ha contribuido la constitución a eso?
can you tell me how the constitution has contributed/has contributed the constitution to it?

In this respect, there are two main differences between Spanish and Dutch. First, in Dutch matrix questions there is always subject-verb inversion, independently of whether the fronted *wh*-element is an argument or an adjunct (5).

6. Wat wilden die twee/*die twee wilden lezen?
what wanted those two/those two wanted want to read?
7. Waarom wil Jan/*Jan wil voor de anderen vertrekken?
why wants Jan/Jan wants before the others leave?

The second difference between Dutch and Spanish comes from the fact that Dutch is a V2 language and Spanish is not. In Dutch, subject-verb inversion only occurs in matrix clauses, never in embedded ones (6), while in Spanish *wh*-questions the main verb must always appear before the subject in both types of clauses.

8. Ik vraag me af aan wie Jan het boek heeft geleend/*heeft Jan het boek geleend.
I wonder to whom Jan the book has lent/has Jan the book lent

Spanish and Dutch show different syntactic options for subject-verb placement in *wh*-questions. In Spanish, all argumental *wh*-questions (matrix and embedded) require obligatory subject-verb inversion, which is met if the lexical verb moves from INFL to C. In Dutch, subject-verb inversion is required with matrix questions but not with embedded questions. No movement of the verb takes place from INFL to C in embedded clauses, whether interrogative or not.

In view of these cross linguistic differences, this study aims to investigate whether Dutch learners of L2 Spanish at beginners and advanced levels of proficiency have mastered Spanish subject-verb inversion in both main and embedded clauses, and in both obligatory and optional contexts. If we start from the premise that these Spanish learners do not have this structure instantiated in their L1 nor that they have learned it explicitly through L2 classroom instruction, it is especially interesting to examine what sort of evidence these Dutch speakers would rely on to acquire these specific properties.

1.1 Research questions

Earlier studies have shown that L2 learners of Spanish have persistent problems with the acquisition of subject-verb inversion in questions (e.g., Cuza, 2013; Frank, 2013). Most of the studies on this topic have been carried out with L1 English speakers. The research questions underlying this investigation are as follows:

- Does Spanish subject-verb inversion in *wh*-questions cause particular difficulties among Dutch L2 learners of Spanish?
- If so, will these difficulties occur across the board or will one type of *wh*-question be more problematic than the other?

For example:

- Will matrix questions be easier to acquire than embedded ones?
- Is there a distinction between argumental and adjunct *wh*-words?

Syntactically, it is precisely in embedded questions that Dutch and Spanish diverge. In both Dutch and Spanish matrix *wh*-questions there is movement of the verb to C. However, only in Spanish embedded questions does the verb undergo movement, just as in matrix questions. We thus expect that the L2ers will have more difficulty with subject-verb inversion in embedded *wh*- questions than in matrix *wh*-questions, since it is in embedded questions where Dutch and Spanish give rise to a difference in grammatical outcome.

1. 2. Experiment

We have collected our data via a Bimodal Grammaticality Judgment Task (BGJT) administered to Dutch learners of L2 Spanish, both at the beginners and advanced levels.

2.1 Participants

A total of 46 participants took part in this study: 20 beginners and 13 advanced learners of L2 Spanish, as well as a control group of 13 Spanish native speakers. All of the advanced L2ers had graduated as BA majors in Spanish from three different Dutch universities, and at the time of testing, their age ranged between 23 and 30 years. The beginners group was formed by students from the first year of the Spanish major at Utrecht University, age range: 18-23 years. All of them completed a linguistic background questionnaire, which contained questions on language use, exposure, and education. The most relevant information obtained from this questionnaire can be summarized as follows: all of the participants were Dutch native speakers who are enrolled in or have finished a Spanish university major in The Netherlands. The advanced group is at C2 level of language proficiency (Common European Framework of Reference for Languages) and the beginners group at B1 level. All participants have native Dutch speaking parents and none of them grew up in a Spanish-Dutch bilingual environment. The control group was formed by young Spanish adults living in Madrid, age range: 18-25 years.

To evaluate the L2 participants' proficiency levels in Spanish, they were asked to complete an independent placement test. This test consisted of a cloze passage with three multiple choice options for each blank adapted from a version of the *Diploma de Español como Lengua Extranjera* (DELE) as well as a multiple choice vocabulary section adapted from a Modern Language Association (MLA) placement test. Following previous research using the same methodology (e.g., Cuza, 2012; Frank, 2013), scores between 40 and 50 points were considered the baseline for "advanced", scores between 30 and 39 points as the baseline for "intermediate" proficiency, and scores between 0 and 29 points were considered as "low" proficiency (beginners). The average mean for the advanced group was 42 and the average mean for the beginners group was 18 points.

2.3 Procedure

Both L2 groups were tested during two of their Spanish lectures. The first time they filled in a placement test and the language background questionnaire and the second time they completed the bimodal grammaticality judgment task. Participants read and listen to Spanish interrogative sentences from a PPT presentation. They had 9 seconds in between sentences to mark their acceptability judgments on paper, on a 1 to 5 scale. The control group completed the same GJT, but by email and in their own time.

The task included 48 Spanish interrogative test sentences. These sentences were divided into four different types: 12 matrix inverted questions, 12 matrix non-inverted questions, 12 embedded inverted questions and 12 embedded non-inverted questions. Moreover, 12 filler questions were included and randomly distributed through the task. The *wh*-words used in the sentences were: *dónde* (where), *cómo* (how), *porqué* (why), *cuándo* (when), *qué* (what) and *a quién* (to whom). In total, each *wh*-word appeared eight times during the task.

Participants indicated their judgments by choosing 1 when the question felt totally unacceptable and 5 when totally acceptable. Examples of the various types are given below:

9. Matrix inverted

¿Cuándo conoció Hugo a Luis?

- ‘When did Hugo meet Luis?’
10. Matrix non-inverted
¿Cuándo Jorge limpió los platos?
When did Jorge clean the dishes?
 11. Embedded inverted
¿Me puedes decir cómo consiguió Alex ese trabajo?
‘Could you tell me how Alex got that job?’
 12. Embedded non-inverted
¿Me puedes decir cuándo Pedro comenzó su viaje?
‘Could you tell me when Pedro started his journey?’

2.4. Results

An Analysis of Variance (ANOVA) shows that there was a significant difference in performance between the Spanish control group and both L2 groups: $F(2, 2184) = 8,967, p < .001$. This difference was as expected. Moreover, the beginner L2 group performed also significantly differently from the advanced L2 group and the native speakers. This is graphically represented in Figure 1.

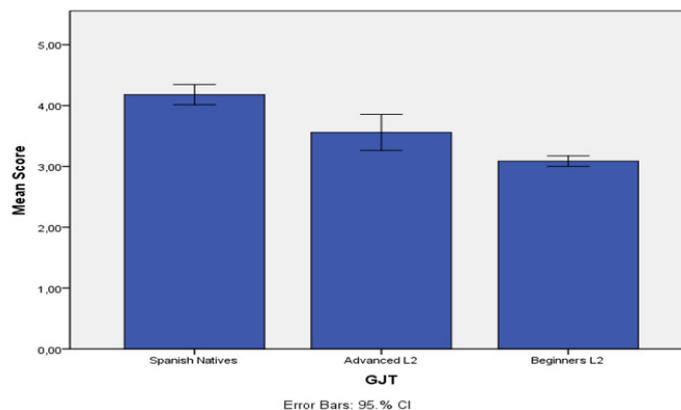


Figure 1. Bimodal Grammaticality Judgment Task.

If we take a closer look at the different types of conditions, we can determine on the basis of a factorial analysis of variance that there is a significant difference between the groups. Specifically, there is a significant difference between matrix and embedded *wh*-questions $F(2, 2184) = 22,558, p < .001$ and also a significant difference between inverted and non-inverted questions, $F(2, 2184) = 82,339, p < .001$. When we look at the argument/adjunct distinction, a factorial ANOVA shows a significant main effect of the argument/adjunct distinction, $F(2, 2184) = 12,229, p < .001$. This distinction remains constant across groups in matrix and embedded clauses $F(1, 2184) = 15,192, p < .001$. The L2 advanced learners seem to perform more accurately with argumental *wh*-words in matrix clauses (non-inverted) than with argumental *wh*-words in embedded clauses. This means that it seems harder for the L2ers to judge the ungrammaticality of non-inverted argumental *wh*-questions in embedded than in matrix environments. The beginner L2ers seem to have equal problems with argumental *wh*-words in matrix and embedded clauses (inverted and non-inverted), which may show that, at a lower level of proficiency, embedded and matrix *wh*-clauses with fronted arguments and adjuncts are judged in a similar way.

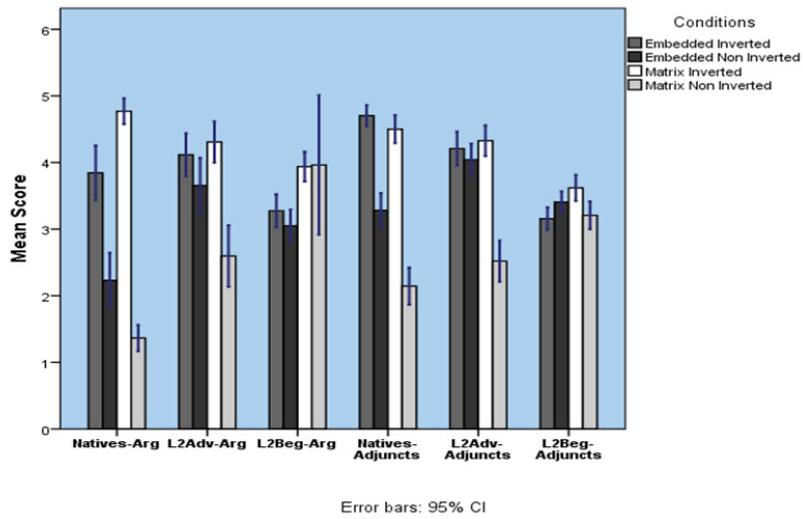


Figure 2. Argument vs. Adjunct distinction in the BGJT

In figure 2 we see that when it comes to the argument-adjunct distinction, the native speakers, as expected, judge the matrix and embedded non-inverted questions ungrammatical with argumental *wh*-words. The two L2 groups do not seem to recognize the ungrammaticality of the embedded non-inverted questions with argumental *wh*-words and more surprisingly, these L2ers also show persistent difficulties in judging the ungrammaticality of matrix non-inverted questions. Surprisingly so, since we expected them to reject the non-inverted matrix interrogatives. However, they do accept them as grammatical questions. If they somehow were relying on a Dutch-type grammar underlying these constructions, they would reject such matrix non-inverted questions.

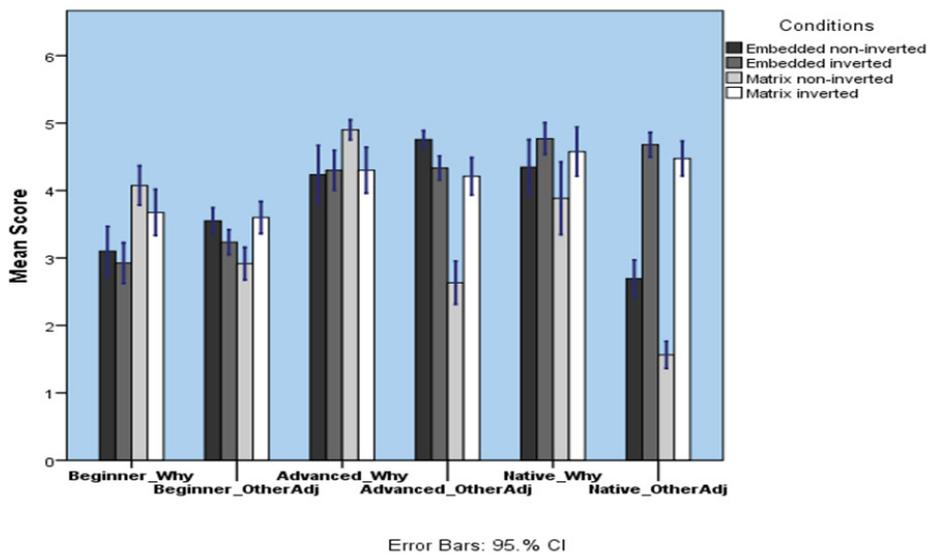


Figure 3. Why vs. Other Adjuncts in the BGJT

Our results also show that *porqué* seems to be the odd one out among the *wh*-elements. In figure 3 we see that *porqué* is a *wh*-element that behaves completely differently from the other adjuncts. In every condition, inversion and non-inversion with *porqué*, in matrix and embedded clauses, the advanced L2ers accept all questions as grammatical. The beginners only differentiate between *porqué* and the rest of the adjuncts in matrix non-inverted clauses. This is consistent with Goodall's (2004) observation that with *porqué* subject-verb inversion in interrogatives seems to be optional.

3. Conclusion

In this study we have investigated non-native acquisition of subject-verb inversion in Spanish *wh*-questions. First, it can be said that both groups of Dutch learners of L2 Spanish are far from a native-like performance. We observe that difficulties do not occur indiscriminately. They performed significantly better with matrix questions than with embedded ones, which confirms our expectation, since Dutch and Spanish differ with respect to subject-verb inversion in these two types of clauses. However, the L2ers also showed problems in judging the ungrammaticality of matrix non-inverted questions, which is surprising from an acquisition point of view. This tells us that the L2ers are not basing their judgments purely on their Dutch grammar only.

Interestingly, even though there is some improvement in most aspects from beginners to advanced level, the learners' performance in embedded questions does not significantly improve at a higher level of proficiency. This result is crucial, since, as was previously indicated, it is in embedded questions where Dutch and Spanish differ.

The learners also seem to perform significantly differently with some *wh*-words, specifically, with *porqué*. All groups seem to accept all questions as grammatical when the *wh*-element *porqué* is involved. The fact that *porqué* behaves differently from all other adjuncts may influence the L2ers' intuitions. They may generalize the optional inversion behavior of *porqué* to the other *wh*-elements.

These findings are in line with previous studies that have shown that the acquisition of Spanish subject-verb inversion is problematic for L2ers. However, we can also conclude that these difficulties do not occur indiscriminately but rather with specific types of clauses, i.e., embedded interrogatives. This difficulty seems to persist even at high levels of L2 proficiency.

The problems with embedded questions may find an explanation by Frank (2013), who states that the problems that the L2ers show with the acquisition of embedded questions can be explained in terms of derivational complexity. However, this account cannot explain the L2ers' behavior with matrix interrogative clauses. If the L2ers were transferring from their L1 only, they should show firm intuitions about inversion in matrix interrogatives, which is clearly not the case. However, we do agree with Frank that input plays an important role in the acquisition of these constructions. If embedded questions are less common in the input, the L2ers will experience more difficulty with this type of clauses. We also believe that *porqué* adds more variability to the input and may lead the L2ers into thinking that subject-verb inversion could be optional more generally.

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