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Grammaticality judgment of null subjects by L1 Spanish speakers learning English

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ABSTRACT

Following the Null Subject Parameter, Spanish is a [+null subject] language whereas English is a [- null subject] language. In language contact situations, crosslinguistic influence is expected. The main objective of this dissertation is to provide an analysis of null subjects by L1 Spanish L2 English speakers. The participants were classified in three groups according to their English proficiency level: high, medium and low. They had to complete a Grammaticality Judgment Task (GJT). The analysis of the data reveals that none of the three groups exhibits crosslinguistic influence from the L1 into the L2 when judging subjects. In general, participants were able to distinguish sentences with null subjects from sentences with overt subjects. However, the results also show that there is a clear relationship between the level of proficiency and how accurately participants judged sentences; the higher the level of proficiency, the better they judge the grammaticality of subjects.

KEYWORDS

Null Subject Parameter (NSP), Grammaticality Judgment Task (GJT), L1 Spanish, L2 English, crosslinguistic influence.

RESUMEN

Siguiendo el Parámetro de Sujeto Nulo, el español se clasifica como una lengua [+sujetos nulos], mientras que el inglés no. En situaciones de contacto lingüístico, cabe esperar una influencia interlingüística. El objetivo de este trabajo es analizar los sujetos nulos por hablantes L1 español L2 inglés. Los participantes fueron clasificados de acuerdo a su nivel de inglés: alto, medio y bajo. Tuvieron que completar una tarea para juzgar la gramaticalidad de los sujetos. El análisis de los datos revela que ninguno de los grupos muestra una influencia lingüística de la L1 a la L2 a la hora de juzgar los sujetos. En general, todos los participantes fueron capaces de distinguir los sujetos gramaticales de los agramaticales. Los resultados también muestran que hay una relación entre el nivel de competencia y lo acertado que los participantes juzgan las oraciones: cuánto más alto es el nivel de competencia, mejor juzgan los sujetos.

PALABRAS CLAVE

Parámetro de Sujeto Nulo, Prueba para juzgar la gramaticalidad, L1 español, L2 inglés, influencia interlingüística.

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1. INTRODUCTION

The Null Subject Parameter (NSP) within the framework of second language acquisition is a linguistic phenomenon that has interested a high number of grammarians and linguists, in particular, after Chomsky's theories on Universal Grammar revolutionized the field of linguistics a few decades ago. In the light of this, many scholars such as Lozano (2002), Holmberg (2005), Quesada & Blackwell (2009), Liceras & Fernández (2016) and Mujcinovic (2020) among others, have widely discussed null subjects in second language acquisition.

In an attempt to further explore null subjects in L1 Spanish L2 English speakers, this dissertation provides an empirical analysis that seeks to determine if the participants that took part in this study present crosslinguistic influence from their L1 into their L2 when judging the grammaticality of null subjects.

The following undergraduate dissertation consists of six separated sections in addition to this introductory first one. Section 2 is divided into two separated parts: 2.1 provides a theoretical description on the NSP; whereas part 2.2 covers a review of the various studies related to the acceptability, production and judgment of null subjects in L1 and L2. In section 3 the predication and research question to be tested are formulated. Section 4 provides an explanation of the methodology followed for this study: 4.1 contains information about the participants; 4.2 presents the method and materials required for the empirical work; and 4.3 displays the procedure followed for the study. Section 5 offers an analysis of the data obtained and a general discussion of the results in light of the initial predictions and research questions. Finally, section 6 contains the conclusions reached in the study. These sections are followed by a list of cited works which are used to elaborate this dissertation and an appendix with the template of the Grammaticality Judgment Task (GJT) designed for the participants.

2. NULL SUBJECT PARAMETER: THEORETICAL DESCRIPTION

The theory of Universal Grammar (UG) is central to the concerns of present-day linguistics. The language faculty which all human beings are born with is genetically encoded. The publication of Chomsky´s *Lectures on Government and Binding* (1981) states that humans are born with an innate biological component, which means that if they are born under normal conditions, they are capable of learning any language. "*Universal grammar may be thought of as some system of principles, common to the species and available to each individual prior to experience*" (Chomsky 1981: 7). With this statement Chomsky suggests that Universal Grammar can be understood as a set of principles or rules that are universally present in all individuals before they acquire language through their experiences and interactions. These principles are part of the human genetic endowment and provide a framework for language acquisition.

The Principles-and-Parameters (P&P) approach was first developed by Chomsky (1981). The leading idea is that Universal Grammar (UG) contains an invariant set of principles associated with parameters which define the space of possible variations among languages (Chomsky 1981). There are some grammatical properties which are common to all languages, which means that all languages have to comply with these properties, known as principles of Universal Grammar. There are other grammatical properties that are only shared by a group of languages and that differentiate them in two typological distinctions [+option] [-option] (Haegeman 2000).

2.1 NULL SUBJECT PARAMETER

The Null Subject Parameter (NSP) (Perlmutter 1971, Jaeggli 1981, Chomsky 1891, Rizzi 1986, Jaeggli & Safir 1989, Holmberg 2005, Camacho 2016, among many others) is a parameter that divides the languages in two typological groups: on the one hand, those languages that allow null subjects (pro), such as the Spanish, example (see example (1)), and on the other hand, languages that do not allow null subjects but requires an explicit subject (they), such as English, (see example (2)).

(1) *pro* comen muy rápido.
(2) They eat very quickly.

As previously mentioned, P&P are related in the sense that principles provide the universal foundation of language, while parameters allow for variation within that universal framework. The NSP is related to the Empty Category Principle (ECP) (Chomsky 1981). In languages in which null subjects are allowed, also called [+null subject] languages, there is the presence of the empty category *pro* as it can be seen in example (1). The ECP is a principle which requires that these empty categories (pro, PRO, etc) must be licensed, governed and identified. In other words, in [+null subject] languages, the ECP provides an explanation for the licensing of null subjects in these languages. According to the ECP, an empty category (represented by a null pronoun) can be licensed in a sentence if it satisfies certain conditions related to the movement of constituents within a sentence. In the case of [+null subject] languages, the ECP allows for the presence of null subjects by positing that pro (the null pronoun representing the subject) is a licensed empty category. Consequently, the ECP helps explain the permissibility of null subjects in [+null subject] languages.

After Chomsky´s *Lectures on Government and Binding* (1981) other proposals (Alexiadou & Anagnostopoulou 1998 & Kato 1999, among others) explain the reason for the

presence of an empty category in [+null subject] languages as opposed to explicit pronouns in [-null subject] languages. These researchers argue that morphology was the reason why this distinction happened in languages.

Spanish is a language with verbal inflections (see example (3)). The ending "-as" that is next to the root of the verb indicates the number and person that the verb has. In other words, the agreement between the verb and the subject is linked to the verb itself (bound morphology). However, English has a free morphology, since this agreement is given thanks to the presence of an explicit subject "you" before the verb (see example (4)), (R. Fernández, 2004).

(3) Cant**as** muy bien.
(4) **You** sing very well.

In the Spanish example (3) there is a verb with an inflection *-s* that indicates second person singular, while in the English example (4) the verb "sing", if it were not for the subject preceding the verb, could refer to any person and number (except for the 3rd person singular, which in the present simple tense would have a final -s to indicate 3rd person singular). Then, a subject, which in this case is "you", is needed to indicate the verb subject agreement of the sentence. Therefore, Spanish and [+null subjects] languages in general are morphologically richer since a single verb contains the ending to indicate the person and number, while English is morphologically poorer because it needs the presence of an explicit subject to indicate the person and number of the verb.

For this reason, the NSP establishes that Spanish is a [+null subjects] language because the verb contains the inflection which not only indicates the verb but also the subject due to the subject-verb agreement. On the contrary, English is a [-null subject] language since it needs an explicit pronoun in order to indicate what the subject is.
The NSP divides languages into two typological groups depending on whether they fulfill the four properties of the parameter or not. The four properties are the following: i) possibility

of pro in the subject position of tensed clauses, ii) possibility of subjects in post-verbal position, iii) possibility of an explicit complementizer when the subject of an embedded clause is moved, iv) possibility of pro as a non-referential subject with weather-type verbs and in expletive constructions; but it is important to highlight that the first property; possibility of pro in the subject position of tensed clauses; will be the main focus of the empirical study.

The examples below indicate the distribution of these subjects in Spanish (5 a & b) and the impossibility of using a null subject in English, since the example is ungrammatical (6 b).

(5) a) Silvia / ella se fue a Madrid

b) *pro* se fue a Madrid

(6) a) Silvia / she went to Madrid

b) **pro* / went to Madrid

The example (5 b) is grammatical because although the subject is null, the ECP is fulfilled since there is an empty category *pro* which is licensed and governed and also the inflected verb contains the morpheme that indicates that the subject is second person singular.

On the contrary, the example (6 b) is ungrammatical because the empty category pro cannot be the subject and therefore an explicit subject is needed.

After having explained that Spanish is a [+null subject] language and that English is a [-null subject] language according to the NSP, it is important to highlight that a bilingual Spanish-English speaker checks two different options in the NSP, which will be fundamental for the investigation of this empirical study.

3. PREVIOUS EMPIRICAL WORKS

Many empirical studies have been carried out on null subjects in the context of second language acquisition. Linguists and grammarians, following Chomsky's lines of thought, have contributed to linguistics with new findings.

Quesada & Blackwell (2009) investigate the pragmatic rules for Spanish null and overt subject pronoun (SP) use in L1 Spanish speakers, focusing exclusively on Spanish first person singular references with tensed verbs. Some of the research questions on which the study is based are the following: "1) What are some of the pragmatic rules that L1 Spanish speakers follow in their use of null and overt first person, singular SPs? 2) To what extent do L1 English speakers studying Spanish as a foreign language follow these rules? And, 3) if Spanish L2 learners follow these rules, which ones are learned early and which are learned later?"(Quesada & Blackwell 2009: 124). In order to carry out the study, two different groups of participants were selected. On the one hand, 120 narratives of 30 L2 Spanish speakers from three levels and on the other hand, 20 narratives from five L1 Spanish speakers that worked as the control group. Group 1 were beginning university students, Group 2 was made up of intermediate students enrolled in the second university year and Group 3 were enrolled in upper division linguistics courses. All participants had had from two to four years of Spanish in high school.

Each participant had to complete four oral tasks: i) give a summary of a short silent film; ii) make a physical description of a known person; iii) give a personal narrative; and iv) they had to say what their plans for the future are (Quesada & Blackwell 2009:124). For the study, all null pronominal referential contexts were tagged in the transcriptions, distinguishing both person and number. However, they only focused on the first person singular subject pronoun (1s SPs). Quesada and Blackwell found that both the L2 and the L1 Spanish speakers prefer null subjects in their narratives. Furthermore, the study proved that the use of overt and null SPs in Spanish is neither optional nor random either for L1 speakers

or the L2 learners. The L2 learners in this study, even in the beginning stages, produce null SPs for all contexts but prefer overt SPs for contrastive focus contexts.

Lozano (2002) studies the interpretation of two pronominal constraints: the Overt Pronoun Constraint (OPC) (Montalbetti, 1984, 1986) and the Contrastive Focus Constraint (CFC) by learners of Spanish as an L2 and L3. The OPC states that in some languages, particularly in romances languages, overt pronouns cannot be used in some context if the pronoun is coreferential with another element in the sentence because there could be ambiguity (as seen in example 1 below).

7) "John$_i$ believes that [he$_{i/j}$ is intelligent]"

In this case, "he" can refer to John or to another person. The CFC is the linguistic phenomenon in which the author avoids the use of pronouns because he wants to emphasize or contrast an element in the sentence, as seen in example 2 below:

8) "I don´t want to talk to you, I want to talk to John"

In this sentence, the speaker wants to clarify that he wants to talk to John and not to any one else. Therefore, to give it focus, the author uses the proper name and not a personal pronoun.

An experiment was designed in order to compare sensitivity to both constructions in advanced learners of Spanish (L1 Greek speakers and L1 English speakers) (Lozano 2002). The author posed two research questions to be tested in his research: "will L2 speakers be sensitive to instantiations of UG principles (like the OPC) in L2s, however their L1 might differ from the L2? On the other hand, where language-specific pronominal constructions differ between the L1 and the L2 (like the CFC), will this be a potential source of fossilization?" (Lozano 2002:57). In order to carry out the empirical study, three experimental groups were selected. Firstly, 9 L1 British English speakers with L2 Spanish, 9 L1 Greek speakers with an advanced Spanish level and 9 peninsular L1 Spanish as a control

group. Lozano chose an acceptability judgment task to see if participants judged given sentences as more or less acceptable. The author obtained several results. First, dealing with the OPC the L1 Greek speakers behave like L1 Spanish speakers, both groups of participants perfectly know how to discriminate between grammatical and ungrammatical OPC constructions (Lozano 2002). Moreover, the results showed that English learners also behave like L1 Spanish, even though the OPC is not operative in English. Regarding the CFC constructions, the results were very similar to the ones of the OPC constructions. Nevertheless, L1 English speakers correctly reject ungrammatical *pro* (i.e., the null subject) in CFC contexts, and their rejection rates are significantly weaker than those of the L1 Spanish. Lozano discovered that L2 and L3 Spanish learners follow the OPC even though their L1 and their L2 do not have this linguistic phenomenon. In other words, Lozano discovered that OPC constructions, being determined by universal principles, do not cause transfer from the L1 and L2 into the Spanish, while CFC constructions, which are determined by language specific features, are conditioned by the participant's L1.

Liceras & Fernández (2019) analyzed English data from two bilingual children and one monolingual child, and Spanish data from two bilingual children and one monolingual child in order to test if there is crosslinguistic influence from the L1 to the L2 in null subjects production. The authors expected that L1 bilingual children would produce more overt subjects than monolingual Spanish children, because there is a possibility that crosslinguistic influence from one L1 to the other L1 will appear in bilingual speakers. (Liceras & Fernández 2016). However, according to Holmberg's (2005) and Sheehan's (2006), Spanish has a weak overt pronoun which are the phonetic realization of null pronouns and happen to be marked. For this reason, the authors formulated a second hypothesis: they expect that although overt English pronouns required an obligatory realization, bilingual Spanish would not overproduce overt pronouns when compared to monolingual Spanish children (Liceras & Fernández 2016). To carry out their study, the authors analyzed one year recordings available in the CHILDES database (MacWhinney 2000). As previously mentioned, they analyzed English data from two bilingual children and one monolingual child, and Spanish data from two bilingual children and one monolingual child. The results showed that although

bilingual speakers produce more subject pronouns than monolingual speakers, the difference is not huge and therefore no overproduction has been seen in bilinguals. Moreover, the Spanish bilingual children behave like Spanish monolingual children because “the Spanish non-PF realization option is favored over the Spanish PF realization option”(Liceras & Fernández 2016: 29). In addition, the author discovers that there is less omission of subject pronouns in child bilingual English and they attribute this to crosslinguistic influence with a facilitating effect. This study reflects the effects of crosslinguistic influence at the onset of bilingual acquisition (Liceras & Fernández 2016).

García Mayo (1998) was interested in the reset process of second language acquisition. That is, she investigated whether learners who start acquiring a second language reset the rules of a parameter in their L1 to begin acquiring again the rules of that parameter in the L2 or whether the L1 setting plays no role in the acquisition process. To carry out her study, students whose L1 is Spanish or Basque ([+null subject] language) and who were learning English ([-null subject] language) as a foreign language were selected. Two research questions were formulated: first, the author wanted to know if adult L2 learners are able to readjust a parameter they had in L1 to L2. And secondly, whether that readjustment will lead to making errors and transferring features from L1 to L2. In order to carry out the study, 59 students of the University of the Basque Country as participants were selected. Their English level was intermediate-high. The participants completed a grammaticality judgment task that consisted of 30 sentences, out of which 16 were directly relevant to the NSP and included: 6 ungrammatical sentences with null subjects and 10 related with other linguistic phenomena. The participants were asked to read the sentences and asked if they considered them to be correct or not. Most of the participants (94%) answered "incorrect" to the ungrammatical sentences so that they recognise the ungrammaticality. The author found that having to reset an L1 parameter does not cause important problems at an intermediate-high level of English. However, she assures that the role of input of the L2 in this context should be further analyzed.

Rothman & Iverson (2007) investigates the role of increased positive input provided by study-abroad experience in regards to its beneficial effects on triggering universals via the acquisition of NSP properties. The authors emphasize the importance of certain factors before conducting the study. They assure that it is possible to reset parameters, that having access to high-quality triggering data is crucial, and that learning in naturalistic contexts is highly beneficial for the learning of an L1. There were three groups of participants: the L1 control (N=8), the study abroad intermediate L2 learners (N=30) and 24 L2 learners who did not study abroad. Both the participants who studied abroad and the ones that did not have the same level of proficiency in Spanish. Therefore, the study abroad experience (i.e. with access to naturalistic input) is the main variable between these two groups. The control group consisted of 8 monolingual L1 Spanish speakers. The authors carried out two different empirical tasks: first, they designed a grammaticality judgment/correction task (GJCT) which was related to all the properties of the NSP except for the OPC which was tested separately in the second test. In GJCT, speakers had to correct ungrammatical sentences. In addition, if the L2 learner could not correct the sentence but believed it was ungrammatical, there was an option to indicate this. Moreover, the authors found that both the students who had studied abroad and those who had not studied abroad showed similar performance to the native speakers. The performances of both L2 groups were strikingly similar. Regarding the OPC test the authors discovered that comparing both L2 learners groups with the L1 Spanish speakers, they performed statistically differently. However, when comparing students who studied abroad and students who did not, results were not so different, indicating that they performed similarly.

Mujcinovic (2020) analyzes the transfer in the case of typologically similar and typologically different language interactions from three different linguistic perspectives, one of them, the production of L2 English sentential subjects produced by 26 L1 Spanish speakers. The participants in her study were selected according to the time of instruction in English they have had, that was 2 and 4 years. The participants who were exposed to English during a period of 2 years were about 9 years old, while the participants who were exposed to English during a period of 4 years were about 11 years old. Both groups received an

English input of 6.5 hours per week. Mujcinovic elaborated two tasks to elicit oral and written production data through experimental and semi-spontaneous procedures. For the oral task, the participants were interviewed individually and voice-recorded. For the written task the participants had to describe a short picture story without any text. The research questions that the author formulated were the following: "i) What is the role, if any, played by typological similarity? ii) What is the role, if any, played by the different availability of subject types across languages?" (Mujcinovic 2020: 94). The study demonstrated that the Spanish L1 group produces significantly more non-adequate subjects than the English group. This means that the L1 Spanish is influencing negatively the L2 English of participants because they are producing null subjects, which are ungrammatical in their L2 English, because in their L1 Spanish they are in fact grammatical. Moreover, the author concluded that years of exposure to English is not a determining factor when learning the L2. That is, no matter how many years participants have received English, they do not do better than those who have been exposed to it for fewer years. The author did not observe in her study a relationship between years of L2 exposure and a better performance.

4. PREDICATION AND RESEARCH QUESTION

This study addresses the acceptance and grammaticality of null subjects by L1 Spanish speakers learning English as an L2. The main purpose of this research is to analyze whether there is cross linguistic influence from the L1 Spanish ([+null subject] language) into the L2 English ([-null subject] language). Taking as a point of departure the different studies presented in section 1, this analysis strives to demonstrate the following research question: to what extent will L1 Spanish speakers learning L2 English exhibit crosslinguistic influence when judging the grammaticality of null subjects.

Finding crosslinguistic influence from L1 to L2 in the participants' production is a common phenomenon that occurs in researches dealing with second language acquisition and bilingualism. In particular, Liceras (1996) and Quesada & Blackwell (2009) found that L1 Spanish speakers acquiring English as an L2 exhibit crosslinguistic influence in subject pronoun production, which suggests that the presence of overt pronouns in Spanish influenced the learner´s production patterns in English. In the same way, Liceras (2005) tested the linguistic behavior of L1 Spanish speakers learning L2 English and found that these participants show a preference for the Spanish pronouns when speaking in both their L1 and L2.

Having found that crosslinguistic influence between languages appears in most studies on second language acquisition, and given that Spanish is a [+null subject] language whereas English is a [-null subject] language, it is expected that L1 Spanish speakers learning L2 English will exhibit crosslinguistic influence when judging the grammaticality of null subjects.

Participants will judge as grammatical both sentences with overt and null subjects, i.e., participants are expected to choose the highest values of the four-point scale even for judging ungrammatical sentences containing null subjects. If this is so, it would mean that crosslinguistic influence plays a fundamental role in the second language acquisition since

participants are transferring the [+] option of the NSP from their L1 (i.e. Spanish) to their L2 (i.e. a [-] option in the case of English). Thus, participants will judge as grammatical sentences where in their L1 they would be grammatical but in their L2 English these structures are in fact ungrammatical.

Moreover, participants with the lower proficiency level are supposed to show less accuracy judging the grammaticality of the sentences than the participants with the highest proficiency level. That is, participants with the lower proficiency level will judge as more "acceptable" ungrammatical sentences with null subject and will judge those sentences with the highest values in the four-point scale. However, the participants with the highest proficiency level of English will distinguish better sentences that are ungrammatical and they will choose lower values for judging the grammaticality of sentences with null subjects. If this were the case, it would mean that the more proficient the participants are, the better their performance is going to be.

5. METHODOLOGY

This section deals with the empirical study designed in order to answer the research questions formulated in the previous section. First of all, section (5.1) deals with the description of the participants which have been chosen to carry out this task. Then, the method and materials required for the study are clarified in section (5.2). Lastly, the procedure is described in section (5.3).

5.1 PARTICIPANTS

The participants who took part in this study are L1 Spanish children whose learning process of the L2 English has taken place in an academic context. The participants are in total 20 children —aged between 12 and 13 years— who are studying the first year of Compulsory Secondary Education in a school in Tordesillas (Valladolid). Of those 20 participants, 7 have a low level of English, 8 have an intermediate level and 5 have a high level according to their English teacher. These participants have received on average 4 hours per week of instruction in English. That is a total of 148 hours per year. The table below summarizes the information about the participants.

#of participants	**Academic formation**	**Grade**	**English exposure**
20	Secondary education	1st	4 hours/week 148 hours/year

Table 1: *Description of the participants*

5.2 METHOD AND MATERIALS

This empirical study is based on a Grammaticality Judgment Task (GJT) which the participants had to complete in-person. A GJT is an empirical procedure in grammar and linguistics that aims to gather information about some grammatical criteria of a language (Schütze & Sprouse, 2012). It is a specific tool that measures participants' competence.

The GJT that the participants had to complete for this dissertation consisted of judging grammatical and ungrammatical sentences with and without subjects in order to analyze to what extent the participants accept or not those experimental items.

The GJT contains a total of 42 experimental items and 24 fillers. All the items follow the same structure: a dialogue between two speakers where: the girl asks a question to the boy who gives an answer. This answer is what the participants had to judge.

In order to elaborate the different experimental sentences, three grammatical sentences and three ungrammatical sentences with each of the English personal pronouns were included. In these types of experimental tasks, fillers have to be included to distract the participants from understanding what they are being judged on. In this case, they focus on null articles and root infinitive structures. These two properties are unrelated to the study of sentential subjects and therefore serve their purpose.

The tables 2 below show the distribution of the experimental items by person and grammaticality.

	pronoun	**#of grammatical sentences**	**#of ungrammatical sentences**	**TOTAL**
1st person singular	I	3	3	6
2nd person singular	you	3	3	6
3rd person singular	he	3	3	6
3rd person singular	she	3	3	6
3rd person singular	it	3	3	6
1st person plural	we	3	3	6
2nd person plural	you	3	3	6
3rd person plural	they	3	3	6

Table 2. *distribution of the experimental items in the GJT.*

The grammatical criteria	**# of grammatical fillers**	**# of ungrammatical fillers**
(a) Null articles	6	6
(b) Root infinitives	6	6

Table 3: *fillers for the acceptability judgment test.*

In their answer sheet, participants were asked to grade the grammaticality of the 72 items on a four-point scale: very bad, bad, good and excellent. The scale was represented by different emojis. The points were distributed so that very bad counts as 1 point and excellent as 4 points.

All the experimental sentences were designed following these criteria: i) written in the present simple tense; ii) regular verbs such as live, practice, like love, cook, save, copy and finish were used; iii) as well as irregular verbs such as be, speak, read, break and go.

In the case of auxiliary verbs only three (can, must, do) were included. The reason why these verbs were chosen is their frequency of use in the students' books and in all cases it was made clear that the participants knew the meaning of these verbs. The experimental sentences included between 4 and 8 words.

Example 9) below shows an experimental item in which the answer has the 3rd person singular pronoun “she” as the subject. Example 10) shows an experimental item in which the answer should have been 3rd person singular pronoun “she” as the subject, but it is omitted. Example 9) is grammatical because there is an overt subject that agrees in person and number with the verb of the sentence. Example 10) is ungrammatical because the subject is null.

9) GIRL: What is her job?
BOY: She is a hairdresser

10) GIRL: When does she go to sleep?
BOY: *Goes to bed at nine o'clock

Example 11 is grammatical because there is an explicit article. Example 12) is ungrammatical because there is a null article.

11) GIRL: Where is my aunt?
BOY: Your aunt is in the bathroom
12) GIRL: What are you eating?
BOY: *I'm eating apple

5.3 PROCEDURE

As previously mentioned, the participants had to take the GJT in person; during a usual English class with their English teacher present in the classroom. In order for all students to do the GJT at the same time, a PowerPoint which was designed for this purpose was projected on the digital whiteboard showing all the experimental sentences and fillers. The first four slides were dedicated to a practice for them to understand how the GJT works. Therefore, in the practice there was a sentence judged as very bad, one sentence as bad, one sentence as good and one sentence judged as excellent. Once the explanation of the GJT was understood, an answer sheet was distributed to each student, from which the data were then extracted. After the practice, the participants were shown the 72 total sentences they had to judge. Once the explanation of the GJT was understood, an answer sheet was distributed to each student, from which the data were then extracted. An example of these slides can be seen in figure 1.

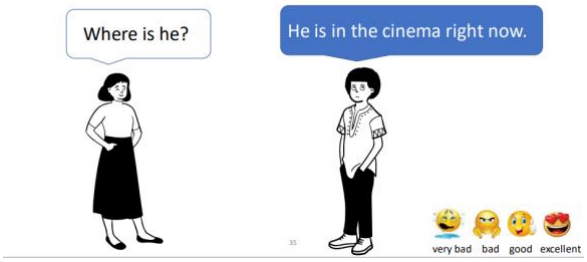

Figure 1. Example of experimental item

The participants were provided with an answer sheet in which the number of sentences to be judged (following the PowerPoint slides) appeared as rows and the four-point scale of very bad, bad, good and excellent appeared in the columns (see figure 2 below).

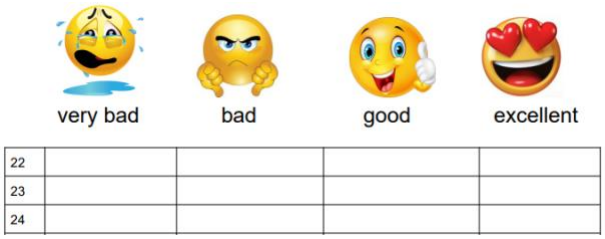

Figure 2. Example of the answer worksheet

The participants had to tick the different options on the scale depending on whether they considered the sentence to be more or less acceptable. The answers provided were then codified. The results obtained are discussed in section 6.

6. RESULTS AND DISCUSSION

In this section, the results obtained in the GJT described in the previous section are presented and analyzed. In order to organize the data two tables have been designed.

Table 4 shows the values of the four-point scale chosen by the participants in the GJT:

Participant´s proficiency level	Grammatical subjects (overt subject)	Ungrammatical subjects (null subjects)
Low (35%)	**2,12**	**1,94**
Medium (40%)	**2,87**	**1,86**
High (25%)	**3,36**	**1,26**

Table 4: *judgment of grammatical and ungrammatical subjects per proficiency group*

Table 4 illustrates the three different proficiency level groups and the arithmetic mean of the values chosen in both grammatical and ungrammatical sentences.

The participants with the highest proficiency level are the group that most accurately judge sentences with grammatical subjects and sentences with ungrammatical subjects. This group has chosen the lowest values of the four-point scale for judging sentences with ungrammatical subjects which means that they are able to recognize the ungrammaticality. Furthermore, this group is also the most accurate at judging sentences with grammatical subjects. The average number of values for grammatical subjects chosen is 3,36 which is the highest mean of the three groups. This means that these participants are also able to distinguish grammaticality and judge with the highest values 3 (good) and 4 (excellent) sentences with overt subjects (i.e. grammatical subjects).

The second group in choosing the most accurate values is the group with the medium proficiency level. The mean of the values chosen by these participants in the ungrammatical sentences is 1.86 which means that the participants have chosen the values of 1 and 2 to judge the sentences with null subjects. These results show that the participants in this group also recognize ungrammatical sentences. Moreover, these participants were also accurate in judging the grammatical sentences. This group chose an average of 2.87 to judge the ungrammaticality of sentences with overt subjects. Although this group did worse than the advanced group, the medium level participants judged the sentences more accurately than the lower proficiency level group.

The low level judged both sentences with grammatical subjects and sentences with ungrammatical subjects less accurately when compared to the other proficiency groups. On the one hand, these participants have a mean of 1.94 in the judgment of ungrammatical sentences, which means that although they are the group that has judged these sentences the worst, they also recognize the error and are able to detect the ungrammaticality of sentences with null subjects. On the other hand, this group has a mean value of 2.12 in judging grammatical sentences, which means that they have chosen value 2 for sentences with overt subjects. In other words, they are not able to identify the grammatical subjects.

After having analyzed the mean values chosen by each group of participants with both grammatical and ungrammatical subjects, a clear hierarchy between these three groups can be established. The participants with the highest level are the ones who have judged most accurately both sentences with overt subject and sentences with null subjects. The group with the medium level did worse than those with the highest proficiency level but better than those with the lowest proficiency level. The group that judged the least accurately is the group with the low proficiency English level. Thus, the higher the proficiency level the participants have, the better they judge the grammaticality and ungrammaticality of sentential subjects.

Table 5 shows more detailed information from the data obtained in the GJT. The three groups of participants are reflected in the rows above, and the values they have

chosen for judging the grammaticality of both null and overt personal pronouns appear in the columns below.

Table 5: *judgment of grammatical and ungrammatical subjects per personal pronouns and proficiency groups*

	Participant´s Proficiency Level				**Participant´s Proficiency Level**		
Overt Personal Pronoun	Low Level (35%)	Medium Level (40%)	High Level (25%)	Null Personal Pronoun	Low Level (35%)	Medium Level (40%)	High Level (25%)
"I"	3,05	**3,70**	**3,83**	∅	2,90	2,37	2,18
"You"	2,30	3,13	3,29	∅	2,14	1,98	1,26
"He"	2,40	3,20	3,70	∅	2,87	2,12	2,14
"She"	**3,70**	**3,70**	**3,83**	∅	**1,98**	**1,90**	**1,10**
"It"	**2,16**	**2,20**	**2,95**	∅	**2,97**	**2,79**	**2,45**
"We"	2,15	2,70	3,50	∅	2,12	2,23	1,58
"They"	2,50	3,10	3,18	∅	1,98	2,14	1,90
"You"	2,90	3,12	3,82	∅	2,34	2,40	2,23

To begin with, the high level proficiency group has chosen values between 2,95 and 3,83 to judge the grammatical sentences that contain overt personal pronouns. The highest

mean value they have chosen is the 3,83 to judge the over personal pronoun “she” and “I”, then these two personal pronouns are the ones with which the sentences have been most accurately judged. However, the personal pronoun with the lowest mean value is “it” that has 2,95.

This means that this personal pronoun was the most difficult for the highest proficiency group to judge since, although being grammatical, the participants chose the lowest values on the four-point scale to judge it.

Dealing with ungrammatical sentences, the highest proficiency group has chosen values between 1,10 and 2,45 to judge the null personal pronouns. These participants were able to recognise the mistake and therefore, they distinguished the ungrammaticality in sentences. As in grammatical subjects, the personal pronoun with which they most accurately judged the ungrammatical sentences is "she" because the participants used low value to judge the null personal pronoun that is ungrammatical. In addition, the personal pronoun with which they had the most problems when judging grammatical sentences was "it" since they chose very high values despite the fact that the pronoun is null and therefore ungrammatical.

In the case of the participants with the medium proficiency level, the values they have chosen for the grammatical sentences are between 2.20 and 3.70. This means that the group has been less accurate in judging the grammaticality of sentences with overt personal pronouns than those with an advanced level. The intermediate proficiency group has chosen the highest values for the pronouns "she" and "I". These two personal pronouns have a mean value of 3.70 which means that they were the easiest to judge for the participants. As for the advanced level group, the personal pronoun that was the most difficult to judge for the intermediate level is "it", since this personal pronoun has the smallest mean value (2.20) despite being grammatical.

Regarding the ungrammatical sentences, the intermediate proficiency group have chosen values of between 1.90 and 2.79 for judging null subject sentences.

This means that the group preferred to use the lower values in the four-point scale and therefore they are also able to recognize the ungrammaticality. Again "she" is the personal pronoun with which they judge sentences best since it has very low values and "it" is the personal pronoun with which they have the most problems since they choose high values to judge this pronoun although it is null and therefore they are not judging grammaticality accurately.

Regarding the lowest proficiency group, the values that this group has chosen to judge grammatical sentences are between 2,16 and 3,70. Once again, this group judges sentences more accurately with the personal pronoun "she". However, the personal pronoun "it" has a mean value of 2.16 which means that even though it is grammatical, these participants have chosen the lowest values and therefore they have been inaccurate when judging this pronoun.

Moving to the ungrammatical personal pronouns, the lowest proficiency group has chosen values between 1.98 and 2.97 to judge sentences with null personal pronouns. This group, despite being the least accurate in judging both sentences with grammatical subject and sentences with ungrammatical subject, was also able to recognize the ungrammaticality of the sentences because they chose very low values for judging sentences with null subject. Furthermore, it happens again that the personal pronoun "she" is the personal pronoun with which they judge sentences best, and the personal pronoun "it" is the most difficult for this group since it has the highest mean value (2,97) compared to the rest of the personal pronouns.

After having analyzed the accuracy with which the three groups judged grammatical and ungrammatical subjects, two conclusions can be drawn. First, it was found that there is a hierarchy relating the proficiency level and the accuracy in judging sentences. The participants with the highest proficiency level were the best at judging the sentences and those with the lowest proficiency level were the least accurate. Thus, the higher the level, the better the sentences are judged.

The second conclusion is that in all the proficiency groups, the pronoun with which they judge sentences the best is “she” and the most difficult for all groups is “it”.

The three proficiency groups were able to detect the null subjects and therefore distinguish the ungrammatical sentences. In fact, the mean values in the three proficiency groups indicate that the three groups judge better the ungrammatical sentence than the grammatical sentences.

Quesada & Blackwell (2009) found in their study that L1 English speakers produced quite a few null subjects in Spanish in all contexts, but that they generally preferred overt subjects. Therefore, there was crosslinguistic influence from their L1 English [-null subject] language to the L2 Spanish [+null subject] language because in their L1 English, null subjects are ungrammatical and therefore they produce overt subjects both in their L1 and in their L2. However, in this study (an analysis of judgment and not competence as in Quesada & Blackwell´s (2009) one) it has been shown that the L1 Spanish participants recognize grammatical and ungrammatical English sentences since for judging sentences with overt subjects the participants used high values of the four-point scale, and for sentences with null subjects they used the lowest values. Therefore, no crosslinguistic influence from L1 Spanish to L2 English was found in the participants of this study who are between 11 and 12 years old. This research shows different results from Quesada & Blackwell (2009), because in this empirical work crosslinguistic influence from L1 to L2 is not found, while in Quesada & Blackwell´s (2009) research, crosslinguistic influence from L1 to L2 is found. This can be due to the fact that in Quesada & Blackwell´s (2009) study, production data is analyzed (i.e., performance), while this study analyzes judgment data (i.e., competence).

In line with Quesada & Blackwell (2009), Mujcinovic (2020), also an analysis of participant´s production and not judgment, demonstrated that the L1 Spanish group produces more null subjects than the L1 English group. This means that the L1 Spanish is negatively influencing the participants' L2 English. However, this study (which analyzes participants' judgment) has shown different results because the 3 proficiency groups distinguished the

ungrammatical subjects from the grammatical subjects. Therefore, there is no indication that the participants' L1 negatively influences the L2.

However, this study is in line with García Mayo´s (1998) one, because in both studies results and conclusions are very similar. García Mayo (1998) discovered that most participants recognise the grammatical and ungrammatical sentences. In fact 94% of the participants answered "incorrect" to the ungrammatical sentences. In the same way, this study revealed similar findings. The 3 proficiency groups identify the ungrammatical sentences that contain null subjects and the grammatical sentences with over subjects. Therefore, both studies demonstrate that there is no crosslinguistic influence between the L1 Spanish and the L2 English, when analyzing judgment data.

7. CONCLUSIONS

The present dissertation has offered an empirical analysis of the grammaticality judgment of null subjects by L1 Spanish speakers with the aim of demonstrating whether there is crosslinguistic influence from the L1 to the L2. In order to do so, three groups of participants whose English proficiency level is different (high, medium, low) were selected to complete a GJT including grammatical and ungrammatical sentences with overt (i.e., grammatical) and null (i.e., ungrammatical) subjects in order to analyze to what extent the participants accept or not those experimental items.

The data analyzed show that the participants with the highest proficiency level are the group that most accurately judged sentences with grammatical subjects and sentences with ungrammatical subjects. This group judged sentences with grammatical subjects with an average of 3.36.

That is, this group judged the grammatical sentences with a mean value very close to the maximum value, 4. In addition, the group judged the sentences with null subject with a mean value of 1.26 which means that they recognized the ungrammaticality. The second group in choosing the most accurate values is the group with the medium proficiency level. This group has chosen a lower mean value than the high proficiency level ones for judging sentences with overt subjects but a higher mean value for judging sentences with null subjects. This medium proficiency group did worse than the higher proficiency level group but better than the lower proficiency group. The group with the lowest proficiency level judged both sentences with grammatical subjects and sentences with ungrammatical subjects less accurately when compared to the other proficiency groups.

Thus, this analysis also reveals that there is a hierarchy relating the proficiency level and the accuracy in judging sentences. The participants with the highest proficiency level were the best at judging the sentences and those with the lowest proficiency level were the

least accurate. Therefore, the following conclusion can be reached: the higher the level, the better the sentences are judged.

8. REFERENCES

Alexiadou, A., & Anagnostopoulou, E. (1998). Parametrizing AGR: Word order, Vmovement and EPP-checking. Natural Language & Linguistic Theory, 16(3), 491- 539.

Camacho, J. (2016). The null subject parameter revisited. In Kato, M. A., & Ordoñez, F., (eds.), The Morphosyntax of Portuguese and Spanish in Latin America, 27-48. Oxford: Oxford University Press.

Chomsky, N. (1981: 7) *Lectures on Government and Binding.* Dordrecht: Foris.

García Mayo, M.P. (1998). The null subject parameter in adult second language acquisition. *Atlantis,* 47-58.

Haegeman, L. (2000). Adult null subjects in non pro-drop languages. In Marc-Ariel Friedemann, M. A., & Rizzi, L. (eds.), The Acquisition of Syntax: Studies in Comparative Developmental Linguistics, 129-169. New York & London: Routledge.

Holmberg, A. (2005). Is there a little pro? Evidence from Finnish. Linguistic Inquiry, 36(4), 533-564.

Jaeggli, O. (1981). A Modular Approach to Passives. Coyote Working Papers in Linguistics, 2, 41-59.

Jaeggli, O., & Safir, K. J. (1989). The null subject parameter and parametric theory. In in Jaeggli, O., & Safir, K. J. (eds.), The Null Subject Parameter, 1-44. Dordrecht: Springer.

Kato, M. A. (1999). Strong and weak pronominals in the null subject parameter. Probus, 11(1), 1-38.

Liceras, J. M., & Fernández Fuertes, R. (2019). Subject omission/production in child bilingual English and child bilingual Spanish: The view from linguistic theory. Probus, 31(2), 245-278.

Lozano, C. (2002). The interpretation of overt and null pronouns in non-native Spanish.

MacWhinney, B. (2000). The CHILDES Project: Tools for Analyzing Talk. Mahwah, NJ: Lawrence Erlbaum Associates.

Mujcinovic, S. (2020). English subjects in the linguistic production of L1 Spanish, L1 Bosnian and L1 Danish speakers: typological similarity and transfer.

Perlmutter, D. M. (1971). A typological difference among languages. In Perlmutter, D.M. (ed.), Deep and Surface Structure Constraints in Syntax. 99-122. New York: Holt, Rinehart & Winston.

Quesada, M.L., & Blackwell, S.E. (2009). The L2 Acquisition of Null and Overt Spanish Subject Pronouns: A Pragmatic Approach.

Rizzi, L. (1986). Null objects in Italian and the theory of pro. Linguistic Inquiry, 17(3), 501- 557.

Rothman, J., & Iverson, M. (2007). The syntax of null subjects in L2 Spanish: Comparing two L2 populations under different exposure. *Revista española de lingüística aplicada*, (20), 185-216.