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An Exploratory Study on Pro-drop in a Written Description Task in L2 Spanish

Abstract

The present article aims at investigating the pro-drop phenomenon in L2 Spanish. The phenomenon of pro-drop or null subject is a typological feature of some languages, which are characterized by an implicit subject in cases of topic continuity. More specifically, behaviour regarding subject (dis)continuity in Spanish differs from French. This paper will offer a contrastive analysis on subject realisation by French learners of L2 Spanish compared to L1 Spanish speakers. So, the goal of this pilot study is to see if a different functioning in pro-drop in the mother tongue also influences on the L2. The study is based upon a written description task presented to the two groups of participants: the experimental group of French mother tongue L2 Spanish language learners and the control group of Spanish native speakers.

Key words

anaphora resolution, pronoun, pro-drop, reference, L2 Spanish

1. Pro-drop phenomenon

Pro-drop refers to a phenomenon whose main property is to allow the subject of a sentence to be implicit, i.e. to have a phonologically empty form. This implicit subject is often referred to in the literature as *pro*, as a syntactic category, or *null subject*, opposed to the explicit *overt subject*. The phenomenon is present in some languages such as Spanish (1), Italian (2) or Greek (3), languages that are therefore called *pro-drop languages* or *null-subject languages*.

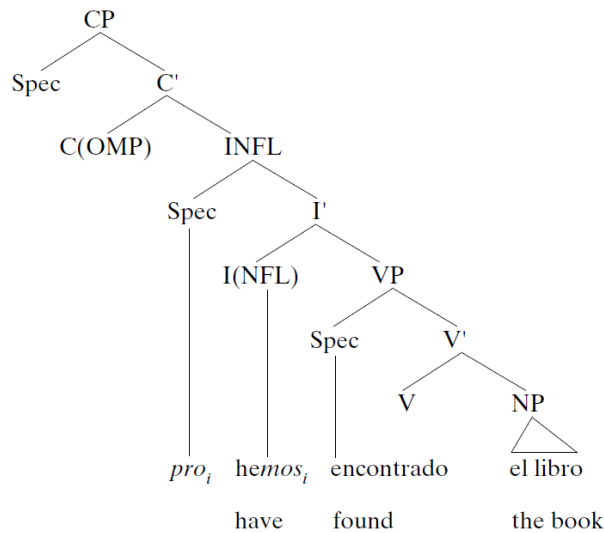
- (1) *Yo bebo agua > bebo agua*
- (2) *Io bevo acqua > bevo acqua*
- (3) *Egó píno neró > píno neró*

As exemplified in (1-3), the sentences in which the subject is implicit are still grammatically correct. This is not the case in non-pro-drop languages, such as French (4), English (5) or German (6), in which the omission of the subject is not possible:

- (4) *Je bois de l'eau > bois de l'eau**
- (5) *I drink water > drink water**
- (6) *Ich trinke Wasser > trinke Wasser**

Even though the null-subject phenomenon has always been a well-known typological feature of some languages, the concept of pro-drop, especially under its syntactical approach, was introduced in the Government and Binding theory, developed principally by Chomsky (1986). According to this theory, a null subject is filled by *pro*, an empty category with the features [+pronoun/-anaphoric]; in other words, *pro* is a pronoun, but it is not reflexive or reciprocal, as opposed to *PRO*. The theory also claims that every tacit element must be locally identified (Roberge 1986), i.e. it must be recoverable by means of another element that contains the features to identify the elided term. In the case of pro-drop, the elision of the explicit subject and its substitution by *pro* is licensed under head-government. In figure 1, the null subject is governed by INLF (inflection), and *pro* is the specifier of the Inflectional Phrase, so the null element can be identified through [+strong] agreement (Chomsky 1981; Rizzi 1986; Licerias/Díaz 1999).

Figure 1



Taken from Licerias/Díaz (1999, 8)

In other words, pro-drop is possible in Spanish, Italian or Greek because these languages have a rich verb morphology permitting generally the identification of the subject when it is omitted (7).

- (7) *Bebo* (=yo), *bebes* (= tú), *bebe* (= él/ella)
 [I drink, you drink, he/she drinks]

In example (7), the category of person is unequivocally conveyed in the verb ending, which makes the pronoun redundant and, thus, omissible. This is not the case in English, for instance, as the verb morphology does not convey information about the person, except for the 3rd person singular adding -s. So, for English it can be stated that INFL has [-strong] agreement (Roberge 1986).

2. Subject continuity and discontinuity

The fact that null subjects are grammatically possible in Spanish does not mean, however, that the distribution of subject forms is free and that both forms are equally allowed under all circumstances. Instead, both the overt and the null form have certain syntactic limitations (see Luján (1999) for an exhaustive description), and in those positions in which both are grammatically possible, the variation explicit/implicit is regulated by pragmatic constraints. One of these constraints is based on differences in the referential

functions of each form, meaning that overt and null subjects seem to have their own antecedent preferences.

This behaviour can be explained in terms of Ariel's (2001) Accessibility theory. According to this model, more marked (or more informative) pro-forms are required to refer to less identifiable, more distant referents, whereas outstanding, well-known and close antecedents can be conveyed by simpler, unmarked forms. That is to say, overt subjects indicate "lower level of accessibility or givenness of the referent, while the null subject requires that the referent is in the centre of attention" (Posio 2011, 779).

Consequently, one of the main discourse functions of the overt form is to introduce those elements with the lowest level of accessibility, that is, new referents. For this, a null subject is not possible since it does not provide enough information to identify a referent that has not been formally introduced before. Examples (8-10) illustrate how it functions. Note that, in order to introduce a new referent, lexical subjects are the most common (8), but a personal pronoun is equally possible (9), as opposed to a null subject (10).

(8) *El chico llegó primero. Cogió las monedas y se fue. Después llegó María, e hizo lo mismo*
[The boy came first. (He) took the coins and (he) left. Then María came, and (she) did the same]

(9) *Él llegó primero. Cogió las monedas y se fue. Después llegó ella, e hizo lo mismo*
[He came first. (He) took the coins and (he) left. Then she came, and (she) did the same]

(10) **∅ llegó primero. Cogió las monedas y se fue. Después llegó ∅, e hizo lo mismo*
[(He) came first. (He) took the coins and (he) left. Then (she) came, and (she) did the same]

Once a referent has been introduced as a subject, the discursive structure can take two different directions: the attention can stay focused on the same element, so the subject referent remains the same (co-reference or subject continuity), as it is the case in examples (8-9), or it can be diverted to another more distant referent that has been introduced previously, either as a subject or as an object (disjunctive reference or subject discontinuity¹). These two discursive functions represent different accessibility levels and are therefore assigned to different subject forms: while the overt subject triggers a disjunctive reference, the null form expresses a co-referential interpretation. In other words, the implicit form refers to the most accessible subject, mentioned in the previous

¹ *Subject continuity and discontinuity* are terms proposed by Mayol (2010).

sentence, while the explicit form indicates that the reference has changed by reintroducing an element into focus (11-13).

- (11) *Cuando Juan conduce, Ø no bebe (s. continuity: Ø = Juan)*
Cuando Juan conduce, él no bebe (s. discontinuity: él ≠ Juan)
[When Juan drives, (he)/he does not drink]

(Taken from Luján, 1999, 1279).

- (12) *Miguel trabaja con Pablo...*
...Cuando Pablo trabaja, Ø no se queja (s. continuity: Ø = Pablo)
...Cuando Pablo trabaja, él no se queja (s. discontinuity: él = Miguel)
[Miguel works with Pablo... when Pablo works, (he)/he does not complain]

- (13) *Ana ama a Elsa, y Ø lo sabe (s. continuity: Ø = Ana)*
Ana ama a Elsa, y ella lo sabe (s. discontinuity: ella = Elsa)
[Ana loves Elsa, and (she)/she knows]

(Taken from Luján, 1999, 1304).

It should be noted that, in the previous examples, the subject-discontinuity is conveyed by means of a pronominal subject, due to the briefness of the sentences and the short distance that separates the pronouns from the first mention of the referent (“Miguel” in (12) or “Elsa” in (13)). However, similarly to examples (8-9), a lexical subject would be equally possible in the subject-discontinuity sentences, as opposed to a lexical subject in the subject-continuity sentences, which is not pragmatically correct:

- (12b) *Miguel trabaja con Pablo...*
*... *Cuando Pablo trabaja, Pablo no se queja (s. continuity)*
... Cuando Pablo trabaja, Miguel no se queja (s. discontinuity)
[Miguel works with Pablo... when Pablo works, Pablo/Miguel does not complain]
- (13b) **Ana ama a Elsa, y Ana lo sabe (s. continuity)*
Ana ama a Elsa, y Elsa lo sabe (s. discontinuity)
[Ana loves Elsa, and Ana/Elsa knows]

This implies that subject-discontinuity is equally conveyed by a pronominal subject and a lexical subject; that is to say, disjunctive references seem to be expressed by means of overt subjects of any kind. Of course, as it is the case when introducing a new referent, the choice between a lexical overt subject and a pronominal overt subject is determined by certain factors (and represents different accessibility levels), but these are not the focus of this study. Since this research is focused on the production of pro-drop, it will be considered as an overt subject any subject that is formally expressed (that is, both nominal and pronominal noun phrases), as opposed to a complete implicit subject, which is considered a null subject.

One of the main studies looking into this question is Carminati (2002), who supports the idea of a division of functions by providing evidence that null and overt subjects have a different antecedent bias (Position of Antecedent Hypothesis or PAH) based on structural saliency. In her study, Carminati showed that the implicit form tended to refer to the antecedent in the highest Spec IP (the subject), the most salient position, whereas overt forms preferred a disjunctive reference as they were linked more usually to antecedents in lower, less salient positions (objects). These preferences are not only applicable in disambiguation; also when the subject is the only possible antecedent, the null form is considered more natural (14) (Rothman 2009).

(14) *El chico llegó primero. Él cogió las monedas y él se fue. Después llegó María, y ella hizo lo mismo**
[The boy came first. He took the coins and he left. Then María came, and she did the same]

Although Carminati's study focused on Italian pro-drop, Alonso-Ovalle, Fernandez-Solera, Frazier & Clifton (2002) and Keating, Van Patten & Jegerski (2011) conducted kindred researches for Spanish and found similar results, suggesting that the general terms of the PAH can be applied equally to Spanish. However, there are some differences between the two languages: while Carminati's results reflected a relatively strict division of roles between the explicit and the implicit subject form in Italian, some studies carried out for Spanish have raised doubts about a strong preference of the overt subject. Whereas Carminati reported that the overt form was linked with a disjunctive interpretation in 83% of the cases, Alonso-Ovalle et al. (2002), Keating et al. (2011), along with others, observed that the overt form in Spanish picked out an antecedent in object position in only 50-65%² of the cases. Likewise, Keating et al. (2011) reported that 74% of the participants in their study showed a strong tendency to interpret a null subject as co-referential, but only 21% of the participants had this same tendency to link an overt subject with a disjunctive reference. This suggests that the overt form is much more instable, or less strict than the null form. In short, research on the PAH in Spanish supports the idea that implicit forms express subject continuity, but it seems that the behaviour of the explicit form in this aspect is relatively free.

² This interval is due to the fact that every study reports slightly different results. It is not clear, though, if these variations are due to factors not clearly taken into account in some studies, such as inter-/intrasentential reference.

However, it is important to notice that even subject continuity (i.e. the co-referential preference of the null form) is not a strict constraint and should be regarded as a tendency and not as a rule: on the one hand, the context (Quesada/Blackwell 2009; Mayol/Clark 2010) has been claimed to wield an important influence and even to block the expected behaviour. On the other hand, even in the case of the null subject the preference reported in the studies mentioned here is not categorical, as *pro* is linked with the previous subject in 70-80³% of the cases (Carminati 2002; Alonso-Ovalle et al. 2002).

3. Pro-drop in L2 Spanish

The purpose of this paper is to analyse pro-drop, but this phenomenon will not be analysed only in Spanish, but in the Spanish production of native speakers of a non-pro-drop language, namely French. Following Selinker (1972), this non-native production is referred to as interlanguage.

Previous research has provided a great amount of evidence supporting the idea that null subjects are licensed and produced in proper syntactical conditions from early stages in the interlanguage (e.g. Liceras/Díaz 1999; Rothman/Iverson 2007). It is expected, therefore, that French speakers will produce null subjects without any complication. However, the fact that learners license null subjects does not mean that they use them correctly; indeed, the distribution of the implicit/explicit form is rarely native-like, even for advanced students (see below). This can be easily explained if one considers that the learning process of pro-drop by a non-pro-drop-language speaker is double-fold: it is not enough to learn that null subjects are permitted, the constraints that regulate the implicit/explicit dichotomy must be acquired as well (White 1989). If null subjects are possible since the beginning of the acquisition, the problem must then be in the second phase. Some studies, such as Rothman (2009), have empirically shown that the pragmatic constraints are more difficult to learn than the syntactic ones and are hence acquired in later stages. Accordingly, after the great amount of existing research on the syntactical licensing of pro-drop in the interlanguage (e.g. Liceras 1989; Liceras/Díaz,

³ Again, this interval is due to different results reported in the studies mentioned.

1998; 1999; Al Kasey/Pérez-Leroux 1998), researchers are now focusing more into the acquisition of its pragmatic employment: e.g. Rothman & Iverson (2007), Rothman (2009), Keating et al. (2011), Jegerski, VanPatten & Keating (2011). More specifically, these studies analyse the interpretation of pro-drop in subject-(dis)continuity environments by intermediate and advanced English students of Spanish. Their results are exposed in table 1 and summarized below.

Table 1. Summary of results for interpretation of subject (dis)continuity

	Natives	L2 advanced	L2 intermediate
1. Rothman & Iverson 2007	P0: 80% co-ref. P1: 36% co-ref. (According to PAH)	No group	P0: 91-92% co-ref. P1: 61-65% co-ref.
2. Rothman 2009	P0: 84-87% co-ref. P1: 35% co-ref. (According to PAH)	<i>P0: 84-87% co-ref.</i> <i>P1: 39% co-ref.</i> (According to PAH)	<i>P0: 84-87% co-ref.</i> P1: 64% co-ref.
3. Keating, Van Patten & Jegerski 2011	P0: 73% co-ref. P1: 53% co-ref. (According to PAH) P0: 74% show a strong tendency for co-ref. P1: 21% show a strong tendency for disj.	P0- 60% co-ref. P1- 54% co-ref. (No statistical difference- no PAH effect) P0: 32% show a strong tendency for co-ref. P1: no clear tendency	No group
4. Jegerski, VanPatten & Keating 2011	P0: 73% co-ref. P1: 52% co-ref. (According to PAH)	P0: 61% co-ref. P1: 56% co-ref. (No statistical difference - no PAH effect)	P0: 60% co-ref. P1: 55% co-ref. (No statistical difference - no PAH effect)

P0: null subject / P1: overt subject / Italics: native-like performance

In the studies of Rothman & Iverson (2007) and Rothman (2009), intermediate students show a strong tendency towards interpreting both the null and the overt form as co-referential. This is legitimate in the case of the implicit form (even though the tendency is stronger than in the Spanish group in the first study), but it is against native expectations for the overt form. The results are consistent with the findings of Sorace & Filiaci (2006) and Belletti, Bennati & Sorace (2007), who tested the PAH in advanced learners of Italian and observed that the students were more prone than monolinguals to linking the overt pronoun with the previous subject.

This means that, while native speakers prefer the overt subject to express a disjunctive reference (as stated by the PAH and other studies), intermediate students seem to interpret this form more often as a co-reference. As a result, there seems to be no neat division of roles between both forms, although it can be observed that students are at least sensitive to the referential preferences of each form as the null subject is still more frequently used for co-referential purposes.

These results are consistent with Keating et al. (2011) and Jegerski et al. (2011), in which there is still no statistical sign of a division of roles between the null and the overt subject in L2 speakers during interpretation tasks (as against the native group) and students are again more prone to interpreting the explicit form as a co-reference. This behaviour is observed not only in intermediate students, but also in the advanced group.

Nonetheless, it is worth noticing that the statistical gap between the preferences of each form is much less sharp than in the previous studies. Yet this is probably caused by certain characteristics of the experiment, as this shorter distance between the forms can be observed as well in the case of the natives. In fact, these differences in the native performance between studies 1 and 2 compared to 3 and 4 despite being within PAH expectations can be seen as another piece of evidence supporting the general observation that subject (dis)continuity is a rather irregular factor.

Keating et al. (2011) also analyses the strength of the referential tendencies of the subject form by determining the number of participants who show a strict preference for a certain interpretation⁴ (when it is chosen in more than 70% of the trials). In the null-subject sentences, only 32% of the experimental group show a strong tendency for a co-referential interpretation (against a significant 74% of the natives). In the overt-subject sentences, the situation is largely unstable: 16% show a strong tendency for the co-reference, 16% for a disjunctive interpretation and 68% show no strict preference. These figures were unforeseen because learners were expected either to follow the PAH, either to display a major preference for the co-referential interpretation; a preference motivated,

⁴ As mentioned already, this analysis is also particularly relevant to understand the preferential strength of each form in native usage, since it can be observed that the native interpretation for overt subjects is much less strict than for null subjects (21% against 74%). In other words, the preference of the null form for the co-reference is much stronger than the preference of the overt form for the disjunctive reference. This supports the idea that the latter is more unstable.

according to the authors, by English anaphora-resolution strategies and consistent with the results of the other studies. However, no clear patterns were found. This instability suggests that “learners are still sorting out the pragmatic constraints on pronominal subject distribution” (Keating et al. 2011, 215).

All in all, the only group who appears to have properly acquired this constraint is the highly-advanced group in Rothman (2009). This suggests that pragmatic factors are eventually acquirable, but only after a great amount of time and in highly-advanced levels of proficiency. According to Rothman (2009), the acquisition difficulty might be motivated (along with the inherent complexity of factors regulating pro-drop) by the instability of the input received by the students, since pragmatic constraints are not clear-cut in native usage. This idea is supported by the fact that the overt form, which seems to be less strict, is the one begetting more acquisition problems (since its usage differs the most from the native one).

In conclusion, these findings reflect that pro-drop pragmatic distribution is extremely difficult to be acquired, and native-like performances are only observed in highly proficient students. In the other groups, although the usage of null forms presents some divergences, it is the overt form that reflects most difficulties.

Now that these results have been presented, it is important to take into account some important differences with respect to the present study:

First of all, the studies discussed here have analysed L2 pro-drop focusing on null subjects and overt subject pronouns, and disregarding lexical subjects. However, we consider that this is due to the nature of their experiments (the goal being that the participants interpret the ambiguous referent of the subject pronoun, which is impossible with a lexical subject, whose referent is explicit) and not to a manifested theoretical distinction. For the present study, it has already been explained that, for the factors explored in this research, overt pronouns and lexical subjects will be treated as one single category.

Secondly, these studies have focused on interpretation of pro-drop, and not on production, and this difference could result in significant divergences. Data about L2 pro-drop production can be found in one of the experiments of Rothman & Iverson (2007), where the same group of intermediate students who misinterpreted the overt

form performs at native-like level by producing virtually no overt subject in co-referential sentences. This supports the idea that data from interpretation of pro-drop cannot be freely applied to production.

Other related studies that have looked into L2 production of referential forms have adopted, however, a broader perspective, analysing all kinds of referring expressions in terms of their accessibility level, and not focusing on pro-drop (e.g., Chini 2005; Gullberg 2006; Leclercq/Lenart 2013; Ryan 2015). In fact, most of the languages they have analysed are not pro-drop ones. Nevertheless, it is relevant to mention that these studies have reported a general tendency of over-explicitness in L2 intermediate and advanced production (that is, L2 speakers tend to use more explicit forms than natives for referents that are accessible enough to be conveyed by less marked expressions), a tendency that is found irrespective of the source and target languages. It is therefore considered a common L2-learning strategy, most possibly motivated by a desire of obtaining maximum clarity and avoiding ambiguity, due to students' self-awareness of their communicative deficiencies (for a detail description of this and other hypotheses, see Ryan (2015)).

The study that presents most similarities with respect to the present one is that of Chini (2005), who analyses the production of referential expressions in German students of Italian (that is, speakers of a non-pro-drop language learning a pro-drop language) in intermediate and advanced stages. However, as mentioned, the broader perspective adopted by Chini hinders a proper comparison.

Due to these differences, the results exposed previously must be treated only as a theoretical background and should not be used to generate preliminary hypotheses.

Similarly, the data presented in table 1 are issued from English students of Spanish. Although French is widely considered a non-pro-drop language, like English (e.g. Wheeler 1988; Kaiser/Hack 2010; Biberauer 2010; Márquez 2011), this categorisation should be regarded as a mere taxonomic label that does not necessarily encompass the idiosyncrasy of each language. As a matter of fact, French possesses some particularities that could be seen as evidence against this assumption, suggesting that French, if not a complete pro-drop language, is at least different from a prototypical non-pro-drop language such as English:

First of all, in French, unlike in English, there is a verbal agreement with the subject: this means that, in English, INFL features are [-strong], while in French they are [+strong], as in Spanish or Italian. For this reason, Liceras & Díaz (1999) propose that null subjects are in fact syntactically licensed in French, but they do not occur due to identification requirements (simply put, because they cannot be identified after elision). Secondly, in French, the subject position is occupied by clitics. Due to their nature, these clitics are equated by some authors with verbal desinences (Miller 1992; Fontana 1993; Auger 1994; Monachesi 1999; Cusimano 2013). Under this approach, French pronouns would perform the same function as Spanish verbal endings. Considering this, Roberge (1986) states that French subject clitics are in fact generated under AGR, while the subject position is occupied by *pro*, which would imply that French is a pro-drop language.

In any case, these characteristics are limited to the syntactic level, and several studies have shown evidence that the pragmatic behaviour of French regarding subject (dis)continuity differs widely from Spanish (Hemforth et al. 2010; Colonna/Schimke/Hemforth, 2012; Schimke/Colonna 2016). This means that, *a priori*, French students have to acquire the pragmatic distribution of Spanish subject forms in a similar manner as English students. Nonetheless, it is important to recognize this dissimilarity and to be cautious with the application of the results developed above.

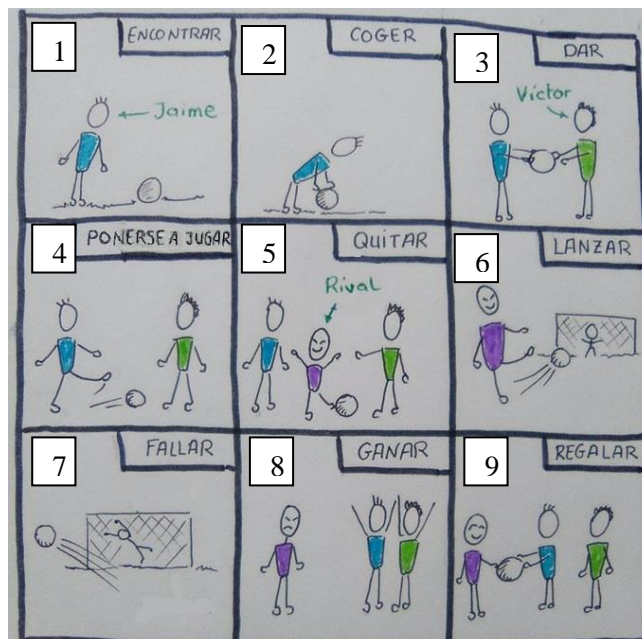
4. Methodological considerations

As previously indicated, the purpose of this paper is to examine the use of null and overt subjects in the French-Spanish interlanguage, that is, in the non-native Spanish production of French speakers, by means of a controlled production task. The paper aims at investigating the influence of subject (dis)continuity on the presence or absence of overt subject forms and so the analysis will offer a first impression of the general anaphora-resolution tendencies in a simple textual environment, that is, relatively unaffected by other pro-drop factors. The data for this analysis have been collected from a corpus obtained via a test presented to a group of 7 speakers of French and a control group of 7 native Spanish speakers, who carried out the same test in order to obtain a proper base to compare the results. The language learners of Spanish are all university

students studying languages. They have a good command of several languages, mostly English and Dutch. As for their competence in Spanish, it was self-reported between B1 and C1. Finally, parameters actors such as age or sex have not been taken into account since various researchers have reported no influence on the pro-drop usage (Enríquez, 1984; Bentivoglio, 1987). The control group of native speakers all live in Spain. Some of them have a good command of English, but none is bilingual.

All the participants completed the same description task, which involved a controlled production based upon a comic-like image (figure 2) composed of 9 scenes and 3 characters (Jaime, Víctor and Rival). Each character is depicted using a different colour and their names are indicated with an arrow in their first appearance. In each scene, a verb is given describing the action in which the characters act as subjects or objects. Participants are instructed to write the story recounted in the comic using all, and only, the verbs provided.

Figure 2. Description task



Note: numbers are not in the original image and are only added for the sake of clarity.

If the instructions are respected, each production must contain the same number of sentences (9, one for each scene/action) including the same verbs, with the same subject referents and affected by the same constraints. If a sentence does not convey the same subject referent or is not affected by the same factor, it is excluded from the analysis.

However, if a sentence contains a different verb but both the subject referent and the factor are the same, the sentence is accepted in the analysis. Some other deviations from the model have been assessed individually and have been accepted if they do not invalidate the subject form. Objects have been controlled as well: every participant has used the same objects (same referent, form and function, apart from unsubstantial exceptions) in the same sentences, so subject forms are equally affected.

If the exercise is executed as instructed, the final text follows this model⁵:

1. JAIME encontrar pelota [JAIME find ball]
2. JAIME coger pelota [JAIME take ball]
3. JAIME dar pelota a Víctor [JAIME give ball to Víctor]
4. JAIME&VÍCTOR ponerse a jugar [JAIME&VÍCTOR start to play]
5. RIVAL quitar pelota a Jaime&Víctor [RIVAL take ball from Jaime&Víctor]
6. RIVAL lanzar [RIVAL shoot]
7. RIVAL fallar [RIVAL miss]
8. JAIME&VÍCTOR ganar [JAIME&VÍCTOR win]
9. JAIME&VÍCTOR regalar pelota a Rival [JAIME&VÍCTOR give ball to Rival]

Considering the pro-drop behaviour exposed previously, the use of an overt subject (henceforth p1) is expected to introduce new entities (sentences 1, 5) or to convey a different referent than the one of the previous subject, i.e. a disjunctive reference (8). Instead, a null subject (henceforth p0) is expected for subjects that refer to the same entity as previous subjects, i.e. for co-reference (sentences 2, 3, 6, 7, 9).

1. >JAIME encontrar pelota
2. =JAIME coger pelota
3. =JAIME dar pelota a Víctor
4. ≈JAIME&VÍCTOR ponerse a jugar
5. >RIVAL quitar pelota a Jaime&Víctor
6. =RIVAL lanzar
7. =RIVAL fallar
8. ≠JAIME&VÍCTOR ganar
9. =JAIME&VÍCTOR regalar pelota a Rival

P0: subject continuity (marked with =)

P1: subject discontinuity (marked with ≠) / new referent (marked with >)

⁵ Capital letters mark the subject referent of each sentence. Note that sentences 4, 8 and 9 have a plural referent.

Nevertheless, it is not expected that p1-cases and p0-cases (that is, cases requiring a p1 or a p0 according to predictions) will show the same preferential strength. As previously stated, p1 and p0 do not have the same strictness regarding their anaphora preferences, and p0 is more often used to express subject continuity than p1 to express discontinuity; in fact, it is not clear whether p1 has any preference at all. However, previous studies regarding this matter have focused on pro-drop interpretation, not on production. If p0 has a relatively strong tendency to express subject continuity, p0 should be mostly found in subject-continuity sentences, and not in other cases, which will be occupied by p1. Conversely, if p1 does not show a clear preference during anaphora resolution, p1 can appear in both subject-continuity and subject-discontinuity conditions. In other words, p1 can assume p0 positions, but not vice versa. Consequently, the instability or lack of strictness of p1 in pro-drop interpretation is expected to translate into instability in p0-cases during production.

Finally, sentence 4, marked with \approx , is a particular case. Its subject conveys a plural referent composed of two entities: *Jaime*, the referent of the previous subject (subject continuity, p0 expected) and *Víctor*, who has been previously introduced only as an object (subject discontinuity, p1 expected). In view of this contradiction, it cannot be predicted how participants will convey this reference and which subject form they will use.

Taking into consideration the above-mentioned factors, the following form is expected in each sentence (stable cases are underlined):

1. p1
2. p0
3. p0
4. ?
5. p1
6. p0
7. p0
8. p1
9. p0

5. Control group: results and discussion

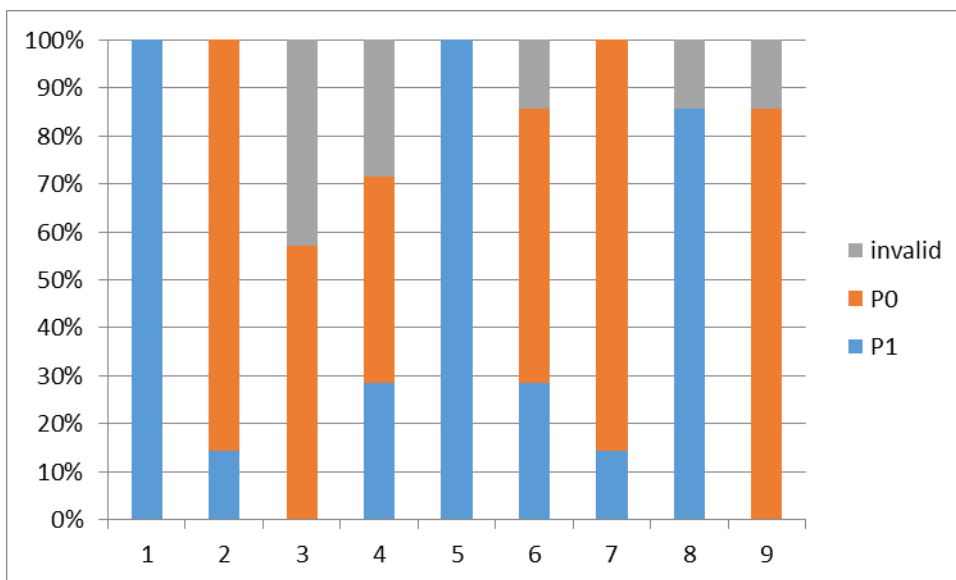
The following section will discuss the results of the group of native Spanish speakers, shown in table 2 and presented graphically in figure 3. These results are in line with the expectations: sentences affected by subject discontinuity or referent-introduction show a clear preference for p1, while sentences affected by subject continuity show a tendency towards p0. Furthermore, the usage of one form or the other is more stable depending on the sentence: as expected, p1-cases show a stronger preference for p1 than p0-cases for p0.

Table 2. Results: Ex. 1 - control group

Sentence	Expectations	P1 %	P0 %
1. >JAIME	P1	100	0
2. =JAIME	P0	14,3	85,7
3. =JAIME	P0	0	57,1
4. ≈JAIME&VÍCTOR	?	28,6	42,9
5. >RIVAL	P1	100	0
6. =RIVAL	P0	28,6	57,1
7. =RIVAL	P0	14,3	85,7
8. ≠JAIME&VÍCTOR	P1	85,7	0
9. =JAIME&VÍCTOR	P0	0	85,7

P1: overt subject / P0: null subject / >new referent / =subj. cont. / ≠subj. discontin. / ≈unclear

Figure 3. Results: Ex. 1 - control group



P1: overt subject / P0: null subject

The only factor clearly forcing the use of a form (a p1) is the introduction of a new referent (in sentences 1 and 5). As explained, a p0 is impossible in this environment since an unknown referent cannot be recovered through verb morphology and therefore cannot be occupied by *pro*. The subject-discontinuity factor (sentence 8) has also strictly disallowed the use of p0; however, one of the participants did not respect the instructions and their sentence had to be excluded from the analysis, so the percentage of p1 is not 100%.

Conversely, sentences affected by subject continuity (2, 3, 6, 7, 9) do not exhibit a stable use of p0. In sentences 2 and 7, 14% of the participants have employed a p1; in sentence 6, the use of p1 rises to 28%. Only in two of the sentences (3 and 9), no p1 is used. However, almost half of the instances of sentence 3 had to be excluded from the analysis, so the p0 preference of this sentence is not reliable. For this reason, the only clear case where the use of a p0 is strongly preferred is in sentence 9, in which 85% of the participants have used a p0 to retake the referent of sentence 8, and no p1 at all is used. This particular stability can be explained by the fact that the subject referent of this sentence is plural⁶, so the verb of this sentence has a plural form. Since there is no other

⁶ The other difference of sentence 9 is that its previous p1-sentence (i.e. the sentence where the referent of its subject is explicitly conveyed) is acted on by subject discontinuity and not by referent-

plural referent in the story, a plural verb can only refer to *Jaime&Victor*, which makes the referent much more accessible and encourages the use of a p0. This reflects, as expected, that the context has an important influence on the choice of subject forms.

All in all, the control group's results match largely with the expectations. The only case for which no prediction was made was sentence 4, where (in spite of the invalid instances that limit the robustness of the results) there is a higher percentage of p0 (42%) than of p1 (28%). See section 7 for the discussion of these results.

6. Experimental group: results and discussion

In this section, the results of the French-speaking learners of Spanish are discussed. These results are displayed in table 3 and presented graphically in figure 4, while table 4 compares the results of both the control group and the experimental group.

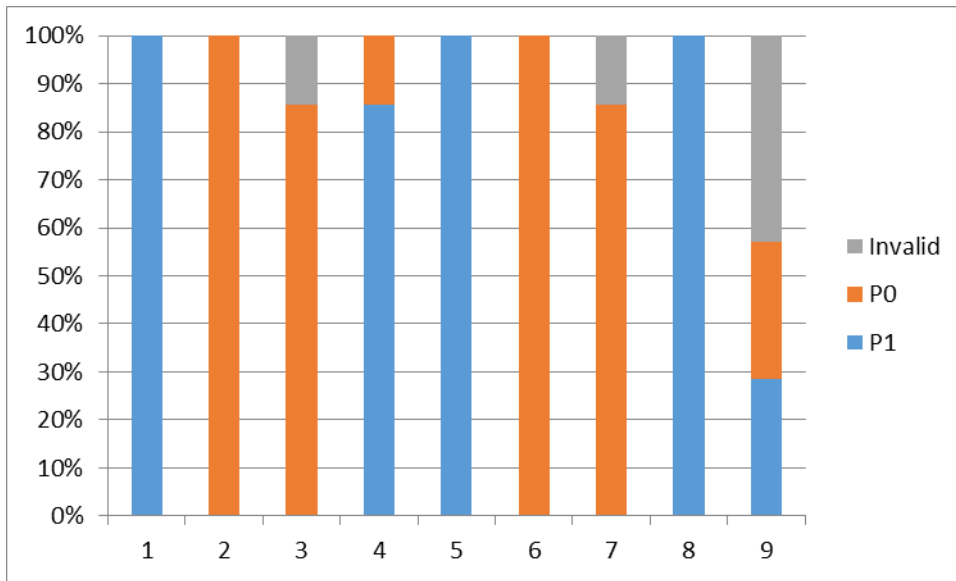
Table 3. Results: Ex. 1 – experimental group

Sentence	Expectations	P1 %	P0 %
1. >JAIME	P1	100	0
2. =JAIME	P0	0	100
3. =JAIME	P0	0	85,7
4. ≈JAIME&VÍCTOR	?	85,7	14,3
5. >RIVAL	P1	100	0
6. =RIVAL	P0	0	100
7. =RIVAL	P0	0	85,7
8. ≠JAIME&VÍCTOR	P1	100	0
9. =JAIME&VÍCTOR	P0	28,6	28,6

P1: overt subject / P0: null subject / >new referent / =subj. cont. / ≠subj. discont. / ≈unclear

introduction. Nothing seems to indicate, however, that this aspect could have an influence on the subject form.

Figure 4. Results: Ex. 1 – experimental group



P1: overt subject / P0: null subject

Table 4. Results: Ex. 1 – control and experimental group

Sentence	Control		Experim.	
	P1	P0	P1	P0
1. >JAIME	100	0	100	0
2. =JAIME	14,3	85,7	0	100
3. =JAIME	0	57,1	0	85,7
4. ≈JAIME&VÍCTOR	28,6	42,9	85,7	14,3
5. >RIVAL	100	0	100	0
6. =RIVAL	28,6	57,1	0	100
7. =RIVAL	14,3	85,7	0	85,7
8. ≠JAIME&VÍCTOR	85,7	0	100	0
9. ≈JAIME&VÍCTOR	0	85,7	28,6	28,6

P1: overt subject (blue) / P0: null subject (red) / >new referent / =subj. cont. / ≠subj. discont. / ≈not clear

As in the control group, the introduction of a new referent (sentences 1 and 5) and the change of referent (sentence 8) impede the elision of the subject and force an explicit form, since p1 is found in 100% of the cases. In the case of referent introduction, these

results are in accordance with those of Chini (2005), in which German students of Italian only conveyed new referents by means of explicit forms.

In subject-continuity sentences (namely 2, 3, 6, 7), there is, like in the control group, a preference for the p0 form. However, as against the native production, in which some instances of p1 can be found, French speakers have produced no p1 whatsoever. These results reflect that p0-cases are more stable than for native speakers and are against other studies in reference production (Chini 2005; Gullberg 2006; Leclercq/Lenart 2013; Ryan 2015) that have reported a general tendency towards over-explicitness in students, which does not seem to be found here.

The only exception is sentence 9, a p0-case where, nonetheless, two instances of p1 are observed. It indicates that this sentence exhibits a particular p1 acceptance as opposed to the complete absence of p1 in the rest of the subject-continuity sentences. Moreover, it should be noted that sentence 9 is the only case in the control group's production where a p1 is manifestly dispreferred. Nevertheless, almost half of the instances of sentence 9 in the experimental group's data had to be excluded from the analysis because participants used *Jaime* as the subject referent⁷, which leaves a very small sample of only 4 instances. Given this situation, it is impossible to draw a proper comparison between both groups or to determine a clear subject-form preference for this sentence.

Finally, another important difference between both groups can be found in sentence 4. These results are described in detail below.

7. Particular case: Sentence 4. Results and discussion

As explained on the methodological considerations, sentence 4 introduces a compound referent affected simultaneously by subject continuity and discontinuity. Due to this contradictory situation, no predictions were made about how participants would convey the subject form.

⁷ This irregularity is likely due to the fact that the actant of scene 9 was not clearly expressed in the comic, a mistake that shall be corrected in future research.

Table 4 retakes the results of both groups for sentence 4.

Table 4. Results: Exp. 1 / sent. 4 – control and experimental group

	Control		Experim.	
	P1	P0	P1	P0
4. ≈JAIME&VÍCTOR	28,6	42,9	85,7	14,3

In the control group (although percentages are not strong enough to reflect a clear tendency), results seem to suggest that both forms are equally possible, even if a p0 is slightly preferred. It could be argued that the referent *Jaime&Victor*, in spite of including a referent previously mentioned, is *per se* a different referent from that of sentence 3, *Jaime*, and that as a result it should be affected by subject discontinuity and expressed preferably by a p1. In other words, it could be considered that a p0 in this case would convey the referent *Jaime*, and not *Jaime&Victor*. However, this does not seem to be the case. Given this situation, it should be assumed that, on the one hand, the p0 in this sentence is already conveying the referent *Jaime* because of subject-continuity preferences, and that, on the other hand, the referent *Victor* is accessible enough to be added to this reference without “penalisation”, that is, without an explicit mention. This degree of accessibility can be accounted for by three factors regarding the textual environment:

- a) Context: in such a simple and limited composition, with only three characters (and the third one is introduced only afterwards), the referents are unequivocal.
- b) Distance: the referent *Victor*, albeit in the form of an object, is introduced in the previous sentence (3). A short distance is assumed to make referents more accessible (Ariel, 1994), encouraging the use of a p0.
- c) Verb form: as in sentence 9, the subject conveys a plural referent, which requires a plural verb. Since the only possible plural referent is *Jaime&Victor*, a plural verb must be necessarily linked with this referent, so it does not require a p1. This idea is supported by the observation that, after the category of person, number seems to be the most reliable feature to interpret ambiguous referents (Carminati 2005).

As for the experimental group, results indicate a very different behaviour. As against the slight preference of p0 in the control group, French speakers strongly prefer a p1 over a

p0 (85% vs. 14%). It seems that students consider *Jaime&Víctor* as a completely different referent that needs thereby to be clarified. This suggests that the referent *Víctor* is not as accessible for the experimental group as for the control group, which may indicate that the three factors exposed above do not affect L2 speakers in the same manner.

8. Discussion of the results

As it has been shown, the predicted general tendencies are shared between the two groups: both the native speakers and the students follow the expected behaviour in most cases, using a p1 to express subject discontinuity or to introduce a new entity and a p0 to convey co-reference. This suggests that the group of French speakers has successfully acquired the pro-drop tendencies related to subject-(dis)continuity bias, inasmuch as the division of roles proposed originally by Carminati (2002) and framed in Ariel's (2001) Accessibility theory occurs in the interlanguage as well.

These results stand out against other studies conducted in English speakers in which a native-like distribution was only observed in very advanced learners (Rothman 2009; cf. table 1). This could be seen as a suggestion that either our participants should be considered as highly advanced, or the acquisition of this particular phenomenon is easier for French speakers. In any case, certain limitations (such as the absence of common criteria to evaluate the language level and the lack of a division of participants according to their proficiency in the present study, due to an insufficient number of subjects), as well as the fact that previous data are generated from interpretation exercises, impede a thorough comparison.

These results are also partially against other studies discussed previously (Chini 2005; Gullberg 2006; Leclercq/Lenart 2013; Ryan 2015), inasmuch as the over-explicitness tendency reported by them is not found in the L2 participants of this experiment (except maybe in sentences 4 and 9, see discussion below). However, other factors could explain this difference: for instance, Kang (2004; 2009) claims that this tendency is stronger in oral productions than in written ones (as it is the case here). Also, the fact that the present

data are obtained from a short and controlled production, with the students following a template, may have eased their concern about a potential lack of clarity in their texts, preventing them from being too explicit.

Nevertheless, despite the fact that the predicted tendencies are shared between both groups, the behaviour observed in French speakers is not completely native-like:

On the one hand, the strength of the referential preference of subject forms differs between the groups: the control group shows a firm tendency to avoid p0 in p1-cases, whereas p0-cases present a certain degree of instability. This is not the case in the experimental group, since neither p1- nor p0-cases reflect any optionality; that is, no p1 is employed when a p0 is required, or vice versa.

It has been argued that, in view of the optionality of p1 in pro-drop interpretation, some instability in p0-cases should be expected during production; an idea that is confirmed in the control group. Indeed, the results corroborate the assumption that the use of p0 is stricter than the use of p1, which shows more variation and seems to be used more freely, but they also indicate that these strength differences are limited to native speakers. The fact that the experimental group does not show this behaviour would imply that their interpretation of p1 does not reflect any variability, but that it has, instead, a strong preference for subject discontinuity. However, previous research (see table 1) has reported that students, of both intermediate and advanced levels, show either the same or a weaker strictness (compared to natives) when linking the p1 with a disjunctive reference. Still, it is to note that differences in terms of the language of subjects and the nature of the experiments hinder a proper comparison with previous studies; but in any case, this could be an indicative that students do not behave in the same way when interpreting or producing pro-drop. During production, L2 speakers reflect a much stricter dichotomy between the two forms and seem to have attributed to each one a clear and unalienable role.

Although the analysis does not provide a vast amount of data to establish a solid explanation for this phenomenon, it is plausible to assume that, in order to properly delimit the functions of each form and facilitate the acquisition, L2 speakers need to attribute to these functions a well-defined nature not subjected to variation. It is logical

to think that a strict division of preferences, in which each element has a neatly-delimited role, is easier to learn than one affected by optionality and fluctuations. In this sense, this divergence from the native behaviour can be attributed to a strategy of hypergeneralisation. Hypergeneralisation is one of the main psycholinguistic processes underlying the interlanguage (Selinker 1972) and it consists of the application of a grammatical principle beyond its licit limits. That is to say, hypergeneralisation facilitates the acquisition of a rule by overlooking possible exceptions or, in this case, a potential variability.

On the other hand, as opposed to the general native-like behaviour, the experimental group behaves very differently in two cases:

- a) Sentence 9: in the control group, sentence 9 is the only p0-case showing a clear p1 avoidance, that is, it is the only case (apart from sentence 3, where percentages are not strong enough to show a clear tendency) affected by subject continuity in which no p1 is found. Conversely, in the experimental group, it is the only p0-case that accepts p1.
- b) Sentence 4: while the control group shows a slight preference for p0 to convey the subject referent, a p1 is strongly preferred by French speakers.

In both cases, the experimental group prefers to use a p1 to convey a plural referent that, for the control group, seems to be accessible enough to be expressed by a p0. This could suggest that our participants are actually affected by the over-explicitness tendency reported by previous studies, at least in these more problematic referents. This would be consistent with some of the conclusions of Ryan (2015), who claims that this tendency is more marked in medium levels of accessibility than in highly accessible referents. Another possibility is that the exposed factors facilitating the accessibility of the referent (see section 7) do not act equally on both groups and have little influence in the case of the students. We consider that the plurality of the verb, especially, might not affect French speakers. Since French verb morphology is not rich enough to provide unequivocal subject information, the referent is expressed in French by a non-droppable subject clitic. This implies that French speakers rely on the subject clitic and not on the verbal flexion to obtain the reference of the verb. In this line, Lardiere (2009) states that L2 students copy the lexical encoding of their L1 into their L2, while Shimanskaya &

Slabakova (2017) provided evidence that this codification transfer is more important in beginners, but that some aspects of it can remain active even for advanced students. Accordingly, it is plausible to consider that French speakers have an influence of the referent-identification strategies in their L1, and that they do not rely on the verb morphology to identify the subject as natives do. As a result, the plurality of the verb is not significant regarding the subject referent and does not induce an implicit form.

Finally, it is important to mention that in sentence 4 we have considered as p0 pure elliptic subjects, which implies that “plural-marking” pronominal forms such as *los dos* and *ambos*, even without including a noun (i.e. *los dos hombres*, *ambos amigos*) are considered as a p1. In other words, only those sentences where all the referential information is conveyed by the verb morphology are counted as p0. Besides, all the instances of p1 in both groups include a “plural-marking” determiner, i.e. there are no instances of nominal forms such as *los hombres* or *ellos* without explicitly expressing the plurality by a determiner. To put it simply, all the p0 forms reported are purely implicit subjects while all the p1 forms include a determiner expressing the plurality of the referent. This implies that the p0/p1 proportions for sentence 4 (table 4) also reflect the percentage of “plural-marking” forms. As it can be seen in table 5, which retakes the percentages for this sentence, this plural marking is therefore more frequent in the experimental group than in the control group. This provides further evidence that, on the one hand, French speakers do not rely on pure verb morphology to convey referential information as strongly as natives do and, on the other hand, that this different lexical encoding seems to be triggered by L1 transfer, since students systematically express the plurality of the referent in the subject, as they would do in French.

Table 5. Ex. 1 / sent. 4 - percentage of plural-markers (p-m)

	Control		Experim.	
	p-m YES	p-m NO	p-m YES	p-m NO
4. ≈JAIME&VÍCTOR	28,6	42,9	85,7	14,3

9. Final conclusion

All in all, our data indicate that French speakers have successfully acquired the explicit/implicit distribution dictated by subject-(dis)continuity bias. Results suggest

that the experimental group understands the different referential tendencies of the two subject forms and performs accordingly, which indicates that they have incorporated to their interlanguage not only the syntactic licensing of null forms, but also the pragmatic constraints of their usage.

Nonetheless, some deviations can be observed in their performance: it has been argued that these differences from the native behaviour may be caused, on the one hand, by a L1-strategy transfer regarding referent identification or an over-explicitness tendency and, on the other hand, by a certain degree of hypergeneralisation with respect to the role assigned to each subject form.

These findings support the assumption that the pragmatic distribution of null and overt subjects is more problematic than the syntactical licensing of pro-drop (since there is not a single case of a subject form produced in an ungrammatical position), and it is therefore acquired in later stages, as stated by Rothman (2009). Nonetheless, our data seem to indicate that the acquisition of the referential bias of Spanish subject forms requires less effort than what previous studies have reported. This could be due to differences in interpretation and production of pro-drop, but it might also indicate that French and English speakers do not acquire pro-drop in the same way.

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