Mood Selection in Relative Clauses by French–Spanish Bilinguals: Contrasts and Similarities between L2 and Heritage Speakers

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Abstract: In this paper, we explore three issues related to the acquisition of mood selection in Spanish relative clauses by second language (L2) and heritage (HL) speakers of Spanish: (1) whether HL speakers are more native-like than L2 learners; (2) whether the speakers' performance differs depending on task modality (written vs. oral), since HL speakers are known to perform better in oral tasks and L2 learners tend to do better in written tasks; and (3) whether knowledge of French as an L1/dominant language (DL) has an impact on the acquisition of Spanish subjunctive, since both languages include this mood in their grammars, but it is used more productively in Spanish. Results from a sentence combination felicity task (SCFT) in Spanish—in written and oral forms—and a written elicited production task (EPT) in French, administered to advanced L2 and HL speakers of Spanish whose L1/DL is French and two monolingual (Spanish and French) control groups, revealed that L2 learners pattern more closely with the control group than HL speakers in the SCFT, both written and orally. In the EPT, all bilingual speakers display higher levels of subjunctive use than the control group, showing a potential influence from the L2/weaker language on the L1/DL.

1. Introduction

The contrast between the indicative and subjunctive moods in Spanish relative clauses has garnered significant attention in the fields of First Language (L1) (Blake 1983; Pérez-Leroux 1998), Second Language (L2) (Borgonovo et al. 2015), and Heritage Language (HL) (Montrul 2007; Montrul and Perpiñán 2011) Acquisition. With respect to L1, it has been found that, even though children acquire Spanish subjunctive morphology early in the language acquisition process, they only master mood selection in relative clauses around the age of 12 (Blake 1983), showing a correlation between cognitive and linguistic development (Pérez-Leroux 1998). This contrast is also lost early in attrition (Lipski 1993; Lynch 1999; Merino 1983; Silva-Corvalán 1994, 2003; Zentella 1997) and is subject to variation among native speakers (Blake 1983; Koenig 2016; Murillo 2000). Previous studies comparing L2 and HL speakers, have found that HL speakers, who acquire the language from birth, are not necessarily more native-like than L2 learners when it comes to structures that are acquired late, as is the case with mood selection in Spanish relative clauses (Montrul and Perpiñán 2011). Furthermore, previous research has also identified that, in experimental research, some of the differences between these two groups of speakers may be task-induced. Specifically, L2 learners, who have received more

instruction in the classroom, tend to obtain better results in tests that maximize explicit or metalinguistic knowledge (e.g., written tasks), whereas HL speakers, who typically acquire their heritage language at home, are more accurate in tests that measure implicit knowledge (e.g., oral tasks) (Bowles 2011; Montrul 2012; Montrul et al. 2008). This finding will be discussed in more detail in Section 2.2.

In turn, tapping into language typology, it has been discussed whether the presence of the subjunctive mood in the L1 represents an advantage in the L2 acquisition of mood selection in Spanish relative clauses. Specifically, when comparing L1 French (L1FR) with L1 English (L1EN) speakers learning Spanish as an L2, it has been found that L1FR speakers acquire the indicative-subjunctive contrast faster and pattern more closely with Spanish native speakers than L1EN speakers (Borgonovo et al. 2008; Boudreau 2007). However, as Boudreau (2007) claims, differences could be, again, task-induced, since the participants in her study performed different tasks. Namely, the L1FR group completed a written sentence combination felicity task (Boudreau 2007), while L1EN participants completed an appropriateness judgment task (Borgonovo et al. 2008). When comparing L1EN learners of Spanish with French as a third language (L3) with L1EN learners with no knowledge of French, Restorick Elordi (2012) found indications of positive cross-linguistic influence from the L3 to the L2, suggesting that L2 learners are at an advantage acquiring an interface phenomenon if they are also learning an L3 that presents the same phenomenon. However, it is important to take into account that, even though both French and Spanish include the subjunctive mood in their grammars, subjunctive is very productive in Spanish, whereas French is currently in the process of losing this mood (Menanteau 1986). Section 2.1 includes further details on the use of the subjunctive mood in French as well as in Spanish.

In order to further explore these issues, in this study we analyse mood selection in Spanish relative clauses in two groups of speakers, HL speakers and L2 learners, whose L1/dominant language (DL) is French. In addition, in order to examine possible task effects, depending on the modality of the task, we compare results from a written and an oral sentence combination felicity task (SCFT). Finally, to explore whether knowledge of French as an L1/DL has an impact on the acquisition of Spanish subjunctive, we compare participants' performances in both SCFTs with the results of a written elicited production task (EPT) in French.

The rest of the paper is organized as follows: Section 2 provides further details about mood selection in Spanish and French, and discusses previous findings regarding the acquisition of this phenomenon, with special attention to studies that explored how task modality may have yielded differences in performance; Section 3 presents the methodology of our study, including our research questions and hypotheses, participant information and materials; Section 4 includes the results and discussion, and, finally, a brief conclusion of our findings is presented in Section 5.

2. Mood Selection in Spanish Relative Clauses

2.1. Mood Selection in Spanish and French Relative Clauses

In Spanish relative clauses, the use of the subjunctive is syntactically optional, since these sentences are grammatical regardless of whether the subordinate verb is conjugated in the indicative or the subjunctive (Pérez-Leroux 1998).[1] In these sentences, mood selection is guided by the interpretation of the Determiner Phrase (DP) modified by the relative, which, in turn, depends on the [+/− existential] status of the referent. As such, as we can see in (1), existential referents trigger the use of the indicative, whereas non-existential referents require the use of the subjunctive.

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[1]   The examples in (1) are taken from Blake (1983). SBJV stands for subjunctive, IND for indicative.

1. a. *Busco*   *una mujer que*   *tenga dinero.*   [−existential]
        Look.for-PRS.1SG   a woman that   has-SBJV money.
        'I'm looking for a woman with money.'

    b. *Busco*   *a un hombre que*   *es rico.*   [+existential]
        Look.for-PRS.1SG   a man that   is-IND rich.
        'I'm looking for a man who is rich.'

As Blake (1983, p. 22) states, "the existence of the referent is frequently dependent on the individual's own subjective interpretation," which necessarily leads to variation in mood selection, both across and within individuals. However, as the author further explains, "the data show that adults and children concur substantially in their judgments of the existential status of the referent." In turn, in addition to the [+/− existential] status of the referent, we find certain contexts and operators in the language that also allow for the non-existential interpretation of the antecedent DP. In (2) and (3), we can see the contrast between a context that rejects the non-specific interpretation of the DP (2) and a context that allows for it (3).

2. ** Tengo*   *un libro que*   *me interese.*
    have-PRS.1SG   a book that   me interests-SBJV
    'I have a book I might be interested in.'

3. *Puedo*   *tener*   *un libro que*   *me interese.*
    Can-PRS.1SG   have   a book that   me interests-SBJV
    'I may have a book I might be interested in.'

In (2), the choice of a lexical verb such as *tener* ('to have'), which is not a modal operator, prevents the non-specific interpretation of the referent, in this case *the book*, which results in an inappropriate use of the subjunctive. In contrast, the presence of a modal verb in (3) opens up the possibility of a non-specific interpretation of the referent and, therefore, the use of the subjunctive is warranted in this sentence. Besides modal verbs, like *poder* ('can') (3), we find other operators that induce the non-specific interpretation of the indefinite DP in Spanish: negation, interrogation, future tense, strong intensional predicates and imperatives (Bosque 1999, p. 1). For the purpose of this study we focus on two of them, namely, future (4) and intensional predicates, that is, verbs with prospective lexical information (*buscar* ('to look for'), *aceptar* ('to accept'), *pedir* ('to ask for'), *esperar* ('to hope'), *querer* ('to want'), *intentar* ('to try'), *planear* ('to plan'), *perseguir* ('to pursue'), *merecer* ('to deserve'), *necesitar* ('to need'), etc.) (5). The future is the context that has the closest association with the indicative mood, while intensional verbs are more related to the subjunctive, as shown in previous studies (Boudreau 2007; Restorick Elordi 2012; among others).

4. *Contrataremos*   *una persona*   *que*   *sepa*   *idiomas.*
    hire-FUT.1PL   a person   that   knows-SBJV   languages
    'We will hire a person who can speak several languages.'

5. *Busco*   *un inversor que*   *tenga dinero.*
    Look.for-PRS.1SG   an investor that   has-SBJV money
    'I am looking for an investor that has money.'

The French verbal system, on the other hand, also presents this modal distinction in relative clauses, but is much less conservative than Spanish in its implementation. A survey conducted by Menanteau (1986) revealed that about 75% of the native speakers who participated in the study considered that the choice between subjunctive and "other mood" in sentences such as those presented in (6) did not necessarily trigger a difference in meaning.

6.　　a.　　*Je cherche*　　　　　*quelqu'un qui*　　*soit parisien.*
　　　　　　　I look.for-PRS.1SG　someone that　　is-SBJV parisian
　　　　　　　'I am looking for someone that is Parisian.'

　　　　b.　　*Je cherche*　　　　　*quelqu'un qui*　　*est parisien.*
　　　　　　　I look.for-PRS.1SG　someone that　　is-IND parisian
　　　　　　　'I am looking for someone that is Parisian.'

From these results, Menanteau (1986, p. 73) concluded that, in French relative clauses, the distinction between the two moods is no longer semantically relevant, and that the subjunctive is a free variant used to mark membership of, or association with, a more prestigious group. This loss of the subjunctive in French relative clauses has also been reported in other studies (Boudreau 2007; Lareau 2008).

2.2. Studying Mood Selection in L2 and Heritage Language Speakers: A Word on Task Effects

Previous studies have identified that, in experimental research, some of the differences between L2 and HL speakers may be task-induced. As mentioned in Section 1, L2 learners who have received more instruction in the classroom tend to obtain better results in tests that maximize explicit or metalinguistic knowledge (e.g., written tasks), whereas HL speakers, who typically acquire their heritage language at home, are more accurate in tests that measure implicit knowledge (e.g., oral tasks) (Bowles 2011; Montrul 2012; Montrul et al. 2008).

More specifically, Montrul et al. (2008) compared HL and L2 learners of different levels of Spanish proficiency, ranging from low to advanced. In their study, mastery of gender agreement was explored through three different tasks: written comprehension, written recognition, and oral production. Their results showed that HL speakers performed better in the oral task, while L2 learners outperformed HL speakers in both written tasks. The authors suggest that these differences are related to the type of knowledge that each task taps into—namely, the oral task is "more representative of fast, implicit and automatically processed knowledge (typically acquired early in childhood)," while the written tasks reflect ability with "metalinguistic, explicit knowledge (typically acquired later)" (Montrul et al. 2008, p. 541). According to Montrul et al. (2008, and following Paradis 2004), L2 learners use their explicit knowledge in the written tasks to compensate for their lack of implicit knowledge. However, in the oral task, they are unable to use the same strategy as they do not have enough time to do so.

In the same vein, using a battery of five tests developed by Ellis (2005) to tease apart implicit and explicit knowledge in L2 learners, Bowles (2011) explored the differences between native speakers of Spanish and HL speakers and L2 learners. Three of the five tasks relied on implicit knowledge—an oral imitation task, an oral narration task and a timed grammaticality judgment task (GJT)—while the other two, a metalinguistic awareness task and an untimed GJT, were designed to tap explicit knowledge. The native group scored close to the maximum in all tasks, with the exception of the metalinguistic awareness task, which indicates that, to a certain extent, monolingual speakers of a given language do not need metalinguistic awareness in their native language in order to master it. As expected, HL speakers scored significantly higher than L2 learners in the three tasks that relied on implicit knowledge, while L2 learners outperformed HL speakers in the metalinguistic awareness task. More specifically, the highest score for the HL group corresponded to the oral narration task, which can be considered the most implicit task in the study.

As shown in these studies, the degree of explicitness and task modality (oral vs. written) seem to have an impact on the performance of the different groups of speakers (HL vs. L2). Modality seems to be closely related to the degree of explicitness of a task, oral tasks being more implicit than written tasks. However, even within each mode, we find different degrees of explicitness. For example, an oral narration task is more implicit than an oral repetition task, which, in turn, is more explicit than an oral GJT. This gradation also applies to written tasks. Montrul and Perpiñán (2011) used two different kinds of written tasks—two elicited morphology recognition tasks and two sentence conjunction judgment tasks—to test knowledge of tense aspect and mood morphology in HL

speakers and L2 learners. Results show that, on the one hand, the L2 learners were more accurate than the HL speakers in the morphology recognition tasks, which benefit from active use of metalinguistic knowledge. On the other hand, HL speakers were more target-like in the conjunction judgment task, which is a more implicit task. Thus, we can see that the degree of explicitness of the task also varies within a given mode and that different tasks may influence results and trigger differences across populations—in this case, HL speakers and L2 learners—depending on their degree of explicitness, without altering the task mode.

In turn, van Osch and Sleeman (2016) also explored the differences between LH and L2 learners of Spanish in their use of the indicative and subjunctive mood, this time in the Netherlands, with speakers who had Dutch as their L1 or DL. Participants were administered an oral elicited production task in which they had to complete each sentence with a verb conjugated in the appropriate mood, and their results were compared to those from a GJT that participants had previously completed. In contrast with previous findings, which come mainly from studies carried out in the U.S. with L1 English speakers, Dutch HL speakers did not perform better in the oral task than in the GJT. Van Osch and Sleeman suggest that these results may be accounted for by the differences in the social contexts of the Spanish HL population in the U.S., on the one hand, and in the Netherlands on the other hand. Due to the smaller size of Hispanic communities in the Netherlands, HL speakers have fewer opportunities to speak their heritage language outside of their home. Additionally, the multilingual nature of their education system may have enhanced the metalinguistic knowledge of both HL and L2 speakers on a more general level (van Osch and Sleeman 2016, p. 15).

3. Our Study

In order to gain further insight into these issues, we present a study that analyses mood selection in relative clauses by two types of French–Spanish bilinguals, namely L2 learners and HL speakers. Specifically, we presented participants with a sentence combination felicity task (SCFT) in Spanish and a written elicited production task (EPT) in French. As discussed in the previous section, it has been argued that some of the differences between HL and L2 speakers in previous research may have been task-induced. In an attempt to further explore this issue, we administered our SCFT in both written and in oral form. In contrast with previous research using different types of tasks—with varying degrees of explicitness—and, often, different modalities as well (some tasks were presented orally and others were presented in written form), this study focuses on the issue of modality by keeping the task constant and only altering the mode in which the SCFT stimuli were presented to our participants. In the remainder of this section, we present our research questions and hypotheses, as well as detailed information about our participants and the methods and materials of our experimental tasks.

3.1. Research Questions

As discussed in Section 1, one of our research goals is to compare L2 and HL speakers whose L1/dominant language (DL) is French by examining mood selection in Spanish relative clauses. We also intend to examine possible task effects favouring either L2 or HL speakers depending on the modality of the task (written vs. oral). Finally, we aim to analyse whether knowledge of French as an L1/DL has an impact on the acquisition of Spanish subjunctive. In order to meet these objectives, we set out to answer the following research questions (RQ):

RQ 1. *Will the two experimental groups (HLSP and L2SP) differ from each other and from the Spanish native control group in terms of their mood selection patterns in Spanish?*

Based on previous studies that examine and compare these two groups, we predict that HLSP and L2SP will differ from the native control group. Specifically, we expect differences between these two groups both overall and with respect to their performance in the different types of tasks (see RQ 3, below).

RQ 2. *Will there be a positive correlation between the use of the subjunctive mood in the production task (Task 2) and the results of the sentence combination tasks (Tasks 1 and 3)? In other words, will there be an observable influence of the L1 on the L2, or vice versa?*

Based on previous studies showing positive cross-linguistic influence, we predict that there will be a positive correlation between an increased use of the subjunctive in Task 2 and higher acceptance rates of clauses using the subjunctive mood in Task 1. Furthermore, since the subjunctive is more productive in Spanish than in French (see Section 2.1), experimental groups (L2SP, HLSP) may be more inclined to use the subjunctive mood in Task 2 than the control group (L1FR with no knowledge of Spanish), which would reveal an influence from Spanish in their L1/dominant language.

RQ 3. *Will L2SP and HLSP speakers perform differently in the oral and written tasks?*

Based on previous research showing differences in the performance of HL and L2 speakers depending on the modality of the task (see Section 2.2), we predict that L2SP speakers will perform better in the written task as it favours explicit knowledge (Task 1), while HLSP will do better in the oral task (Task 3) as it favours implicit knowledge.

3.2. Participants

Four groups of participants took part in this study: two experimental groups and two control groups (see Table 1, below). The experimental groups consisted of: French–Spanish bilinguals (HLSP) and L2 learners of Spanish whose L1 and dominant language was French (L2SP). All HLSP participants had acquired Spanish from birth and all L2SP participants began learning Spanish in a formal setting after puberty. None of the heritage participants were schooled in Spanish or had received formal Spanish instruction. Both experimental groups had an advanced level of proficiency in Spanish, as evidenced by the results of a language proficiency test (see Section 3.3., below). In addition, one group of native speakers of Spanish with little or no knowledge of French (L1SP) and one group of native speakers of French with little or no knowledge of Spanish (L1FR) served as a control. All participants gave their informed consent for inclusion before they participated in the study. The study was conducted in accordance with the Declaration of Helsinki, and the protocol was approved by the Ethics Committee of Research of the faculty of Arts and Sciences (CERFAS) of the Université de Montréal (code: CERFAS-2014-15-049).

Table 1. Participant information for each task.[2]

Group	Task 1	Task 2	Task 3
L2SP	$n = 10$ [Median age = 27.7]	$n = 18$ [Median age = 31.5]	$n = 12$ [Median age = 31.25]
HLSP	$n = 10$ [Median age = 25.9]	$n = 13$ [Median age = 24.7]	$n = 10$ [Median age = 21.9]
L1FR		$n = 14$ [Median age = 40.2]	
L1SP	$n = 11$ [Median age = 41.5]		$n = 21$ [Median age = 37]

L2SP: L2 learners of Spanish whose L1 and dominant language is French; HLSP: French–Spanish bilinguals; L1FR: native speakers of French with little or no knowledge of Spanish; L1SP: native speakers of Spanish with little or no knowledge of French.

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2   Most participants from the experimental groups completed all three tasks. However, some participants only completed two out of the three tasks (either Tasks 1 and 2, or Tasks 2 and 3), hence the difference in the composition of groups from task to task.

Table 2 presents a summary of the characteristics of each experimental group, including the age of onset of acquisition for each of the two languages involved in the study as well as the type of input and acquisition setting in each case.

Table 2. Participant information based of Age of Acquisition (AoA) of Spanish and French, acquisition setting, and input mode.

Group	AoA of Spanish	AoA of French	Spanish Acquisition Setting	Spanish Input Mode
L2SP	>15 years	since birth	instructed (classroom)	written and aural (literacy)
HLSP	since birth	since birth (simultaneous)//4–7 years (sequential)	naturalistic (home)	aural

L2SP: L2 learners of Spanish whose L1 and dominant language is French; HLSP: French–Spanish bilinguals.

As indicated in Table 2, the HLSP speakers of our study presented two different profiles in terms of their age of onset of bilingualism: simultaneous, who were exposed to both French and Spanish from birth, and sequential, who were first exposed to French between the ages of four and seven. This difference in terms of age of onset of bilingualism was not expected to be a relevant variable, since this study focuses on a late acquisition phenomenon. However, in order to present a more complete picture of our heritage speakers, these two profiles were taken into account in the codification and analysis of our data even if the type of bilingualism (simultaneous or sequential) was not part of the original experimental design. Relevant findings with respect to this variable (type of bilingualism) are discussed in detail in Section 4.

3.3. Experimental Design

All participants had to fill out a language background questionnaire in order to guarantee that the linguistic profiles of all participants matched the requirements of the study. All experimental groups also completed two Spanish proficiency tests. First, they completed a general proficiency test, based on the Diplomas de Español como Lengua Extranjera (DELE, Certificate of Spanish as a Foreign Language) exam, which has been widely used in recent second language acquisition (SLA) studies (Montrul 2007; Montrul et al. 2008; Montrul and Perpiñán 2011; among others). This test was followed by a morphology recognition task (following Boudreau 2007; Slabakova and Montrul 2002; among others), which measured the participants' ability to recognize the indicative–subjunctive contrast.

In addition, three experimental tasks were administered: a sentence combination felicity task in Spanish (modified from Borgonovo et al. 2008; Boudreau 2007), both in written (Task 1) and in oral form (Task 3), and an Elicited Production task in French (Task 2). Tasks 1 and 3 were completed in Spanish by all experimental groups and the Spanish control group, and Task 2 was completed in French by all experimental groups and the French control group.

3.3.1. Task 1: Sentence Combination Felicity Task—Written Version

The goals of this task, inspired by similar ones from previous studies (Borgonovo et al. 2008; Boudreau 2007; Montrul 2007; Montrul and Perpiñán 2011), were: (1) to analyse mood selection patterns in the Spanish grammars of HL and L2 speakers; and (2) to test whether participants were able to associate each mood (indicative or subjunctive) to a given interpretation of the antecedent DP (either specific or non-specific) (Borgonovo et al. 2008). The task included 54 pairs of sentences (juxtaposed, adversative, disjunctive, and subordinate), 36 of which were experimental items and the remaining 18 were distractors. The first sentence of the experimental items always contained a main clause containing a DP that was modified by a relative clause. The second sentence in the item contextualized the information of the first sentence and determined whether the DP was specific or

not. An example with an intensional verb (*buscar* 'to look for') is shown in (7). The first sentence alone (7a) could be grammatical either with the indicative or the subjunctive mood, but when combined with the sentence in (7b), only the indicative mood would be grammatical, since it calls for a specific interpretation of the DP.

7. a. *Buscamos un restaurante que no cuesta/cueste muy caro.*
'We are looking for a restaurant that is-IND/SBJV not too expensive.'

   b. *Me han dicho que se llama "El Marino".*
'I was told its name was "El marino".'

The task included three different contexts (future, intensional, and modal), with 12 items per context, and four conditions per context: Appropriate Indicative (AI), Inappropriate Indicative (II), Appropriate Subjunctive (AS), and Inappropriate Subjunctive (IS). The following examples present an appropriate subjunctive (AS) item with a modal context in (8), an inappropriate indicative (II) item with an intensional context in (9), and an inappropriate subjunctive (IS) item with a future context in (10). The complete list of experimental items from Task 1 is available in Appendix A.

8. a. *Debes leer un libro que te permita comprender el subjuntivo.*
'You must read a book that allows-SBJV you to understand the subjunctive mood.'

   b. *En esta biblioteca seguro encontrarás alguno.*
'You will probably find one in this library.'

9. a. * *Quiero una habitación que tiene mucha luz,*
'I want a room that is-IND very bright.'

   b. *pero solo hay habitaciones oscuras en este edificio.*
'but there are only dark rooms in this building.'

10. a. * *Veremos una película que esté nominada a un Oscar.*
'We are going to see a movie that is-SBJV nominated for an Oscar.'

    b. *Se titula* Boyhood.
'It's called *Boyhood*'.

Participants had to read the sentences and judge, in each case, whether they could have been uttered by a Spanish native speaker. To do so, they had to circle on a 5-point Likert scale whether they were "Sure that it could NOT have been uttered by a native speaker" (−2), "Sure that it could have been uttered by a native speaker" (+2), or any option in between. The middle point, which was marked as 0, corresponded to "I don't know" or "I am not sure". Participants were instructed to avoid 0 as much as possible. Additionally, following Alba de la Fuente (2012), if they assigned a negative score to an item (−2 or −1), they were further instructed to correct the part of the item that they considered problematic. This additional instruction allowed us to verify whether the negative judgments were really motivated by an incorrect use of the subjunctive/indicative mood or by other factors, such as lexical limitations (Alba de la Fuente 2012, p. 128).

3.3.2. Task 2: Elicited Production Task

In the elicited production task (Task 2), participants had to fill in the blank of a series of sentences with the correct tense—and mood—of the verb provided in parenthesis. The experimental items were a French translation of the items used in tasks 1 and 3. In order to facilitate the analysis, only verbs

that have different forms in the indicative and the subjunctive were selected, which required a few minor modifications to some items. For example, the original test in Spanish included the verb *criticar* ('to criticize'), which was reworded as *faire une critique* ('to do/make a criticism'). Two examples of Task 2 items are shown in (11) and (12). The complete list of experimental items from Task 2 is available in Appendix B.

11.   a.   *Tu dois lire un livre qui te _____ (permettre) de comprendre le subjonctif.*
             'You must read a book that _____ (allow) you to understand the subjunctive mood.'

       b.   *Dans cette bibliothèque tu en trouveras sûrement un.*
             'You will probably find one in this library.'

12.   a.   *Nous allons voir un film qui _____ (être) nominé pour un Oscar.*
             'We are going to see a movie that _____ (is) nominated for an Oscar.'

       b.   *Il s'intitule* Boyhood.
             'It's called *Boyhood*'.

The goal of this task, which is a modified version of the one used by Boudreau (2007), was to gain further insight on the distribution of indicative and subjunctive in these structures in French and to explore whether the participants' responses were comparable to the Spanish distribution of the two moods. Thus, unlike Boudreau (2007), this task was administered to all our experimental groups (HL and L2) and not just the control group (L1FR).

3.3.3. Task 3: Sentence Combination Felicity Task—Oral Version

This task was identical to Task 1, except for the way in which stimuli were presented to the participants. While Task 1 was presented in written form, both the instructions and stimuli were presented orally in Task 3. The purpose of this task was, first, to analyse mood selection patterns in the Spanish grammar of the speakers when speakers are constrained to rely more strongly on their implicit knowledge and, in combination with the results from Task 1, to explore whether the mode in which the tasks were presented—written or oral—had an effect on participants' responses. As mentioned in Section 1.1, written tasks allow participants to make use of their explicit knowledge and metalinguistic skills, as items can be read many times and participants can take more time to think about their responses. In turn, oral tasks are considered to make participants depend more on implicit knowledge as they have to react faster and, normally, stimuli are not available to access on demand.

For the development of Task 3, the items from Task 1 were digitally recorded by a female native speaker of Spanish from Mexico. The recordings were then segmented by sentence, so that they could be presented one at a time within each item. Another speaker, a male near-native speaker of Spanish, was digitally recorded for the instructions. The introduction of two noticeably different voices was done in order to make sure that participants were able to clearly distinguish the instruction segments of the recording from the experimental items.

The task was administered through a web experiment platform developed using the jsPsych library (De Leeuw 2015) and the participants were instructed to use headphones and complete the entire experiment without interruption. In order to make sure that the participants understood the instructions and that there were no technical problems, five practice items were presented at the beginning of the task. For each item, the audio stimulus was played twice, after which a 5-point scale appeared on the screen. Participants had to indicate their judgment by clicking with their mouse on their selected answer (from −2 to 2). As in Task 1, they also had to correct what they considered to be the error in sentences that received a negative score. In these cases, the written item appeared on the screen and they had to correct the sentence using their keyboard. Again, this correction allowed us to verify that the negative judgments were really motivated by an incorrect use of the

subjunctive/indicative mood. As was the case in Tasks 1 and 2, there were no time limitations on this task and participants could take as long as they needed to provide a response.

4. Results and Discussion

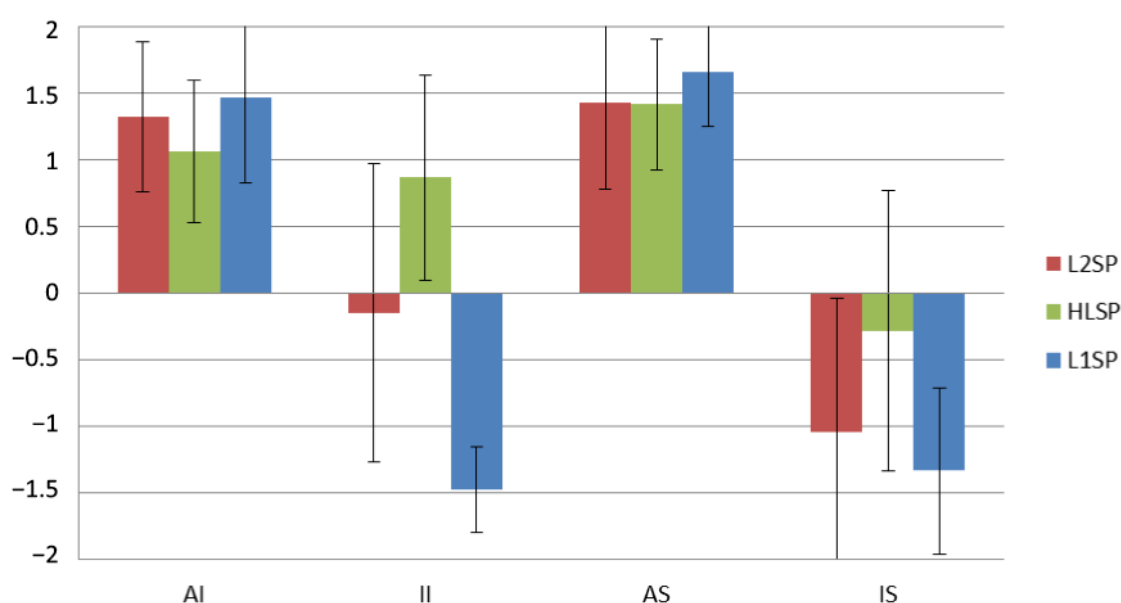### *4.1. Sentence Combination Felicity Tasks (in Spanish)*

4.1.1. Task 1—Written Version

In this task, participants had to rate the acceptability of a series of sentence pairings using a 5-point Likert scale, as indicated in Section 3.3.1. The results of this task reveal that, as expected, the native group rejected inappropriate uses of both moods and accepted their corresponding appropriate counterparts. The L2 group also presented this pattern of accepting appropriate conditions and rejecting inappropriate conditions, but at lower rates than the L1 control group. Also, the inappropriate subjunctive (IS) showed higher rejection than the inappropriate indicative (II) in this group, thus revealing more uncertainty in the II condition than in the IS condition. Finally, the HL group showed rejection of the IS condition, but not of the II condition.

Figure 1 shows the overall results of the three experimental groups.

The results of a repeated measures ANOVA reveal main effects for "mood" (($F(1, 28) = 5.541$, $p = 0.026$)), "appropriateness" ($F(1, 28) = 146.950$, $p < 0.001$) and "group" (($F(2, 28) = 4.380$, $p = 0.022$). The statistical analysis also revealed main interactions between "mood" and "group" ($F(2, 28) = 4.933$, $p = 0.015$), between "appropriateness" and "group" ($F(2, 28) = 12.928$, $p < 0.001$), between "mood" and "appropriateness" ($F(1, 28) = 29.797$, $p < 0.001$), and between "mood", "appropriateness" and "group" ($F(2, 28) = 3.955$, $p = 0.002$). Pairwise comparisons using the Bonferroni correction reveal significant differences between the L1SP and the HL groups ($p = 0.019$).

There was no main effect for "context" (intensional, future, modal) ($F(2, 56) = 2.876$, $p = 0.065$). A main interaction between "mood" and "context" was found ($F(2, 56) = 2.828$, $p < 0.001$), but none of the other interactions—either with "appropriateness" or with "group"—were significant and pairwise comparisons using the Bonferroni correction did not reveal any further statistically significant differences among the three contexts.

Figure 1. Overall results. Task 1—Sentence combination felicity task (written version). L2SP: L2 learners of Spanish whose L1 and dominant language is French; HLSP: French–Spanish bilinguals; L1SP: native speakers of Spanish with little or no knowledge of French. AI: appropriate indicative; II: inappropriate indicative; AS: appropriate subjunctive; IS: inappropriate subjunctive.

These results indicate that, overall, the appropriate (A) and inappropriate (I) conditions were treated differently, as were the two moods, and that the experimental groups behaved differently. Specifically, the HL group, but not the L2 group, differed significantly from the L1SP control. The different treatment of A and I conditions was expected and is apparent for all groups. However, and in contrast with the other two groups, the HL group failed to reject the II condition, thus indicating a general acceptance of the use of indicative in these relative clauses. Furthermore, the HL group tended to rate inappropriate uses of both moods more highly than both the L2SP and the L1SP groups. In terms of "context," participants did not treat the three contexts (intensional, future, mood) differently enough to reach statistical significance.

Finally, as the reader may recall, participants were asked to provide corrections for the items that were judged to be incorrect. All groups behaved very similarly in terms of their corrections and, as expected, the vast majority of the item modifications implied replacing the inappropriate mood with the appropriate one, thus validating the premise that, when participants assigned a negative score to a given item, they were indeed reacting to the inappropriateness of the verb mood in the relative clause. In a few cases, instead of replacing the inappropriate mood of the verb, participants modified another element in the sentence in an attempt to make it align with the [+/− existential] status of the referent, which also suggests that participants were reacting to the inappropriateness of the verb mood. Examples of this include the use of conditional in items with a non-existential referent, as shown in example (13) from Task 1, and clause reduction, avoiding the use of either indicative or subjunctive, as in example (14) from Task 3.

13. Original item (Participant HLSIM07)
Compraré un traje que va bien con el tuyo, si encuentro alguno en esta tienda.
'I will buy a suit that matches yours, if I find any at that store.'

Correction
Compraría un traje que va bien con el tuyo, si encuentro alguno en esta tienda.
'I would buy a suit that matches yours, if I find any at that store'.

14. Original item (Participant L1SP02)
En esta biblioteca puedes leer un libro que esté escrito en alemán. Hay muchos en el segundo piso.
'In this library, you can read a book that is written in German. There are many on the second floor.'

Correction
En esta biblioteca puedes leer libros escritos en alemán. Hay muchos en el segundo piso.
'In this library, you can read books written in German. There are many on the second floor.'

The few remaining cases either included modifications that were unrelated to the mood of the relative verbs (e.g., the addition of a comma or other punctuation marker, the replacement of one lexical item, etc.) or did not contain any modifications. The corrections provided by participants were essentially the same in Tasks 1 and 3, both in terms of the types of correction applied (mood changes, tense changes, clause reductions, no modification, etc.) and their distribution.
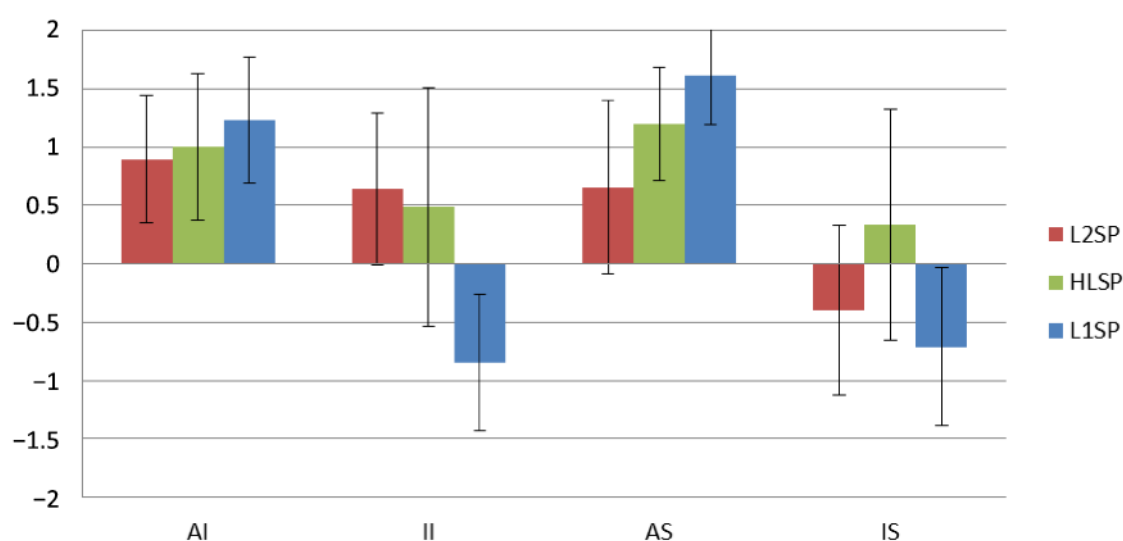
4.1.2. Task 3—Oral Version

As indicated in Section 3.3, above, Tasks 1 and 3 were identical, except for the way in which stimuli were presented to the participants. Task 1 was presented in written form and Task 3 was presented orally. The purpose of this was to explore whether the mode in which the tasks were presented—written or oral—had an effect on participants' responses. We first present the results of Task 3 and then compare them with the results of Task 1.

The results of a repeated measures ANOVA performed on these data reveal the main effects for "appropriateness" ($F_{(1, 40)} = 63.641$, $p < 0.001$) and "group" ($F_{(2, 40)} = 4.517$, $p = 0.017$). No effect was found for "mood" ($F_{(1, 40)} = 2.157$, $p = 0.150$) or "context" ($F_{(4, 80)} = 1.080$, $p = 0.344$). There were,

however, significant interactions between "mood" and "group" ($F(2, 40) = 11.890$, $p < 0.001$), between "mood" and "appropriateness" ($F(1, 40) = 10.938$, $p = 0.002$), and between "mood" and "context" ($F(2, 80) = 9.430$, $p < 0.001$). The interaction between "appropriateness" and "group" was also significant ($F(2, 40) = 14.650$, $p < 0.001$).

As in Task 1, pairwise comparisons using the Bonferroni correction reveal significant differences between the L1SP and the HL groups ($p = 0.014$).

As we can see in Figure 2, the L1SP group displays the expected acceptance and rejection pattern, which also matches the distribution found in Task 1. With respect to the other two groups, the HL group displays an overall acceptance of all conditions, albeit at varying rates, and the L2 group displays a rejection of inappropriate sentences, but only in the IS condition. Given the fact that no effect was found for "context" in either Task 1 or 3, this variable will not be further discussed.
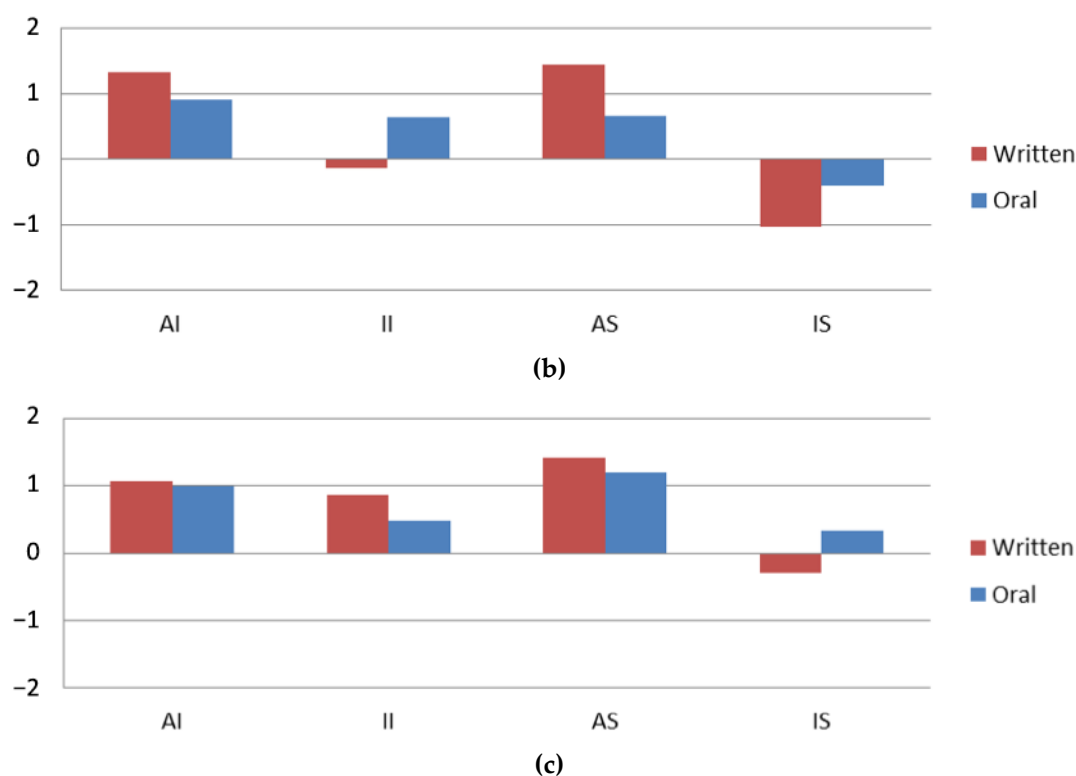

Figure 2. Overall results. Task 3—Sentence combination felicity task (oral version).

4.1.3. Task 1 (Written) vs. Task 3 (Oral)

In this section, we compare the results of Tasks 1 and 3 in order to explore whether the mode in which the task was presented (written or oral) had an effect on our participants' responses. Figure 3 presents the results of the two tasks broken down by group.

(a)
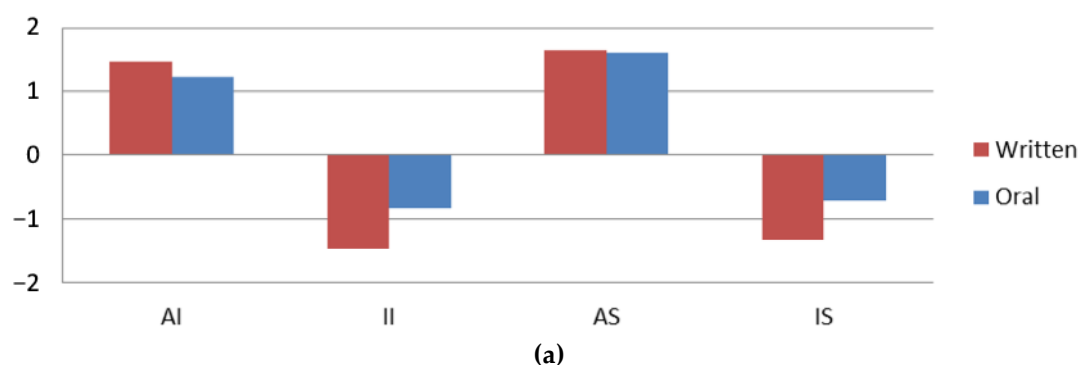
Figure 3. Task 1 vs. Task 3—Sentence combination felicity task (written vs. oral), results by group. **(a)** Task 1 vs. Task 3 (L1SP); **(b)** Task 1 vs. Task 3 (L2SP); **(c)** Task 1 vs. Task 3 (HLSP).

In general, we see that the rates were more polarized—i.e., higher acceptance and higher rejection—in the written task than in the oral task, but followed similar trends in all groups, with the exception of the II condition in the L2 group and the IS condition in the HL group. The results of a repeated measures ANOVA revealed main effects for "mood" ($F(1, 68) = 8.027$, $p = 0.006$), "appropriateness" ($F(1, 68) = 203.629$, $p < 0.001$) and "group" ($F(2, 68) = 9.375$, $p < 0.001$). The ANOVA also revealed several interactions between these factors. Namely, main interactions were found between "mood" and "group" ($F(2, 68) = 14.442$, $p < 0.001$), between "mood" and "appropriateness" ($F(1, 68) = 41.168$, $p < 0.001$), between "appropriateness" and "group" ($F(2, 68) = 24.656$, $p < 0.001$), and between "appropriateness", "mood" and "group" ($F(2, 68) = 6.947$, $p = 0.002$).

No overall effect was found for "task mode" ($F(1, 68) = 0.808$, $p = 0.372$), but significant interactions were found between "appropriateness" and "task mode" ($F(1, 68) = 10.495$, $p = 0.001$), and between "mood", "appropriateness", "group" and "task mode" ($F(2, 136) = 3.654$, $p = 0.031$). Pairwise comparisons using the Bonferroni correction reveal significant differences between the L1SP and the HL groups ($p < 0.001$) and a borderline significant difference between the HL and the L2 groups ($p = 0.049$).

Despite the absence of a main effect for task mode, in view of the presence of several significant interactions including this factor, separate repeated measures ANOVAs were performed on each group in order to further explore potential task effects in our data. The results of these analyses reveal no main effect for the L2SP group ($F(1, 20) = 0.048$, $p = 0.829$), or the HL group ($F(1, 18) = 0.000$, $p = 0.991$). In contrast, the L1SP group did show a main effect for task mode ($F(1, 30) = 7.804$, $p = 0.009$). As we can see in Figure 3, the L1SP group displays the expected acceptance/rejection patterns in both tasks. However, while the response rates for the A conditions remained similar in both tasks, there was stronger rejection for the I conditions in the written task than in the oral task, which results in an unexpected task effect for this group.

4.1.4. Some Remarks on the HL Group

Our HL group included a combination of simultaneous and sequential bilinguals. Both in the written and in the oral tasks, 40% of the HL participants were simultaneous bilinguals, and 60% were

sequential bilinguals. In view of this distribution, two repeated measures ANOVAs were performed on the HL data, one for Task 1 and one for Task 3, in order to determine whether there were significant differences in the behaviour of these two sub-groups. The results of the ANOVA revealed borderline significant differences between the two subgroups in the written task ($F(1, 8) = 5.450$, $p = 0.048$), and no significant differences in the oral task ($F(1, 8) = 1.175$, $p = 0.310$). Figure 4 shows the results of the HL participants, broken down by subgroup, for both the written and the oral task.
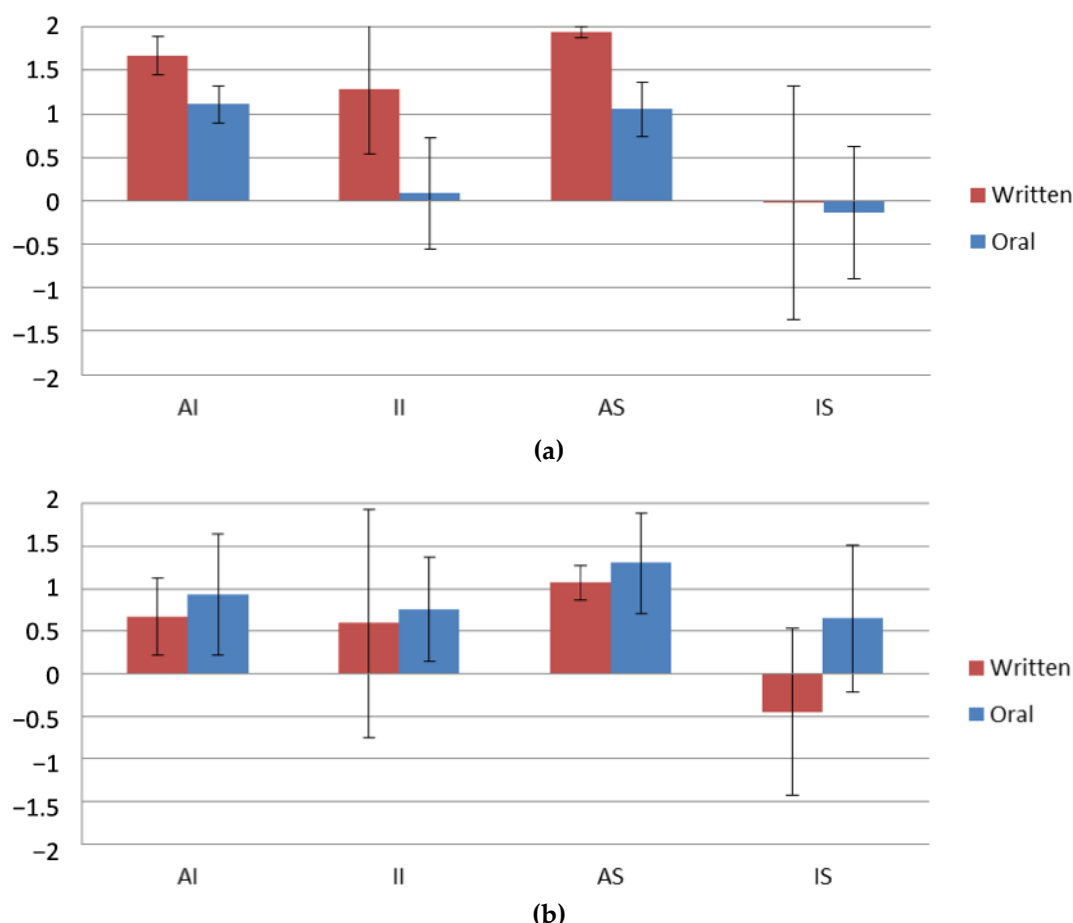
Figure 4. Sentence combination felicity task (written vs. oral), HL results, broken down by subgroup (HLSIM: simultaneous French–Spanish bilinguals, HLSEQ: sequential French–Spanish bilinguals). **(a)** Task 1 vs. Task 3 (HLSIM); **(b)** Task 1 vs. Task 3 (HLSEQ).

When comparing the two subgroups' performances in both tasks, we found no main effect for "type of bilingualism (group)" ($F(1, 16) = 0.600$, $p = 0.450$) or "task mode" ($F(1, 16) = 0.275$, $p = 0.607$). There was, however, a significant interaction between "type of bilingualism" and "task mode" ($F(1, 16) = 6.093$, $p = 0.030$), as well as between "appropriateness," "type of bilingualism," and "task mode" ($F(1, 16) = 0.153$, $p = 0.009$). These significant interactions, including "task mode" and "type of bilingualism," hint at the presence of a possible task effect that only seems to affect the simultaneous French–Spanish bilinguals (HLSIM) group. The responses from this group were most divergent from the other groups in the written task and closest in the oral task, thus showing an apparent disadvantage for HLSIM participants in the written task that disappears—or becomes less apparent—in the oral task, which is in line with previous findings. However, separate repeated measures ANOVAs comparing the results from both tasks did not reveal significant effects for task mode for either sequential French–Spanish bilinguals (HLSEQ) ($F(1, 10) = 2.651$, $p = 0.135$) or HLSIM ($F(1, 6) = 2.737$, $p = 0.149$).

As discussed in Section 3.3.2, the first goal of this task was to gain further insight on the distribution of indicative and subjunctive in native French and to obtain empirical evidence of the claim that subjunctive is being lost in these structures in French, as defended by authors such as Menanteau (1986). The second goal was to explore whether mood preferences were comparable across groups or whether knowledge of Spanish may influence participants' responses. Thus, in contrast with Boudreau (2007), this task was administered not only to the native control group but to the experimental groups (L2SP and HL) as well.

In this task, participants were presented with a sentence with a blank space, which they had to fill with the correct form of the verb provided in brackets. Participants' responses were initially coded based on both tense and mood. Then, in order to carry out the analysis, all responses were recoded as either "indicative," "subjunctive," or "other."[3] Figure 5 presents the overall results of Task 2, arranged by group and by response, including percentages for each response type.
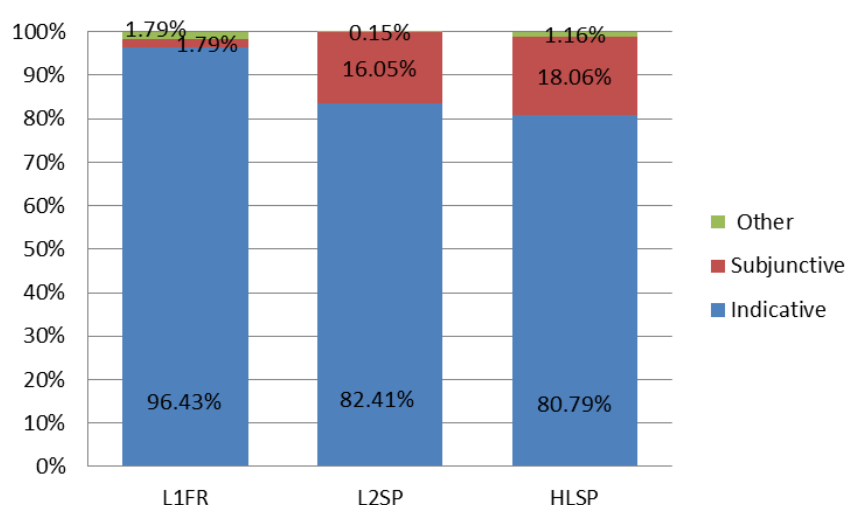

Figure 5. Sentence completion task in French (Task 2)—Overall results.

As expected, the presence of the subjunctive is practically absent in the L1FR control data, as participants provided a verb conjugated in the indicative 96.43% of the time. In contrast, the subjunctive mood was present in varying degrees in both experimental groups. Specifically, the rates of subjunctive responses were 16.05% for the L2SP group and 18.06% for the LH group. The indicative remained the most frequent mood chosen by all groups and was used at least 80% of the time. However, based on the assumption that French is in the process of losing the indicative–subjunctive contrast in these structures, and in view of the results from the L1FR control group, the presence of subjunctive responses in the other two groups was surprising, especially in the case of the L2SP group, whose L1 and dominant language was French—like the L1FR control group—and Spanish was only acquired after puberty.

The experimental design of this task included items whose Spanish equivalent would require the use of the indicative—i.e., the "indicative" condition—and items whose Spanish equivalent

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3　The "other" category included the use of non-finite forms and conditional, which was the most frequent response in this category. An example of a response using conditional is presented in (i).

　i.　　a.　*Tu dois lire un livre qui te __permettrait__ de comprendre le subjonctif.*

　　　　　　'You must read a book that __would allow__ you to understand subjunctive mood.'

　　　　b.　*Dans cette bibliothèque tu en trouveras sûrement un.*

　　　　　　'In this library, you will probably find one.'　　　　　　　　　[Participant L1FR06]

would require the use of the subjunctive—i.e., the "subjunctive" condition. In turn, based on this parameter, responses were also coded as "matching" if the mood chosen corresponded to the equivalent expected mood in the Spanish translation of the sentence (e.g., whether the subjunctive was used in a "subjunctive" condition), and "non-matching" if it did not (e.g., whether the indicative was used in a "subjunctive" condition). Figure 6 shows the results of the three groups broken down by condition.
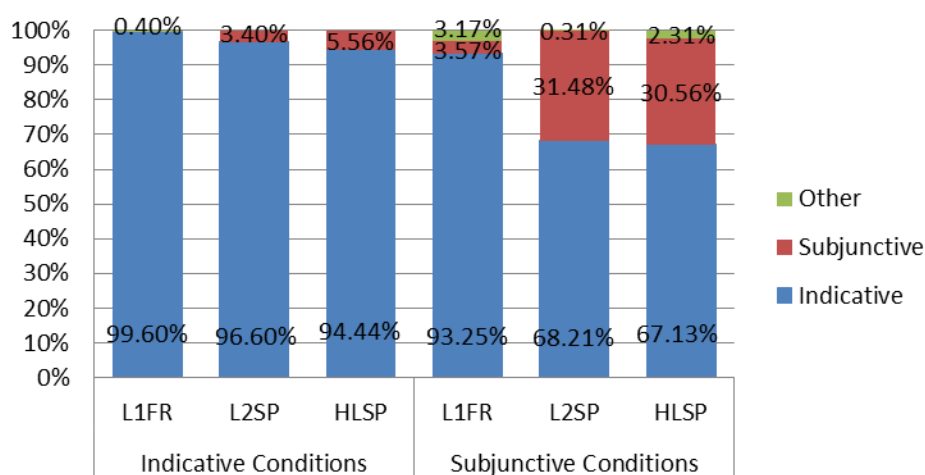
Figure 6. Overall results, broken down by condition. Task 2—Elicited production task.

As shown in Figure 6, the overwhelming majority of subjunctive responses correspond to subjunctive conditions. This suggests that, also in their dominant language, the use of the subjunctive by L2SP and HL participants matches the equivalent uses in Spanish. In other words, even though the indicative mood was overwhelmingly preferred by participants in all three groups, when L2SP and HL participants chose to use a subjunctive verb, they did so in conditions whose Spanish equivalent would also require the use of the subjunctive (i.e., "matching").

A generalized linear mixed model was performed on the data using "group", "condition" and "context" as predictors and "subjunctive use" as the outcome ("indicative" was coded as 0, "subjunctive" as (1). Both "participant" and "item" were included as random effects. The results of the statistical model revealed significant differences for all the predictors, the strongest one being "group", followed by "condition" and, then, by "context." Specifically, the differences between the L1FR control group and both the L2SP ($z = 4.007$, $p < 0.001$) and the HL ($z = 3.901$, $p < 0.001$) groups were significant, as were the differences between the indicative and subjunctive conditions ($z = 7.863$, $p < 0.001$). Finally, there were also significant differences between the "future" context and the "intensional" ($z = 4.046$, $p < 0.001$) and "modal" ($z = 3.285$, $p = 0.001$) contexts. Specifically, the results of the mixed model indicate that "future" favoured the use of the indicative, whereas "intensional" and "modal" favoured the use of the subjunctive. Interactions between the three predictors ("group," "condition," and "context") were also tested, but were removed from the model as none of them were significant.

A second mixed model was performed with the two HL sub-groups (HLSIM and HLSEQ) as separate groups, but the difference between the two models (one with HL as one group and one with HL as two groups) was not statistically significant ($p = 0.08$). In other words, as we saw in Tasks 1 and 3, the differences between the HLSEQ and HLSIM subgroups were not statistically significant.

4.3. Analysis and Discussion

In the first research question, we asked whether HL and L2 speakers' responses would differ from each other and from the native control groups. In line with our predictions, the data reported in the previous sections showed significant differences between the control and the experimental groups in all tasks. In the sentence completion task, in French (Task 2), both experimental groups differed from the L1FR control group in that they both used verbs in the subjunctive, particularly in

"matching" conditions, where the Spanish equivalents would also require the use of the subjunctive. In contrast, the subjunctive mood was practically absent in the L1FR control data, which was an expected result and compatible with the idea that subjunctive is being lost in French relative clauses (Menanteau 1986). In the Sentence Combination Felicity tasks, in Spanish (Tasks 1 and 3), the difference between the L1SP control and the HL group was significant when both the stimuli were presented in written form (Task 1) and orally (Task 3). The difference between the HL and the L2 groups became more apparent and reached statistical significance only when the data from both tasks were considered. In turn, the performance of the two HL subgroups (HLSIM and HLSEQ) was comparable in the two types of task, as demonstrated by the absence of main effects regarding the "type of bilingualism" in the statistical analyses.

Research question 2 asked whether we would find a correlation between the use of subjunctive in Task 2 and the results of Tasks 1 and 3, which would indicate a possible influence of the L1 on the L2, or vice versa. As predicted, there was a positive correlation between an increased use of the subjunctive in Task 2 and higher acceptance rates of clauses using the subjunctive mood in Tasks 1 and 3. Indeed, the HL group, which presented the highest rates of subjunctive use in Task 2, was also the group that displayed the highest acceptance rates of subjunctive conditions in Tasks 1 and 3. With respect to the L2SP group, given that the use of the subjunctive is rather scarce in these constructions in French, an influence of the L1 on the L2 may have surfaced in the form of lower acceptance or higher uncertainty in the subjunctive conditions in Tasks 1 and 3. Our results indicate that this is not quite the case, since L2 participants were able to successfully accept appropriate uses of the subjunctive and reject inappropriate uses of this mood. Furthermore, we found that both HL and L2 participants use subjunctive in French as well (Task 2), and that they did so at significantly higher rates than their monolingual counterparts. Our results also indicate that the distribution of their responses in terms of mood choice displayed a certain amount of overlap with Spanish, as the conditions in which these participants provided most of their subjunctive responses were those in which the Spanish translation would also require the use of the subjunctive (i.e., "matching"). This presence of the subjunctive in French was to be expected of the HL group, but not so much of the L2SP group, given that French was their only L1, they only began learning Spanish after puberty, and they all lived in Quebec, in an environment where French is the majority language. The influence of the L1 on the L2 is a widely attested and thoroughly studied phenomenon in the field of SLA. As Silva-Corvalán (2014, p.21) notes, "[t]he weaker language is expected to evidence, among other features, more errors of production and more frequent use of structures that parallel those in the stronger language, to the detriment of alternatives attested in the input". What is less frequent is for researchers to report on the effects of the weaker/L2 language on the dominant/L1 language (a few notable exceptions are Cook 2003; Kecskes 2008; as well as studies such as Pavlenko and Jarvis 2002; Dussias and Sagarra 2007; among others), and even less so in non-immersion contexts, which is the case of our participants.

Finally, research question 3 asked whether participants would behave differently in oral and written tasks. As discussed in Section 3, having the same task—a SCFT in Spanish—administered in two different modes—orally and in written form—allowed us to explore the issue of modality in isolation, in an attempt to explore the extent to which the way in which stimuli were presented to the participants may have an influence in their responses. Based on previous studies, our prediction was that L2 speakers would perform better in the written version of our SCF task, while HL speakers would fare better in the oral version. As shown in the previous section, our results revealed the presence of a task effect, although not the way we had expected. Overall, rates tended to be higher in the oral task than in the written task, and this difference was noticeable in all groups, including the L1SP control. However, the statistical analysis did not reveal significant differences with respect to task mode for any of the experimental groups. In contrast, it did reveal a main effect for task mode for the L1 control. This effect was caused by the aforementioned tendency to assign higher rates to inappropriate conditions in the oral task, as compared to the written task. A possible explanation for this may be found in the different degrees of formality that are associated with oral and written speech. Specifically, L1SP participants tended to "penalize" inappropriate conditions more strongly

in the written task (Task 1) than in the oral task (Task 3), which is in line with the idea that written speech is normally associated with a higher degree of formality and, consequently, tolerance for errors would tend to be minimal.[4] Regardless of this unexpected task effect, the L1SP group did present the predicted response distribution pattern in both tasks, providing positive rates to all appropriate conditions and negative rates to all inappropriate conditions. Regarding the experimental groups, there was no apparent advantage for HL speakers in the oral task, which stands in contrast with previous findings by authors such as Montrul et al. (2008) and Bowles (2011).[5] Instead, our results are in line with recent research on Dutch heritage speakers of Spanish carried out by van Osch and Sleeman (2016). Like the Dutch participants, our participants' multilingual experience and the educational system may have contributed to the development of higher metalinguistic awareness in our participants. Specifically, our participants spoke English at varying levels—english as a second language (ESL) is mandatory from the beginning of primary education in Quebec, and access to the language is readily available, given its status as one of the official languages of Canada. Furthermore, it is also worth noting that, in the Quebec education system, French grammar is taught explicitly in school as part of the curriculum, which likely constitutes another relevant contributing factor in the development of our participants' presumed heightened metalinguistic awareness.

5. Conclusions

Our study explored mood selection in Spanish relative clauses by French–Spanish bilinguals by comparing two types of populations: heritage speakers and L2 learners. In addition, we addressed the question of whether any potential differences between these two groups may be task-induced. Our results show that, although the experimental groups did behave differently from each other or from the Spanish control group, the mode in which the stimuli were presented (either in written form

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4 One anonymous reviewer wondered whether the saliency of the subjunctive (i.e., irregular forms, such as *tenga*, from the verb *tener*, 'to have', as opposed to regular forms, such as *venda*, from the verb *vender*, 'to sell') may have played a role in the results of the native control group. Specifically, the reviewer wondered whether the indicative–subjunctive distinction could have been more easily misperceived in the oral task given that the difference between indicative and subjunctive forms is less salient in the case of regular verbs (e.g. *vende* vs. *venda*) than irregular verbs (e.g. *tiene* vs. *tenga*). Even though the saliency of the verb form was not a variable included in the experimental design, the distribution of regular and irregular verbs in our items was rather even, with 56% of items containing a regular verb and 44% containing an irregular verb. The results of a repeated measures ANOVA reveal that there was, indeed, a main effect for saliency ($F(1, 30) = 7.587$, $p = 0.010$). Specifically, our data reveal that participants tended to reject inappropriate mood choices more strongly when they contained an irregular verb, which is in line with the reviewer's prediction. However, there was no significant interaction between saliency and task mode (oral/written) ($F(1, 30) = 2.216$, $p = 0.147$), since this pattern of higher rejection of the inappropriate condition with irregular verbs was present in both the written ($F(1, 10) = 8.461$, $p = 0.016$) and in the oral task ($F(1, 20) = 5.785$, $p = 0.026$). These results show that, while our native control group did show sensitivity to verb saliency, the extent to which this factor played a role in the modality effect found in the native control data is not so clear, as regular and irregular verbs were treated differently in both tasks. As such, the issue of verb saliency remains a topic for further investigation.

5 One anonymous reviewer pointed out that this overall lack of difference in modality by our experimental groups may be due to the fact that, whether presented orally or in written form, the task was essentially the same. In addition, at least in the case of HL speakers, the task represented a rather uncommon linguistic activity for HL participants (judging and correcting sentences). While we agree with the reviewer that all these points merit consideration, our control group did show sensitivity to task modality, as their responses were more polarized in the written task than in the oral task. As discussed in this section, and in Section 4.1.3, above, these differences reached statistical significance. We take these results as a positive indicator that modality was a relevant intervening variable in our experimental design, all the more so if we consider that, just like HL speakers, our native control participants were not accustomed to judging and correcting sentences (whether orally or in written form), and, yet, our results indicate that their responses were, indeed, affected by modality. Thus, in our view, it is necessary to consider alternative explanations for the lack of a modality effect in our experimental groups.

or orally) did not have a significant effect on the HL and L2 participants' responses. As van Osch and Sleeman (2016) noted about their Dutch participants, the absence of a task effect in our data may also be caused by an enhanced metalinguistic awareness from our participants, brought about by a combination of their multilingual experience and the specificities of the Quebec francophone educational system. In addition, Task 2 of our study revealed the apparent influence of Spanish on our participants' dominant language, signalled by the increased production of subjunctive responses in French. In contrast, our French control group (with no knowledge of Spanish) showed minimal use of the subjunctive mood, which supports the general assumption that the subjunctive is being lost in French relative clauses. Traditionally, when researchers have reported effects of the L2 on the L1, these normally occurred in contact situations where the L2 is the majority language. In contrast with this, our study constitutes an example of L2 influence on the L1 in a non-contact situation where the L1 is the majority as well as the participants' dominant language. This finding provides empirical support for the idea that bilinguals are, indeed, different from monolinguals, and that, as Kecskes (2008, p.31) explains, citing his own previous work, "(…) people with more than one language have different knowledge of their L1 than do monolingual people, and this difference can mainly be explained by the effect of subsequent languages on the development and use of L1 skills".

Author Contributions: All the authors contributed equally to this work.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Item list for Task 1: Sentence combination felicity task

1   Contrataremos una persona que hable holandés, si logramos encontrar alguna.
2   Luis y Pedro quieren amueblar la casa porque les gusta más vacía.
3   Quiero una lavadora que indica la temperatura. La venden en Amazon y está barata.
4   Esteban y su hermano se parecen mucho. Siempre los confundo.
5   Compraré una casa que queda en el centro, si hay alguna a buen precio.
6   Necesitamos un director que le conviene a la empresa pero creo que ninguno de los candidatos es bueno para dirigir.
7   Tengo que alquilar una camioneta para la mudanza. Nos mudamos este sábado.
8   Quiero un motor que no haga ruido, pero no hay ninguno en esta tienda.
9   Tengo que resolver un problema difícil, por eso necesito tu ayuda.
10 Quiero un libro que contenga muchos personajes fantásticos. Se titula "La historia sin fin".
11 Viajaremos a Canadá en el verano porque queremos conocer la nieve.
12 Compraré un traje que va bien con el tuyo, si encuentro alguno en esta tienda.
13 Tenemos que encontrar una enciclopedia que muestra todos los cuadros de Picasso. No recuerdo en qué estante la puse.
14 Me gusta mucho la pera pero prefiero la manzana.
15 Podemos navegar en un barco que tenga cuatro cabinas. Es aquel que pertenece a la compañía "Caribe sol".
16 Necesitamos un autobús que tiene asientos vacíos pero están todos llenos.
17 Busco a mi perro porque no quiero encontrarlo.
18 Debo comprar una corbata que va bien con mi camisa azul. ¿Cuál me recomiendas?
19 María debe comprar un perro porque tiene ratones en la casa.
20 Buscamos un perro que tenga una sola oreja. Se llama Fido.
21 Con tu experiencia como curador artístico, puedes trabajar en una tienda que vende obras de arte. Busca en Internet, seguro hay alguna en esta ciudad.
22 Prefiero un museo que tenga dinosaurios pero si tiene dinosaurios no me gusta.

23   Debes utilizar un ordenador que esté conectado a la red. Es el que está al lado de la puerta de entrada.

24   Contrataremos un músico que toca el bajo pero por el momento solo encontramos pianistas.

25   Necesitamos un gato porque hay ratones en casa.

26   Buscamos un restaurante que no cuesta muy caro, me han dicho que se llama "El Marino".

27   Mis abuelos visitarán un lugar en el que hace buen tiempo. Se van para Cuba.

28   Iremos al cine a ver una película sobre los dinosaurios. Comienza a las 4:00.

29   Leeré un libro que habla de Beethoven. Me lo regaló mi hermano.

30   Tengo que organizar una cena para vegetarianos, por eso he comprado carne de res y de cerdo.

31   Necesito un lápiz que escriba oscuro. Es ese rojo que está sobre la mesa, ¿me lo pasas?

32   Veremos una película que esté nominada a un Oscar. Se titula *Boyhood*.

33   Busco un hotel barato pero todos son caros.

34   Tenemos que encontrar un mapa que muestre los lugares turísticos de Roma. Creo que lo puse en la maleta verde.

35   Comeremos una manzana que está barata esta semana. La cultivan aquí en Quebec.

36   Quiero una habitación que tiene mucha luz pero solo hay habitaciones oscuras en este edificio.

37   Debo vender una casa que tiene piscina y jardín. Creo que será difícil venderla porque es muy cara.

38   Quiero comprar unos zapatos para la carrera del domingo.

39   En esta biblioteca puedes leer un libro que esté escrito en alemán. Hay muchos en el segundo piso.

40   Busco un libro que tiene reproducciones de pinturas de Leonardo da Vinci. Es azul y verde, ¿no lo has visto?

41   Necesito un libro para leer pero no sé leer.

42   Te cantaré una canción que te haga feliz. ¿Tienes alguna sugerencia?

43   Tengo que cocinar un plato que le guste mucho. Dime qué le gusta comer.

44   Es suficiente con dos litros de leche pero cuatro litros no alcanzan.

45   Necesito un libro que ayude a comprender la física de manera fácil, pero creo que nadie ha escrito todavía un libro así.

46   Pediremos una comida que contenga poca grasa. ¿Me recomienda algún plato en particular?

47   Esta noche podemos ver un programa que critica el sistema de salud. Comienza a las 10:00.

48   Miguel prefiere jugar al fútbol que al tenis. Es que el fútbol es un deporte más divertido.

49   Tengo que alquilar una camioneta que carga hasta 1000 kilogramos pero no existe ninguna así.

50   Miguel busca un negocio que venda muebles antiguos. Le han dicho que en la capital podrá encontrar alguno.

51   Laura verá en el cine una película que la haga llorar. La ha visto más de diez veces.

52   Juan tiene que ir al trabajo en bicicleta porque está desempleado.

53   Debes leer un libro que te permita comprender el subjuntivo. En esta biblioteca seguro encontrarás alguno.

54   En el próximo concierto tocaremos una guitarra que tenga doce cuerdas. La acabo de comprar en la tienda.

Appendix B

Item list for Task 2: Elicited production task

1   Laura verra au cinéma un film qui la _____ (faire) pleurer. Elle l'a vu plus de dix fois.

2   Je veux un livre qui _____ (contenir) de nombreux personnages fantastiques. Il s'intitule "The Neverending Story".

3   Nous devons trouver une encyclopédie qui _____ (contenir) tous les tableaux de Picasso. J'ai oublié dans quelle étagère je l'ai mise.

4   Je vais chanter une chanson qui te _____ (rendre) heureux. J'espère être capable de la composer.

5   Nous avons besoin d' un directeur qui _____ (convenir) le mieux à l'entreprise, mais je pense qu' aucun des candidats n'est bon pour diriger.

6   Mes grands-parents iront visiter un endroit où il _____ (faire) beau. Ils iront à Cuba.

7   Avec ton expérience en tant que commissaire artistique, tu peux travailler dans un magasin qui _____ (vendre) des œuvres d'art. Recherche sur Internet, je suis sûre qu'il y en a certains dans cette ville.

8   J'ai besoin d'un crayon qui _____ (écrire) sur le verre. C'est celui qui est sur la table, peux-tu me le passer?

9   Je dois vendre une maison qui _____ (avoir) une piscine et un jardin. Je pense qu'elle sera difficile à vendre, car elle est très chère.

10 Nous allons commander un repas qui _____ (contenir) peu de graisse. Recommandez-vous un plat en particulier?

11 Je cherche un livre qui _____ (contenir) des reproductions des tableaux de Léonard de Vinci. Il est bleu et vert, l'as-tu vu?

12 Nous pouvons naviguer dans un bateau qui _____ (avoir) quatre cabines. Il appartient à l'entreprise "Les Caraïbes."

13 Je veux une laveuse qui _____ (dire) la température. On la vend sur Amazon à bon prix.

14 Miguel cherche un magasin qui _____ (vendre) des meubles anciens. On lui a dit qu'au centre-ville il pourra en trouver un.

15 Je dois louer un camion qui _____ (pouvoir) charger jusqu'à 1000 kg, mais il n'y en a aucun.

16 Nous allons embaucher un musicien qui _____ (être) bassiste, mais jusqu'à présent, nous n'avons trouvé que des pianistes.

17 Je veux un moteur qui ne _____ (faire) pas de bruit, mais il n'y en a aucun dans ce magasin.

18 Je vais lire un livre qui _____ (contenir) la biographie de Beethoven. Mon frère me l'a donné en cadeau.

19 Ce soir, nous pouvons regarder une émission qui _____ (faire) une critique du système de santé. Elle commence à 10h00.

20 J'achèterai un habit qui _____ (allez) bien avec le tien, si j'en trouve un dans ce magasin.

21 Tu dois lire un livre qui te _____ (permettre) de comprendre le subjonctif. Dans cette bibliothèque tu en trouveras sûrement un.

22 Je dois acheter une cravate qui _____ (aller) bien avec ma chemise bleue. Laquelle me recommanderiez-vous?

23 Je veux une chambre qui _____ (être) bien éclairée, mais il n'y a que des pièces sombres dans ce bâtiment.

24 Ce soir au concert, nous allons rencontrer un chanteur qui _____ (être) aussi un guitariste très doué. Il s'appelle Antonio.

25 Nous cherchons un restaurant qui _____ (être) pas très cher. On m'a dit qu'ils'appelle "El Marino".

26 Nous devons trouver une carte qui _____ (contenir) les sites touristiques de Rome. Je pense que je l'ai mise dans la valise verte.

27 Nous allons voir un film qui _____ (être) nominé pour un Oscar. Il s'intitule "Boyhood".

28 Nous avons besoin de monter à bord d'un autobus qui _____ (avoir) des sièges libres, mais tous les autobus sont pleins.

29 Je dois préparer un plat qui _____ (être) à son goût. Dites-moi ce qu'il préfère manger.

30 Je vais acheter une maison qui _____ (être) au centre-ville, si j'en trouve une pas trop cher.

31 Tu dois utiliser un ordinateur qui _____ (être) connecté au réseau. C'est celui qui est sur la table à l'entrée du laboratoire.

32 Nous cherchons un chien qui n'_____ (avoir) qu'une seule oreille; il s'appelle Fido.

33 Nous mangerons une sorte de pomme qui _____ (être) en rabais cette semaine. On la cultive ici au Québec.

34 Dans cette bibliothèque tu peux lire un livre qui _____ (être) écrit en allemand. Il y en a beaucoup au deuxième étage.

35 Nous allons embaucher quelqu'un qui _____ (comprendre) le néerlandais, si nous pouvons trouver quelqu'un.

36   J'ai besoin d'un livre qui _____ (décrire) de manière facile la physique, mais je crois qu'aucun auteur ne serait capable d'expliquer la physique de manière facile.

References

(Alba de la Fuente 2012) Alba de la Fuente, Anahi. 2012. Clitic Combinations in Spanish: Syntax, Processing and Acquisition. Ph.D. dissertation, University of Ottawa, Ottawa, ON, Canada. Available online: http://dx.doi.org/10.20381/ruor-5926 (accessed on 20 January 2016).

(Blake 1983) Blake, Robert. 1983. Mood Selection Among Spanish-Speaking Children, Ages 4 to 12. *The Bilingual Review/La Revista Bilingüe* 10: 21–32.

(Borgonovo et al. 2008) Borgonovo, Claudia, Joyce Bruhn De Garavito, and Philippe Prévost. 2008. Methodological Issues in the L2 Acquisition of a Syntax/Semantics Phenomenon: How to Assess L2 Knowledge of Mood in Spanish Relative Clauses. In *Selected Proceedings of the 10th Hispanic Linguistics Symposium*. Edited by Joyce Bruhn de Garavito and Elena Valenzuela. Somerville: Cascadilla Proceedings Project, pp. 13–24.

(Borgonovo et al. 2015) Borgonovo, Claudia, Joyce Bruhn De Garavito, and Philippe Prévost. 2015. Mood selection in relative clauses: Interfaces and variability. *Studies in Second Language Acquisition* 37: 33–69.

(Bosque 1999) Bosque, Ignacio. 1999. Sobre la gramática de los contextos modales: Entornos modales y expresiones inespecíficas en español. In *Actas del XI Congreso Internacional de la Asociación de Lingüística y Filología de la América Latina Las Palmas de Gran Canaria, del 22 al 27 de julio de 1996*. Las Palmas: Servicio de Publicaciones de la Universidad de Las Palmas, pp. 43–58.

(Boudreau 2007) Boudreau, Geneviève. 2007. El Modo en la Esfera Nominal: Análisis y Adquisición. Master's thesis, Université Laval, Québec, QC, Canada. Available online: http://hdl.handle.net/20.500.11794/19268 (accessed on 16 November 2016).

(Bowles 2011) Bowles, Melissa A. 2011. Measuring implicit and explicit linguistic knowledge: What Can Heritage Language Learners Contribute? *Studies in Second Language Acquisition* 33: 247–71. doi:10.1017/S0272263110000756.

(Cook 2003) Cook, Vivian. 2003. The changing L1 in the L2 user's mind. In *Effects of the Second Language on the First*. Edited by Vivian Cook. Clevedon: Multilingual Matters, pp. 1–18.

(De Leeuw 2015) De Leeuw, Joshua R. 2015. jsPsych: A JavaScript library for creating behavioral experiments in a Web browser. *Behavior Research Methods* 47: 1–12.

(Dussias and Sagarra 2007) Dussias, Paola E., and Nuria Sagarra. 2007. The effect of exposure on syntactic parsing in Spanish–English bilinguals. *Bilingualism: Language and Cognition* 10: 101–16. doi:10.1017/S1366728906002847.

(Ellis 2005) Ellis, Rod. 2005. Measuring implicit and explicit knowledge of a second language: A Psychometric Study. *Studies in Second Language Acquisition* 27: 141–72. doi:10.1017/S0272263105050096.

(Kecskes 2008) Kecskes, Istvan. 2008. The effect of the second language on the first language. *Babylonia* 2: 31–34.

(Koenig 2016) Koenig, Renee Elizabeth (2016). La selección modal del subjuntivo/indicativo en el Corpus sociolingüístico Preseea-Medellín. *Boletín de Filología* 51(2): 89-120. doi:10.4067/S0718-93032016000200004

(Lareau 2008) Lareau, François. 2008. Vers une Grammaire D'unification Sens-Texte du Français: Le Temps Verbal Dans L'interface Sémantique-Syntaxe. Ph.D. dissertation, Université de Montréal/Université Paris 7, Montréal, QC, CA, August. Available online: http://hdl.handle.net/1866/6421 (accessed on 5 September 2016).

(Lipski 1993) Lipski, John. 1993. Creoloid phenomena in the Spanish of transitional bilinguals. In *Spanish in the United States*. Edited by Ana Roca and John Lipski. Berlin: Mouton, pp. 155–73.

(Lynch 1999) Lynch, Andrew. 1999. The Subjunctive in Miami Cuban Spanish: Bilingualism, Contact, and Language Variability. Ph.D. dissertation, University of Minnesota, Minneapolis, MN, USA, August. Available online: http://works.bepress.com/andrewlynch/22/ (accessed on 10 January 2018).

(Menanteau 1986) Menanteau, Didier. 1986. Le mode verbal, classe grammaticale? *La Linguistique* 22: 69–80.

(Merino 1983) Merino, Barbara. 1983. Language loss in bilingual chicano children. *Journal of Applied Developmental Psychology* 4: 277–94.

(Montrul 2007) Montrul, Silvina. 2007. Interpreting mood distinctions in Spanish as a heritage language. In *Spanish in Contact: Policy, Social and Linguistic Inquiries*. Edited by Kim Potowski and Richard Cameron. Amsterdam: John Benjamins, pp. 23–40.

(Montrul 2012) Montrul, Silvina. 2012. Is the heritage language like a second language? *Eurosla Yearbook* 12: 1–29.

(Montrul and Perpiñán 2011) Montrul, Silvina, and Silvia Perpiñán. 2011. Assessing differences and similarities between instructed heritage language learners and L2 learners in their knowledge of Spanish tense-aspect and mood (TAM) morphology. *Heritage Language Journal* 8: 90–133.

(Montrul et al. 2008) Montrul, Silvina, Rebecca Foote, and Silvia Perpiñán. 2008. Gender agreement in adult second language learners and Spanish heritage speakers: The effects of age and context of acquisition. *Language Learning* 58: 503–53. doi:10.1111/j.1467-9922.2008.00449.x.

(Murillo 2000) Murillo, Jorge (2000). Oraciones de relativo y variación modal en el habla culta costarricense. *Revista de Filología Española* 80(1/2): 141-153. doi:10.3989/rfe.2000.v80.i1/2.278.

(Paradis 2004) Paradis, Michel. 2004. *A Neurolinguistic Theory of Bilingualism*. Amsterdam: John Benjamins.

(Pavlenko and Jarvis 2002) Pavlenko, Aneta, and Scott Jarvis. 2002. Bidirectional Transfer. *Applied Linguistics* 23: 190–214. doi:10.1093/applin/23.2.190.

(Pérez-Leroux 1998) Pérez-Leroux, Ana Teresa. 1998. The acquisition of mood selection in Spanish relative clauses. *Journal of Child Language* 25: 585–604.

(Restorick Elordi 2012) Restorick Elordi, Audrey K. 2012. Interpretation of the French and Spanish Subjunctive by L1, L2, and L3 Speakers: Contexts Where Mood Can Alternate without Ungrammaticality. Ph.D. dissertation, University of Western Ontario, London, ON, Canada. Available online: https://ir.lib.uwo.ca/etd/1055/ (accessed on 29 September 2016).

(Silva-Corvalán 1994) Silva-Corvalán, Carmen. 1994. *Language Contact and Change: Spanish in Los Angeles*. New York, NY: Oxford University Press.

(Silva-Corvalán 2003) Silva-Corvalán, Carmen. 2003. Linguistic consequences of reduced input in bilingual first language acquisition. In *Linguistic Theory and Language Development in Hispanic Languages*. Edited by Silvina Montrul and Francisco Ordóñez. Sommerville: Cascadilla Press, pp. 375–97.

(Silva-Corvalán 2014) Silva-Corvalán, Carmen. 2014. *Bilingual Language Acquisition: Spanish and English in the First Six Years.* Cambrigde: Cambridge University Press.

(Slabakova and Montrul 2002) Slabakova, Roumyana, and Silvina Montrul. 2002. On viewpoint aspect interpretation and its L2 acquisition. In *The L2 acquisition of tense-aspect morphology*. Edited by Rafael Salaberry and Yasuhiro Shirai. Amsterdam: John Benjamins, pp. 363–95.

(Van Osch and Sleeman 2016) Van Osch, Brechje, and Petra Sleeman. 2016. Spanish heritage speakers in the Netherlands: Linguistic patterns in the judgment and production of mood. *International Journal of Bilingualism*. doi:10.1177/1367006916654365.

(Zentella 1997) Zentella, Ana Celia. 1997. *Growing up Bilingual*. Malden: Blackwell.