Portuguese as a Heritage Language in contact with German and French: a comparative study on the acquisition of verbal mood

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This study focuses on the acquisition of verbal mood in complement clauses by two groups of heritage speakers of European Portuguese (EP) (7-16 years) with similar sociolinguistic profiles and two different dominant languages, German and French. The production of finite complement clauses was elicited through a sentence completion task. By comparing two bilingual groups with different dominant languages (a Romance language with a subjunctive mood encoding the same semantic values as EP and a Germanic language with no similar linguistic category), we discuss the relative weight of cross-linguistic influence and of amount of exposure in bilingual acquisition. The results show protracted development of both bilingual groups concerning the subjunctive, with no negative effect observed in the bilingual speakers who are dominant in German. We conclude that cross-linguistic influence cannot explain this performance and suggest that amount of input plays a role.

Keywords: Heritage speakers, protracted development cross-linguistic influence, mood selection, complement clauses, European Portuguese

1.   Introduction

Despite the growing number of studies on heritage language (HL) acquisition in the last two decades (for a recent overview, see Montrul 2016), there are still many open questions on the nature of HLs, concerning the role of the majority language as well as the effect of amount and type of input in HL development.

Despite the autonomous development of the two languages in early bilinguals, it has been demonstrated that the two language systems of a bilingual child may interact, showing cross-linguistic influence (CLI). The development of a HL may show negative or positive influence of the dominant language, namely in the form of delay or acceleration effects (Paradis and Genesee 1996; see also Almeida 2011, a.o.). The most frequent case reported is the one where a delay is observed (Flores and Barbosa 2014). Alternatively, delays observed in HL acquisition may be due to other factors, namely reduced language exposure (Austin 2009; Rodina and Westergaard 2017). It has been suggested that reduced input in bilingual acquisition may particularly affect structures which are expected to develop late. This is in agreement with the delay identified by Flores and Barbosa (2014) in the acquisition of clitic placement by heritage speakers (HSs) of European Portuguese (EP) living in Germany, which contrasts with the good performance of the same bilingual population in the domains of verb movement and VP ellipsis, two properties which stabilize early (Santos and Flores 2016; see also the discussion concerning non-core linguistic phenomena in Tsimpli 2014).

In light of the previous literature, it is important to specifically investigate the acquisition of properties that are expected to develop late. If, in addition, the relative weight of amount of exposure and of CLI is investigated, researchers should compare two bilingual populations with similar exposure

to a common HL but with different dominant languages. In the present work, we aim at comparing the acquisition of mood distinctions in complement clauses by two groups of HSs of EP, whose dominant languages are German, in one case, and French, in the other case.

2. Mood selection in complement clauses

2.1 European Portuguese

In EP, as in other languages which exhibit an indicative/subjunctive contrast, the distribution of mood in finite complement clauses is governed mainly by the matrix predicate. The indicative is selected by (a) verbs that express knowledge or a high degree of belief (e.g. *saber* 'know' or *achar* 'think'); (b) declarative verbs (e.g. *dizer* 'say'); (c) comissive verbs (e.g. *prometer* 'promise') and (d) fiction verbs (e.g. *sonhar* 'dream'). The subjunctive is selected by various classes of verbs, including (a) verbs that express a negative (or a low degree of) belief (e.g. *duvidar* 'doubt'); (b) verbs of volition (e.g. *querer* 'want'); (c) directive verbs (e.g. *mandar* 'order'); (d) causative verbs (e.g. *deixar* 'let' or *conseguir* 'manage') and (e) evaluative predicates (e.g. *lamentar* 'regret' or *achar bem* 'approve').

The verb *acreditar* ('to believe'), as well as a group of other verbs with similar meaning (e.g., *supor,* 'to suppose'), accepts both the indicative and

the subjunctive in its complement clause, depending on the degree of belief that is conveyed: subjunctive in the complement indicates a lower degree of belief.

A semantic explanation for the distribution of mood in EP (proposed by Marques 2003, a.o.) links the selection of mood with the kind of propositional attitude being expressed. Briefly, in EP, if the main verb expresses an epistemic or a positive doxastic attitude (i.e., an attitude of knowledge or belief), it selects the indicative, while the verbs that convey a different kind of propositional attitude are subjunctive rulers. In other words, the verbs that select the indicative are both [+ epistemic], expressing an attitude of knowledge or belief, and [+ veridical], in the sense that the proposition they introduce is taken to be true by some entity in the relevant model of evaluation (Giannakidou 1999). As for the verbs that trigger the subjunctive, they are either [− epistemic] (i.e., they do not express an epistemic or doxastic attitude, even if they presuppose the truth of the embedded proposition, as is the case of evaluative predicates like *to regret*) or [− veridical] (i.e., they do not allow the inference that someone takes the complement proposition to be true).

Given these two semantic features, four combinations are possible: (i) [+ epistemic; + veridical], (ii) [+ epistemic; − veridical], (iii) [− epistemic; + veridical] and (iv) [− epistemic; − veridical].

The indicative rulers of class (a), above, clearly are [+ epistemic; + veridical], which is also the case of declarative (b) and comissive (c) verbs, which commit the subject of the main clause to the truth of the embedded proposition. It is also the case of fiction verbs (d), with the particularity that in this case the belief is relativized to the relevant model, e.g., the dream world in the case of *to dream* (see Farkas 1992; Giannakidou 1999, 2013, a.o.).

With respect to the subjunctive rulers, those that express a negative (or a low degree of) belief are [− veridical], since they do not allow the inference that the attitude holder (the entity referred by the subject of the main clause), or any other entity, takes the complement proposition to be true − even if the predicate may be [+ epistemic]. Thus, among the verbs that express an epistemic attitude, some of them (e.g. *know*, *say*) are veridical and select the indicative, whereas others (e.g. *doubt*) are non-veridical and select the subjunctive. We will use the terms "strong epistemic" and "weak epistemic" to refer, respectively, to the first and the second of these kinds of verbs. In addition, verbs of volition (e.g. *want*) and directive predicates (e.g. *order*) are both [− epistemic] and [− veridical], whereas causative (e.g. *manage*) and evaluative predicates (e.g. *regret*) are [− epistemic], although being [+ veridical].[i] All the [- epistemic] predicates are subjunctive rulers.

In sum, in EP, for the indicative to arise, the sum of the features [+ epistemic] [+ veridical] must be present, otherwise the subjunctive will be selected. We summarize the proposal in Table 1.

Table 1. Mood distribution in EP complement clauses.

[+ epistemic] [+ veridical]	strong epistemic verbs (e.g. *saber* 'know', *prometer* 'promise')	**Indicative**
[+ epistemic] [– veridical]	weak epistemic verbs (e.g. *duvidar* 'doubt')	**Subjunctive**
[– epistemic] [+ veridical]	implicative verbs (e.g. *conseguir* 'manage', *lamentar* 'regret')	**Subjunctive**
[– epistemic] [– veridical]	non-implicative verbs (e.g. *querer* 'want', *mandar* 'order')	**Subjunctive**

2.2 French

The distribution of subjunctive complement clauses in French is quite similar to the one observed in Portuguese (and other Romance languages). According to Godard (2012), it is generally accepted that the indicative is selected "when the clause expresses a proposition corresponding to an agent's belief" (Godard 2012:130), whereas the selection of subjunctive corresponds to more heterogeneous contexts. Predicates selecting a subjunctive complement clause include verbs expressing attitudes of will

and desire (e.g. *vouloir* 'want'), evaluatives, including factives (e.g. *regretter* 'regret') and non-factives (e.g. *préférer* 'prefer'), verbs expressing negative attitudes (e.g. *douter* 'doubt'), mandatives (e.g. *ordonner* 'order') and causatives (e.g. *éviter* 'avoid', *essayer que* 'try'). Importantly, there is a relevant overlap between the classes of matrix predicates which select for subjunctive in French and in Portuguese.

Nevertheless, some differences are observed. Concerning complement clauses, they are mostly related to the fact that in French some predicates allow both the indicative and the subjunctive moods, while their Portuguese correspondents trigger only one of these moods. These cases will not be relevant for the experiment presented in this paper.[ii]

Accounting for the overlap of the distribution of the subjunctive in Portuguese and in French, we can suggest that globally the French system can be explained along the same lines sketched above for Portuguese. That is, the distribution of mood follows from the combination of the features [epistemicity] and [veridicality].[iii]

Apart from these differences, the subjunctive in French appears to be less salient in the input data available for acquisition than the subjunctive in EP, since in French, the forms of the past subjunctive are no longer used. When the main clause is in the past tense, the complement clause is usually in the present tense and in the subjunctive mood (see (1)).

(1)   *La maman canard ne   croyait pas que le petit canard*

        the mummy duck   NEG believe NEG that the little duck

        soit   capable de voler. [iv]

        be.SBJV.PRS.3SG able   of fly.INF

        'Mummy duck did not believe that the small duck was able to fly'

This fact is particularly relevant, since in the case of first group verbs (e.g. *parler* 'speak') the form of the verb is identical in the present indicative and in the present subjunctive for the singular and for the 3rd person plural. However, it is frequent in these morphologically ambiguous situations to add a modal to the complement clause, namely *pouvoir* 'can', morphologically marked for subjunctive (see (2)). Moreover, very frequent verbs such as *être* 'be' take different forms in the indicative and in the subjunctive (see the case in (1) above).

(2)   *Il voulait que la fille puisse   <u>gouter</u>   la soupe*

        he   wanted that the girl can.SBJV.PRS.3SG taste.INF the soup

        'The cooker wanted the girl to taste the soup'

2.3   German

German differs considerably from EP and French in the domain of mood selection in complement clauses, since the semantic features [epistemicity] and [veridicality] play no primary role in the distribution of the subjunctive mood, i.e. the German mood system does not encode the type of semantic values encoded by the Portuguese and French systems.

German distinguishes between the morphological present subjunctive (3a), which is mostly used with a reportative function (Fabricius-Hansen and Sæbø 2004), and a morphological past subjunctive (b), which concurs with the periphrastic *würde*-form. Importantly, mood selection in German is constrained by different modal, discursive and sociostylistic features (Zifonun et al. 1997). The morphological subjunctive forms are less frequent in spoken, colloquial registers, where they are either substituted by the periphrastic *würde*-form (see (3b)) or the indicative mood is used (see (3a)). It is crucial to highlight that, differently from EP and French, in German it is always possible to use the indicative mood in complement clauses. Furthermore, the morphological subjunctive is acquired very late in L1 German, i.e. during school age (Knobloch 2001).

(3)   a.   *Die Entenmutter   glaubte nicht, dass das Entchen*
            the mummy duck believed NEG that the little duck

fliegen könne /   *kann.*

fly   can.SBJV.PRS.3SG / can.IND.PRS.3SG

'Mummy duck did not believe that the small duck was able to fly.'

b.   *Die Entenmutter   glaubte nicht, dass das Entchen*

the mummy duck believe NEG that the little duck

käme /   *kommen   würde.*

come.PST.SBJV.3SG / come.INF AUX.SBJV.3SG

'Mummy duck did not believe that the small duck would come.'

3.   Previous studies on the acquisition of mood by monolingual and bilingual speakers

A previous study on the distribution of mood in complement clauses by monolingual children acquiring EP shows that, in general, the acquisition of the subjunctive is delayed compared to the indicative (Jesus, 2014). Some contexts which require the use of the subjunctive (e.g. weak epistemic predicates, are particularly late-acquired, since even 8 and 9-year-olds do not demonstrate target behavior in these particular contexts.

The knowledge of mood restrictions in complement clauses by bilingual speakers has been investigated in a previous study by Flores et al. (2017),

who analyzed 50 Portuguese-descendent children living in Germany with regard to their heritage language (EP). This study, based on the sentence completion task by Jesus (2014), which is also used in the present work, shows that German-dominant HSs take longer to acquire the distribution of subjunctive than monolingual children: at the age span of 10-12 years the subjunctive is not stabilized in [− epistemic] contexts; in the case of weak epistemic matrix predicates ([+ epistemic; − veridical]), even older children (13-16 years) do not produce the subjunctive in more than 50% of the contexts.

Studies on adult HSs of Spanish living in the US and in the Netherlands (with English or Dutch as dominant language) show that bilinguals whose dominant language's mood system is fundamentally different show consistent problems with the subjunctive mood in their HL (Montrul 2009; van Osch and Sleeman 2016).

4.   The present study

4.1   Research question

In order to determine the role played by the dominant language in HL acquisition, we compare HSs with similar sociolinguistic profiles acquiring EP in a German dominant environment and in a French dominant

environment. Germany and France are two European countries with large communities of Portuguese immigrants. From a linguistic point of view, it is ideal to compare the effect of having a Germanic dominant language, where no Romance-type subjunctive is available, with the effect of a Romance dominant language, namely French, a language with a subjunctive encoding the same values as the EP subjunctive. In general, we aim at answering one general question, raised in light of the results of previous studies on the acquisition of mood by HSs:

Can we identify a negative CLI from a dominant language that would lead to a delay in the HL acquisition of a generally late acquired property (the semantic value and distribution of the subjunctive in EP)?

We anticipate two possible result patterns, summarized in a. and b.:

a. Portuguese-French bilinguals show a similar performance (in pattern and level of accuracy) to Portuguese-German bilinguals, i.e. no difficulties in using the indicative mood but arrested development with respect to the subjunctive, particularly in weak epistemic (i.e. [+ epistemic; − veridical]) contexts.

b. Portuguese-French bilinguals perform more accurately than Portuguese-German bilinguals.

If the situation in a. is observed, we have no argument to support the existence of CLI. On the contrary, if the situation in b. occurs, it supports

the idea that the majority language German, which has a distinct mood system, negatively influences the acquisition of mood choice in EP.

4.2   Participants

Two groups of bilingual speakers were tested, each comprised by 17 participants in the age span of 7 to 16 years (mean: 11.03; SD: 2.45): a group of Portuguese-descendant HSs living in France and another group living in Germany. Biographical and sociolinguistic data were gathered through a written background questionnaire or/and an oral interview to the parents or to the participants in the case of the adolescents, either at their homes or in a room next to the HL class. Additionally, a monolingual group of 17 Portuguese children and teenagers in the same age span (mean: 10.65; SD: 2.34) was tested.

The Portuguese-French bilingual group includes children with migration background (mean age: 11.06; SD: 2.33), who have at least one Portuguese parent. All children were exposed to Portuguese from birth and to French between birth and the age of two years. Fourteen children were born in France; the remaining three were born in Portugal but immigrated with their parents before the age of two years. All the children received input from Portuguese and French at home; however, for ten children, French is more used at home than Portuguese. In any case, there had been significant

exposure to Portuguese at home and, at the time of testing, all the children were able to communicate in that language. Apart from communication at home, all children have contact with EP through other sources, namely Portuguese grandparents also living in France, Portuguese TV, the annual holidays spent in Portugal, cultural activities and enrollment in a HL course once a week. Five participants never attended such a course and three are no longer enrolled in one.

As for the Portuguese-German bilingual speakers, all 17 participants (mean age: 11; SD: 2.65) were born in Germany in Portuguese-speaking families. They are a sub-group of the subjects tested for Flores et al. (2017). Since we aimed at assessing the independent influence of the dominant language, the German-dominant children were matched with the French-dominant children with regard to extra-linguistic variables. For this reason, , we extracted the subgroup of Portuguese-German bilinguals from the subgroup of speakers with less exposure to Portuguese at home which was considered in Flores et al. (2017). Specifically, all the speakers in the group had at least one parent who was raised bilingually in Germany and two children had two second generation parents of Portuguese origin. Therefore, all the speakers had contact with Portuguese and German from birth. Similarly to the Portuguese-French bilinguals, apart from communication within the family, participants have some contact with EP through TV, music, holidays spent in Portugal and the weekly HL course.

The control group comprises 17 children, who grew up in a monolingual context in Portugal. As their bilingual counterparts, they are between 7 and 15 years old (mean: 10.65; SD: 2.34).

4.3   Method

The test consisted of a sentence completion task, meant to elicit the production of finite complement clauses. The test items (each one corresponding to an episode of a story) were arranged in order to build four short narratives. The participants listened to the stories, told by an experimenter, while watching illustrations on a computer screen. After a given episode, the experimenter asked the participant to complete a sentence describing the main event.

In (4), we give an example of a test item, in which a subjunctive complement clause is expected after the matrix verb *querer* 'want'.

    (4)   Previous context (given by the previous items/episodes) – A

            little girl is helping the cook making lunch.

            Experimenter – After all, the cook was making a soup, but he

            needed help. So, he asked the girl – "Can you taste it?".

            (Stimulus sentence) –   *O   cozinheiro queria que…*

                             the cook   wanted that…

Expected answer: *a menina provasse*   *a   sopa.*

the girl   taste.SBJV.PST.3SG the soup

'(The cook wanted) the girl to taste the soup.'

The items were grouped under six conditions, which correspond to the relevant semantic contexts sketched in section 2.1, with two different verbs for each condition. Two conditions presented a [+ epistemic; + veridical] matrix clause, thus introducing an indicative complement: strong epistemic verbs (*prometer* 'promise' and *descobrir* 'find out') and fiction verbs (*sonhar* 'dream' and *fingir* 'pretend'). For the elicitation of subjunctive complements, three conditions were considered. The non-implicative condition presents [– epistemic, – veridical] contexts and includes the verbs *querer* 'want' and *mandar* 'order'. The implicative condition presents [– epistemic, + veridical] contexts and includes the predicates *achar bem* 'approve' and *deixar* 'let'. The weak epistemic condition presents [+ epistemic, – veridical] contexts and includes the predicates *duvidar* 'doubt' and *não acreditar* 'not believe'. The test comprised 38 items in total (24 test items – 2 for each verb, 2 training items and 12 fillers).[v]

To make sure that all the subjunctive conditions in EP also corresponded to subjunctive contexts in French, a Romance language which, with few exceptions, exhibits a similar mood system, all the sentences of the test were

previously translated to French. There was no need to make modifications to the original experiment.

The participants were individually tested in one single session by one experimenter and all sessions were audiorecorded and transcribed. During the data collection of the bilingual groups, the experimenter ensured that only Portuguese was spoken, since he was presented as a visitant researcher from Portugal. The data were coded according to mood selection, i.e. production of the *indicative* or the *subjunctive*. In addition, when children provided an infinitive complement, their answers were coded as *non-finite*. Whenever participants did not provide a complement clause, responses were coded as *other* and excluded from the statistical analysis.

5.   Results

We begin by presenting the mean rate of accuracy per group and sub-condition (Figure 1).
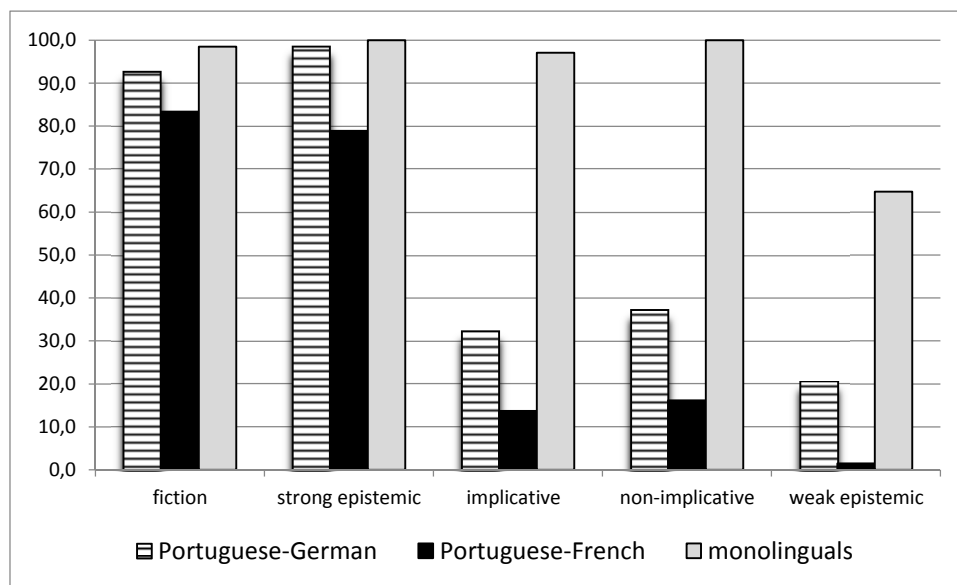
Figure 1. Rate of accuracy per group and per sub-condition (in %).

In the indicative conditions (fiction and strong epistemic predicates), the mean rate of accuracy reaches 92.7% in the Portuguese-German group against 83.3% in the Portuguese-French group, for fiction predicates, and 98.5% against 78.9%, respectively, for strong epistemic predicates. The monolinguals reach ceiling performance in the strong epistemic context and 98.5% in the fiction verb condition.

Table 2 shows the raw counts for the indicative conditions. Since each context is tested by 4 items, a total of 68 answers per group were quantified (4 items x 17 participants).

Table 2. Total raw counts per group in the two indicative conditions.

	Fiction				
	indicative	*subjunctive*	*non-finite*	*other*	*total*
German dominant	61	5	0	2	68
French dominant	50	0	5	13	68
Monolinguals	67	1	0	0	68
	Strong epistemic				
	indicative	*subjunctive*	*non-finite*	*other*	*total*
German dominant	66	1	0	1	68
French dominant	53	2	4	9	68
Monolinguals	68	0	0	0	68

The raw counts for the Portuguese-German bilinguals indicate that in the context of fiction verbs, 61 out of 68 answers were target-like. In five cases a subjunctive form was used and in two cases the participants did not use a complement clause. In the context of strong epistemic predicates, the number of target-like use of indicative forms is 66 (out of 68). These results indicate that overall the HSs of EP living in Germany had no problems in performing the task. The number of answers in which children did not use a complement clause is marginal (3 instances out of 136 items); the use of non-finite forms was not attested at all. In the case of the French-Portuguese bilinguals, the use of the indicative mood in indicative conditions is also very high (fiction verbs: 50; strong epistemic verbs: 53, out of 68). As opposed to the Portuguese-German bilinguals, this bilingual group resorts to

non-finite forms in indicative conditions, even if at a very low level (fiction verbs: 5; strong epistemic verbs: 4, out of 68). Also the number of instances in which the children use other structures is higher in this group. Furthermore, no instances of subjunctives in fiction verb contexts are produced; but in the strong epistemic condition, two subjunctive forms are used instead of the required indicative. In the monolingual group, as reported above, all children produce the indicative form in the strong epistemic context. As for the contexts with fiction verbs, there is one instance of a subjunctive produced by the oldest participant (15 years old). Non-finite forms are never used.

The most revealing differences between the groups lay in the subjunctive conditions. As indicated in Figure 1 above and in Table 3 below, there is a clear difference between the bilingual's and the monolingual's performance in the subjunctive conditions. Furthermore, there are differences within the subjunctive conditions in all groups, specifically regarding the participants' performance in the implicative and non-implicative contexts ([− epistemic]), on the one hand, and the weak epistemic condition ([+ epistemic; − veridical]) on the other hand.

Table 3. Total raw counts per group in the three subjunctive conditions.

	Implicative				
	subjunctive	*indicative*	*non-finite*	*other*	*total*
German dominant	21	32	10	5	68
French dominant	9	29	22	8	68
Monolinguals	66	2	0	0	68
	non-implicative				
	subjunctive	*indicative*	*non-finite*	*other*	*total*
German dominant	24	35	5	4	68
French dominant	11	33	18	6	68
Monolinguals	68	0	0	0	68
	weak epistemic				
	subjunctive	*indicative*	*non-finite*	*other*	*total*
German dominant	14	51	2	1	68
French dominant	1	47	7	13	68
Monolinguals	44	24	0	0	68

In the monolingual group, with non-implicative predicates, all speakers produced target-like subjunctive forms; with implicative predicates, there are only two occurrences of indicatives instead of the expected subjunctive, produced by a nine and a ten-year old child (97.1% of accuracy; SD=8.3). As for the complements of weak epistemic verbs, the epistemic context in which the subjunctive is justified by veridicality (a [− veridical] context is

created), 24 out of 68 items correspond to the target-deviant use of indicative forms (only 64.7% of accuracy; SD=31.9).

The rates of subjunctive are considerably lower in both bilingual groups. With implicative predicates, the Portuguese-German bilinguals produce only 32.4% of subjunctives, and the Portuguese-French group 13.7%. In the non-implicative sub-conditions, the rates are 37.3% (SD=39.5%) and 16.2%, respectively. The weak epistemic contexts, which correspond to [+ epistemic; − veridical] contexts, are the most challenging for both bilingual groups. The Portuguese-German bilinguals only produce 20.6% subjunctive forms and Portuguese-French bilinguals almost do not produce subjunctives in these contexts (1.5% accuracy).

A generalized linear mixed model (GLMM) executed in SPSS 22 was used to analyze accuracy in indicative and the subjunctive conditions. Fixed effects entered into the model were Age at testing (7 to 16 years), Group (Monolingual, German dominant, French dominant), Condition (indicative: strong epistemic and fiction verb conditions; subjunctive: non-implicative, implicative and weak epistemic verb conditions) and a Group by Condition interaction. Subject was entered as a random factor. The model showed significant main effects of AGE $F(1,1004)=10.914$, $p=.001$, GROUP $F(2,1004)=7.530$, $p=.001$ and CONDITION $F(4,1004)=18.971$, $p<.001$, and no significant GROUP*CONDITION interaction: $F(8,1004)=1.460$, $p=.168$).

The probability of a correct answer is lower in the bilingual groups, and in particular it is lower in the Portuguese-French group than in the Portuguese-German group. Pairwise Sidak-corrected analyses included in the model show significant differences between the groups: Monolingual vs. German dominant t(1004)=4.608, $p<0.001$, Monolingual vs. French dominant t(1004)=12.157, $p<0.001$, German dominant vs. French dominant t(1004)=4.440, $p<0.001$.

As for the factor "condition", we are especially interested in the subjunctive conditions: if all the data is considered, we expected the probability of a subjunctive to be produced in implicative and in weak epistemic conditions to be lower than in the non-implicative condition, particularly lower in the weak epistemic condition. However, pairwise Sidak-corrected analyses including all the data do not show significant differences between the different subjunctive conditions. What is more telling is the group pairwise contrasts in each subjunctive condition. We found significant differences in each pairwise comparison of groups within each subjunctive condition. Looking in particular to the more problematic weak epistemic condition, we highlight two comparisons: Monolingual vs. German dominant t(1004)=5.202, $p<0.001$, German dominant vs. French dominant t(1004)=2.605, $p=0.009$.

6.   Discussion and concluding remarks

The results obtained in this study contribute to our knowledge of the acquisition of mood in EP, both in monolingual and in bilingual settings.

The first relevant result of this study pertains to monolingual acquisition. Jesus (2014) had shown that at 8-9 years monolingual speakers exhibit stabilized knowledge of the use of subjunctive in implicative and non-implicative contexts (i.e. [− epistemic] contexts), but they do not show the same knowledge in the case of the complements to weak epistemic predicates ([+ epistemic; − veridical]). The present study corroborates this finding and shows that not even in the age span of 13-15 monolingual adolescents perform as adults in this condition. This contributes to qualify the distribution of subjunctive in EP complement clauses as a type of grammatical knowledge which stabilizes especially late. Stabilizing so late, the use of subjunctive to encode non-veridicality in epistemic contexts is also possibly a vulnerable property in terms of language change, both in monolingual and in bilingual settings – exactly as it is the case of the proclitic use of clitics in EP (see Costa, Fiéis and Lobo 2015, for monolingual settings; Flores and Barbosa 2014, for HL acquisition of this property).

The vulnerability of the subjunctive as a marker of non-veridicality in epistemic contexts is confirmed by the acquisition path we could identify in

the two HSs groups: in both cases, the lowest accuracy rates in subjunctive contexts were obtained in the complements to weak epistemic matrix verbs. To this extent, we may conclude that HSs follow the same acquisition path as monolingual speakers: they first stabilize the use of indicative in complement clauses and, in the case of subjunctive clauses, the subjunctive is first used in [− epistemic] contexts and only later, if at all, in [+ epistemic; − veridical] contexts. Crucially, our results reveal a very protracted development of the HSs in the use of the subjunctive. However, the significant effect of the children's age at testing shows that there is an acquisition effect, in particular, performance improves with increasing age. Furthermore, we show that protracted development is found not only in the case of the Portuguese-German bilinguals, as already observed by Flores et al. (2017), but also in Portuguese-French bilinguals. As discussed in section 2.2, French, contrary to German, has a subjunctive of the Romance type, which can be said to signal the same semantic values as the Portuguese subjunctive. In this case, if the dominant language contributes to justify a delayed acquisition of the HL, we would expect the Portuguese-German bilinguals to be outperformed by the French-dominant group.

The results obtained run contrary to these expectations: the Portuguese-French group did not outperform the Portuguese-German group. In fact, French-Portuguese bilinguals show even lower accuracy rates than the Portuguese-German bilinguals in subjunctive and in indicative contexts.

This suggests that the acquisition process in the case of the Portuguese-French bilinguals is proceeding at an even slower pace. We will discuss this in two steps, first considering the protracted development affecting the two heritage groups and, finally, and along the same line, suggesting a tentative explanation for the lower accuracy rates of the French dominant group.

First, since the delay observed in the bilingual groups is not due to CLI (which should have affected the German dominant group more negatively than the French dominant bilinguals), it is reasonable to consider other factors that affect both groups of HSs. One explanation is the lack of favorable input conditions, which affect the two groups of HSs. This conclusion is in line with previous findings of other studies that describe delays in bilingual language acquisition as the result of reduced input rather than as an effect of language contact (Austin 2009; Gathercole 2007; Unsworth 2012). Austin (2009), for instance, claims that the higher rate of root infinitives in Basque in Spanish-Basque bilingual children is not attributable to any influence from Spanish but to the different patterns of exposure to Basque. As argued by Tsimpli (2014), limited input may particularly influence late properties, which is the case of the subjunctive.

Along the same line, the even lower results of the HSs living in France may be explained as a result of even more limited exposure to EP input compared to Portuguese-German bilinguals. Even though we have controlled for the language background of the HSs, selecting, for both

bilingual groups, children with at least one Portuguese parent and with exposure to EP outside the nuclear family (other interlocutors, HL course, holidays in Portugal), a more controlled input measurement instrument (e.g. BiLEC, Unsworth 2013) could probably unveil more refined input differences which are not detected by a qualitative-oriented questionnaire. In general, the rapid switch to French as the main language of communication, also in domestic contexts, even in first generation migrants who have recently arrived to the host country, is a very typical linguistic behavior documented for the Portuguese migration in France as opposed to other host countries (see Beauchemin, Hamel and Simon 2015; Faneca 2013, a.o.). We believe that this general lower use of Portuguese within Portuguese communities in France leads to input differences between the two bilingual groups, which explain the overall lower results of the French-dominant HSs. We will pursue this question in future research. Furthermore, to completely assess the role of input in the development of EP as HL, in future research, HSs of EP living in France with more exposure to EP should be included, as well as adult HSs with the same sociolinguistic profile.[vi]

Ultimately, an analysis that takes into account input-driven explanations instead of primarily laying the focus on CLI may help to give us a better picture of HL development. As Gathercole (2007) conclude, a child that lacks exposure to the "critical mass of input" necessary to acquire certain

linguistic properties may take longer, or even fail, to acquire those properties. Our data support the idea that child HSs may not have enough exposure to EP to ensure the acquisition of the combination of the semantic values that regulate the distribution of the subjective mood.

Still, a word of caution is needed with respect to this conclusion. Although reduced input may help explain divergent outcomes of HL development, we do not support purely data-driven theories of language acquisition. Many linguistic outcomes are not explainable by input-driven accounts. This is precisely the case of the different subjunctive contexts: the lower results obtained by all the groups with weak epistemics, if compared with other subjunctive conditions, call for a linguistic explanation. In particular, we argue that the more notorious and persistent difficulty in this particular condition can only be explained if one recalls that it is only in this condition that the child must consider [veridicality] (in addition to [epistemicity]) in order to determine mood choice; in all other conditions, identifying the context as [− epistemic] would be enough to justify the choice of the subjunctive. So only establishing a hierarchy of access to the different features explaining the distribution of mood in EP we have a full explanation for the pattern that we identified. Our general point here is that access to the specific combination of [+ epistemic; − veridical] as a feature combination justifying the use of subjunctive comes late and needs a particular accumulation of *input*, something that happens later or may not

happen at all in some HS groups (see Montrul 2009; van Osch and Sleeman 2016, for adult HL speakers of Spanish). In line with Unsworth (2012), we believe that it is only by contrasting different "areas of language where input effects are expected, e.g., vocabulary, that we can come to a complete understanding of how input and the mechanisms driving language acquisition interact" (Unsworth 2012: 643).

References

de Almeida, Laetitia. 2011. *Acquisition de la structure syllabique en contexte de bilinguisme simultané portugais-francais*. Unpublished Ph.D Thesis. Universidade de Lisboa, Portugal. http://hdl.handle.net/10451/4972

Austin, Jennifer. 2009. "Delay, interference and bilingual development: The acquisition of verbal morphology in children learning Basque and Spanish." *International Journal of Bilingualism* 13(4):447–479.

Beauchemin, Cris, Christelle Hamel, and Patrick Simon. 2015. *Trajectoires et origines, enquête sur la diversité des populations en France*. Paris: Ined (collection Grandes Enquêtes).

Costa, João, Alexandra Fiéis, and Maria Lobo. 2015. "Input variability and late acquisition: Clitic misplacement in European Portuguese." *Lingua* 161:10–26.

Fabricius-Hansen, Cathrine, and Kjell J. Sæbø. 2004. "In a mediative mood: The semantics of the German reportive subjunctive." *Natural Language Semantics* 12(3):213–257.

Faneca, Rosa M. 2013. "Aprendizagem e representações do português língua de herança por lusodescendentes em França em contextos não formais." *Indagatio Didactica* 5(3):29–49.

Flores, Cristina, and Pilar Barbosa. 2014. "When reduced input leads to delayed acquisition: a study on the acquisition of clitic placement by Portuguese heritage speakers." *International Journal of Bilingualism* 18(3):304–325.

Flores, C., A. L. Santos, A. Jesus & R. Marques (2017). Age and input effects in the acquisition of mood in Heritage Portuguese. *Journal of Child Language*. *44*(4), 795-828.

Gathercole, Virginia C. M. 2007. "Miami and North Wales, so far and yet so near: A constructivist account of morphosyntactic development in bilingual children." *The International Journal of Bilingual Education and Bilingualism* 10(3):224–247.

Godard, Danièle. 2012. "Indicative and subjunctive mood in complement clauses: From formal semantics to grammar writing." In *Empirical issues in syntax and semantics 9*, edited by Christopher Piñón, 129–148. Paris: Colloque de Syntaxe et Sémantique à Paris.

Jesus, Alice (2014). *Aquisição do modo em orações completivas do Português Europeu*. MA Dissertation. Faculdade de Letras da Universidade de Lisboa.

Kanté, Issa. 2010. "Mood and modality in finite noun complement clauses." *International Journal of Corpus Linguistics* 15(2):267–290.

Knobloch, Clemens. 2001. "Wie man den "den Konjunktiv" erwirbt." In *Grammatikalisierung, Spracherwerb und Schriftlichkeit*, edited by Helmuth Feilke, Klaus-Peter Kappest, and Clemens Knobloch, 67–90. Tübingen: Niemeyer.

Marques, Rui. 2003. "Semantic and Pragmatic Constraints on Mood Selection." In *Meaning Through Language Contrast*, Vol. 1, edited by Katarzyna M. Jaszczolt and Ken Turner, 129–146. Amsterdam: Benjamins.

Meinunger, Andre. 2004. "Verb Position, verbal mood and the anchoring (potential) of sentences." In *The syntax and semantics of the left periphery*, edited by Horst Lohnstein and Susanne Trissler, 313–342. Berlin, New York: de Gruyter.

Montrul, Silvina. 2009. "Knowledge of tense-aspect and mood in Spanish heritage speakers." *International Journal of Bilingualism* 13(2):239–269.

Montrul, Silvina. 2016. *The acquisition of heritage languages*. Cambridge, UK: Cambridge University Press.

Müller, Natascha, and Aafke Hulk. 2001. "Crosslinguistic influence in bilingual language acquisition: Italian and French as recipient languages." *Bilingualism: Language and Cognition* 4(1):1–53.

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

Paradis, Johanne, and Fred Genesee. 1996. "Syntactic acquisition in bilingual children: Autonomous or interdependent?" *Studies in Second Language Acquisition* 18(1):1–25.

Rodina, Yulia, and Marit Westergaard. 2017. "Grammatical gender in bilingual Norwegian-Russian acquisition: The role of input and transparency." *Bilingualism: Language and Cognition* 20(1):197–214.

Santos, Ana L., and Cristina Flores. 2016. "Comparing heritage speakers and late L2-learners of European Portuguese: verb movement, VP ellipsis and adverb placement." *Linguistic Approaches to Bilingualism* 6(3):308–340.

Tsimpli, Ianthi. 2014. "Early, late or very late? Timing acquisition and bilingualism." *Linguistic Approaches to Bilingualism* 4(3):283–313.

Unsworth, Sharon. 2012. "Testing for crosslinguistic influence and exposure effects in the bilingual acquisition of specific indefinite objects." In *Proceedings of the 36th annual Boston University Conference on Language Development*, edited by Alia Biller K., Esther Y. Chung and Amelia E. Kimball, 633–645. Somerville, MA: Cascadilla Press.

Unsworth, Sharon. 2013. "Assessing the role of current and cumulative exposure in simultaneous bilingual acquisition: The case of Dutch gender." *Bilingualism: Language and Cognition* 16(1):86–110.

Zifonun, Gisela, Ludger Hoffmann, Bruno Strecker et al. 1997. *Grammatik der deutschen Sprache*. Berlin, New York: de Gruyter.

[i] For the sake of simplicity, we will coin causative and evaluative predicates as "implicative predicates", using the term "non-implicative predicates" to refer to directive predicates and predicates of volition.

[ii] A well-known case is the verb *espérer* (´to hope'/ 'to expect'), whose complement clause can take either the indicative or the subjunctive, whereas Portuguese *esperar* is a subjunctive trigger. The same goes for evaluative predicates (e.g., the equivalents of *regret*) or for the noun (equivalent to) *fact*. In French, the complement clauses of these predicates can exhibit the indicative or the subjunctive, whereas in Portuguese the indicative is ruled out.

[iii] A possible explanation for the aforementioned differences between the two languages is that in French prominence is given to the epistemicity feature (see, e.g., Marques 2003; Kanté 2010).

[iv] Note that the verb *croire* ('to believe') also allows a complement clause in the past tense and in the indicative mood, in a parallel way to what happens in Portuguese:

> *La maman canard ne croyait pas que le petit canard était*
> the mummy duck NEG believe NEG that the little duck be.IND.IPFV.3SG
> *capable de voler.*
> able of fly.INF

[v] Another condition aimed at analyzing mood selection under a double mood choice verb [+ epistemic; +/ – veridical], namely *acreditar* 'believe'. In this case, the selection of the indicative or the subjunctive does not exclusively depend on the matrix predicate, but also on the discourse context. In the present paper, we do not explore the results in this condition, which were not clear for any of the groups, not even in the case of the adult control group tested by Jesus (2014).

[vi] A reviewer suggests that the lower results of the Portuguese-French bilinguals may be due to the fact that French is similar to Portuguese but the subjunctive is less salient in French. We do not believe that this explanation is valid because the French-dominant children also present lower results in the indicative conditions. Furthermore, in the subjunctive conditions they resort more often to non-finite forms. Both observations run contrary to a CLI-based argumentation.