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OVERT PRONOUNS ARE CHALLENGING: SUBJECT REALIZATION IN WRITTEN NARRATIVES OF PORTUGUESE-FRENCH BILINGUAL SCHOOL- AGE CHILDREN

ABSTRACT

This paper examines the use of referential expressions in the subject position in European Portuguese (EP) in a corpus of narratives written by two groups of Portuguese-speaking school-age children: monolingually-raised children living in Portugal and bilingual French-Portuguese children living in Switzerland. We focus on the children's choice of null and overt subjects, considering both the syntactic context (inter- and intrasentential) and the pragmatic context (topic continuity and topic shift). Additionally, we explore potential age and proficiency effects within the group of bilinguals. Results show an overuse of overt pronouns in intersentential topic continuity contexts in the narratives of the bilingual children, modulated by proficiency and age. This confirms that potential changes to heritage language grammars in EP may affect, in particular, the use of overt subject pronouns. The overuse of strong pronouns reflects that their acquisition is challenging for monolingual and for bilingual children alike, probably due to the complexity and variability of overt subject pronouns in the adult grammar.

KEYWORDS: null subjects, overt pronouns, syntactic context, pragmatic constraints, European Portuguese, heritage languages

INTRODUCTION

This paper investigates the distribution of null and overt subject pronouns in narratives written by two groups of children acquiring European Portuguese (EP) as first language. The first group consists of monolingually-raised children living in Portugal, the second

group of bilingually-raised children living in the French-speaking region of Switzerland who grow up with French as dominant environmental language and EP as heritage language (HL). We focus on the children's use of null and overt subjects and investigate the role of syntactic (intra- vs. intersentential) and pragmatic (topic continuity/TC vs. topic shift/TS) context. Since the group of bilingual children is rather heterogeneous concerning age and proficiency, we also consider potential effects of these two factors on their individual results.

SUBJECT REALIZATION IN EP AND FRENCH

In a null subject language (NSL) like EP, the choice between different referential expressions depends on the discourse referent's degree of accessibility, which in turn depends on factors like the syntactic function of the antecedent, the distance between antecedent and null/overt subject and the prominence of the antecedents in the previous discourse (TC/TS), among others (see Calabrese 1986; Ariel 1990; Carminati 2002). Null subjects are more likely to be used with more accessible referents, i.e., antecedents in subject position and less distant or recently mentioned antecedents, and in contexts of TC. Overt subject pronouns are more likely with less accessible referents, i.e., antecedents in object position and more distant antecedents, and in contexts of TS.

Chomsky (1981) establishes a general principle guiding pronoun choice in NSLs, the "Avoid pronoun principle", suggesting that a null pronoun is the unmarked choice, and an overt pronoun should only be used, if necessary, in cases of emphasis, contrast or ambiguity. Accordingly, corpus studies generally show a higher proportion of null than of overt subjects (typically a distribution of approx. 30% overt vs. 70% null subjects).

Based on a corpus of written newspaper interviews, Barbosa et al. (2005) report that 3rd person overt and null pronoun subjects in EP are indeed realized along these lines: 22% of the subjects were realised by an overt pronoun and 78% were null subjects. Subject realisation was influenced by the position and distance of the antecedent: the lowest number of overt subjects occurred in intrasentential anaphoric contexts in which the subject of a subordinate clause referred to the subject of an adjacent main clause (3%) and in intersentential contexts in which the subject of a main clause relates to a subject antecedent in an immediately adjacent preceding main clause (11%). More overt pronouns occurred in contexts with a non-subject antecedent in an adjacent clause (29%) and in contexts with an antecedent in a non-adjacent clause (33%). This shows that overt subject use correlates with topic shift and greater distance of the antecedent.

Data from sentence comprehension show a similar pattern: Rinke and Flores (2018) compare different conditions, each one either with an overt or a null pronoun (*pro*), see ex. (1a) for an intrasentential anaphoric and (1b) for an intersentential context. This study included adult speakers of EP and different groups of monolingually- and bilingually-raised child speakers.

- (1) a. *Por isso, a mãe chamou a Sónia quando*
 therefore the mother called the Sónia when
pro/ela voltou do trabalho.
 pro/she came back from-the work
 ‘Therefore the mother called Sónia when she arrived from work.’
- b. *A Sónia telefonou à Susana. Como sempre pro/ela está atrasada.*
 the Sónia called to+the Susana As always pro/she is late
 ‘Sónia called Susana. As usual she is late.’

The results of the adult group indicated that in all contexts, null subjects show a strong tendency to refer to the subject in the adjacent clause (=TC, 88.9% in the intrasentential and intersentential anaphoric conditions). Overt pronouns preferentially relate to the non-subject constituent in the adjacent clause (=TS, varying between 82.9% in the anaphoric intrasentential and 72.2% in the intersentential condition). The results reveal that in ambiguous contexts with a subject and an object antecedent, overt and null pronouns show different patterns of anaphoric resolution: null pronouns refer to a subject antecedent in an adjacent clause, overt pronouns to an object referent. This effect is widely independent of condition with respect to null pronouns. For overt pronouns, the syntactic context plays some role: although they preferentially mark topic shift, this tendency is stronger in intrasentential than in intersentential contexts (see also Morgado 2013; Lobo and Silva 2016).

French is generally considered to be a non-null subject language (Kayne 1980, Rizzi 1986)¹ in the sense that a pronominal subject is realized by a subject clitic, which can be doubled by strong pronouns in contexts of emphasis.²

- (2) *Alors la mère a téléphoné à Sonia quand*
 therefore the mother called to-the Sonia when
*(*pro)/elle est rentrée du travail.*
 pro/ she is come back from-the work
 ‘Therefore the mother called Sonia when she arrived from work.’

SUBJECT REALIZATION IN CHILD AND ADULT HERITAGE SPEAKERS

Previous research has shown that the adequate choice between overt and null subjects in NSLs may be a vulnerable domain in HLs, both in comprehension and production (Montrul 2004; Keating et al. 2011). A general tendency observed in adult heritage speakers (HSs) is overexplicitness through the overuse of overt subject pronouns or their

¹ For the assumption that French subject clitics are comparable to agreement markers in prototypical null subject languages see Kaiser (1992).

² For a corpus study on subject realization in colloquial French, see Gabriel and Rinke (2010).

interpretation in terms of TC (Montrul 2004³; Otheguy et al. 2007). This tendency has also been reported for bilingual children with a non-dominant NSL (e.g., Sánchez et al. 2023, for Spanish-English; Serratrice et al. 2004, for Italian-English, Argyri and Sorace 2007, for Greek-English bilinguals), suggesting that changes to the constraints that regulate subject realization may be a consistent particularity of the HL, at least in some HS populations (e.g., Brehmer et al. 2023 did not attest this tendency in German-Polish bilingual children). Potential changes are often explained as the result of a combination of independent or related factors, such as cross-linguistic influence (CLI, e.g., Serratrice et al. 2004), proficiency and language dominance (e.g., Andreou et al. 2023; Argyri and Sorace 2007; Torregrossa et al. 2021).

Flores and Rinke (2020) investigated the realization of overt and null subjects in a spontaneous speech corpus of two generations of EP speakers living in Germany (1st and 2nd generation speakers with migration background). This study revealed quantitative results which were similar to the overall numbers reported by Barbosa et al. (2005): 67.1% of overt and 32.1% of null subjects in Gen1 and 66.5% of overt and 33.5% of null subjects in Gen2. Both groups also showed a sensitivity to the pragmatic context, with a clear tendency to use null subjects in TC contexts (80.6% in Gen1; 77.7% in Gen2), and a preference for overt subjects in TS contexts (64.4% in Gen1 and 55.8% in Gen2). Both groups also show the expected tendency for realizing a subject antecedent by a null subject and an object antecedent by an overt pronoun. However, the study also reports a considerable degree of individual variation in Gen2, with two speakers diverging from the general pattern and showing a tendency towards an overuse of overt subject pronouns.

Concerning the comprehension of null and overt subjects, the study by Rinke and Flores (2018) showed that monolingually-raised EP, bilingual Spanish-EP and bilingual German-EP children also preferentially interpret null subjects in terms of TC and overt subjects as TS. This confirms earlier studies showing that monolingual children acquired the distribution of null and overt subjects at the age of 9 (Lobo and Silva 2016); and adds that bilingual children, independent of their language combination, also have acquired this knowledge at roughly the same age. There are, however, also some differences between the groups. In the null subject condition, the bilinguals show more variation in the interpretation of the null pronoun in the intersentential and the intrasentential cataphoric conditions, while in the overt pronoun condition monolingual and bilingual children behave alike and differ in all conditions from the monolingual adults. The latter confirms that the pragmatically adequate interpretation of overt subject pronouns is not only a challenge for bilingual children, but also a complex task in monolingual acquisition.

³ Montrul 2004 also reports a pragmatically inadequate use of null subjects in adult Spanish HSs.

THE PRESENT STUDY

RESEARCH QUESTIONS

Departing from the evidence gathered so far from studies on subject expression in NSLs acquired as HL, four research questions guide the present analysis:

- I. Do children who acquired EP as L1 in a monolingual or in a bilingual context show the overall distribution of null/overt subject pronouns identified for EP in their (written) narratives?
- II. What is the impact of the syntactic context (inter-/intrasentential) and the pragmatic constraints (TC/TS) on this distribution?
- III. Do bilingual children show a tendency to be overexplicit in TC contexts?
- IV. To what extent is the performance of bilingual children modulated by current age and proficiency?

PARTICIPANTS

Data were collected from two groups of Portuguese children. The monolingually raised group (MON) comprises 30 children without a migration background who reside in the Lisbon region of Portugal. They range in age from 11 to 12 years (mean age 142.5 months). These children were born into Portuguese-speaking families with exclusive exposure to EP. Their narratives were collected as part of the study by Flores et al. (2024).

The bilingually raised group (BIL) consists of 32 bilingual children who live in the French-speaking part of Switzerland. They are simultaneous or early successive bilinguals who started to acquire EP as their HL from birth within the family setting and French, the societal language, either from birth, also through the nuclear family, or up to age 4 in the kindergarten (mean age of onset of French = 19.00 months, $SD = 26.49$). All children have Portuguese parents who were born in Portugal and migrated to Switzerland in adulthood. The bilingual children are between 10 and 12 years old, with a mean age of 133.57 months ($SD = 9.12$). All children attend a public French-speaking school. Additionally, they attend an extra-curricular Portuguese HL course organized by the Camões Institute once a week, lasting approximately two hours. This means that all bilingual children are mainly instructed in French, but they also acquired literacy skills in Portuguese through the HL course. As for language use, the bilingual children use EP at home, with Portuguese friends, neighbours, and other family members, and during the Portuguese HL course. They frequently visit Portugal during their holidays.

METHOD

Data collection in Switzerland included three types of instruments: a background questionnaire, a cloze test in EP (and in French) and a written retelling task in EP (and also in French). For the present study, we will report only on the Portuguese data (for more information about the data see Flores et al. 2022). Data collection in Portugal included

the same retelling prompt and a short background questionnaire. Data collection took place in person in a classroom in the presence of an instructor. To elicit written data, a combination of audio and visual stimuli was used. A model story (based on an ENNI picture narrative, see Schneider et al. 2005), narrated by a native Portuguese speaker, was aurally played alongside a sequence of pictures in a PowerPoint presentation. Afterwards, children were asked to write down the story they had just heard (once), using a paper featuring the same set of images.

The recorded story consisted of 258 words. The narratives produced by the monolingual children had an average of 138.66 words and those of the bilinguals had 119.12 words on average. The complete corpus encompassed 7853 words.

WRITTEN NARRATIVES: CODING AND ANALYSIS

The narratives were transcribed and coded for a bunch of grammatical features. For this analysis, the relevant ones are:

- i. subject form: definite noun phrase (dnp), indefinite noun phrase (inp), personal pronoun (pron), demonstrative pronoun (dem), relative pronoun (rel), null pronoun (null). Subject omissions in coordinated structures of the type “She entered the room and Ø switched on the light.” were coded separately;
- ii. pragmatic context: topic continuity (TC), topic shift (TS);
- iii. syntactic context: intersentential (INTER), intrasentential (INTRA).⁴

Example (3) shows a sentence with an overt pronoun in an intrasentential context (*ele*), which refers to the indirect object of the main clause (*elefante*), being thus a TS context. Example (4) shows a null subject (*pro*) in an intrasentential context which refers to the subject of the main clause (*Girafito*, =TC). In example (5) the overt pronoun *ele* refers to a subject antecedent in a previous sentence (intersentential context, TC).

- (3) *A elefantina foi a correr pedir ajuda ao elefante,*
the elephantina went running asking help to+the elephant
para ver se ele_i conseguia.
to see if he was+able
‘Elefantina began to run to ask the elephant for help in order to see if he would be able.’
- (4) *O Girafito ficou muito furioso a pensar que pro iria perder o seu brinquedo.*
the Girafito was very angry to think that would lose the his toy
‘Girafito became very angry just thinking that he would lose his toy.’
- (5) (E o girafinho ficou muito triste.)
Ele ficou tão triste que...
he became so sad that
‘And Girafinho became very sad. He became so sad that....’

⁴ We further coded for intrasentential anaphoric and cataphoric contexts, however, due to the limited occurrences of cataphoric contexts, we collapsed both.

BACKGROUND QUESTIONNAIRE AND PROFICIENCY TEST

In addition to the written narratives, a background questionnaire was filled out by the parents of the bilingual children to gather information on language acquisition and language use in various contexts of the children’s life.

Furthermore, data collection comprised a written cloze test in EP, which served as proficiency assessment tool. The test included 40 blank spaces targeting various linguistic structures of different levels of difficulty (for more details see Torregrossa et al. 2023).

RESULTS

DESCRIPTIVE RESULTS

We will start by reporting the descriptive analysis of the corpus. Table 1 shows the raw counts of all subject forms used by the monolingual and the bilingual children in their written narratives. The total number of coded subjects per group is similar in both groups (MON: 645; BIL: 640).

Table 1. Types of subject expression (raw counts)

Group	Definite NP	Overt pronoun	Null pronoun	Indefinite NP	Relative pronoun	Demonstrative	Coord. null	Total
Monolingual	276	78	114	58	37	2	80	645
Bilingual	305	119	62	61	23	0	70	640

In a second step, we circumscribed our analysis only to the pronominal subject forms (see Table 2).

Table 2. Types of subject expression in 3rd person contexts (raw counts)

Group	Subject form	Raw counts (%)
Monolingual	Null	114 (59.4%)
	Pron	78 (40.6%)
Bilingual	Null	62 (34.3%)
	Pron	119 (65.7%)

As seen in Table 2, the proportion of overt subjects is higher in the bilingual group and the proportion of null subjects lower. While in MON the rate of null subjects (59.4%) surpasses the rate of overt pronouns (40.6%), in BIL the proportion of overt pronouns (65.7%) exceeds that of null subjects (34.3%).

Table 3 gives an overview over the distribution of null and overt pronouns per syntactic and pragmatic context.

Table 3. Null and overt subjects per syntactic and pragmatic context (raw counts and %)

Group			Subject form	Raw counts (%)
Monolingual	Intersentential	TC	null	51 (62.2%)
			pron	31 (37.8%)
		TS	null	15 (30.6%)
			pron	34 (69.4%)
	Intrasentential	TC	null	28 (80%)
			pron	7 (20%)
		TS	null	4 (80%)
			pron	1 (20%)
Bilingual	Intersentential	TC	null	27 (25.5%)
			pron	79 (74.5%)
		TS	null	12 (28.6%)
			pron	30 (71.4%)
	Intrasentential	TC	Null	9 (69.2%)
			pron	4 (30.8%)
		TS	Null	0 (0%)
			pron	2 (100%)

STATISTICAL ANALYSIS

Statistical analyses were performed on the jamovi script (The jamovi project 2021) in R (R Core Team 2021).

Since our focus lies on the alternation between null and overt pronouns, for the statistical analysis we excluded the definite noun phrases and reduced the variable ‘subject type’ to a binominal dependent variable with two factors, ‘null’ and ‘pronoun’ (pronoun is the reference level). We ran a generalized linear mixed model (GLMM) with the following independent variables: ‘group’ (MON/BIL), ‘pragmatic context’ (TC/TS) and ‘syntactic context’ (INTER/INTRA), which were simple coded (−0.5/+0.5). The model included also simple interactions of the independent linguistic variables with the variable ‘group’ and participants as random intercepts. The test results are displayed in Table 4.

Table 4. GLMM results

Names	Estimate	SE	exp(B)	Lower	Upper	Z	P
(Intercept)	-0.0286	0.225	0.972	0.625	1.510	-0.127	0.899
Group	-0.8597	0.459	0.423	0.172	1.041	-1.871	0.061
TC/TS	0.7697	0.292	2.159	1.217	3.830	2.632	0.008
Syntactic_context	-1.2378	0.379	0.290	0.138	0.609	-3.270	0.001
Group*TC/TS	1.3357	0.581	3.803	1.217	11.878	2.298	0.022
Group* Syntactic_context	0.3743	0.756	1.454	0.331	6.394	0.495	0.620

The GLMM shows a significant effect of ‘group’, of the ‘pragmatic context’ (TC/TS) and of the ‘syntactic context’ in the distribution of null/overt forms in the corpus. The negative estimate for ‘group’ indicates that the log odds of producing overt pronouns decreases for monolingual children, while for ‘syntactic context’ it shows that the log odds of producing overt pronouns decreases in intrasentential contexts. The positive estimate for TC/TS indicates a tendency to produce more overt subject pronouns in TS than in TC contexts. Furthermore, there is a significant effect of the interaction between ‘group’ and ‘pragmatic context’ (TC/TS), but no interaction between ‘group’ and the ‘syntactic context’. These results indicate that, overall, the choice between an overt/null pronominal form is influenced by the pragmatic as well as by the syntactic context, although this result must be taken with caution because the bilingual children produced a low number of intrasentential contexts. In addition, results show that the two child groups differ in their choice of pronominal forms (null vs. overt), but this difference is influenced by the pragmatic context (TC vs. TS), and not by the syntactic context.

To better understand the Group*TC/TS interaction, we ran Post Hoc Comparisons (with Bonferroni correction) (see Table 5).

Table 5. Post Hoc Comparisons – Group*TC/TS

Group:TC/TS	Group:TC/TS	exp(B)	SE	Z	P
BIL TC	– BIL TS	0.903	0.3903	-0.236	1.000
MON TC	– MON TS	0.237	0.0930	-3.672	0.001
BIL TC	– MON TC	4.607	2.1500	3.273	0.006
BIL TS	– MON TS	1.211	0.7400	0.314	1.000

Results of the Post Hoc Comparison indicate that monolingual and bilingual children differ significantly in their choice of pronominal forms in TC contexts ($p = 0.006$), but not in TS contexts. Furthermore, intragroup comparisons show that monolingual children have different choices in TC vs. TS contexts ($p = 0.001$), but bilingual children do not differ significantly concerning the distribution of overt vs. null forms in topic shift and topic continuity contexts.

To complement this picture, Figure 1 shows the predicted probability of using an overt pronoun in TC and TS contexts by child group (the probabilities were extracted from the GLMM).

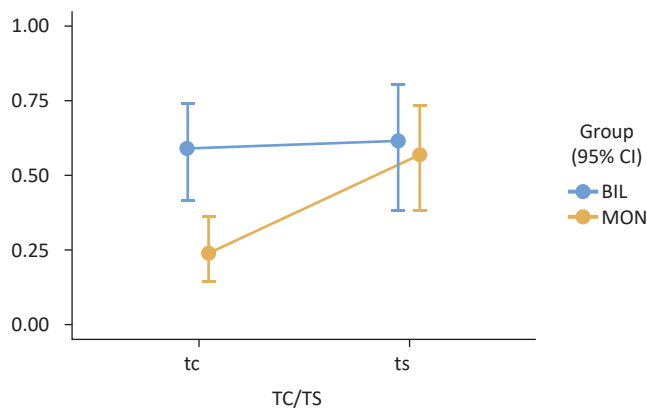


Figure 1. Effects plot (overt pronoun), per group and TC/TS

As visualized in Figure 1, the probability for the monolinguals to use an overt pronoun increases considerably in TS contexts (TC: 0.236; TS: 0.565), while this probability is almost identical in TC and TS contexts in the bilingual group (TC: 0.587; TS: 0.611).

A LOOK AT AGE AND PROFICIENCY EFFECTS IN THE BILINGUAL GROUP

The results reported in the previous section point to particularities in the narratives of the bilingual children in the domain of subject expression. As demonstrated, Portuguese-French bilinguals use overt pronouns almost to the same extent in TC and TS contexts in their HL EP. They show a clear tendency to use an overt pronoun in contexts, where a null subject is the expected option.

To better understand this performance, we investigated the role of the two individual variables that are assumed to play a crucial role in explaining the particularities of HL development: the children's level of HL proficiency and their current age (see also Andreou et al. 2023).

To assess children's HL proficiency, we used a cloze test, with a maximum score of 40 points. The children reached a mean score of 22.5 (SD = 8.93), in a range from 6 to 39 points. This shows considerable intra-group variation, as depicted in Figure 3. Figure 4 displays the variation in bilinguals' age.

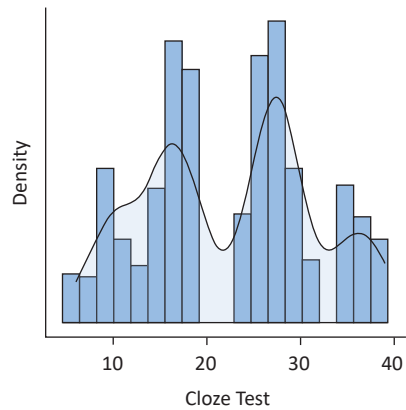


Figure 2. Density histogram for the Cloze Test results

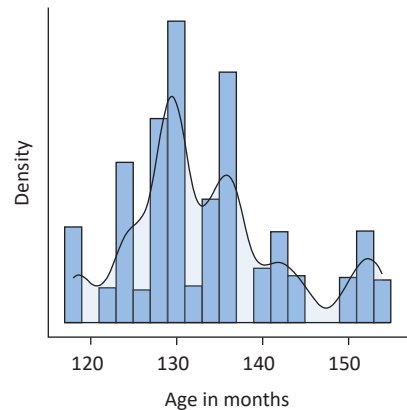


Figure 3. Density histogram for the age range

For the statistical analysis we ran a second GLMM, only with the data of the bilingual children, again with the variable ‘subject type’ as binominal dependent variable (‘null’/‘pronoun’). As independent variables the model included again the ‘pragmatic context’ (TC/TS), since this is the variable where the bilingual children show a particular behavior compared to the monolinguals (see the interaction in Table 1). ‘Proficiency’ (Cloze Test results) and ‘age’ were included as continuous variables, ‘participant’ as random intercept. The GLMM results are displayed in Table 6.

Table 6. GLMM results with ‘proficiency’ and ‘age’ included (bilingual group)

Names	Estimate	SE	exp(B)	Lower	Upper	Z	P
(Intercept)	1.5803	0.4628	4.86	1.960	12.03	3.41	< .001
Cloze Test	0.0580	0.0473	1.06	0.966	1.16	1.23	0.220
Age	0.0599	0.0432	1.06	0.976	1.16	1.39	0.165
TC/TS	1.0992	0.7272	3.00	0.722	12.49	1.51	0.131
Cloze Test*TC/TS	0.2042	0.0824	1.23	1.044	1.44	2.48	0.013
Age*TC/TS	0.1283	0.0706	1.14	0.990	1.31	1.82	0.069

The results show a significant effect of the interaction between the cloze test score and the pragmatic context (TC/TS), and a marginally-significant effect of the interaction between age and the TC/TS context in the use of overt pronouns. The positive estimates indicate that increasing proficiency and increasing age interact with pragmatic context.

To better understand these effects, Figure 4 plots the predicted probability of producing overt pronouns in TC/TS contexts as a function of proficiency, and Figure 5 plots the predicted probability of producing overt pronouns in these contexts as a function of age.

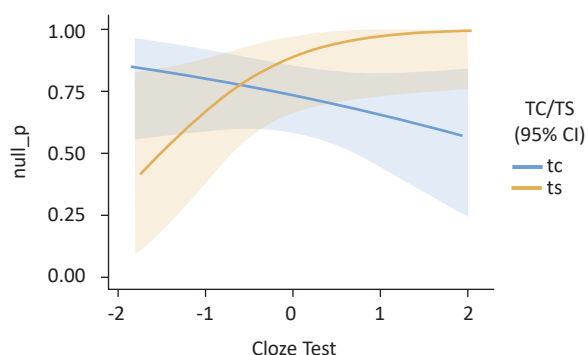


Figure 4. Effects plot for proficiency*TC/TS (overt pron.)

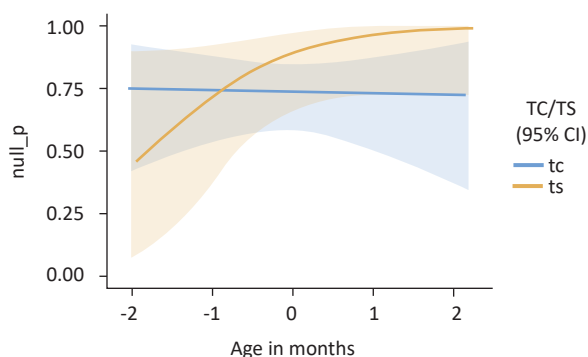


Figure 5. Effects plot for age*TC/TS (overt pron.)

Figure 4 indicates that a change in proficiency of 1 SD below the mean to 1 SD above the mean leads to an increase in the probability of producing an overt pronoun of 29.1% (from 68% to 97.1%) in the TS contexts. In TC contexts, where null subjects are expected, this change in proficiency leads to a decrease in the probability of producing an overt pronoun of 14.7% (from 80.4% to 65.7%). Figure 5 shows that a change in age of 1 SD below the mean to 1 SD above the mean leads to an increase in the probability of producing an overt pronoun of 23.7% (from 72.7% to 96.4%) in the TS contexts. In TC contexts this change in age barely affects the probability of producing an overt pronoun: the decrease is of only 1.6% (from 74.5% to 72.9%). Overall, the probabilities of producing overt subject pronouns in TS contexts increase with increasing proficiency and age. Conversely, the probabilities of producing overt pronouns in TC contexts reduce much less (or almost not at all) as a function of proficiency and age.

DISCUSSION AND CONCLUDING REMARKS

This paper analysed the use of null and overt subjects in written narratives of monolingually and bilingually-raised children acquiring EP as L1/HL. We asked whether their written production shows the same distribution as identified in the literature for EP. Following previous corpus studies (Barbosa et al. 2005), we expected an overall higher use of null forms compared to overt pronouns. This expectation is only partly fulfilled. The monolinguals indeed produce 59.4% null against 40.6% overt pronouns, even though the percentage of null forms is lower than shown in other written or oral corpora of adult speech. In the HL corpus, however, the rate of overt pronouns is almost double as high as the rate of null forms (65.7% overt against 34.3% null), indicating a reverse trend and a tendency to use a higher number of overt pronouns.

The study also showed that the distribution of null and overt subjects is determined by the syntactic and pragmatic context. The two groups perform similarly in TS contexts: both child groups produce more overt pronouns than null subjects. This is expected given that non-subject constituents tend to be resumed by overt pronoun forms (Carminati 2002).

A difference between the two groups arises in TC contexts, particularly in intersentential contexts: While the monolingual children show the expected tendency to use more null forms than pronouns, the bilingual children show the opposite pattern and overuse overt pronouns. Given that the subject constituent represents a highly accessible referent, the children are overexplicit in using a more informative nominal expression. Overexplicitness is found also in many other studies on bilingual and second language acquisition of anaphora resolution (Lozano 2016; Torregrossa et al. 2021).

It is interesting to observe that this tendency is particularly visible in intersentential contexts. Closer inspection reveals that monolingual children also use more overt pronouns in inter- than in intrasentential TC contexts. That overt pronouns are more likely to be used in intersentential TC contexts is expected, given that these contexts show less cohesion: because of a sentence boundary, the subject referent becomes generally less accessible and is more likely to be resumed by a more informative anaphoric expression, e.g., an overt pronoun also in the adult language (Alonso Ovalle et al. 2002; Morgado 2013; Rinke and Flores 2018).

As shown by Rinke and Flores (2018), the variability (and complexity) of the target system in some subdomains (cataphoric, intersentential, overt pronoun conditions) is a predictor for late acquisition both by monolingual and by bilingual children, who acquire the relevant knowledge relatively late, i.e., during adolescence. Overt pronouns tend to be used in contexts of TS, but – depending on the syntactic context – they can also be used to some extent in TC contexts. This shows that they are relatively variable and flexible and not exclusively related to contrast or emphasis. We argue that the variable interpretation of overt subject pronouns is a complex acquisition task in general. It is acquired late by monolingually-raised children (Lobo and Silva 2016), by bilingual children acquiring a dominant societal language (see Bel et al. 2010, for Catalan) and, as we show here, by children acquiring a HL. Our data confirm that it is not the syntax of the null subject property or of the overt subject pronoun as such that is complex, it is the challenge to understand and adequately apply the pragmatic conditions of variable pronoun use in different syntactic and pragmatic contexts.

This study does not allow us to consider the role of CLI because this would require that we include bilinguals with typologically different language pairs. Although we cannot exclude that French may exert some kind of influence, we also do not have clear evidence that CLI can account for the observed particularities. First, the observation that an increased use of overt pronouns is mostly restricted to intersentential TC contexts, amplifying the same tendency shown by the monolingual children, weakens a CLI-based explanation. Second, the children do neither show the French pattern of consistent pronoun use nor any signs of pronoun doubling as typically attested for French. In Rinke and Flores (2018), we have compared bilingual children acquiring EP as HL and German and Spanish, respectively, as their environmental languages. The results showed that the children acquiring two null subject languages (Spanish and Portuguese, and to a certain extent even a third null subject language, Catalan) perform similarly as bilingual children with a non-null subject language and a null subject language (German-Portuguese). They even showed a higher tendency to interpret overt subject pronouns in terms of TC in comparison to the German-Portuguese group.

Finally, our analysis confirms that the bilinguals' performance is (partly) modulated by proficiency and age, showing that the pragmatic knowledge on the use of overt pronouns is not per se a vulnerable domain in HL (see Andreou et al. 2023; Sánchez et al. 2023, for similar conclusions). With growing proficiency and increasing age, bilingual children master the null/overt subject alternation, particularly in TS contexts. In TC contexts, however, this knowledge may take even more time for bilinguals to acquire, which is due to reduced HL input. It remains an open question, to be answered in a future study, if adolescent HSs of EP, eventually master this alternation, or whether this is a linguistic property that is likely to undergo language change.

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