

The acquisition of clitic pronouns by European Portuguese heritage speakers

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1. Introduction

For the last 30 years, a large body of research on bilingual language acquisition has studied bilingual speakers who acquire both languages in parallel from birth. These (simultaneous) bilinguals show evidence of making a clear distinction between their two languages early in life, showing a successful autonomous development of the two languages from early on (Meisel, 2001).

Another well-studied group is that of bilingual speakers who acquired their L2 later in life (successively in childhood, as adolescents or adults). Research in this subfield aims at investigating whether these L2 speakers acquire their L2 in a different way from L1 acquirers (see Ellis, 1985, for an overview).

A third group shares some common issues with the first two types of bilingual speakers, even though it may be defined as unique. This is the group of heritage speakers (HS), who have received particular attention in the field of language acquisition only in recent years (Montrul 2002, 2004, 2008, 2010; Pires & Rothman, 2009; Pires, 2011; Polinsky, 1997, 2006, 2008; Polinsky & Kagan, 2007; Rothman, 2007, 2009; Schoenmakers-Klein, 1989, 1997; Silva-Corvalán, 1994; Valdés, 1995, 2000). HSs are typically second and third generation migrants, who grow up in the country of migration. The host language develops commonly as their dominant language, while the language of origin, their parents' language, is their heritage language (HL). HSs acquire their HL like monolinguals and simultaneous bilinguals, i.e., through their inborn faculty of language, triggered by naturalistic early exposition to the HL; nevertheless, they differ from the other two groups with respect to the quantity and quality of the input they receive from their HL. As Polinsky and Kagan say, "their heritage language begins in the home, and often stops there" (Polinsky & Kagan, 2007: 369). Commonly, these speakers have no (or very limited) formal education in their heritage L1 and show low literacy skills. In opposition, the majority language is the language of schooling and socialization. Most daily interaction occurs in the majority language. Some studies on bilingual acquisition assume that HSs are incomplete acquirers given that their competence is described as diverging from the linguistic competence of monolinguals with the same age, social group and cognitive development (for a discussion, see Pires, 2011).

The second and third generations of Hispanic-descendants resident in the EUA have been the most studied group of HS from a linguistic and educational perspective (cf. Montrul, 2002, 2004, 2006, 2010; Silva-Corvalán, 1994; Valdés, 1995). Since Portugal is a country with a strong emigration tradition, we also find Portuguese communities living all over the world, being a valuable source for the research in the field of heritage bilingualism. Portuguese HS live, for example, in the US, Canada, Venezuela, South Africa or in the European countries that have traditionally hosted Portuguese migrants in the last fifty years: France, Switzerland and, in our study, Germany.

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Despite the common factors that define heritage bilinguals, they are not a homogeneous group. The level of proficiency in the HL may vary from 'very low' to 'highly proficient' given that it may be influenced by a variety of linguistic and extra-linguistic factors. The onset of exposure to the majority language can occur at the same time as the exposure to the HL (simultaneous bilingualism) or only later (successive bilingualism). The majority language can be totally excluded from the domestic environment, it can be used at home but only among siblings or it can be used in parallel to the home language by the parents. There are also other factors, like language attitudes and motivation, which influence the maintenance of the heritage language inside a migrant family or community. Furthermore, not all HSs have the opportunity or the wish to attend HL programs, so there are huge differences in formal education and literacy among HS. As stated by Rothman (2009), "without adequate academic support of the heritage language during the school years, heritage speakers often miss the chance to acquire literacy skills in the language." (Rothman, 2009: 157).

In general, HSs tend to show differences in language competence in comparison to monolingual speakers of the same age (Pires & Rothman, 2009). Hence, some authors argue that heritage bilinguals have undergone incomplete acquisition or L1 attrition (Montrul, 2002, 2008; Polinsky, 1997, 2007, 2008; Silva-Corvalán, 1994). Polinsky (2008), for instance, demonstrates that HSs of Russian who live in the US reanalyze the grammatical gender system of Russian by reducing the three-gender-system. For Polinsky (2008) the Russian HSs show incomplete acquisition of the Russian grammar.

The deficiencies showed by the HSs regarding their HL competence led some authors to propose that the acquisition of a HL equals L2 acquisition. L2 learners rarely achieve complete native-like competence in all domains of their second language (Hyltenstam & Abrahamsson, 2003). They show instances of divergence compared to native speakers in several domains of the grammar. Hence, some studies propose that HS fail to achieve native-like competence in the same grammatical domains as L2 learners (e.g. in flexional morphology, as described in Montrul, Foote & Perpiñán, 2008).

Another factor, which is common in L2 and HL acquisition, is the variation in the quality and quantity of the input from the target language. HS are exposed to a restricted number of contexts and interlocutors (Montrul, 2010), in contrast to the input that a monolingual child receives during its acquisition process.

It is almost consensual that the quality and quantity of input plays a central role in language acquisition, however how much input a child needs in order to develop native competence remains an open question. Following Chomsky (1986), the child acquires its native language on the basis of little evidence (a question he calls Plato's Problem). However, empirical research with hearing children of deaf parents has shown that there is a minimal baseline of input that these children need in order to develop productive competence in their spoken L1 (Sachs, Bard & Johnson, 1981). Schiff-Myers (1988), for instance, shows that these children need a minimum of 5 to 10 hours per week of interaction with non-deaf people (Schiff-Myers, 1988: 54). The same conclusion is made with regards to bilingual children. De Houwer (1999) emphasizes that the bilingual child needs sufficient input from both languages in order to develop native-like proficiency in both.

The heritage speaker generally receives intensive input from his/her heritage language until the age of three, but the input decreases progressively from this age on (if the immigrant stays in the host country and don not decide to return). Therefore, an important question in heritage language research is to investigate if the reduction of exposure to the HL influences its acquisition.

Another important variable is the AGE. The age of L1/L2 acquisition is intrinsically related to optimal periods for the acquisition of different language properties. If certain properties are acquired earlier than others in L1 acquisition, consequently the HS, who is

exposed to his/her L1 since birth but suffers a decrease of input at a certain age, will show variability with regards to his/her knowledge of different grammatical domains. Probably, s/he will show more stable knowledge of the properties which are acquired early and will have more difficulties with regards to grammatical aspects, which are acquired at a later stage in L1 acquisition. Authors like Au, Knightly, Ju, & Oh, (2002), Au, Knightly, Ju, Oh, & Romo (2008) and Montrul (2010) investigate this hypothesis.

Pires and Rothman (2009) point to another variable which may influence the development of heritage languages: the factor *formal instruction*. Normally HS are not (or only marginally) exposed to formal instruction in their HL. Some countries support HL programs, where HS are taught in their native language, but the number of schools with HL programs varies from country to country or from region to region within the same country. Hamburg, for instance, the German region with the largest community of Portuguese immigrants, (still) has some schools where Portuguese is taught to Portuguese immigrant children (on a facultative basis). However, in smaller urban environments we do not find similar initiatives. Furthermore, the number of taught hours tends to be very limited (2-3 hours per week). The facultative character of these programs also reduces the assiduity.

Pires and Rothman (2009) argue that certain linguistic properties are only present in the standard norm, which is acquired in school, and are almost inexistent in the colloquial norm. Consequently, the heritage speaker who is not (or only marginally) exposed to the standard form does not have the opportunity to acquire these grammatical aspects. The contrast between standard and colloquial norm is especially expressive in the case of Brazilian Portuguese, where we can find high degrees of variation in many grammatical domains, such as the verbal morphology, the clitic system, the subjunctive or the inflected infinitives. In the case of inflected infinitives, the authors argue that BP colloquial dialects no longer instantiate inflected infinitives (see also Pires, 2006), but this grammatical issue is taught at school and BP monolinguals show full competence of them in comprehension/grammaticality judgment tasks (see Rothman, 2007). In contrast, Brazilian HS who live in the US, studied by Rothman (2007) and Pires and Rothman (2009), show insufficient knowledge of this property. The authors explain this deficit by arguing that

“mismatches between heritage and monolingual native grammars are not in all cases the result of qualitative distinctions between the process/mechanisms of native acquisition in both cases, but rather the result of exposure to significantly distinct primary linguistic data”. (Pires & Rothman, 2009: 236)

Brazilian HS in US have not been sufficiently exposed to the standard norm, where inflected infinitives occur.

The present study aims at analyzing the proficiency of Portuguese heritage children, who live in Germany, with regards to their knowledge of clitic placement. Their results are compared to the competence of Portuguese monolinguals of the same age span. The objective of the study is to verify if young second generation immigrants, who acquire Portuguese as HL, develop identical knowledge of the Portuguese clitic system as Portuguese monolinguals. Section two describes clitic placement in EP; section three presents the methodology and the participants (Heritage Speakers [HS] and the control group of Monolingual Speakers [MS]). The hypotheses are described in section four. Section five presents the results of both informant groups, which are discussed in the following section.

2. Clitic placement in EP

The clitic system is one of the most complex issues in the grammar of European Portuguese (EP). Normally, the clitic pronouns occur in enclitic position. Proclisis only occurs in the following contexts:

I. Subordinate clauses introduced by a complementizer:

- (1) Eu duvido **que** ele a visse. (Cf. Lamento terem-na visto)
I doubt that he her see.SUBJ.3SG (regret.1SG to-have.3PL-her seen)
I doubt it that he saw her (Cf. I doubt it that they saw her)

II. Whenever the following elements precede the verbal complex within the minimal CP that contains it:

- *Wh-phrases*
- (2) **Quem** o viu?
who him saw
'Who saw him?'
- *Nonreferential quantified expressions*
- (3) Non-specific indefinite QPs
- a. Subject: **Alguém / algum aluno** o viu.
Someone / some student him saw
- b. Object: **Alguma coisa** lhe disseram, mas não sei o quê.
some thing to-him said.3pl, but not know.1sg the what
'Something they told him, but I don't know what.'
- (4) Negative QPs
- a. Subject: **Nenhum aluno** se esqueceu do livro.
no student SE forgot of-the book
'No student forgot the book.'
- b. Object: **Nada** te posso dizer.
nothing to-you can.1SG say
'There is nothing I can tell you.'
- (5) Universal QPs
- a. Subject: **Todos** se esqueceram do livro
everyone SE forgot of-the book
- b. Object: **Tudo** me recusaram.
everything to.me refused.3PL
'They refused everything to me.'
- (6) DPs modified by Focus particles
- a. Subject: **Só o Pedro** o viu.
only the Pedro him saw
'Only Peter saw him.'
- b. Object: **Só isto** te posso dizer agora.
only this to.you can-1SG say now
'I can tell you only this.'
- *Sentential negation and negative adverbs*
- (7) O João **não/nunca** a viu.
the João not / never her saw
'João never saw her.'
- *Aspectual adverbs*
- (8) a. O Pedro **já** o viu.
the Pedro already him saw
'Pedro already saw him.'
- b. Ela **ainda** se engana nas contas.
she still SE make.mistakes in-the calculations
'She may well mix up the numbers.'
- c. Ela **sempre** se enganou.

She always SE makes mistakes
'She has always made mistakes'

The complexity inherent to this phenomenon raises interesting problems for acquisition. This is why it is particularly suited to the topic at hand.

3. The present study

3.1. Participants

A total of 24 Portuguese children aged between 7 and 15 participate in the present study. The group of HS includes 12 children/teenagers, aged between 7 and 15 (mean = 10,83; standard deviation = 2,62). All of them grew up in Germany, four live in South Germany, in a small town near Stuttgart, seven live in the North (Hamburg) and one participant (HS_4) had returned to Portugal one month before the testing session. Nine participants were born in the host country, while the other three immigrated before the age of two. The participants share the common characteristics of heritage speakers. The parents are first generation migrants, even though in four cases one parent has grown up her/himself in Germany (though not the other). Portuguese is the predominant language at home in every case. It is spoken by parents and other members of the family in their daily interactions with the child. Half of the informants said that they also used German at home, especially those who have siblings or whose mother/father is bilingual (because s/he grew up in Germany her/himself). German is the majority language. It is spoken at school, with friends and in other daily contexts outside home. All informants said that they feel much more comfortable speaking German than Portuguese. Despite communication within family, the tested HSs also have contact with Portuguese through TV and during the summer holidays annually spent in Portugal. All participants come from a small village in the region of Porto (North Portugal).

The participants differ in their exposure to formal instruction in Portuguese. Three children attend a bilingual German-Portuguese school (the *Rudolph-Ross Schule* in Hamburg), where they study Portuguese; some subjects, such as History, are taught in German and Portuguese. Thus, these children receive formal instruction in Portuguese. In the other extreme, there are two participants with no schooling in Portuguese and two who had one year of extra-curricular Portuguese classes (4 hours a week). The other participants started attending Portuguese classes at the age of 7, on an average of 3 hours a week. These classes are sponsored by the Portuguese Embassy or by the Portuguese Catholic Church. For each participant, an estimate of the total amount of hours of formal instruction in Portuguese up until the moment of the interview was calculated on the basis of the formula < hours per week x 40 weeks per year x number of years>.

Table 1 shows the relevant description of the group of HSs: identifying code (HS_1 through HS_12), age and amount of exposure to formal instruction (estimate of the total number of hours, according to the formula presented above).

Table 1. Group of Heritage Speakers (age and formal instruction in Portuguese)

Participant	Age	Schooling (total n° of hours)
FH_1	7	0
FH_2	8	480
FH_3	8	240
FH_4	9	400
FH_5	10	960

FH_6	10	320
FH_7	12	160
FH_8	12	1440
FH_9	12	720
FH_10	12	620
FH_11	15	160
FH_12	15	0
MÉDIA	10,83	458,33
DESVIO-PADRÃO	2,62	424,13

The control group is made up of 12 monolingual speakers, aged between 7 and 12. All of the children live in the district of *Póvoa do Varzim*. Thus, the members of the control group and the members of the group of study are from the same region. The participants in the control group were all born in Portugal and never left the country. They study English as a foreign language at school, but they do not speak any other language. Their age, mean and standard deviation are represented in Table 2.

Tabela 2. Control group (age, mean and standard deviation)

Participant	Age
MS_1	7
MS_2	7
MS_3	7
MS_4	8
MS_5	8
MS_6	8
MS_7	8
MS_8	9
MS_9	9
MS_10	10
MS_11	10
MS_12	12
MEAN	8,58
STANDARD DEVIATION	1,50

3.2. Methodology

Clitic placement was tested by an oral production task, performed in a silent room. At first, the children were told that they would see a Powerpoint with a story involving a dialogue between two characters, a Portuguese boy and a foreign girl who had trouble constructing Portuguese sentences. Thus, the sentences produced by the girl did not have the right word order. The task of the child was to help the girl put the words together in the right order. The interviewer read the boy's sentences aloud, assuming the role of the boy, and the child was to assume the role of the girl, thus "helping" her put the words together. The words composing each sentence were shown on the screen and the child should construct the sentence and say it aloud. There were no limitations of time. All of the sessions were taped.

The test contains 18 sentences out of which 16 contain clitics: 12 in contexts of proclisis and 4 in contexts of enclisis. The proclitic constructions involve three different conditions: (i) constructions with sentential negation and negative adverbs, as in example *Ainda não me apetece comer* 'I still don't feel like eating'; (ii) subordinate clauses, as in *Já viste o bolo que a minha mãe nos fez?* 'Have you seen the cake that my mother made for us?'; (iii) clauses

introduced by other proclisis triggers, such as adverbs (*já* ‘now’, *talvez* ‘perhaps’), as in *Agora já o vi* ‘Now I already saw it’ or negative QP subjects (*ninguém* ‘noone’).

Before testing, there was an oral interview focusing on biographic and sociolinguistic questions designed to define the profile of each participant.

4. Hypotheses

Even though there are several studies on the acquisition of clitics in EP (cf. Costa & Lobo, 2007, 2009; Costa, Lobo & Silva, 2009; Duarte & Matos, 2000; Duarte, Matos & Faria, 1995; Silva, 2007, 2009), we know of no systematic quantitative study of the enclitic/proclitic alternations in child speech. The papers by Costa & Lobo (2007, 2009), Costa, Lobo & Silva (2009) e Silva (2007, 2009) show that monolingual preschool children (between 3 and 6 years old) go through an initial stage in which they omit clitics. Subsequently, they gradually start producing clitics. In spite of this, little is known about the alternations between proclisis and enclisis in child speech. Silva (2007) reports attested mistakes in clitic placement between the ages of 3 and 6,5 consisting in the use of enclisis in the context of elements that trigger proclisis in the adult grammar. Similar observations are made in Duarte, Matos & Faria (1995) e Duarte & Matos (2000). These authors claim that, at initial stages of acquisition, monolingual children generalize enclisis. It is only later (at the age of 4) that proclisis is acquired. However, we know of no longitudinal study that addresses the topic in a systematic way.

Assuming that the sources cited are right in claiming that the monolingual child starts by generalizing enclisis, we can draw the following hypotheses regarding heritage speakers:

- 1) The HS does not acquire Portuguese like a native speaker, i.e., he does not go through the same stages of acquisition as the monolingual child. This hypothesis would be confirmed in case the deviant cases attested are instances of proclisis in contexts of enclisis (the opposite pattern of the one that is found in monolingual children).
- 2) The performance of the HSs is similar to that of the MSs. In this case, we may conclude that, as far as this particular aspect of the grammar is concerned, competence in the HL is native-like.
- 3) The deviant cases attested are instances of enclisis in contexts of proclisis. This would strengthen the hypothesis that the HS follows the same pattern of acquisition as the monolingual child even though he diverges from the monolingual child from the initial state onwards in virtue of the drastic reduction in the linguistic *input* that characterizes the development of the HL.

5. Results

The central aim of this study is to test whether the participants know the rules of clitic placement in Portuguese, specifically in contexts of proclisis. Consequently, the results will focus on the correct use of clitics in the three contexts that require proclisis (negation, subordinate clauses and sentences with aspectual adverbs and indefinite quantifiers).

First the results of the monolingual controls will be presented. Figure 1 shows the accurate use of proclisis (in percentage) per individual.

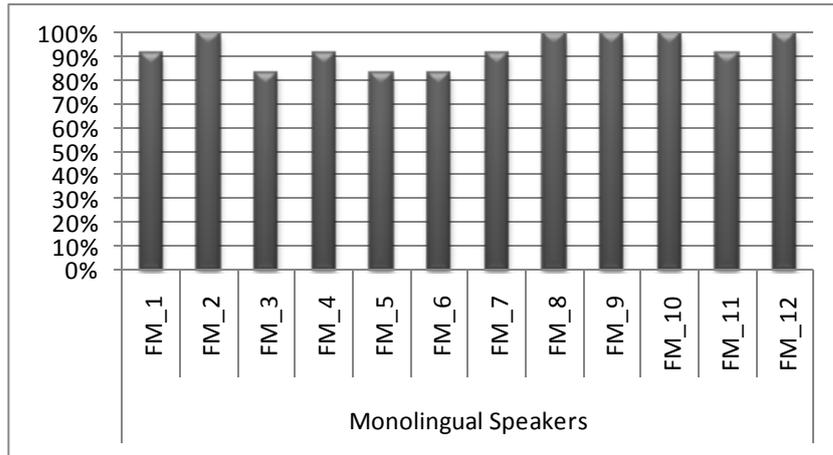


Figure 1. Proclisis: percentage of accuracy (Monolingual Control Group)

The average of accurate use of proclitic pronouns is about 93,1%, (83,3% - 100%), the standard deviation is 6,97. Five monolingual children use proclisis in all proclitic contexts, four use proclitic pronouns in 91,7% and the other three in 83,3% of the proclitic contexts. The data show that monolingual children have a very robust knowledge of proclisis, even though there is some variation. Seven children use enclisis instead of proclisis in at least one context.

The results of the heritage speakers are given in figure 2.

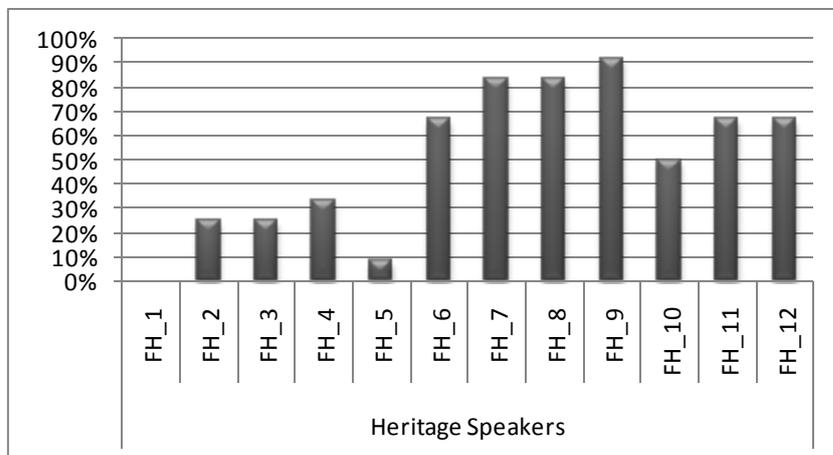


Figure 2. Proclisis: percentage of accuracy (Heritage Speakers)

The average of accuracy is about 50% in this group. However, inter-group variation is much higher in the case of the HSs when compared to the monolingual controls. The percentage of accurate use of proclitic construction varies between 0 and 91,7% (standard deviation = 30,99). One child does not use proclitic pronouns at all, four produce less than 35% of proclitic constructions and one speaker uses proclisis in half of the proclitic contexts. On the other hand, three heritage speakers show results which are very close to the average of accuracy of the monolinguals: two participants use proclisis in 83,3% of the contexts and one

participant produces 91,7% of proclitic pronouns. No HS uses proclisis in all required contexts.

Figure 3 presents the averages of accuracy in both groups.

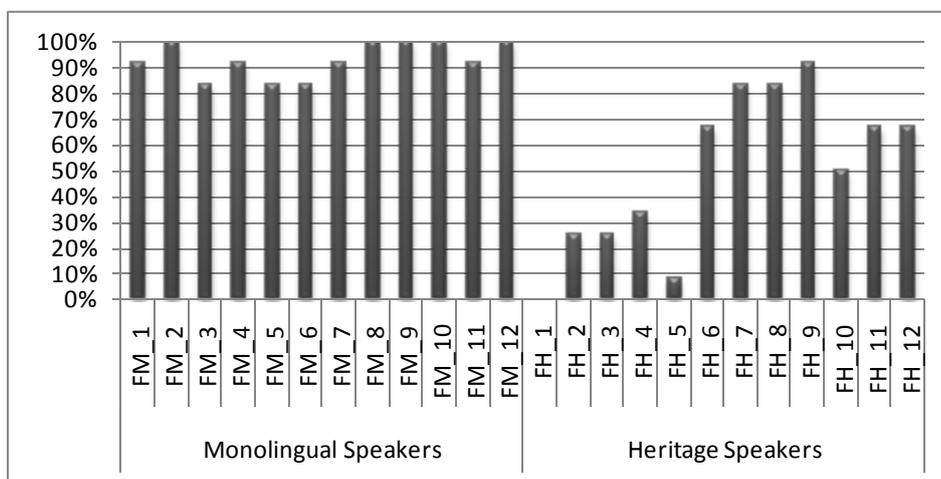


Figure 3. Proclisis: percentages of accuracy (both groups)

A non-parametric Mann-Whitney test reveals a highly significant difference between both groups ($Z = -3,748$, $p < 0,001$), but the inter-group variation among the HSs is so high that it is necessary to relate the results with extra-linguistic factors that might influence the proficiency of the participants in this particular grammatical domain. The two independent variables that were controlled in this study are AGE and EXPOSURE TO FORMAL INSTRUCTION.

Concerning AGE, it is possible to divide the group of HSs into two subgroups. The first subgroup includes participants who are between 7 and 10 years old (henceforth ‘younger HS’; participants HS_1 to HS_6). The second subgroup comprises older children and adolescents (henceforth ‘older HS’), with ages between 7 and 15 (participants HS_7 to HS_12).

A new statistical test was run in order to compare the average of accurate production of proclitics in both subgroups. The results show that the younger HSs use proclisis only in 26,4% of all contexts ($SD = 23,23$), while the average of accuracy is about 73,6% in the group of the older HS ($SD = 15,28$). A non-parametric Mann-Whitney confirms that there is a highly significant difference between both subgroups ($Z = -2,589$, $p = ,009$). The younger heritage children show considerable difficulties in the production of proclitic constructions. Only a ten-year-old boy (HS_6) scores slightly higher than the other participants of this subgroup (66,7%). On the other side, in the group of the older HS, only the twelve-year-old participant HS_10, scores slightly lower (50%). The other participants vary between 66,7% and 91,7% of accurate use of proclitic pronouns. These results indicate that the variable AGE plays an important role in the domain of clitic placement.

In order to test the influence of the variable EXPOSURE TO FORMAL INSTRUCTION, a new re-arrangement of the subgroups was made. In this case, three subgroups were constituted according to the total number of hours of formal instruction (in Portuguese) that the participants had until the moment of testing. The first subgroup comprises participants who did not attend Portuguese classes at all (participants HS_1 and HS_12) or those who attend only one year of classes (a total of 160 hours; HS_7 and HS_11). In the second subgroup are the participants who had between 240 and 480 hours of formal instruction in Portuguese by the time of testing (participants HS_2, HS_3, HS_4, HS_6). The third subgroup includes the

participants with the highest amount of formal instruction in Portuguese. The estimated total of hours varies between 620 and 1140 (HS_5, HS_8, HS_9 and HS_10).

Table 3 shows the average of accurate production of proclisis and the standard deviation per subgroup.

Table 3. Variable EXPOSURE TO FORMAL INSTRUCTION

HS	Age	Formal instruction (estimated number of hours)	Subgroups	Accurate use of Proclisis (Individual results)	Mean (SD)
HS_1	7	0	Subgroup 1 0 to 160 hrs	0%	54,2% (SD = 36,95)
HS_12	15	0		66,7%	
HS_7	12	160		83,3%	
HS_11	15	160		66,7%	
HS_3	8	240	Subgroup 2 240 to 480 hrs	25%	37,5% (SD = 19,86)
HS_6	10	320		66,7%	
HS_4	9	400		33,3%	
HS_2	8	480		25%	
HS_10	12	620	Subgroup 3 620 to 1140 hrs	50%	58,3% (SD = 37,90)
HS_9	12	720		91,7%	
HS_5	10	960		8,3%	
HS_8	12	1440		83,3%	

The subgroup with little (or no) exposure to formal instruction presents a mean of 54,2% of correct production of proclisis. Surprisingly, the intermediate subgroup (participants with 240 to 1140 hours of formal instruction) scores lower than the first subgroup with an average of 37,5%. In the case of the third subgroup (the participants with most exposure to formal instruction) the mean is about 58,3%, i.e., it is slightly higher than in the other two subgroups. In general the mean values are very close in the three subgroups. A Kruskal-Wallis Test confirms that there is no statistical difference between the three subgroups concerning the variable EXPOSURE TO FORMAL INSTRUCTION ($\chi^2(2) = 1.149$, $p = .563$).

A closer look to the data shows that the youngest participant (7 years old), who did not attend a heritage language class, has the lowest result (0% of proclisis), but the oldest speaker, who also did not attend any kind of classes, scores significantly higher (66,7%). This individual comparison suggests that the variable AGE appears to be more significant than the variable EXPOSURE TO FORMAL INSTRUCTION. A similar conclusion can be drawn by comparing the results of the participants HS_2 and HS_7. The participant HS_2 is a child who has attended the bilingual school Portuguese-German for two years (estimated amount of instruction: 480 hours). His proficiency regarding clitic placement is very low (only 25% of proclitic constructions). Conversely, the twelve-years-old girl HS_7 only had a total of 160 hours of exposure to formal instruction (she attended the heritage language program during one year). Nevertheless, she scores considerably higher than HS_2 (83,3%), a result that is very much like that of some monolinguals.

5. Discussion

Summing up our results thus far, we reach the following conclusions:

- As far as clitic placement is concerned, the HSs do not have the same level of proficiency as the MSs with the same age. The HSs show an average of accurate results of 50%. The MSs, by contrast, display an average of accuracy of 93%.
- The HSs use enclisis in contexts of proclisis; the converse is not attested at all.
- Age appears to be the key factor: the younger HSs reveal significantly lower rates of accurate results than the older HSs.
- Formal instruction does not have a significant impact on the different levels of accuracy evidenced.

Even though there are no quantitative studies of clitic placement in the acquisition of European Portuguese by monolinguals, it has been observed that children tend to overgeneralize enclisis in early stages of acquisition (Silva, 2007; Duarte & Matos, 2007). Thus, the results of our study confirm the hypothesis that the HSs follow the pattern of monolingual acquirers, i.e., they start by overgeneralizing enclisis and then they acquire the contexts that require proclisis, even though they do it at a slower pace than the MSs. The differences detected between the younger HSs and the older ones indicate that the contexts of proclisis are eventually acquired, but at a delayed stage when compared to monolinguals. Our hypothesis is the following: because the HSs are exposed to reduced input, they take longer to acquire the grammar of clitic placement, but the strategies used in the process are identical to those of the MSs. This hypothesis, however, needs to be tested against further studies in the acquisition of clitic placement in monolingual children.

If the claim that the monolingual acquirers overgeneralize enclisis is to be confirmed, the question that then arises is why enclisis is the pattern that is generalized and not proclisis. Overgeneralization of one pattern over another is not surprising if something like the Subset Principle is a guiding strategy in acquisition. This principle, originally proposed by Berwick (1985), basically states that the learner “must select the smallest possible language compatible with the input at each stage of the learning procedure” (Clark & Roberts 1993:304-5). This principle is designed to capture the fact that children do not seem to make use of negative evidence. Thus, by positing the grammar that generates the smallest possible language compatible with the trigger experience, the acquirer is able to rely on positive evidence only in the process of convergence towards the target grammar. Since a language that only has enclisis or proclisis is a subset of a language that possesses both patterns, it is not surprising that the child should start by overgeneralizing one pattern. Notwithstanding this, the question that arises is why enclisis is the generalized pattern and not proclisis.

One first hypothesis to consider is whether the option for enclisis is due to frequency effects. In order to verify this hypothesis, an automatic search was carried out on the *Linguatca Speech Corpus MUSEU DA PESSOA*³. In a total of 6501 occurrences of clitics, 3380 tokens of enclisis (52%) and 3121 (48%) tokens of proclisis were attested. Even though enclisis is more frequent than proclisis, the difference between the two is not significant. Therefore, we conclude that frequency is not the relevant factor.

It seems evident that the answer to the question why enclisis is the overgeneralized pattern in acquisition depends on the theory of clitic placement in the adult grammar. The literature on the syntax of pronominal clitics is abundant and a number of different theories have been proposed (cf. Barbosa, 1996, 2008; Rouveret, 1992; Madeira, 1992; Martins, 1994; Uriagereka, 1995; Duarte & Matos, 2000; Duarte, Matos & Gonçalves, 2005; Costa & Martins, 2003; Raposo & Uriagereka, 2005; Magro, 2008). Here, we will follow the set of proposals that assume that, in the syntax, the clitic is placed to the left of the functional head that contains the verb, enclisis being derived in the post-syntactic component of the grammar

³ *Corpus Museu da Pessoa* <http://www.linguatca/ACDC/>

(cf. Costa & Martins, 2003; Magro, 2008; Barbosa, 2008). In particular, we adopt the analysis developed in Barbosa (2008), which is briefly described in the next section.

6.1. Barbosa (2008)

Barbosa (2008) suggests that what distinguishes clitics in EP from those of the other Romance languages is that, in the syntax, the clitic is not dominated by the head that contains the verb. In other words, it does not form a **Morphological Word** (in the sense of Distributed Morphology⁴; cf. Halle & Marantz, 1993; Embick & Noyer, 2001) with the head that contains the verb (cf. also Magro, 2008).

$$(9) \quad \textit{Syntax}: [\textit{CP} \textit{cl} [\textit{T} [\textit{T} \textit{V} [\textit{T}]]] [\textit{VP} \dots]]$$

As a result of this, it is in the post-syntactic level of the grammar that the clitic adjoins to its host (cf. Vigário, 2003).

In the model of Distributed Morphology, the terminal nodes of the syntactic derivation (Morphemes) are bundles of abstract syntactic features relevant only to syntax, with no phonological or syntactic information. It is only at the moment of *Spell Out* that the phonological matrices of each morpheme (the **Vocabulary Items**) are inserted. At the moment of **Vocabulary Insertion**, the hierarchical structure generated by the syntax is linearized and there is a small set of operations that may alter the order of the morphemes generated by the syntax. **Local Dislocation** (LD) is one such operation. It consists of merger of a terminal node with another under adjacency. LD applies to linearized structures (i.e., immediately after linearization) and replaces an adjacency relation by a hierarchical relation, as illustrated below:

$$(10) \textit{X}^* \textit{Y} \rightarrow [[\textit{Y} \textit{X}]] \quad (* \textit{ indicates the adjacency relation})$$

Barbosa (1993, 2008) proposes that enclisis in EP is the result of merger of the clitic to the Morphological Word that immediately follows it (which is formed by the terminal nodes dominated by T: the verb and its affixes):

$$(11) \textit{cl}^* [\textit{T} \textit{V} + \textit{T}] \rightarrow [[\textit{T} \textit{V} + \textit{T}] \textit{cl}]$$

Barbosa (1996, 2000, 2008) argues that every context of enclisis in which the verbal complex does not occupy the absolute initial position is a context of adjunction to CP (or TP if C doesn't project). This is the case of referential/specific pre-verbal subjects, sentential adverbs or dislocated and topicalized objects. Assuming, in the spirit of Chomsky (2001), that *Spell Out* proceeds cyclically, by Phases, CP being a Phase, then it becomes possible to state that (11) only applies in those contexts in which the clitic is situated in the left periphery of the CP Phase.

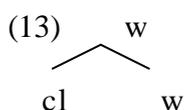
Barbosa (2008) proposes that the idea that LD is defined over linearized structures has the potential to explain the distribution of enclisis. In his original formulation of Morphological Merger under Adjacency, Marantz (1988) attempts to restrict the application of this operation to the cases in which the element that is subject to dislocation occupies a peripheral position. The motivation for this restriction is that it is only in these cases that affixation under adjacency does not destroy the adjacency relation that has been previously established between the affix/clitic and an element to its right/left.

⁴ In the model of Distributed Morphology, a Morphological Word is a (potentially complex head) not dominated by another head.

In Embick (2006), this restriction is labeled Consistency and is formulated as follows (where the term “concatenation relation” stands for “adjacency relation”):

(12) **Consistency**: concatenation relations must be kept and may not contradict each other.

Barbosa (2008) suggests that, as a result of this restriction, the rule of LD (11) is blocked in those contexts in which the clitic establishes an adjacency relation with an element to its left (namely, in all those contexts in which there is phonetic material preceding the verbal complex within CP; these are the contexts of proclisis). In these situations, adjunction of the clitic to its host takes place at a later level, when Prosodic Structure is computed: the clitic adjoins to the Phonological Word to its right, as happens with the other nonpronominal clitics in EP, as argued in Vigário (2003).



(13) is the configuration associated with proclisis.

In the cases in which the clitic occupies the left periphery of the CP phase, LD may take place without violation of Consistency, deriving enclisis. At this point, the idea that *Spell Out* proceeds cyclically, by phases, becomes crucial. Since *Spell Out* is cyclic, any material that is outside CP — that is, above CP (or above the highest functional projection if CP does not project) — is spelled out in the next cycle up. Therefore, it is not spelled out in the same phase as the clitic being irrelevant for the purposes of LD: at the moment adjacency relations are computed, the clitic is the leftmost element of the Phase. Therefore, rule (11) applies, yielding enclisis. According to Barbosa (2008) this is what happens in all of the contexts of enclisis in which the verbal complex is not in absolute initial position: constructions with referential/specific pre-verbal subjects, frame adverbs, etc. (see Barbosa, 2008, and the references cited there for details).

The picture that emerges from this set of proposals is that LD applies whenever possible: in the cases in which it is blocked by independent constraints, the clitic does not have any other choice but to adjoin to its host at a later level of the derivation, in Prosodic Structure, using the same resources that are used by the other nonpronominal clitics of the language. This is why most speakers have the intuition that proclisis is somewhat more “marked” than enclisis.

6.2. Consequences for acquisition

Coming back to acquisition, if indeed the target grammar behaves as described in the previous section, then the option for enclisis by the child means that the child starts out by assuming a grammar in which the clitic is subject to LD and that it is only later that he/she acquires the contexts in which the operation is blocked.

Let us now consider the alternative hypothesis, in which the child would start by assuming proclisis. On the perspective adopted here, the option for proclisis would mean that the child starts by selecting one of the following two hypotheses:

- a) The clitic in EP forms a Morphological Word with the head that contains the clitic in the syntax (i.e., EP is just like Italian or Spanish).

- b) The clitic does not form a Morphological-Word with the head that contains the verb but it only needs to adjoin to its host in the level of Prosodic Structure.

Both a) and b) entail that the grammar posited does not have a rule of LD. Such an assumption, however, is incompatible with the input data. What this means, then, is that the grammar that generates the smallest possible language compatible with the input data is a grammar with a rule of LD across the board, i.e., a grammar with enclisis. This grammar can then be revised on the basis of sufficient exposure to positive evidence so as to incorporate the contexts in which the rule in question is blocked.

7. Conclusions

This study is a contribution to the understanding of the knowledge of the grammar of heritage EP by focusing on clitic placement, a particularly complex issue of EP grammar.

We have observed that the HSs of Portuguese living in Germany who are 7-15 years old present a great deal of variation in their production of sentences that require proclisis in the target grammar. In this respect they clearly differ from the MSs with the same age. The results show that, by the time they are seven years old, monolingual children show robust knowledge of the patterns of clitic placement. In the case of the HSs, their performance is strongly dependent on age. On average, the older HSs show higher levels of accuracy than the younger HSs. This points to the conclusion that the contexts of proclisis are eventually acquired, even though the whole process takes longer and is delayed.

The other conclusion of this study is that the HSs go through the same stages in the acquisition of clitic placement as monolingual acquirers, i.e., they start by overgeneralizing enclisis and then they gradually acquire proclisis. In fact, all of the mistakes that were attested were cases of enclisis in contexts of proclisis; we did not find a single occurrence of proclisis in a context of enclisis. We presented a hypothesis of explanation of this phenomenon that relies on the analysis of Barbosa (2008). We argued that this option for enclisis reflects a strategy that is in accordance with the Subset Principle: the child starts by assuming the grammar that generates the smallest possible language that is compatible with the trigger experience. In the framework adopted, such a grammar is the one that assumes that the clitic is subject to a rule of LD. Then, by sufficient exposure to positive evidence, the child fixes the contexts in which this rule is blocked. In the case of the HSs this process is delayed and takes longer precisely because it requires sufficient exposure to positive evidence. Our hypothesis is that delayed acquisition is due to reduced input data.

Finally, this study has also shown that formal instruction in Portuguese has little effect on the process of acquisition of this particular aspect of the Portuguese grammar.

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