The role of type of structure, input variables and cross-linguistic effects in the performance on a cloze-test by heritage Portuguese children in Switzerland

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This paper presents a study on European Portuguese (EP) as Heritage Language (HL), spoken in three linguistic areas of Switzerland (French, German, Italian) by Portuguese-descendant second and third generation children and adolescents (so called heritage speakers/HSs).

The main aim was to (i) assess HSs' proficiency in Portuguese and the majority language, through a Cloze Test developed in all analysed contact languages, (ii) investigate whether the linguistic competence of the HSs in EP reflects a common linguistic hierarchy of complexity, and (iii) analyse potential correlations between the HSs' proficiency as assessed in both their languages. In addition, this study aimed at analysing the role of the contact languages and of input factors for the development of EP as HL. Input information was extracted from parental questionnaires. We tested 180 Portuguese-descendant children living in three different areas of Switzerland (60 for each language pair Pt-Ital, Pt-Germ, Pt-Fr; age range: 7;7-15;9). Data collection included: (1) a detailed language background questionnaire focusing on the parents' and the children's linguistic profile and including an extensive number of questions that measured the use of Portuguese and the majority language across different contexts over time (2) a Cloze Test in Portuguese and one of the majority languages. The test consisted of 40 gaps and was designed to target different structures, for example, nominal and verbal inflectional morphology, (contracted and non-contracted) prepositions, (different types of) subordinate clauses, pronouns in different syntactic constellations, definite and indefinite articles and lexical knowledge. The Cloze Test adapted material from the Edmonton Narrative Norms Instrument (Schneider et al. 2005).

The results reveal that both the overall degree of accuracy (see table 1) and the hierarchy of complexity of linguistic structures are the same across the three groups, despite the different majority languages. In particular, children experienced the greatest difficulty with structures including contracted prepositions, dative clitics and allomorph clitic forms.

	Portuguese-Italian		Portuguese-German		Portuguese-French	
	Portuguese	*Italian*	*Portuguese*	*German*	*Portuguese*	*French*
mean	26.95	32.97	27.17	26.55	25.6	30.45
SD	11.20	8.60	11.74	10.50	9.7	7.9

Table 1: overall accuracy in the clause test across the three groups of heritage children.

Furthermore, we found strong correlations between the accuracy scores in the cloze-test across the two languages, i.e., Portuguese and the majority language (Pt-Ital: $r = .81$, $p < .001$; Pt-Germ: $r = .68$, $p < .001$; Pt-Fr: $r = 741$, $p < .001$). The greater is the accuracy in the HL, the better the performance in the majority language is.

In a next step, we tested the effect of several input factors on the degree of accuracy as related to particular morphosyntactic structures across different subdomains of the cloze-test, by performing binary logistic regressions. The results reveal that performance in the most complex structures (e.g., clitic allomorphs and *qual*-complementizers) is sensitive to language input at home and instruction in the HL. In contrast, language input plays no significant role for children's mastery of the least complex structures (e.g. reflexive *–se* and complementizer *que*). This also means that the most complex structures are more vulnerable to the amount of language

exposure and, in general, more likely to show variation in heritage grammars. Conversely, this also shows that they can be successfully acquired by HSs, provided that they receive sufficient and continuous language and literacy input (as already suggested by Rinke & Flores 2014).

To conclude, this study shows that there is a hierarchy of complexity for the acquisition of the structures tested in the cloze test and this hierarchy is independent of the majority language with which EP is in contact. The children's performance in the HL is positively correlated with their performance in the majority language, which suggests that there is no evidence for "subtractive bilingualism". More exposure to the HL at home and schooling are important factors for the acquisition of more complex structures, but not necessarily decisive for the successful acquisition of less complex structures.