

Verb agreement in the interpretation of Relative clauses in early Spanish

Theoretical background. It has been found that children have difficulties to understand relative clauses until five years of age (French: Labelle 1996; Spanish: Pérez-Leroux 1995; Italian: Adani 2011, Contemori & Belletti 2014; Guasti & Cardinaletti, 2003; Portuguese: Costa, Lobo & Silva 2011; Catalan: Gavarró, Cunill, Muntané & Reguant 2012). In particular, subject relative clauses in languages with head initial are easier to understand compared to object relative clauses. Following Relativized Minimality, Rizzi (1990, 2004) proposes that object RCs are more difficult to process than subject RCs because they feature the intervention of the subject between the head and its trace. Friedmann, Belletti, & Rizzi (2009) suggest that Relativized Minimality applies to adults, but children apply a strict version of RM, which requires a distinct featural specification of the target with respect to the intervener and a disjoint specification, since inclusion is too difficult for children to process. Studies in the acquisition of relative clauses in Spanish have been limited to production studies, and this is the first research on the comprehension of object relative clauses in Spanish.

Method. The aim of this paper is to compare the performance in a comprehension test of declarative Object/Subject Relatives. The predictions of Relativized Minimality will be that Object Relative Clauses are more difficult to understand than Subject Relative Clauses, and that sentences with Subject/Object RCs will be more difficult when NPs have the same morphosyntactic features than when these have different morphosyntactic features (subject-verb agreement for number). In this study, we applied a comprehension test to 80 Spanish monolingual children aged from 4;6 to 7;10. The test is a set of picture/sentence pairs by De Vincenzi (1996). We compared two different relative clauses, where the head of the Relative Clause in the embedded clause is an Object (1a, 2a), and where the head of the Relative Clause in the embedded clause is a Subject (1b, 2b). We also compared the sentences with Subject/Object RCs when NPs had the same (1a, 1b) or different (2a, 2b) morphosyntactic features (Object and Subject differed on the number marking for verb agreement).

1. a) Señala el caballo que el león está siguiendo (Object Relative, SM)
Point to the horse that the lion is following
b) Señala la pantera que está empujando al elefante (Subject Relative, SM)
Point to the panther that is pushing the elephant
2. a) Señala los leones que el caballo está siguiendo (Object Relative, DM)
Point to the lions that the horse is following
b) Señala la pantera que está empujando a los elefantes (Subject Relative, DM)
Point to the panther that is pushing the elephants

Results. We found a significant statistical difference for the performance between Object Relatives and Subject Relatives, since the percentage of errors is higher in the former kind of sentences ($P < 0.05$). We also found a significant statistical difference in Object/Subjects Relatives between clauses that had the same or different morphosyntactic features, since the former were more difficult to understand ($P < 0.05$). The fact that the NPs had a different number facilitated the interpretation of the sentence. The performance also improves with age ($P < 0.05$). Relativized Minimality seems to predict the data found in the different experimental conditions. Table 1 shows the percentage of correct responses.

Discussion. Similar results have found for this contrast in other languages like Catalan, English, French, Hebrew Italian, or Portuguese. A different pattern has been found in languages like Chinese or Basque, since these languages are head final, as predicted by the different theoretical explanations like the Active Filler Hypothesis (Frazier & Fodor 1978), the Dependency Locality Theory (Gibson 1998) and Intervention (Friedmann, Belletti & Rizzi 2009). These results are congruent with findings in the children with Specific Language Impairment (Friedmann & Novogrodsky, 2004; Stavrakaki, 2001, 2002; van der Lely 1998, 2005) and agrammaticality (Grillo, 2009). These results are coherent with the findings in the acquisition of wh-questions and passives (Contemori & Belletti 2014; Friedmann, Belletti, & Rizzi 2009; Guasti, Branchini & Arosio 2012; Stromswold 1995) and language processing (Garraffa and Grillo, 2008; Gibson, 1998). In addition, it has been found an interaction of the acquisition of relative clauses with other variables, like animacy or the argument structure (Goodluck & Tavakolian 1982; Guasti, Branchini, Arosio, & Vernice 2012).

	SR, SM	SR, DM	OR, SM	OR, DM
4;0	74%	85%	51%	61%
5;0	76%	92%	53%	63%
6;0	81%	95%	58%	67%
7;0	85%	93%	67%	75%

Fig. 1. Percentage of correct responses for Subject (SR) and Object Relative Clauses (OR) with the same (SM) and different (DM) morphosyntactic features.

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