

# CHILDREN DO NOT SUBSTITUTE OBJECT RELATIVES WITH SUBJECT RELATIVES IN EVERY ROMANCE LANGUAGE: THE CASE OF SPANISH

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**Abstract:** Restrictive relative clauses collected using the Spanish version of the elicitation test developed in a collaborative project (Friedmann 2010, Friedmann *et al.* in preparation) show that 5 year-old children (ch5) produce almost adult-like rates of target SR in Spanish, whereas target ORs are close to chance level at the same age and still 20% lower than adults' 22 months later (ch7). These results confirm widely reported cross-linguistic research showing that SRs are easier than ORs (Labelle 1988, among many others). However, the high error variability observed in the target-deviant RCs, as well as the absence of any evident morphosyntactic pattern as an alternative to the production of ORs (such as the use of passives or resumptives) makes it difficult to maintain the existence of some clear OR-by-SR substitution strategy in Spanish at this age.

**Keywords:** restrictive relative clause, subject-object asymmetry, Spanish, clitic, resumptive.

## 1. INTRODUCTION

RCs have been considered late acquired structures with regard to main sentences, or other kinds of embedded structures, such as complement clauses. But the widely attested asymmetries in the production of more target-like SRs vs. less target-like ORs across many related and unrelated languages has been interpreted as evidence for an asynchrony in the acquisition of both kinds of RCs. The observation of the lower rates of general as well as target-like production of ORs in spontaneous and experimental corpora, together with the presence of passives and

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(pro)nominal resumptives in O positions reported in different languages converge with a widely reported strategy of “avoidance of O extraction” (Labelle 1990, Pérez-Leroux 1995, Belletti forthcoming).

SR/OR asymmetries observed in children’s linguistic production as well as in comprehension are explained in terms of an earlier mastering of non-movement structures and of lesser derivational complexity, of preference for smaller linear as well as hierarchical head-gap distances, and of children’s sensitivity to the specificity of head-gap intervening elements (Friedmann *et al.* 2009). In addition to these syntactic considerations, the presence of resumptives as well as the role of some cues like animacy or morphological features (case, gender, number) must also be kept in mind when addressing RC processing (Arosio *et al.* 2009, Friedmann 2010, Friedmann *et al.* 2010).

These are the goals of the present paper: First, to describe the different kinds of RCs in Spanish; second, to check for the existence of SR/OR asymmetries in child Spanish and track their development between ages 5 and 7; and finally, to test the universality of the *OR-by-SR substitution* strategy.

## 2. SPANISH RELATIVE CLAUSES

Spanish is typically described as a right-branching SVO language with flexible word order, in which the relative clause follows the modified NP. The complementizer of the RC (*que* ‘that’, *quien* ‘who’, *donde* ‘where’...) introduces the clause containing the gap co-indexed with the head noun, the antecedent of the relative pronoun. Relative clauses are post-nominal embedded structures introduced by a complementizer (optionally preceded by a determiner or/and by a preposition) (1b-g). Some authors assume that relative pronouns have two different functions, as in the case of *que* ‘that’ in 1b and 1c: one regarding the main sentence, S of the main attributive sentence ‘\_\_ is my cousin’ and the other regarding the O of the embedded one ‘the actress kissed \_\_’ (Brucart 1999). Moreover, Spanish RCs share some properties with declaratives and interrogatives, though “they pattern with declaratives, rather than interrogatives” (Zagona 2002:29). RCs share with interrogatives the presence of a pronoun from a set which is quite similar to that of interrogatives -*que* ‘what’, *quien* ‘who’... - with the exception of the genitive *cuyo* ‘whose’. But contrary to interrogative pronouns (1a), relative pronouns are unstressed and have an antecedent like *el actor* ‘the actor’ in (1b-1d, 1f-1g). Moreover, contrary to interrogatives, which require V-S inversion (1a), relatives do not (1b-c).

- (1) a.      ¿a quién besó la actriz? / \* ¿a quién la actriz besó?  
          ‘who(m) did the actress kiss?’
- b.      el actor [al que/ \*el que/ que besó la actriz \_\_\_\_] es mi primo  
          ‘the actor that (which) the actress kissed is my cousin’

- c. el actor [al que/ \*el que/ que la actriz besó \_\_\_\_ ] es mi primo  
‘the actor that (which) the actress kissed is my cousin’
- d. el actor, [a quien / al que / el que/ \*que la actriz besó]  
‘the actor, who the actress kissed’
- e. el libro [\*al que / \*el que / que la actriz besó]  
‘the book that the actress kissed’
- f. el actor [que besó a la actriz / \* al libro]  
‘the actor that kissed to the actress / to the book’
- g. el actor [que besó \*la actriz/ el libro]  
‘the actor that kissed the actress / the book’

The form of relativized constituents may vary depending on whether the RC is restrictive (1b, 1c, 1f, 1g) or not (1d). Relativized non-S arguments may be followed by the RC preceded by a preposition. Such is the case of relativized direct objects, in which the head may be followed by the *a-Det-que* RC (1b-d). In restricted RCs, the animacy, or the [+/- HUMAN]<sup>2</sup>, feature of the internal argument of the embedded predicate determines the presence (1b-1d) or absence (1e) of the “accusative marker” *a* preceding the complementizer of the RC. Following Zagana (2002:58), restrictive RCs are not sensitive to the definiteness of the antecedent. Head and gap usually share person and number (2a,b,c) features in SRs, with some exceptions like in *soy el actor que beso a la actriz* ‘I am the actor that I kiss the actress’ in (2a). In ORs, the determiner preceding the complementizer *que* may be preceded by the preposition of the gap (optionally in colloquial Spanish)<sup>3</sup>, and it agrees in gender and number with the gap (2e-g).

- (2) a. Soy el actor [que besa/ beso a la actriz]  
‘I am the actor that kisses/kiss-1<sup>st</sup> person singular the actress’
- b. Son los actores [que besan /\*besa / \*beso a la actriz]  
‘they are the actors that kiss-3<sup>rd</sup> pl/ kiss-1<sup>st</sup> person singular the actress’
- c. Conozco a la actriz [que viene / \*vengo al teatro]  
‘I know the actress that comes / come-1<sup>st</sup> person singular to the theatre’
- e. Es la actriz [que besa el actor] / a la [que besa el actor]  
‘She is the actress that the actor kisses’
- f. Es la actriz (a la) [que besa el actor] / \*al [que besa el actor]  
‘She is the actress that-fem.sing the actor kisses’ / that-masc.sing the actor kisses’

<sup>2</sup> Note that animate Objects very often are preceded by the preposition *a*:

(i) busca un / \*a un libro ‘looks for a book’=> el libro (al\*) que busca ‘the book he looks for’

(ii) busca una/ a una hormiga ‘looks for an ant’ => la hormiga (a la) que busca ‘the ant he looks for’

<sup>3</sup> Omission of the preposition is considered ungrammatical in normative Spanish. (Brucart 1999:403)

- g. Son las actrices (a las) / \*a la/ \*a los [que besa el actor]  
 ‘they are the actresses that-fem.pl. / that-fem.sing / that-masc.pl the actor kisses’

Some variability is observed inside the RC, with regard to the presence of the preposition *a* (mostly with animate O), clitics and resumptives and to S-V linear order. Thus, the presence of *a* preposition +Det preceding a non-S RC is optional (2f-g), as is the presence of doubled clitics (3a-3b, 4a-4c)<sup>4</sup>. Moreover, resumptive pronouns (3d,4d) are possible, though not very frequent in adult Iberian Spanish, especially in restrictive *que*-RCs headed by a definite DP<sup>5</sup>. Traditionally, the presence of resumptives, a feature of colloquial and informal speech, has been related to the distance between the so-called relative *que* and the resumptive pronoun. See De Mello (1992) for discussion on the features that may affect resumptive production (such as clarification, animacy, distance, avoidance of passivization), who concludes that what is relevant is not the distance between *que* and the clitic, but between the nominal head and the resumptive pronoun. Consequently, several kinds of SRs and ORs exist in oral Spanish in addition to the typical ones with/without a clitic<sup>6</sup> in 3(a-b) and 4(a-c), such as the ORs preceded by a preposition corresponding to the case marking in the source position (4c), those containing a preverbal S (4b-c), or passivized verbs (5).

(3) SR

- a. La actriz [que *t* besó al actor]  
 the actress that kissed to-the actor
- b. La actriz<sub>i</sub> [que *t<sub>i</sub>* le<sub>j</sub> besó al actor<sub>j</sub>]  
 the actress that him/her kissed to-the actor
- c. \*La actriz [que *t* al actor besó]  
 the actress that to-the actor kissed
- d. La actriz<sub>i</sub> [que ella<sub>i</sub> le<sub>j</sub> besó al actor<sub>j</sub>]  
 the actress that she him/her kissed to-the actor  
 ‘the actress that kissed the actor’

<sup>4</sup> In fact, pronoun doubling is considered a feature of colloquial Spanish, excluded from normative Spanish. (Brucart 1999: 403).

<sup>5</sup> De Mello (1992) reports a much higher proportion of resumptives with non-restrictive *que*-RCs (74%) than with restrictives (26%), though in Spanish varieties their distribution is more balanced between the two types (De Mello 1992: 29). Moreover, though at a low rate, resumptives are attested in different types of restrictive RCs (3-4% in *que*-RCs in the Caracas variety), they are more frequently attested in OR (7%) than in oblique-R (2-5%) and SR (1%), and in the speech of young speakers under 30 (Suñer 2001, Bentivoglio 2003).

<sup>6</sup> The clitic *le*, unspecified for gender, is also the accusative pronoun for animate objects in *leista* varieties. Notice that the examples of clitic doubling in this list are not instances of resumptives because they may appear in non-embedded sentences as well, and are acceptable even for speakers who do not accept resumptives (Brucart 1999: 405).

## (4) OR

- a. La actriz<sub>i</sub> [que (le)<sub>i</sub> besó el actor<sub>j</sub> \_\_<sub>i</sub>]  
 the actress that him/her kissed the actor
- b. La actriz<sub>i</sub> [que el actor<sub>j</sub> (le)<sub>i</sub> besó \_\_<sub>i</sub>]  
 the actress that the actor him/her kissed
- c. La actriz<sub>i</sub> a la<sub>i</sub> [que el actor<sub>j</sub> (le)<sub>i</sub> besó \_\_<sub>i</sub>]  
 the actress to the that the actor him/her kissed
- d. La actriz<sub>i</sub> [que el actor<sub>j</sub> le<sub>i</sub> besó a ella<sub>i</sub>]  
 the actress that the actor him/her kissed to her  
 ‘the actress that the actor kissed’

## (5) Passive RC

- a. La actriz<sub>i</sub> [que \_\_<sub>i</sub> fue besada por el actor \_\_<sub>i</sub>]  
 the actress that was kissed-fem by the actor  
 ‘the actress that was kissed by the actor’

Both S and O are possible null arguments in Spanish. Null Ss are typically licensed by the rich person marking on the finite V, but O can also be null regardless of the presence of an object clitic agreeing with it. Therefore, arguments in the embedded clause are not necessarily overt. In fact, the same sequence of words, as in (6), can correspond to different structures which can be interpreted as SR (6b,6d) or OR (6c, 6e), depending on the context. Interestingly, the third person singular clitic cannot help disambiguate in this context, as in the absence of the preposition and determiner (*a la*) preceding the RC, it may be coindexed with both the O of the embedded SR (6b) and the head of the OR (6c, 6e). Moreover, the O gap in (6d) could be interpreted as an arbitrary one (=some/anybody) or the non-existent internal argument of an intransitive-like V (6a). Notice that the clitic is excluded in both these cases.

## (6) SR or OR

- a. La actriz que besó  
 ‘the actress that kissed’
- b. La actriz<sub>i</sub> [que \_\_<sub>i</sub> le<sub>j</sub> besó \_\_<sub>j</sub>]  
 ‘the actress that kissed him/her’
- c. La actriz<sub>i</sub> (a la) [que \_\_<sub>j</sub> (le)<sub>i</sub> besó \_\_<sub>i</sub>]  
 ‘the actress that (s)he kissed’
- d. La actriz<sub>i</sub> [que \_\_<sub>i</sub> (\*le)<sub>j</sub> besó \_\_<sub>ARBj/0</sub>]  
 ‘the actress that kissed (someone)’
- e. La actriz<sub>i</sub> (a la)[que \_\_<sub>ARBj</sub> (le)<sub>i</sub> besaron \_\_<sub>i</sub>]  
 ‘the actress that they (=arbitrary)/ somebody) kissed’

But argument omission is not the only source for ambiguity in Spanish RCs. The preposition *a* preceding the animate object has been considered as

case/animacy marking which allows for the disambiguation of S and O arguments in main sentences, and consequently, between ORs (4a, 4b) and SRs (3a, 3b). However, the presence of *a* is restricted to animate Os, and thus, it cannot disambiguate between inanimate S and O, which may result in ambiguous RC.

- (7) a. el niño que (le) despertó al despertador (SR)  
 the child that to-it/him woke to-the alarm clock  
 ‘the child that woke the alarm clock’
- b. el niño que despertó el despertador (OR/?SR)  
 the child that woke the alarm clock  
 ‘the child that the alarm clock woke’ or ‘the child that woke the alarm clock’
- c. el niño que le despertó el despertador (OR)  
 the child that to-it/him woke the alarm clock  
 ‘the child that the alarm clock woke’
- d. el niño que el despertador <sup>?</sup>(le) despertó (OR)  
 the child that the alarm clock to it/him woke  
 ‘the child that the alarm clock woke up’

Only in a context in which the alarm clock could be animate are all examples in (7) accurate constructions for some speakers, where (7a) would be interpreted as a SR (animate alarm clock), (7b) could be either a SR (inanimate alarm-clock) or an OR (animate alarm clock), whereas (7c) could only be interpreted as an OR regardless of the animacy of the alarm clock. In a non-animate alarm clock situation, however, only the OR reading would be possible for (7b), whereas (7a) would be excluded. However, the logical interpretation for the examples in (8) is not exactly the same. Regardless of the animacy of the shower, the predicate *calentar* ‘to warm’ allows an ambiguous interpretation of (8b) as a SR or an OR. The ambiguity is only resolved in the presence of the clitic (8c, 8d) in these RCs, in which the use of preverbal Ss is more restricted (8e).

- (8) a. el niño que (le) calentó a la ducha (SR)  
 the child that to it/him warmed to the shower  
 ‘the child that warmed (the water of) the shower’
- b. el niño que calentó la ducha (SR/OR)  
 ‘the child that warmed (the water, room of) the shower’ and ‘the child that the shower warmed’
- c. el niño que le calentó la ducha (OR)  
 ‘the child that the shower warmed’
- d. el niño que la ducha le calentó (OR)  
 ‘the child that the shower warmed’
- e. el niño que la ducha calentó (OR antiquated or very formal)  
 ‘the child that the shower warmed’

Finally, RCs may contain verbs inflected for indicative/subjunctive mood, depending on the possibility (subjunctive) or the factivity of the assertion.

### 3. THE STUDY

#### 3.1. Method

Data in this research were collected using the Spanish version of the preference elicitation test developed in the COST-A33 project (Friedmann 2010, Friedmann *et al.* in preparation). The experiment consisted of a selection task whose goal was to elicit 20 relative clauses: 10 SRs and 10 ORs per participant. Orally, the experimenter presented two characters performing some action in which one of the characters (*the child*) was the agent (10 sentence pairs) or the patient (10 sentence pairs) of a transitive predicate, and she asked the participant to choose which child (s)he would prefer to be. The majority of the predicates were semantically reversible (7 reversible (9a–b) and 3 non-reversible (10)) and the sentence pairs could contrast in the verb (9a) or in the second character (9b–c).

(9) Experimenter eliciting SRs: *Hay dos niñas. Una niña abraza a su madre y la otra empuja a su madre. ¿Cuál de las dos te gustaría ser?* ‘There are two girls. One hugs her mother and the other pushes her mother. Which girl would you like to be?’

Target answer:

- a. *la niña [que (le) abraza/empuja a su madre]*  
 the child that her hugs/pushes to her mother  
 ‘The girl that hugs/pushes her mother’

Experimenter eliciting ORs: *Hay dos niñas. A una niña le peina su vecina, y a la otra le peina su mamá ¿Qué niña te gustaría ser?* ‘There are two girls. A neighbor combs (the hair of) one girl, while the other girl is combed by her mother. Which girl would you like to be?’

Target answer (b or c):

- b. *La niña [que le peina su/la mamá / vecina]*  
 the girl that her combs her/the mother/ neighbour
- c. *La niña [que su/la mamá/ vecina le peina]*  
 the girl that her/the mother / neighbour her combs  
 ‘The girl that the/her mother/neighbour combs’

All the responses were audio-recorded and transcribed.

### 3.2. Participants and procedure

This study combines a cross-sectional and a longitudinal data collection in an attempt to better account for developmental patterns. Thus, two kinds of data were collected using the same methodology: on the one hand, a group of adults and another of children were tested using the elicitation task. On the other hand, the (mini)longitudinal corpus consisted of two samples obtained by repeating the task with the same child group, with an interval range of 18-20 months, which made it possible to maintain the participant variable across child samples constant.

The child group consists of fifteen participants: 8 girls and 7 boys. All of them live in a Spanish monolingual town in Navarra (Northern Spain) and are growing up in families in which both parents (in most cases, and at least one in some) are monolingual native speakers of Spanish. Children in this study were recorded twice. In the first session, called the *age 5 session* or *ch5* (mean age 5;2), children ranged in age from 4;10 to 5;5. They are a subgroup of the bigger sample of 5-year-olds analyzed in Friedmann (2010). In the second session, or *ch7* (mean age 6;11), their ages ranged between 6;6 and 7;2. The control group (*adult sample*) includes 8 adults, 6 female and 2 male (mean age 39 years) ranging from 27 to 60 years of age. With the exception of one speaker of Rioplatense Spanish, adult participants and the researcher herself are native speakers of Northern Iberian Spanish.

This preference task basically consisted in indicating which child the participant would prefer to be, choosing between the two options provided by the researcher in main transitive sentences involving one child and a second character (mostly animate) as arguments of the predicate as in the V-change example *one child looks for the grandma and the other child finds the grandma*. Participants sometimes chose between the two options in the question posed by the researcher, selecting “literally” one of the two uttered contrasting options as they were presented by the researcher or preceded by *el de* “the one of” (10a), instead of producing a relative clause. In such cases the researcher asked again: *¿Qué niño/niña te gustaría ser?* ‘which boy/girl would you like to be?’ (10b). In cases in which the child did not answer or produced just a small fragment (which happened more frequently in the first trials) (10c), the researcher prompted the RC, facilitating the antecedent of the RC as in (10d). Among the answers (mostly one or two) produced by the participants in this off-line task, only the “most target-like” was considered for coding and later analysis (10b,d).

(10) Researcher: *Hay dos niños. A uno la ducha le calentó mucho y a otro/otra la ducha le enfrió mucho. ¿Cuál de los dos niños te gustaría ser?* ‘There are two boys. The shower warmed one up a lot and made the other very cold. Which one would you like to be?’

- a. la ducha le calentó/ el de la ducha le calentó (IñTe 6;08,26)  
 ‘the shower warmed him up/ the one of the shower warmed him up’

Researcher: ¿Cuál de los dos niños te gustaría ser?  
 ‘Which one would you like to be?’

- b. el que la ducha le calentó (IñTe 6;08,26)  
 ‘the one that the shower warmed up’

Researcher: ¿Cuál de las dos niñas te gustaría ser?  
 Which one of the two girls would you like to be?

- c. mm.mm (MaAr 4;10,19)  
 ‘mm...’

Researcher: a ti te gustaría ser la niña...

- d. que le calienta mucho mucho (MaAr 4;10,19)  
 ‘that it warms her up very much’

### 3.3. Results

With the exception of some fragments or non-embedded sentences (10), most children and adults answered with a RC in the elicitation task (~95%). Errors like (11a,b) are found among children in both sessions (ch5 and ch7) and even adults produce some (11c), as shown in Table 1. Note, however, that a single child was responsible for the production of 12 of the 16 non-RC instances in the second session (ch7).

- (11) a. una niña le sacó la foto a un bailarín (MaAr 4;10,19)  
 ‘one girl took the picture of the dancer’  
 b. abrazar a su mamá (JoPe 7;1,22)  
 ‘to hug his mother’  
 c. el de la radio/ de la radio (MiZu 50)  
 ‘the one of the radio/ of the radio’

Table 1

Production of RCs in the elicitation task

	Ch5		Ch7		Adults	
Total RC	93.7%	274/300	95%	282/298	96.8%	154/159
SR context	88%	132/150	94.6%	141/149	98.7%	78/79
OR context	95%	142/150	94.6%	141/149	95%	76/80

#### 3.3.1. Ambiguous RCs

Around 10% of the produced RCs across groups and sessions (range 8-14%) were ambiguous clauses (12) which could be analysed as SRs as well as ORs (Table 2).

- (12) a. el que le dio un regalo (JoPe 7;1,22)  
 ‘the one that gave a present to him/ the one that he gave a present’

- b. el que- el niño que dibujó un policía (UnJu 6;7,15)  
 ‘the one- the boy that drew a policeman /the boy that a policeman drew’
- c. la que abraza (SaRo 5;5,5)  
 ‘the one(female) that hugs’
- d. la que le dibuja (JaLa 28)  
 ‘the one (female) that hugs him/her’

Table 2

Ambiguous SR/OR across samples in the elicitation task

	Ch5		Ch7		adults	
	%	N	%	N	%	n
Total ambiguous	13.13%	36/274	8.86%	25/282	14%	21/154

With the exception of one child, all children produced one or more target-deviant RCs in both sessions (range: 1-11 out of 20 items (ch5 sample) and 1-6 (ch7 sample)). Such data suggest that a) errors are generalized (mean 25%-16% in non-ambiguous RCs) even at age 7 (mean 4.8 (ch5) / 3.2 (ch7) out of 20 items), and b) they are mostly found in OR contexts.

RCs without overt (S or O) lexical arguments are frequently ambiguous (12c-d), but not in many other cases, such as in non-reversible predicates (13a), or in the presence of the preposition *a*, either in its original position (13b) or pied-piped (13c). However, the potential assimilation of the preposition *a* with an immediately preceding word ending in *-a* obscured interpretation in some cases, even in adult production (13d). Also, the presence of overt lexical arguments was not sufficient to prevent SR/OR ambiguity in some cases (13e).

- (13) a. El que lo compró (UrUr 6;10)  
 ‘the one that bought it (=the book)’
- b. el que invitó a su tío (IñTe 5;1,6)  
 ‘the one that invited his uncle’
- c. al que le enfrió mucho mucho (OiLo 6;11,16)  
 ‘the one who it made very cold’
- d. la que le abraza a?? su mamá (JaLa, 28;0)  
 ‘the one that hugged her mother’ or ‘that her mother hugged’
- e. el que (le) dio un regalo (JoPe 7;1,22)  
 ‘the one who gave a present’ or ‘the one that (s)he gave him a present’

Moreover, lexical arguments in the embedded clause could be [+/- animate] and [+/- definite]. Some combinations also result in ambiguous SR/OR sentences, though it seems to us that non-definite arguments (14b) tend to be interpreted as O of the embedded easier than definite arguments (14c). No instances along the lines of (14c-d) have been attested.

- (14) a. el que dibujó el policía (PzUrUr 5;3,16) OR (SR?)  
 ‘the one that drew the policeman or that the policeman drew’  
 b. la que dibujó un policía (NaZu 5;1,21) (SR/OR)  
 ‘the one that drew a policeman or that a policeman drew’  
 c. un niño que dibujó el policía (OR)  
 ‘a child that the policeman drew’  
 d. un niño que dibujó un policía (SR/OR)  
 ‘a child that a policeman drew’ or ‘a child that drew a policeman’

Among the unambiguous RCs (Table 3), the answers of the youngest children were consistently target-like at rates close to 90% in SR contexts, only slightly lower than older participants’ (over 95% in ch7 and adults). Differences are more visible in OR contexts, where the youngest children (ch5) produced target ORs at a chance level (48.7 %), which contrasts both with their rate (73%) in the second session (ch7) and that of adults (95.5%). A noticeable finding is the 25% increase in target-like OR production observed between the two sessions (ch5-ch7) separated by the 20 month interval.

Table 3

Target RC in unambiguous SR and OR

	Ch5		Ch7		Adults	
SR context	88.2%	105/119	96%	122/127	98.5%	66/67
OR context	48.7%	58/119	73%	95/130	95.5 %	63/66
<b>TOTAL</b>	<b>68.5%</b>	163/238	<b>84.4%</b>	217/257	<b>97%</b>	129/133

### 3.3.2. Heads

Most RCs are headed in the three corpora. Headless RCs (15a) are quite frequent (38%) in ch5, which contrasts with the 4% in ch7 and 2.6% in adults. But a methodological fact should be kept in mind at this point which may help in understanding the initial frequency of this pattern. As mentioned before, one of the ways of prompting RC production in cases in which children answered with fragments or with non-embedded sentences (mostly during the first session (ch5)), consisted in the experimenter herself producing the head (see 10d). In these cases, the child only “had to complete” the answer, and as a result (s)he produced a (headless) RC. Among the headed RCs, both options, the null N head option *el/la que* ‘the M/F (one)’ (15b) and the full DP head *el niño/la niña* ‘the boy/girl’ (15c) are attested, and their distribution varies across samples, though the noun-less option (15b) is the most frequent in all the samples (78% (ch5), 53.3% (ch7), 58.3% (adults)), and in both SR and OR.

- |         |   |                |           |
|---------|---|----------------|-----------|
| (15) a. | que bebió Coca-Cola<br>'that drank Coke'                  | (LeMa 6;11,21) | 0-que     |
| b.      | la que comió helado<br>'the one that ate ice-cream'       | (MaAr 6;5,20)  | Det-que   |
| c.      | la niña que comió helado<br>'the girl that ate ice-cream' | (LeMa 6;11,21) | Det+N-que |

### 3.3.3. Clitics

Pro-drop languages like Spanish allow ORs without overt Ss, and participants in our study also produce instances of this kind in their answers. Lexical Os are consistently present in SRs (88% (ch5), 90.1% (ch7) and 90% (adults)), whereas a lower rate is observed in the production of lexical Ss in ORs (73.3% (ch5) and 71% (ch7), respectively), which converge with adult rates (73.2%). Moreover, almost the majority of all child and adult unambiguous SRs contain a lexical O realized as an NP, DP or PP argument (95% (ch 5), 92% (ch 7), 93.5% (adults)), which coincides with the high rate of overt Ss in children's ORs (91% and 85%, respectively) and in adults' ORs (80%).

Moreover, about half of the RCs in all the samples contain a clitic, though general mean rates of clitics in unambiguous RCs seem to decrease with age: 56% (ch 5), 44% (ch 7), 38% (adults). This decrease requires more careful consideration because the distribution and development of clitics are very different in SRs and ORs (Figure 1). As far as unambiguous SRs are concerned, clitics are mostly attested in the first child session (30% in ch5, 1.5% in ch7 and 3% in the adult sample), whereas lexical objects turn out to be the most frequent option at older ages (>95% in ch7 and adults). Consequently, production in the earlier session (ch5) shows more variability between single lexical objects (over 70%), and clitic doubling (16a). In contrast, only some isolated examples of doubling are attested in the second session (16c), and none in the adult data. Interestingly, most O-clitic-doubling constructions found in ch7 are contained in target-deviant SRs produced in contexts of reversible ORs during the first (16b) or the second session (16c). Notice that examples like (16), attested in several participants, are well-formed though not always pragmatically accurate utterances (therefore the stars in 16b,c).

- |         |  |               |
|---------|--|---------------|
| (16) a. | la que le encontró a la amiga<br>'the one that found the friend'   | (OIBi 5;5,2)  |
| b.      | * que le encontró al abuelo<br>'that found the grandfather' instead of 'the one that the grandpa found'    | (SaRo 5;5,5)  |
| c.      | *el que le abrazó a su papá<br>'the one that hugged his father' instead of 'the one that his father found' | (OIBi 7;2,20) |

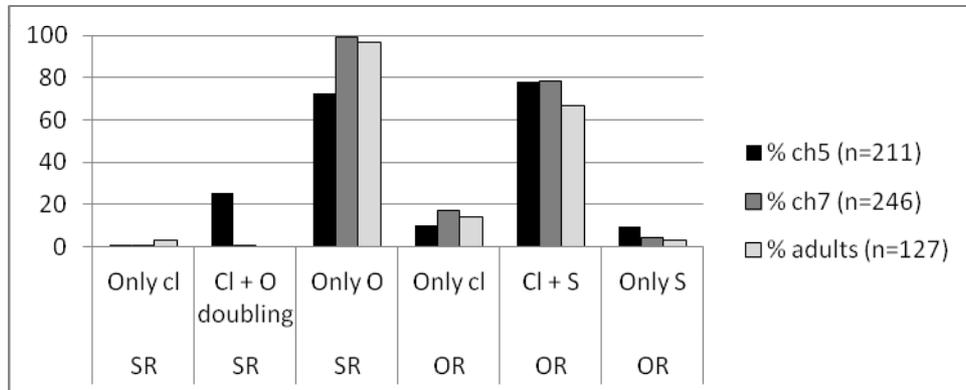


Fig. 1. Distribution of lexical and pronominal arguments in unambiguous SRs/ORs containing overt arguments

Contrary to what was observed with SRs, most RCs produced in contexts of ORs contain a clitic and at a similar rate across samples (76% (ch5), 84% (ch7) and 79% (adults)), and they are frequent even in unambiguous ORs: 68% (ch5), 84.5% (ch7) and 74% (adults). Moreover, clitics are frequent in ORs, regardless of the presence of an overt S and its placement, i.e. preceding (17b) or following V (17c): in fact, all ORs with a null S contain a clitic (17a), as is the case in many ORs with an overt S (17b-d).

- (17) a. la niña que le calentó mucho (ArJa 6;7,17)  
 ‘the child that warmed up a lot/ the girl that it warmed up a lot’  
 b. [Researcher: “el niño...”] que el abuelo le buscó (JoPe 7;1,22)  
 ‘that the grandfather looked for him’  
 c. la que le buscó el abuelo (SaRo 7;2)  
 ‘the one that the grandfather looked for’  
 d. el niño que le levantó el elefante con su trompa (IñTe 6;8,26)  
 the child that the elephant lifted him with its trunk’

### 3.3.4. Word Order

Word order is very consistent in child and adult SRs: (cl-)V always precedes O (N, DP or PP) (18a). In contrast, more variability is observed in ORs where even the same child may produce both orderings (18b,c) in the same second session, though they are not equally distributed in the sample: S precedes (cl-)V quite frequently, as in (18b). However, the most frequent pattern across samples (88.6% (ch5), 70% (ch7); (80%) (adults)) is the reverse one shown in (18c,d), namely (cl-)VS. Interestingly, both sequences are attested when clitics are present in the OR. In contrast, a clear preference for VS was observed in ORs when the object clitic was absent (18d), with some scarce exceptions of SV like (18d).

- (18) a. la niña que encontró a un amigo (MaCi 6;10,21)  
       ‘the girl that found a friend’  
       b. la niña que el papá le abrazó (IrMo 6;10,16)  
       ‘the girl that the daddy hugged’  
       c. la niña que le dibujó su tía (IrMo 6;10,16)  
       ‘the girl that her aunt drew’  
       d. que la ducha calienta (MaCi 5;1,22)  
       ‘that the shower warms up’  
       e. la niña que despertó la radio (ArJa 6;7,17)  
       ‘the girl that the radio woke up’

### 3.3.5. *Passives*

No instances of passives have been found in the children’s corpora in any of the sessions. Only in the adults’ corpora were a few examples attested in OR contexts (19).

- (19) a. la niña que fue fotografiada por su profesor (IxMe 28)  
       ‘the girl that was photographed by her teacher’  
       b. la que le/ el que fue dibujado (MiZu 50)  
       ‘the one that/ the one that was drawn’

### 3.3.6. *Target-deviant RCs*

Among the few target deviant SRs and the most frequent deviant ORs (Table 4), there are several kinds of errors attested in the corpora.

Table 4

Errors in unambiguous RCs

	Ch5		Ch7		Adults	
	%	N	%	N	%	N
SR context	11.76%	14/119	3.9%	5/127	1.5%	1/67
OR context	48.7%	61/119	26.9%	35/130	4.5%	3/66
<b>TOTAL</b>	<b>31.5%</b>	<b>75/238</b>	<b>15.6%</b>	<b>40</b>	<b>3%</b>	<b>4/133</b>

There are some RCs with an interpretation corresponding to the role reversed target sentence. Since these are mostly well-formed utterances it is not always easy to decide whether the deviance relies on a semantic error (role reversal) as in (20a,g,h), a person reference error (20b,c), a grammatical error such as the incorrect use of the preposition *a* (20a,b), or the incorrect inflection on the verb (20b), especially if the lexical head is not produced overtly (20a-c). Some additional lexical errors are observed in cases in which the participant uses a different predicate from the ones provided by the experimenter in the choice task (20d). Finally, there are some scarce instances of a resumptive DP (20e), which

were only attested in the first session, or a (quasi)relative pronoun preceded by the preposition *de* ‘of’ (20h,i).

- (20) a. \*el que le abrazó a su papá (OIBi 2;2,20)  
 ‘the one that hugged his father’  
 TARGET OR: el que (le) abrazó su papá ‘the one that his father hugged’
- b. \*la que desperté a- la radio (SaRo 7;2)  
 ‘the one that I woke the radio up’  
 TARGET OR: la que (le) despertó la radio ‘the one that the radio woke up’
- c. \*el que te fotografió un cantante (IñTe 6;8,26)  
 ‘the one that a singer photographed you’  
 TARGET SR: el que (le)fotografió al cantante ‘the one that photographed a singer’
- d. \*la que le puso mucho frío (MaAr 6;5,20)  
 ‘the one that made him/her very cold’  
 TARGET OR: la que (le) enfrió ‘the one that made her very cold’
- e. \*el que le abrazaría el niño a su madre (IñTe 5;1,6)  
 ‘the one that the child would hug his mother’  
 TARGET SR: el que le abrazó a su madre ‘the one hugged his mother’
- f. \*la tía que le dibujó (SaRo 7;2,4)  
 ‘the aunt that drew her/him’  
 TARGET OR: la niña que le dibujó la tía ‘the girl that her aunt draw’
- g. \*me gustaría ser el elefante que moja con su trompa a una niña (IxAr 27)  
 ‘I would like to be the elephant that wets a girl with its trunk’  
 TARGET: la niña que moja el elefante con su trompa ‘the girl that the elephant wets with its trunk’
- h. \*el de que come helado (JoPe 5;4,23)  
 ‘the one of that he eats ice cream’  
 TARGET SR: el que come helado ‘the one that eats ice cream’
- i. \* la niña de la que le peinó la mamá (ArJa 4;11,27)  
 ‘the girl of that her mother combed’  
 TARGET OR: la niña que le peinó la mamá ‘The girl that the mother combed’

As Figure 2 shows, most of the target-deviant RCs are mistakes in person reference<sup>7</sup>. Examples in (21) are well-formed ORs, though instances of person reference error produced by participants who in some cases referred to him/herself instead of referring to a hypothetical child (1st person singular clitic in OR or 1st

<sup>7</sup> Some examples contain more than one kind of error.

person singular agreement in SR), or in some ORs they produced the V inflected for non-referential plural (impersonal S) (21b-c). This kind of error in person reference was frequent in both sessions of child productions and some instances are also found with the adults (2 out of 4 errors are person reference) (21d).

- (21) a. \* a mi me gustaría ser el niño que ME curó el doctor (IñPe 7;1,16)  
 ‘I would like to be the child that the doctor cured me’  
 b. \*que ME abrazan mis amigos (UrPe 6;11,25)  
 ‘that my friends hug me’  
 c. \*me gustaría ser el niño que le mojaron con la trompa (IñPe 7;1,16)  
 ‘I would like to be the child who (they) wet with the trunk’  
 d. \* la que mi tía me dibujó (LeXX 29)  
 ‘the one that my aunt drew me’

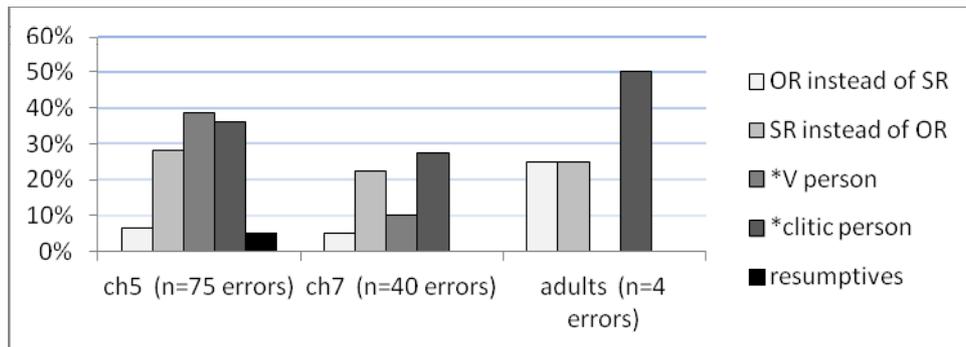


Fig. 2. Error distribution in target-deviant RCs.

Finally, it should be noted that the error category called \*SR *instead of OR* in Figure 2 is in fact a very heterogeneous category which contains a varied set of error types, among which the overproduction of the preposition *a* preceding an animate O inside the RC is the most frequent (n= 17 in ch5, n=8 in ch7) and turns out to be indistinguishable from role reversal in reversible ORs. But there are also (mostly lexical or semantic) substitution errors such as the use of the relative *quien* ‘who’, which is only acceptable in non-restrictive Spanish RCs (n=5 in ch5), instead of *que*; the use of the intransitive *se*-medial form *calentarse* ‘to get warm’ instead of the transitive *calentar* ‘to warm’, *poner frío* ‘make cold’ instead of *enfriar* ‘to cold’; change of object *levanta la trompa* ‘lifts the trunk’ instead of *levanta con la trompa* ‘lifts (the child) with its trunk’ or *sacar la foto a* ‘to take a picture of’ or *hacer una foto a* ‘to make a picture’ instead of *fotografiar* ‘to photograph’; and the use of incorrect prepositions preceding the relative *de que* ‘of that’ or preceding the antecedent DP *el del niño que* ‘the one of’.

#### 4. DISCUSSION

The high rates of RC production attested in the experiment across samples confirms that children at age 5 are already experienced in the production of SRs and ORs in Spanish, which confirms the early presence of both SRs and ORs (*que* complementizer), reported by age 2;6 in several longitudinal corpora (Hernández Pina 1984, Barreña 2000). They are frequently attested in the expected contexts of SRs (88% (ch5), 94% (ch7) and 98% (ad)) and ORs (95% (ch5), 95% (ch7) and 95% (ad)) in the elicitation task. As reported in the literature of many different languages and contrary to what was observed in the adult participant production, general rates of target SRs (almost adult-like) are higher than ORs, suggesting that the production of RCs is still under development at age 7, though SR-OR differences decrease between sessions (35% (ch5)-18% (ch7)). The observation that a considerable number of produced RCs could be ambiguously analyzed as SR and OR (mean range of 8%-14% across samples) led us to tease apart ambiguous and non-ambiguous productions and initiate a new count. Differences between SRs and ORs turned out to be even more visible if only the examples of unambiguous productions were considered (40% (ch5), 23% (ch7), which contrasted again with the low difference (3%) observed in adult error productions. Thus, quantitative differences are observed between both kinds of RCs in children, but not in adults, which confirms the asymmetry found cross-linguistically between ORs and SRs in developing and impaired grammars (Labelle 1988, 1990, Arosio *et al.* 2009, Friedmann 2010, Friedmann *et al.* 2009, 2010, Gutiérrez-Mangado & Ezeizabarrena (in press)).

Qualitatively, the data analyzed show that 4- to 5-year-old children (ch5) are already able to produce most of the structures attested in the descriptive literature in an adult-like manner. Passives and resumptives seem to differentiate children from adults, but this difference is only apparent. On the one hand, passives, frequently described as some kind of relief strategy in the adult and child literature, are not frequent in the adult corpus of this study: only 4 instances are attested (6%), three of them produced by the same participant. This result contrasts with the findings of other languages like Italian, where passives frequently replace ORs in both child and adult production, though at a different rate (Belletti forthcoming). As far as resumptives go, only 4 instances are attested in the earliest child sample, one in a SR context and 3 in OR contexts, and in all of them both arguments, the external and the internal, are overtly produced. The presence of resumptives is partially consistent with Pérez-Leroux's (1993, 1995) findings that only the youngest children produce such structures, though their scarcity, as well as the absence of pronominal resumptives (all of them are NPs), contrasts with the 25% of resumptives, all of them O or oblique resumptives, and mostly pronominal reported in her study of 26 children between the ages of 3;5 and 6;8 (mean 5;3). Thus, the data analyzed confirm Guasti and Shlonsky's (1992, in Pérez-Leroux 1995) conclusion that resumptives have a higher cost in the grammar than a movement derivation in adult (and child) grammars. Also confirmed is Alexopoulou *et al.*'s (2008) conclusion that children, like adults, do know that

pronouns are not legitimate variables in quantificational chains. Therefore, the presence of passivization and resumption as reported strategies “to transform a relative clause with a target extraction other than subject into a subject-extraction relative” (Pérez-Leroux 1995:122) as reported by Labelle (1988, 1990) is not confirmed in the data analyzed. Specific properties of the Spanish variety tested as well as some methodological facts should not be discarded as factors having an influence on the results. It must be noticed that, on the one hand, resumptives in Spanish require a long structural distance between the nominal head and the gap (De Mello 1992) or between the relative pronoun *que* and the gap (Brucart 1999:405), and on the other hand, animate object-clitic production (and even doubling) is frequent in the variety under study.

There is an element that distinguishes the child and adult data in this task, namely the production of clitics in SRs. In general, children produce more clitics in the first session (63%) than themselves at age 7 (44% (ch7)) and than adults in general (42%), though 3<sup>rd</sup> person singular clitics are equally frequent (48% (ch5), 44% (ch7), 40% (adults)) in the three samples. But what makes the difference between the samples is the context in which they are produced. Clitics are expected in ORs and have been attested in adults and both child samples, most of them in clauses containing an overt S and some of them in subjectless clauses. Only children, and only in the first session at age 5, produce clitics in SRs, which appear consistently in doubling constructions, a permissible option with animate objects in adult grammar. In fact, around 25% of the overt Os are doubled in the unambiguous SRs.

A frequent error observed in the sample consists of the change of referent attested in the produced 1<sup>st</sup> person singular inflected V form in SRs or the 1<sup>st</sup> person singular clitic pronoun in ORs, instead of the expected 3<sup>rd</sup> person singular, which would better correspond to the hypothetical child “I would like to be the child”. Children in both sessions produce person errors in both the V inflection (n=29 errors in ch5 and n=5 in ch7) and the clitic (n=27 in ch5 and n=11 in ch7). Adults only produce person errors with the clitic (n=2). In adult Spanish the V of SRs agrees in person and number with the antecedent, though there are some exceptional instances in which 1<sup>st</sup> person singular and 2<sup>nd</sup> person singular pronouns in the main clause may attract the agreement inflection of the embedded predicate (Brucart 1999:459) as in *yo soy el que lo afirma/ lo afirmo* ‘I am/it is me the one who states-3<sup>rd</sup> person singular / state-1<sup>st</sup> person singular it’. The fact that children produce 1<sup>st</sup> person singular forms in SRs should not be considered an instance of this kind of structure in isolation, but as a more general tendency to identify the hypothetical child with herself, which happens not only in SRs but also in ORs at a similar frequency. Therefore, such errors should be excluded from the discussion of SR/OR syntactic asymmetries.

In this task, participants produced many lexical arguments in RCs. Lexical Os are consistently present in SRs (mean range 88%-90% in all samples), as are lexical Ss in ORs, though at a slightly lower rate (mean range 70-73% across samples). Both results a) the high rate of Ss in a pro-drop language and b) the high

rate of overt Os in SRs were not predicted in a task in which half of the SRs were answers to a preference question between two V items: *which child would you like to be: the one that scared/drew his friend?*, a context in which the lexical Os could be elided or replaced in the answer by the clitic (SR: *el que (le) asustó* ‘the one that scared (him)’). However children –even at age 5– behave similarly to adults at this point, producing frequent lexical Os.

With regard to word order, RCs produced in the task show the same placement patterns as the ones described for relatives and declaratives in what concerns the placement of V with regard to its arguments. On the one hand, a very consistent VO pattern is observed in SRs (100%) in all the three samples, and on the other hand, a clear preference for VS is found in ORs in children ((88.6% (ch5), 70% (ch7)) as well as in adults (80%), in comparison to SV (below 30%). Moreover, this difference is very sensitive to information structure, as has been suggested for adult Spanish (Brucart 1999). In all three samples SV production was clearly restricted to the V-change condition: *There are two children: The grandfather looks for one child and he finds the other child. Which one would you like to be?*, while some VS patterns were found in such contexts, in addition to their exclusive presence in the S-change condition, as in *There are two children: the doctor cures one and the nurse cures the other. Which one would you like to be?* Interestingly, the same pattern is observed in the productions of (younger and older) children and adults, which indicates an adult-like knowledge of word order restrictions in both SRs and ORs.

Finally, the error category called \*SR instead of OR is in fact the sum of different kinds of errors, such as the overproduction of the preposition *a* preceding an animate O inside the RC, which turns out to be indistinguishable from role reversal in reversible ORs (n= 17 in ch5); lexical substitutions such as the use of the relative *quien* ‘who’, which is only acceptable in non-restrictive Spanish RCs (n=5 in ch5), instead of *que*; use of the intransitive *se*-medial predicates like *calentarse* ‘to get warm’ instead of the transitive *calentar* ‘to warm’ or change of object *levanta la trompa* ‘lifts the trunk’ instead of *levanta con la trompa (al niño)* ‘lifts (the child) with its trunk’; use of incorrect prepositions preceding the relative, as in *de que* ‘of that’, or preceding the antecedent DP, as in *el del niño* ‘the one of’ (n=6 in ch5) or *al niño que* ‘to the one that’ (n=11 in ch7).

## 5. CONCLUSIONS

Longitudinal data of 15 children confirm the existence of quantitative differences in the production of target ORs and SRs in child Spanish at age (4 to) 5 and also at age (6 to) 7, which decreases with age, confirming the widely attested result that SRs are easier than ORs to acquire. Two important results have been obtained in this research. First, the high variability observed in the alternative

answers given to the expected RCs, especially ORs, makes it difficult to maintain the existence of some purely syntactic *OR-to-SR transformation strategy* in the avoidance of ORs. Lexical semantic and pragmatic reasons may account for the majority of errors (in person-reference, role reversal, vocabulary, etc.) attested in child Spanish, which seem to decrease with age. In contrast to what has been reported for many other languages, no evidence for purely syntactic strategies such as passivization or resumption has been attested among the target-deviant ORs reported. Secondly, a very consistent adult-like behavior has been observed with regard to the production as well as placement of Ss, clitics, Os and Vs, with the exception of the target-like clitic doubling mostly attested in the earliest sample, and only with animate Os, which confirms a mature knowledge of the constraints governing SRs and ORs in 5-year-old Spanish.

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