# SUBJECT VS. OBJECT RELATIVES: WHAT CAN ROMANIAN CHILDREN TELL US ABOUT THEIR ACQUISITION?

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**Abstract.** The present study addresses the question of intervention effects in subject and object relative clauses and aims at evaluating to what extent Romanian children make use of syntactic and morphological material in order to disambiguate between the two structures. The comprehension of relative clauses was tested with a sentence-scenario matching task in two experiments that manipulated the type of DP appearing as intervener in object relatives: the subject ('the intervener') was either a full nominal expression, or a null subject. In both cases, the *phi*-features of the subject matched those present on the head of the object relative clause ('the target'). The results obtained show that Romanian children (aged 4 to 6) comprehend subject relatives better than object relatives. This suggests that children have difficulties computing structures that involve movement across an intervener whose argumental features are properly included in the set of features of the target.

**Keywords**: relative clauses, A'-movement, intervention, lexical restriction, pronominal DP, featural specification.

## 1. INTRODUCTION

A lot of research in first language acquisition has focused on children's ability to produce and comprehend syntactically complex sentences, such as relative clauses (RCs), while trying to account for their ability to deal with non-local dependencies. Studies of children's comprehension of RCs in experiments (English: de Villiers *et al.* 1979, Sheldon 1974, Tavakolian 1981, Hebrew: Friedmann and Novogrodsky 2004, Friedmann *et al.* 2009, Arnon 2005, 2009, Italian: Adani 2010; Adani 2011, Arosio *et al*. 2011, Portuguese: Correa 1995) have focused on the well-established asymmetry that appears between subject relative clauses (SRCs) and object relative clauses (ORCs). These studies have shown that children comprehend SRCs, which involve movement of the embedded

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subject (1), better than ORCs, which involve movement of the embedded object (2), from the position where they were merged in the structure (the original position is indicated in angled brackets):

(1) The girl that <the girl> is feeding the dog.
(2) The dog that the girl is feeding <the dog>.

The two sentences differ in that, in ORCs, an embedded subject (e.g. *the girl*) appears between the position where the A'-constituent has been merged and its landing site in the structure. No such element appears in the chain formed by the merge and landing positions of the A'-constituent in SRCs.

In this paper I address the question of intervention effects in subject and object relatives in child Romanian, by focusing on the effect of the type of DP appearing as intervener in the RC and on the role that the morphosyntactic features of the head of the RC and the intervening element play in the acquisition of ORCs in Romanian. The study also aims at evaluating to what extent Romanian children make use of the syntactic and morphological material available in the relative structures in order to disambiguate between the two types of constructions.

The difficulty children have in dealing with ORCs has been explained, on the one hand, through lack of adult competence, namely that children analyze RCs in a different way than adults (The Parallel Function Hypothesis – Sheldon 1974; The Conjoined Clause Hypothesis – Tavakolian 1981). On the other hand, it has been argued that children's difficulties in the comprehension of this type of structures are due to the infelicitous pragmatic conditions[2] in the experimental context for the use of relative clauses.

Hamburger and Crain (1982) argue that Sheldon (1974) and Tavakolian (1981) used experimental settings that were infelicitous for the test sentences presented to the children[3]. The RCs tested in these earlier studies failed to satisfy the referential function of the restrictive RC by providing only one possible referent in the experimental situation. They show that 4-year-old English children understand and produce RCs in an adult-like way once the pragmatic context renders the use of the RC felicitous in the discourse situation, that is, once an extra object identical to the referent of the relative clause is added in the experimental setting and the set of potential referents is enlarged.

More recently, Friedmann *et al.* (2009) have tested Hebrew children's comprehension and production of various A'-constructions and shown that children experience difficulties only with A'-dependencies that involve moving a lexically

[2] Felicity conditions are conditions that need to be met in order for a speech act to be effective.

[3] In these experimental tasks, children hear a test sentence containing a relative clause, as in (i):

(i) The horse kicked the cow that the lion pushed.

Children are provided with singletons of each of the toys identified by the nouns in the relative clause and are asked to act out the two actions based on their parsing of the test sentence.

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restricted [+NP] element over the intervening subject which also contains a lexical NP. When the A'-moved element and the intervening subject are structurally similar, children have difficulties computing the non-local dependencies (i.e. headed object relative clauses or *which NP* object questions). Thus, the subject-object asymmetry can be explained in terms of intervention effects, which amount to Relativized Minimality (RM) effects (Rizzi 1990, 2004).

Studies in the comprehension of RCs by adults using off-line and on-line tasks have revealed that in normal adults, SRCs are easier to process than ORCs (Gibson 1998, Gordon *et al.* 2001, 2004, Warren and Gibson 2002). These studies also show that adults do not find all ORCs equally difficult to process. One factor that seems to influence adult processing is the type of NP that appears in the embedded clause, the difference in processing difficulty being greatly reduced when the NP in the embedded subject position is a first/ second person pronoun or a proper name (as illustrated by the examples from Gordon *et al.* (2001) in 3 and 4 below):

(3) The barber that the lawyer / you / Joe admired climbed the mountain.
(4) The barber that admired the lawyer / you / Joe climbed the mountain.

Gibson (1998) and Warren and Gibson (2002) showed that, when asked to rate the degree of complexity of doubly nested relative clauses in which a first/ second-person pronoun, a non-referring third-person pronoun, a proper name or a definite description appeared as the NP in the innermost subject position, adults rated sentences with first/ second-person pronouns and proper names as being less complex than the same sentences with other types of NPs in the most deeply embedded clause.

The effect of NP type on children's comprehension of ORCs has recently been investigated by Arnon (2009). In her study, she investigated the production (both spontaneous and elicited) and comprehension of ORCs with full lexical NPs and with a first person pronoun by Hebrew-speaking children aged 4;6 years. Arnon's (2009) analysis of a corpus of spontaneous child and child-directed speech shows that Hebrew children hear and produce more ORCs with embedded pronominal NPs and more SRCs with a lexically restricted (in the sense of Friedmann *et al*. 2009) embedded object. As for the comprehension study, the results obtained still reflect an asymmetry between subject and object RCs, but, like in processing studies with adults, the difficulty in processing ORCs is reduced in the pronoun condition.

The present study reports the results of two experiments which tested Romanian children's comprehension of subject and object RCs with two different types of intervening DPs in the case of ORCs: a DP containing a nominal expression ("The dog which the horse is washing.") and a pronominal DP *pro* ("The dog which *pro* is washing."). The experiments aimed to test whether a change in the type of the intervening DP modulates comprehension of ORCs in

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child Romanian and whether the morphosyntactic features on the intervener, be it an overt or a null category, play a role in children's processing of non-local dependencies.

The paper first describes the main syntactic characteristics displayed by subject and object RCs in Romanian, then presents the Relativized Minimality (RM) account put forth by Friedmann *et al.* (2009). In section 4, I outline the experiments and the results obtained. Section 5 concludes the paper.

## 2. SUBJECT AND OBJECT RELATIVE CLAUSES IN ROMANIAN

Romanian expresses relativization in headed RCs through the use of the relative pronoun *care ('who/which')*. In (5), the relativized element is the local subject. In (6), the head of the relative is the local object:

(5) Copilul *care* râde.
child-the who laughs
'The child who is laughing.'
(6) Fata *pe care* am salutat -*o*.
girl-the *pe* who have.1.SG greet her.F.SG.ACC
'The girl who(m) I have greeted.'

Example (6) above illustrates that Romanian, like Italian and Spanish, allows declarative sentences with non-overt subjects. Overt subjects can alternate with null subjects in finite clauses (represented as *pro* in syntactic theory):

(7) Eu locuiesc în Geneva.
I live.1.SG in Geneva.
'I live in Geneva.'
(8) __ locuiesc în Geneva.
live.1.SG in Geneva.
'I live in Geneva.'

This phenomenon is present in languages with "rich" verbal agreement, which allows for a reconstruction of the subject in (8). Thus, the overt morphological expression of the subject-verb agreement in the above example indicates that the subject of the sentence is the first person singular pronoun *I*.

When the subject is realized through a full lexical DP, this can occupy either a pre-verbal or a post-verbal position:

(9) Fata *pe care*[4] Maria a întâlnit -o ieri.
girl-the *pe* who Maria has met her.F.SG.ACC yesterday
'The girl who(m) Maria met yesterday'

[4] It should be noted that *pe* can be omitted in ORCs in the spoken register of Romanian.

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(10) Fata *pe care* a întâlnit -o Maria ieri.
girl-the *pe* who has met her.F.SG.ACC Maria yesterday
'The girl who(m) Maria met yesterday.'

Note, however, that the relative head and the relative pronoun are differently marked for Case: the first is assigned Case in the matrix clause, while the latter bears the Case assigned to it within the relative clause. The preposition *pe* in (9) and (10) above indicates that the relative pronoun is marked for Accusative case, although it appears in a position at the left periphery of the phrase, a position in which it cannot receive Case. Example (11) is another illustration of the Case asymmetry between the NP "head", which bears Accusative Case, and the relative pronoun *care*, which is marked for Dative and bears the same phi-features (number and person) as the relative head:

(11) Am revăzut -o pe fata *căreia* i-
have.1.SG seen her.F.SG pe girl.the who.DAT.F.SG her.F.SG.DAT
am vândut bicicleta.
have.1.SG sold bicycle-the
'I have seen again the girl to whom I sold the bicycle.'

A further characteristic of Romanian ORCs is the obligatory presence of "resumptive" object clitics. Direct object resumptive clitics precede the verb in sentences containing a present tense verb:

(12) Cartea/cărțile *pe care* mi *-o /le* vinzi.
book-the/books-the *pe* which me.DAT *it.F.SG.ACC/them.F.PL.ACC* sell.
'The book/books which you are selling to me.'
(13) Copacul/copacii *pe care îl /îi* taie
tree-the/trees-the *pe* which *it.*M.SG.ACC*/them.*M.PL.ACC cut.3.SG
pădurarul.
woodman-the
'The tree/trees which the woodman is cutting.'

The Accusative 3rd person singular feminine clitic follows the verb in compound past tenses, (see 14a), whereas all the other clitics precede the auxiliary (see 14b, c):

(14) a. Cartea *pe care* mi- ai vândut *-o*.
book-the *pe* which me.DAT have.2.SG sold *it.F.SG.ACC*
'The book which you have sold to me.'
b. Cărțile *pe care* mi *le-* ai vândut. .
books-the *pe* which me.DAT *them.F.PL.ACC* have.2.SG sold

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'The books which you have sold to me.'

c. Copacul/copacii *pe care l- /i-* a
tree-the/trees-the *pe* which it.M.SG.ACC/them.M.PL.ACC have.3.SG
tăiat pădurarul.
cut woodman-the
'The tree/trees which the woodman has cut.'

Romanian thus provides children with various cues which should facilitate disambiguating between subject and object RCs: (i) subject-verb agreement should be informative for the correct identification of the subject, (ii) case-marking on the relative pronoun at the very onset of the RC should inform the parser on how to analyze the structure (as a subject or an object relative), whereas (iii) the resumptive clitic gives an indication of the position in which the object relative head should be interpreted inside the relative clause[5].

## 3. SUBJECT AND OBJECT RCs: AN *RM* ACCOUNT

The acquisition of RCs can be placed under the more general domain of acquisition of structures derived by movement of some constituent of the phrase. Syntactic movement is also subject to locality restrictions, as shown by the impossibility to extract a wh-element over another wh-element:

(15) * What did you know where Mary bought <what>?

Such effects have been accounted for through the principle of RM (Rizzi 1990, 2004), which states that a syntactic relation is restricted to the closest element bearing that relation and, therefore, it cannot hold between two elements X and Y if Z is structurally similar to X and Z intervenes between X and Y:

(16)… X … Z … Y …

Assuming that movement is triggered by matching features, it follows that an intervening element endowed with the same featural configuration as the probe will give rise to RM effects. We can now account for the ungrammaticality of the example in (15), in which *where*, endowed with a wh-feature, intervenes between *what* and its trace.

Starke (2001) has further refined the notion of RM and shown that a richer featural specification on the moved element allows it to cross over an element endowed with fewer features.

[5] Following Belletti (2005, 2006), I assume that the relative head and the resumptive clitic originate together in a "big DP" inside the relative clause. The relative head is then raised and the pronoun is stranded within the relative clause.

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(17) Which article do you wonder how to write <which article>?

Friedmann *et al.* (2009) have shown that RM is operative in child grammar, as well, but in a stricter fashion. They present a series of experiments conducted with 22 Hebrew-speaking children (3;7 to 5;0 years old) which aimed at testing Hebrew children's ability to deal with object A'-dependencies. The experiments on the comprehension of headed SRCs, ORCs with or without a resumptive pronoun, the comprehension of free relatives and of object relatives with an arbitrary *pro* subject, as well as the comprehension of *who* and *which* subject and object questions. Examples of their test items are given in (18) below[6].

(18) a. Tare li et ha-pil she-ha-arie martiv.
show to-me ACC the-elephant that-the-lion wets
'Show me the elephant that the lion is wetting.'
b. Tare li et ha-kof she-ha-yeled mexabek oto.
show to-me ACC the-monkey that-the-boy hugs him
'Show me the monkey that the boy is hugging.'
c. Tare li et mi she-ha-yeled menadned.
show to-me ACC who that-the-boy wets
'Show me the one that the boy is wetting.'
d. Tare li et ha-sus she-mesarkim oto.
show to-me ACC the-horse that-brush-pl him
'Show me the horse that someone is brushing.'
e. Et mi ha-xatul noshex?
ACC who the-cat bites
'Whom does the cat bite?'
f. Et eize kelev ha-xatul noshex?
ACC which dog the-cat bites
'Which dog does the cat bite?' (Friedmann *et al.* 2009)

The results obtained show that children have no problems in dealing with subject dependencies (i.e. when the head noun is the subject of the RC) and that they experience difficulties with the comprehension of certain types of object dependencies, namely ORCs with or without a resumptive pronoun, and which object questions. In all these cases, the moved constituent has to pass over an intervening element (the subject) which is lexically restricted and which blocks the realization of a chain between the target (the landing position of the moved constituent) and the origin (its trace in the relativization site). Such a problem does not arise with SRs, where no intervener appears between the target and the trace, nor with object A'-dependencies in which the intervener and the target have a different featural specification (i.e. when only the target or only the intervener is

[6] I am only including examples of object dependencies.

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lexically restricted). This is the case with free object relatives (18c), headed object relatives crossing an impersonal *pro* subject (18d), and *who* object questions (18e). (19a-e) illustrate the relevant featural configurations for object dependencies:

(19) a. Headed object relative:
D NP2 R . . . . . D NP1 . . . <D NP2>
the cat that the dog bites <the cat>
b. Free object relative:
Wh R . . . . . D NP . . . <Wh>
who that the dog bites <who>
c. Impersonal *pro* object relative:
D NP R . . . *pro* arb . . . pronoun
The cat which (someone/they) bites it
d. Object who question:
Wh Q . . . D NP . . . <Wh>
Whom does the cat bite <whom>
e. Object *which* question:
Wh NP2 Q . . . D NP1 . . . <Wh NP2>
Which cat does the dog bite <which cat>

In other words, it is the internal structure of both the intervener and the target that accounts for the problems children have in processing ORCs.. The same pattern has been observed for the production of RCs and corroborated by the results the authors obtained in the elicited production experiment.

Friedmann *et al*. (2009) interpret the subject – object asymmetry in the children's comprehension of RCs in terms of intervention effects due to the structural similarity is between the A'-moved element and the intervening subject. Structural similarity is defined in terms of featural constitution of the origin, the intervener and the target. These intervention effects amount to RM effects, whereby a local relation cannot hold between X (the target) and Y (the origin) when Z intervenes and if Z matches the featural specification of the target X.

The authors claim that the RM principle is also operative in child language and that it accounts for the selective difficulties children have with object dependencies. They assume that a "stricter" version of RM is at play in the child system and that child grammar will block non-local dependencies in which the moved element and the intervening one share some morphosyntactic features, in the case at hand when they both share a lexical restriction [+NP], resulting in a poorer understanding of such types of structures.

## 4. DIFFERENT TYPES OF *DP* INTERVENERS: THE EXPERIMENTS

Drawing on the methodology used by Friedmann *et al*. (2009), two experiments were designed to test Romanian-speaking children's comprehension

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of subject and object RCs with a different type of NP inside the RC, either a full lexical NP or a pronominal DP (*pro*).

## 4.1. Method

### *4.1.1. Participants*

Eight typically developing Romanian children participated in the study. They ranged in age from 4;6 to 6;3 (mean age 5). All the children are native speakers of Romanian attending a private kindergarten in the northern part of Romania.

### *4.1.2. Materials*

Materials for each of the two experiments consisted of 28 experimental items (14 restrictive SRCs and 14 restrictive ORCs) associated with seven pairs of scenarios. Both experiments had a within-subject design. The first experiment tested children's comprehension of subject and object RCs with two overt lexical NPs. The second experiment exploited a property typical of Romance null subject languages and tested the comprehension of SRCs with a clitic resumed object and of ORCs with a null subject (*pro*). Examples are given in Table 1.

*Table 1*

Examples of comprehension items in the two experiments

| | **Comprehension (Experiment 1 + Experiment 2)** |
|---|---|
| SR full NP (Exp 1) | Arată-mi găina care împinge vulpea<br>show-me hen.the which push.3.sg fox.the<br>'Show me the hen which pushes the fox.' |
| OR full NP (Exp 1) | Arată-mi vulpea pe care găina o împinge.<br>show-me fox.the$_k$ pe which hen.the her$_k$ push.3.sg<br>'Show me the fox which the hen pushes.' |
| SR clitic (Exp 2) | Uite găina. Arată-mi vulpea care o împinge.<br>look hen.the$_k$. Show-me fox.the which her$_k$ push.3.sg<br>'Here's the hen. Show me the fox which pushes her.' |
| OR *pro* (Exp 2) | Uite vulpea. Arată-mi găina pe care o împinge.<br>look fox.the$_k$. Show-me hen.the$_i$ pe which *pro*$_k$ her$_i$ push.3.sg<br>'Here's the fox. Show me the hen which she pushes.' |

The same test items were used in both experiments, but Experiment 2 was run at an interval of two days after the first experiment. Only pre-verbal subjects were used in the ORCs. All verbs were transitive verbs in the present tense. The two NPs used in all the test sentences had the same gender and number in order to avoid inflectional cues provided in Romanian by the agreement of number on the

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verb and of gender and number on the object clitic. All sentences were semantically reversible, so that either thematic role could be assigned to both NPs in the sentence (the fox could be either the Agent or the Patient of the pushing action).

#### *4.1.3. Procedure*

A sentence-scenario matching task was used for each of the experiments. After a familiarization phase in which the animals were introduced to control for lexical knowledge, two scenarios were acted out to the child, each scenario involving two identical pairs of animals. The role of the animals changed in each scenario, i.e. the animal performing an action in one scenario would be the one on whom the same action was performed in the second scenario. This procedure made the use of a restrictive RC pragmatically felicitous in the given context, by prompting children to identify the correct referent out of a set of two identical referents on the basis of the description given in the RC. Each scenario was associated with two sentences and each sentence was presented twice, once with one NP as agent and then with the other NP as agent. After each sentence was pronounced, the children were asked to identify the correct animal.

Each child was tested individually and the test items were randomized. There was no time limit and the experimenter repeated the sentences if necessary in order to prompt the child to point to the correct animal.

### 4.2. Results

The main results of the correct responses show that Romanian children comprehend SRCs more accurately than ORCs, for which children do not perform above chance. Table 2 summarizes the proportion of target responses in both experiments according to the type of RC tested and the type of DPs used in each RC structure.

*Table 2*

Proportion of correct answers for each condition in the two experiments

| | **Full NP** | **Clitic object** *pro* **subject** |
|---|---|---|
| Subject relatives | 0.81 | 0.69 |
| Object relatives | 0.44 | 0.30 |

A comparison of the two sentence types yielded a statistically significant difference between SRCs and ORCs both in the full NP condition ($t = 3.98$, $df = 6$, $p = .007$), and in the pronoun condition ($t = 4.36$, $df = 6$, $p = .005$). A comparison of SRCs with a full lexical NP object or with a clitic object also revealed a significant

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difference between the two types of structures (t = 2.79, df = 6, p = .031 ). No statistical difference was observed when comparing ORCs with a lexically-restricted embedded subject and ORCs with a *pro* subject (t = 1.72, df = 6, p = .136).

A one-way ANOVA showed that there was a significant interaction in the analysis by sentence between the full NP and the pronoun condition (F1(1,14) = 9.72, p = .008, F2(1,14) = 20.38, p = .001).

### 4.3. Discussion

The study tested the effect of the change in the type of intervener between the relativization site and the head of the RC in the comprehension of ORCs in child Romanian.

The results of the two experiments show that there is a clear asymmetry in early Romanian between the comprehension of subject and object RCs (see Sevcenco and Avram this issue for similar results for Romanian) and corroborate the findings in other languages and in a variety of subjects that children experience difficulties in assigning the correct interpretation to non-local dependencies which involve establishing a relation between two positions separated by a (potential) intervener.

Following the account put forth by Friedmann *et al.* (2009), I propose that Romanian children's difficulties with ORCs can be explained as an intervention effect due to a stricter version of the syntactic principle of RM (Rizzi 1990, 2004) that is operative in child grammar. As shown by Friedmann *et al.* (2009) RM effects arise in the child system in the processing of A'-dependencies when the set of morphosyntactic features specified on the intervener is included[7] in the set of morphosyntactic features of the target. The feature at stake in restrictive headed ORCs is the [+NP] feature (i.e. the lexical restriction) on both the subject (the intervener) and the relative head (the target), as shown in (20):

(20) Arată-mi vulpea pe care găina o împinge <vulpea>.
show-me fox.the pe which hen.the her push.3.sg <fox>
[+R +NP] [+NP] <[+R +NP]>

[7] Friedmann *et al.* (2009) express the discrepancy between the adult and the child system in terms of each system's capacities to compute the relations that can hold between the featural specification of the target and the intervener, illustrated below:

| | | Adult grammar | Child grammar | |
|---|---|---|---|---|
| (a) +A ... | +A ... <+A> | * | * | identity |
| (b) +A,+B ... | +A ... <+A,+B> | ok | * | inclusion |
| (c) +A ... | +B ... <+A> | ok | ok | disjunction |

(Friedmann *et al.*2009: 84)

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The relative head has the features [+R, +NP]. According to the proposal developed in Friedmann *et al.* (2009), [+R] is the "criterial" feature that acts as an attractor for the head of the RC, whereas the [+NP] feature expresses the presence of a lexical restriction. In the child system, the intervening subject specified for [+NP] blocks the establishment of the chain relation between the moved relative head and its trace, as illustrated in (20) above. This intervention effect is not expected to arise in SRCs (21), where no intervener appears between the head of the RC and its gap:

| | | | | | | |
|---|---|---|---|---|---|---|
| (21) | Arată-mi | găina | care | <găina> | împinge | vulpea |
| | show-me | hen.the | which | <hen> | push.3.sg | fox.the |
| | | [+R +NP] | | <[+R +NP]> | | [+NP] |

The main finding of the second experiment is that children's performance with ORCs does not improve when a *pro* appears as intervener between the position targeted by the head noun and its trace inside the relative clause. The question that arises is how the proposal outlined above can explain children's difficulties with this type of structure?

Although previous findings in processing studies with adults and children (Arnon 2009, Gibson 1998, Gordon *et al.* 2001, 2004, Warren and Gibson 2002) show that processing difficulties with ORCs are reduced when the embedded subject is a first or second person pronoun, the results obtained in the present study show that a third person *pro* subject does not have a facilitating effect in the comprehension of object RCs (see also Sevcenco and Avram. this issue, where experimental data indicate a lower rate of target responses on ORCs with a null subject). This hints at the possibility that it is not necessarily the pronominal nature of the intervener that modulates comprehension, but that some additional features might play a role in reducing processing difficulties[8]. Moreover, Gibson (1998) and Warren and Gibson (2002) showed that doubly nested sentences with a 1st or 2nd person pronoun as embedded subject were easier for adults to process than those with a 3rd person pronoun.

The ORCs tested in the second experiment with Romanian-speaking children used a third-person *pro* embedded subject co-referential with the NP previously introduced by the lead-in *Here is* ..., as in (22):

[8] Sigurðsson (2004) puts forth the hypothesis that 1st /2nd person pronouns have speaker/ addressee speech features instantiated in the C-domain of the clause. Without going into the details of the 1st /2nd and 3rd person dichotomy, I would like to point out that the different behavior of 1st and 2nd versus 3rd person pronouns receives empirical support not only from syntax (for example, 1st and 2nd person pronouns are optionally null in Finish in any environment, whereas a 3rd person pro subject can only be used when bound by a higher subject, see Holmberg (2010), but also from studies in language acquisition which show asymmetries in the acquisition of 1st / 2nd person and 3rd person clitics in Romance languages (Avram 2011 and references cited therein, Hill and Pîrvulescu 2010).

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(22) Uite calul. Aratã-mi câinele pe care îl loveşte.
look horse.the$_k$. Show-me dog.the$_j$ pe which *pro*$_k$ him$_j$ hit.3.sg

The embedded *pro* subject bears the same phi-features as the antecedent it co-refers with, calul ('the horse'). The relevant features are [+number, +gender, + person]. Therefore, both the lexically restricted object relative head and the null *pro* subject are specified for the same gender (masculine or feminine) and number (which was always singular). I assume that the person feature is also included in the *phi*-feature structure of the lexically restricted NP. I take this feature to be the third person [+3P] feature, as illustrated by the subject-verb agreement in SRCs and person feature present on the resumptive clitic, which is co-indexed with the head noun of the object relative clause. The relevant feature configuration is given below:

(23) Uite calul. Aratã-mi câinele pe care îl loveşte <câine>.
look horse.the$_k$. Show-me dog.the$_j$ pe which *pro*$_k$ him$_j$ hit.3.sg <dog>.
[+NP +SG +M +3P] [+R +NP +SG +M +3P] [+SG +M +3P] [+R +NP +SG +M]

Whenever a feminine NP was used in the sentence, the corresponding feature value for [+gender] would be [+F]. The pattern observed in the above sentence is similar to what we have seen for headed ORCs with two full lexically restricted NPs. In both cases the set of features specified on the intervener are included in the set of features specified on the relative head, resulting in the same inclusion relation that has been shown to give rise to intervention effects in child grammar and which leads to difficulties in comprehension.

Such an approach can also account for the fact that the 3$^{rd}$ person *pro* subject used in the ORCs in Romanian does act as an intervener between the head of the RC and its trace, contrary to the results obtained in Friedmann *et al.* (2009) for headed object RCs with an arbitrary *pro* that has a plural feature[9], manifested in the agreement on the verb. It also brings support to the claim that children have problems computing subset-superset featural relations, irrespective of the overt or null nature of the potential intervener.

A further question that needs to be answered is why children displayed a poorer performance with subject RCs containing a clitic object than with subject RCs with a full lexical DP. The sentences were of the type illustrated in (24):

(24) Uite calul. Aratã-mi câinele care îl loveşte.
look horse.the$_k$. Show-me dog.the which him$_k$ hit.3.sg
'Here's the horse. Show me the dog which hits him.'

[9] Ur Shlonsky (p.c.) points out that arbitrary *pro* in Hebrew always bears [+plural] [+masculine] features.

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An analysis of the errors children made shows that 70% of errors stem from considering the first NP to be the head of the RC and the agent of the action. Therefore, children do assign a SRC interpretation to the embedded clause, but interpret the RC as modifying the NP introduced by the lead-in. This difficulty might be due to the fact that children consider the first NP to be the topic (and the referent) of the RC by virtue of it being the discourse topic and, therefore, more salient in the given context.

Finally, the fact that Romanian children comprehend SRCs better than ORCs shows that the morpho-syntactic cues present in the latter type of structure do not help them disambiguate between a subject and an object RC interpretation. Thus, we can conclude that neither the presence of the Accusative case-marker on the relative pronoun, nor the presence of the object clitic play a role in modulating the comprehension of the ORCs tested in the two experiments.

## 5. CONCLUSIONS

This paper aimed at answering two questions about the comprehension of RCs in child Romanian.

The first was concerned with the role played by the intervening subject and its morphosyntactic features in modulating ORC comprehension. The response patterns obtained in the two experiments show that children are sensitive to the internal structure of the target and of the intervener. They have difficulties in interpreting RCs whenever the featural specification of the intervening element is included in the featural specification of the moved element. Therefore, children's processing difficulties arise not only when a lexically restricted NP crosses over another lexically restricted NP, but also when the intervening element, although a null subject, shares the same features with the moved head noun. This supports the hypothesis that a "stricter" version of RM, as a locality principle accounting for intervention effects, is at play in child grammar with respect to adult grammar and that it is only specific features that are taken into consideration when processing intervention.

The second question addressed the issue of the cues that children use in disambiguating between subject and object RCs. Despite additional disambiguating information, such as case-marking on the relative pronoun and the presence of the clitic at the relativization site, Romanian children still have difficulties comprehending ORCs and perform better with SRCs which contain less morphosyntactic cues.

Although more data from child Romanian, paired with cross-linguistic studies, are needed, I believe that the evidence so far points to the fact that, like adults, children display a gradient of acceptability with respect to the features that

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can qualify an element as a potential intervener in a syntactic relation. A better understanding of the acceptability scale can lead us to uncover their fine-grained mapping within the DP in both child and adult grammar and the role they play in our processing of language.

## REFERENCES

Adani, F., H.K.J. van der Lely, M. Forgiarini, M.T. Guasti, 2010, "Grammatical feature dissimilarities make relative clauses easier: A comprehension study with Italian children", *Lingua*, 120(9), 2148−2166.

Adani, F., 2011, "Rethinking the acquisition of relative clauses in Italian: Towards a grammatically based account", *Journal of Child Language*, 38(1), 141−165.

Arnon, I., 2005, "Relative clause acquisition in Hebrew: Towards a processing-oriented account", in: A. Brugos, M. R. Clark-Cotton, S. Ha (eds.), *Proceedings of the Twenty-ninth Boston University Conference on Language Development,* Somerville, Mass., Cascadilla Press, 37–48.

Arnon, I., 2009, "Rethinking child difficulty: The effect of NP type on children's processing of relative clauses in Hebrew", *Journal of Child Language*, 37(1), 1−31.

Arosio, F., M.T. Guasti, N. Stucchi, 2011, "Disambiguating information and memory resources in Children's processing of Italian relative clauses", *Journal of Psycholinguistic Research*, 40, 137−154.

Avram, L., 2011, "Person and intervention effects in the acquisition of Romanian clitics, Paper presented at the Research Seminar, May 17th , University of Geneva, Geneva.

Belletti, A., 2005, "Extended doubling and the vP periphery", *Probus*, 17, 1–35.

Belletti, A., 2006, "Extending doubling to non local domains: complete vs. partial copying + deletion and related reconstruction issues", in: Brandt, P., Fuss, E. (eds.), *Form, Structure and Grammar*, Berlin, Akademie Verlag, 129–136.

Correa,L.M.,1995,"An alternative assessment of children's comprehension of relative clauses", *Journal of Psycholinguistic Research*, 24, 183–203.

de Villiers, J.G., H. Tager Flusberg, K. Hukata, M. Cohen, 1979, "Children's comprehension of relative clauses", *Journal of Psycholinguistic Research*, 8, 499–518.

Friedmann, N., A. Belletti, L. Rizzi, 2009, "Relativized relatives: Types of intervention in the acquisition of A-bar dependencies", *Lingua*, 119(1), 67−88.

Friedmann, N., R. Novogrodsky, 2004, "The acquisition of relative clause comprehension in Hebrew: a study of SLI and normal development", *Journal of Child Language*, 31(3), 661−681.

Gibson, E., 1998, "Linguistic complexity: locality of syntactic dependencies", *Cognition*, 68(1), 1−76.

Gordon, P. C., R. Hendrick, M. Johnson, 2001, "Memory interference during language processing", *Journal of Experimental Psychology: Learning, Memory and Cognition*, 27, 1411–1423.

Gordon, P. C., R. Hendrick, M. Johnson, 2004, "Effects of noun phrase type on sentence complexity", *Journal of Memory and Language*, 51, 97–114.

Hamburger, H., S. Crain, 1982, "Relative acquisition" in: S. Kuczaj (ed.), *Language Development, Syntax and Semantics*, 1, Hillsdale, NJ, Erlbaum, 245–274.

Hill, V., M. Pîrvulescu, 2010, "Syncretism in the pragmatic field in first language acquisition", Paper presented at Romance Turn IV, August 25-27, Université François-Rabelais, Tours.

Holmberg, A., 2010, "Null subject parameters", in: T. Biberauer, A. Holmberg, I. Roberts, M. Sheehan (eds.), *Parametric Variation: Null Subjects in Minimalist Theory*, Cambridge, Cambridge University Press, 88−124.

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Rizzi, L., 1990, *Relativized Minimality*. Cambridge, Mass., The MIT Press.
Rizzi, L., 2004, "Locality and the left periphery", in: A. Belletti, (ed.), *Structures and Beyond:The Cartography of Syntactic Structures,* 3, Oxford-New York, Oxford University Press, 223–251.
Sevcenco, A., L. Avram, this issue, "Romanian-speaking children's comprehension of relatives".
Sheldon, A., 1974, "The role of parallel function in the acquisition of relative clauses in English", *Journal of Verbal Learning and Verbal Behavior*, 13, 272–281.
Sigurðsson, H. Á., 2004, "The syntax of person, tense, and speech features", *Italian Journal of Linguistics*, 16, 219–251.
Starke, M., 2001, Move dissolves into Merge: A theory of locality, doctoral dissertation, University of Geneva, Geneva, Switzerland.
Tavakolian, S. L., 1981, "The conjoined-clause analysis of relative clauses", in: S. L. Tavakolian (ed.), *Language Acquisition and Linguistic Theory*, Cambridge, Mass., The MIT Press, 167–87.
Warren, T., E. Gibson, 2002, "The influence of referential processing on sentence complexity", *Cognition*, 85(1), 79−112.

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