Topics and passives in Italian-speaking children and adults

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Abstract

Through two elicited production experiments we investigated how preschool Italian-speaking children access the left-periphery of the clause with respect to topics in Clitic Left Dislocation/ CILD structures. Since the discourse conditions of the experiments are felicitous for the production of passives as well, we also investigated children’s production of different types of passives, and how it compares to adults’. A rich and variegated array of results indicate young children’s early access to the left peripheral topic positions - also in a non-adult manner through use of a-marked Topics - and preference for CILD over passive in contrast to adults; children’s early access to passive in the causative voice also emerged as well as use of CILD with null generic subject as an alternative to the (copular/venire) passive. Intervention locality/Relativized Minimality plays a crucial role in interpreting the articulated results within the system developed in Friedmann, Belletti & Rizzi (2009) and much subsequent work.

1. Introduction

The present study investigates the acquisition of clitic left dislocations and passive structures by monolingual Italian preschoolers, in the context of an elicited production task in which the object patient of a transitive verb is the topic. Introducing the patient in the discourse (e.g. Tell me about Xpatient. What is happening to Xpatient?) creates a felicitous context for eliciting a sentence ‘about’ the patient, therefore it has been adopted cross-linguistically to investigate the production of passives or alternative active structures with a pronoun (see English, Pinker et al. 1987; Marchman et al. 1991; Meints 2003; Sesotho, Demuth et al. 2010; Italian, Del Puppo & Pivi 2015, Manetti 2013, Volpato et al. 2014, 2016, Anonymous 1 2017; Catalan, Prat-Sala & Hahn 2007; Brazilian Portuguese, Menuzzi 2001).

As for Italian, given a question about the patient as (1a), both a passive and a CILD are felicitous answers, although in two different ways: in (1b) the patient is the subject which the following passive sentence is about1, in (1c) it is the left-dislocated object in a left peripheral topic position and the following active sentence containing a resumptive accusative clitic predicates some property of it. We will further clarify throughout the close relation between the two possible answers given in (1b) and (1c):

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1 In the passive sentence, both the auxiliary essere/’to be’ and venire/‘to come’ are felicitous in the answer; however, with actional verbs in the present tense the auxiliary venire/‘to come’ is preferred by adults and children (Belletti and Guasti 2015).
(1)  
   a. Che cosa succede al bambino?  
      ‘What is happening to the kid?’  
   b. (Il bambino) è/viene lavato dalla mamma.  
      (The kid) is/comes washed by the mother.  
      ‘The kid is being washed by the mother.’  
   c. (Il bambino) la mamma lo lava.  
      (The kid), the mother him-Cl washes.  
      ‘The kid, the mother is washing him.’

As indicated by the parenthesis, in both answers (1b,c), the repetition of the topic patient is not required since the topic referent (i.e. ‘the kid’ in 1) is unique and given in the immediately previous question: the preferred answer leaves the topic unpronounced, yielding topic continuity. As discussed in Rizzi (2005, 2017), the repetition of the discourse topic, both in the passive and in the CI LD, would sound redundant. Hence, the unmarked answers would consist either of a passive sentence with a null pronominal subject, as in (2a), or a CI LD with no overt left-dislocated object, corresponding to a sentence in the form of Subject-Clitic-Verb, given in (2b), where the clitic is the object:

(2)  
   a. pro è/viene lavato dalla mamma.  
      pro is/comes washed by the mother.  
      ‘He is being washed by the mother.’  
   b. La mamma lo lava.  
      the mother him-Cl washes.  
      ‘The mother is washing him.’

Previous studies investigating the use of passives or alternative active structures with a pronoun adopted a patient-oriented eliciting context and consistently showed that Italian-speaking children and adults significantly differed in their answers. While children typically choose the active structure with the clitic
pronoun (e.g. *Subject-Clitic-Verb*), adults resort to the passive (Del Puppo and Pivi 2015; Manetti 2013; Volpato et al. 2014, 2016; Anonymous 1 2017).  

2. The present study  

Stemming from the findings just mentioned in the Introduction, the present study further tackled the use of structures having a topic patient, in preschool children and adults. In particular, our investigation explored, first, the production of structures with an active verb and an object clitic pronoun, either containing an overt left-dislocated object topic (CILD, e.g. *Object-Subject-Clitic-Verb*) or no overt object topic and just an object clitic pronoun (e.g. *Subject-Clitic-Verb*); secondly, we focused on the use of (different types of) passives produced by children and adults.

2.1 Investigating the production of Clitic Left Dislocations  

As for our first aim, the present study differs from the ones mentioned in the introduction with respect to the informational context designed to elicit structures with topic patients. Previous studies adopted an eliciting question having one patient character only, and the results showed that such context elicited a structure with an active verb and the object clitic (e.g. *Subject-Clitic-Verb*), with no overt realization of the topic patient, i.e. the most felicitous answer as described in (2). In our design, instead, we aimed at providing a felicitous pragmatic context for the production of overt left-dislocated topics with the purpose of tapping into the acquisition of left peripheral topic positions.

We thus manipulated the discourse conditions in which participants had to talk about the patient(s): In one condition the question contained one topic patient (e.g. What is happening to my friend, \(X_{\text{patient}}?\)) and functioned as the baseline measure for eliciting *Subject-Clitic-Verb* structures with no overt expression of the topic patient, coherently with the results from previous studies. In the other condition, we provided a contrastive topic situation by giving a question with two topic patients (e.g. What is happening to my friends, \(X_{\text{patient}}\) and \(Y_{\text{patient}}?\)) undergoing two distinct actions. Under this second condition, if children resorted to a

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2 This preference remains also for school age children, at least until age 9, as shown in Del Puppo and Pivi (2015) and Anonymous 1 (2017). In these works, the experimental question was patient-oriented, but the designs differed with respect to the representation of the agent character: in Del Puppo and Pivi’s work the agent was partially covered, whereas in Anonymous 1 (2017), the agent was fully shown on the picture. This difference did not affect children’s preference for the use of an active verb with the object clitic pronoun.
structure with the clitic pronoun instead of a passive, as expected from previous studies, they would need to produce an overt left-dislocated object in order to explicitly refer to one of the two patient referents, possibly resulting in a clitic left-dislocated structure (DP₁-DP₂-Clitic-Verb, e.g. Object-Subject-Clitic-Verb). Conversely, leaving the left-dislocated topic patient unexpressed would yield an unclear and under informative answer on the two plausible topic patients to which the answers could refer. This experimental design has been adopted in two elicited production experiments: Experiment 1 and Experiment 2. Across the two experiments, we also manipulated the featural number match vs. mismatch of the arguments of each verb. In Experiment 1, each verb was depicted with one agent and one patient (cat, dog) creating a number match condition between the two DPs, as reported in (3a). In Experiment 2, each verb was depicted with two agents (two cats) and one patient (one dog) as shown in 3b, testing a number mismatch condition between the two DPs.

(3)  
   a. Experiment 1: Number match condition (cat washing dog)  
   Il cane il gatto lo lava.  
   the dogobj.sing the catsubj.sing him-Cl washes  
   ‘The dog, the cat is washing him.’  

   b. Experiment 2: Number mismatch condition (cats washing dog)  
   Il cane i gatti lo lavano.  
   the dogobj.sing the catpl subj him-Cl wash  
   ‘The dog, the cats are washing him.’

The rationale for the manipulation of number match vs. mismatch in this production study is based on previous results on the comprehension of CLLDs, which showed above-chance performance when the topicalized DP mismatched in number with the subject (Manetti et al. 2016), as in (3b), and more generally on the results showing the role of this type of number mismatch in enhancing the comprehension of A’-dependencies (Adani et al. 2010).

Notice that, in CLLD structures of the form DP₁-DP₂-Cl-V, when both DPs are lexical and overt as in the examples (3) above, the resulting CLLD structure instantiate a situation of intervention which falls within the domain of locality, expressed through the principle Relativized Minimality (Rizzi 1990, 2004): the DP, corresponding to the object, encounters the intervening DP subject (Z) in the establishment of the dependency between its Target (X) position as a left-peripheral topic and its Merge object position (Y) within the clause, as shown in the following configuration (4):
Moreover, the two DPs, DP1 and DP2, can be interpreted in two different orders, either DP_{sub}2DP_{obj} ((5a) SO; with S also in a left-peripheral topic position as Italian is a multiple topic language, Rizzi 1997) or DP_{obj}2DP_{sub} (OS; with S possibly in a left-peripheral topic position as well or in the clause internal preverbal subject position, whence the parenthesis surrounding DP_{sub} in (5b)). In both cases the locality problem arises.

(5)

a. 

[DP_{1(subj)}, [DP_{2(obj)} [$<DP_{1(subj)}...V _<DP_{2(obj)}>]]

b. 

[DP_{1(obj)},[DP_{2(subj)}]][(DP_{2(subj)}) ... V _<DP_{1(obj)}>]]

Hence, the question of how the Relativized Minimality configuration is dealt with by children arises as well. We will address the issue through the comparison between the number match and mismatch conditions couching the discussion in terms of featural Relativized Minimality/\text{fRM} along the lines of Friedmann, Belletti & Rizzi (2009) and much related work.

2.2 Investigating the production of passives

Our second topic of investigation taps into the production of passives: recall that under these discourse conditions, in Italian, the passive is an alternative and felicitous structure to the use of ClLDs, given that it promotes the patient and makes it the subject, which the sentence is about. In our experiments, passives can be used in both conditions (one topic patient vs. two topic patients).

This side of the study will help us shed some more light, first, on the potential preference for ClLDs vs. passive structures in the acquisition of Italian under experimental conditions carefully controlled for discourse contexts; second, we will explore the potential preference for certain types of passives in the comparison between adults’ and children’s productions (e.g. passive in the causative voice referred to as ‘si-causative’ throughout vs. periphrastic passives). Previous studies have indicated a somewhat privileged early access to si-causative passives of the type in (6a) in young children. The evidence comes both from the production of declarative passive sentences (Manetti & Belletti 2015) and from the production of subject relatives in the (si-
causative) passive when an object relative clause was elicited, a type of response referred to as Passive Object Relative/POR (6b), (Contemori & Belletti 2013, Belletti 2014):

(6) a. Il bambino si fa lavare dalla mamma.
   the kid si-makes wash by the mother
   ‘The kid gets himself washed by his mother.’

   b. Il bambino che si fa lavare dalla mamma.
   the kid that si-makes wash by the mother
   ‘The kid that gets himself washed by his mother.’

It is an interesting question to ask whether some preference for the same si-causative passive is manifested in our new study, using different elicitation techniques than previous ones.

To sum up, the present study will allow us to investigate whether 4- and 5-year-old children distinguish between the two conditions (one topic patient vs. two topic patients) with respect to the use of overt left-peripheral topic in CILDs. This should provide us with some evidence on the ability by young children to access topic positions in the map of the Left Periphery and on the way they deal with locality in the intervention configuration. In this respect, the manipulation of the number feature across the two experiments will reveal further information on the possible role of such feature in the production of structures involving an object A’-dependency, such as DP₁-DP₂-Cl-V. Finally, the study will compare children’s and adults’ first global preference for passive vs. CILD, as well as possible preferences for specific types of passives.

3. Experiment 1

3.1. Participants

We tested 39 typically-developing Italian-speaking children, aged from 4;1 to 5;11 year-old (MA= 60 months; SD= 6.8 in months), in two kindergartens in Florence and in the province of Florence; 24 adult monolingual Italian-speaking students of the University of Siena (aged between 19 and 25; MA= 21 y.o.) also took part in the study. As for children, three of them did not complete the session and were excluded from the analysis (we thus included 36 children in the analysis).

3.2. Method and Materials

The test consisted of an elicited production task in which participants answered questions introducing the patient of an action verb (henceforth, patient-oriented question). We used eight transitive action verbs (lavare ‘wash’, pettinare ‘comb’, fotografare ‘photograph’, vestire ‘dress’, accarezzare ‘caress’, spingere ‘push’,...
*coprire* ‘cover’, *leccare* ‘lick’), and characters consisting of pairs of either humans or animals; in each event, both the patient and the agent were in the singular form, giving rise to a number match condition between the two DPs.

The pictures were presented using a power point presentation with the prerecorded experimental questions being asked by a cartoon smurf. The participant was told that a smurf, named ‘Quattrocchi’, likes to walk around his village and visit his friends, but he cannot fully see or understand what is going on around him: specifically he cannot enter the houses where the events take place, hence he will ask the participant for some help.\(^3\) Five practice trials followed the introductory story to familiarize the child with the task and make them feel comfortable, after which the test started.

The experimental trials were organized under two experimental conditions: the one-topic condition introduced one single patient undergoing two different actions (e.g. What is happening to my friend, \(X_{\text{patient}}?\), see (7), Figure 1); the two-topic condition introduced two patients receiving two different actions (What is happening to my friends, \(X_{\text{patient}}\) and \(Y_{\text{patient}}?\), see (8), Figure 2).\(^4\) This manipulation was presented within-subjects.

(7) Experimental trial (One-topic condition having one topic patient -> the elephant)

\begin{enumerate}
\item The experimenter presents all characters: “In this house there is an elephant, a bear and an ant.”
\item The experimenter explains that the smurf is very curious about one of his friends, the elephant.
\item The experimenter explains that the smurf arrives at the house but he cannot enter and look inside, thus he needs the child’s help to answer his question.
\end{enumerate}

The smurf finally asks the question: ‘*Che cosa succede al mio amico, l’elefante*? (‘What is happening to my friend, the elephant?’)

\(^3\) This detail has been added to the story in order to favor a fully informative answer: notice that the child can well see what is happening inside the house and can thus provide all the information asked by the smurf.

\(^4\) In both cases, the actions were performed on the patient(s) by two distinct agents, in the aim of creating two independent events. Note incidentally that in a full informative answer this should lead to the production of an overt subject (see Sections 3.6.1 and 5.2). For similar and related studies on the manipulation of the number of agent referents in the eliciting question, see Serratrice (2008) for English, and De Cat (2009) for French.
(8) Experimental trial (Two-topic condition having two topic patients -> the rabbit and the ant)

a. The experimenter presents all characters: “In this house there is a rabbit, a cat, an ant and a frog.”

b. The experimenter explains that the smurf is very curious about two of his friends, the rabbit and the ant.

c. The experimenter explains that the smurf arrives at the house but he cannot enter and look inside, thus he needs the child’s help to answer his question. The smurf asks the question: “Che cosa succede ai miei amici, il coniglio e la formica? (‘What is happening to my friends, the rabbit and the ant?’).

After the question in the one-topic condition, the answer should contain two descriptions of the actions depicted inside the house (see Figure 1c), which should consist of sentences in the form of Subject-Clitic-Verb with no overt expression of the topic, as in (9a), or of passive sentences (si-causative or copular/venire passive) with a null subject, as shown in (9b):

(9) a. L’orso lo lava e la formica lo copre.
   The bear him-Cl washes and the ant him-Cl covers
   ‘The bear is washing him and the ant is covering him.’

b. È/viene lavato/si fa lavare dall’orso, e è/ viene coperto/si fa coprire dalla formica.
   pro is/comes washed/si-makes wash by the bear and pro is/comes covered/si-makes cover by the ant
‘He is being washed by the bear and he is being covered by the ant.’

The question in the two-topic condition also elicits two descriptions of the actions happening inside the house (see Figure 2c), which should contain either CILDs with an overt left-dislocated topic patient (10a), or passives with an overt lexical subject (10b): in both cases, the patient referents should be overtly realized in order to unambiguously identify them:

(10) a. *Il coniglio* il gatto lo accarezza, e la *formica* la rana la copre.

the rabbit the cat him-Cl caresses, and the ant the frog her-Cl covers

‘The rabbit, the cat is caressing him and the ant, the frog is covering her.’

b. *Il coniglio* è/viene accarezzato/si fa accarezzare dal gatto e la *formica* è/viene coperta/si fa coprire dalla rana.

the rabbit is/comes caressed/si-makes caress by the cat and the ant is/comes covered/si-makes cover by the frog

‘The rabbit is being caressed by the cat and the ant is being covered by the frog.’

Note that the eliciting questions, in both conditions (see 7c and 8c), did not directly introduce the patients in the form of a PP experiencer preceded by the preposition ‘a’/to (e.g. Che cosa succede al coniglio e alla formica? / ‘What is happening to the rabbit and to the ant?’), as was the case in previous designs quoted in the introduction. Rather, all the questions had the patient(s) at the end of the sentence in the form of simple DPs (e.g. Che cosa succede ai miei amici, *il coniglio* e *la formica*? / ‘What is happening to my friends, the rabbit and the ant?’). This was done in order not to prime the repetition of the *a*-experiencer in the answer.5

For both conditions, we created four experimental trials and, as already mentioned above, each question elicited the description of two separate events (illustrated on Figure 1(c) and 2(c)). Thus, we collected two answers after each patient-oriented question, for a total of eight descriptions in the one-topic condition and further eight in the two-topic condition. Moreover, the test included eight fillers, eliciting DPs (e.g. Question: Chi c’è in casa?/‘Who is in the house?’, Answer: Un bambino/‘A kid’), (S)V structures with intransitive verbs (e.g. Question: Che cosa fanno i bambini?/‘What are the kids doing?’, Answer: Leggono/‘They are reading’),

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5 The importance of this aspect of our design will become apparent in the discussion of children’s answers containing *a*-Topics (Section 5.2) that cannot thus simply be interpreted as repetitions of the *a*-experiencer of the question.
and one SVO structure (e.g. Question: Che cosa mangiano il coniglio e il topolino?/‘What are the rabbit and the mouse eating?’, Answer: Il coniglio mangia la carota e il topo mangia il formaggio/ ‘The rabbit is eating a carrot and the mouse is eating a piece of cheese’). The fillers and the experimental items were presented in pseudo-randomized order. For the children, the test was run individually in a quiet room at the kindergartens and lasted around ten minutes. As for adults, the experiment was administered individually at the University of Siena.

3.3. Coding criteria

The answers were coded under four main categories: Pronoun, ClLD, Passives and Other.

The category ‘Pronoun’ includes all sentences with no overt expression of the topic, as in (11). The sentences contain an active verb and an object clitic pronoun; the subject could be uttered in preverbal (11a), post-verbal position (11b) or it could be null (11c):

(11) a. DP_{subject} - Clitic - Verb: L’orso lo lava.

   the bear him-Cl washes

   ‘The bear is washing him.’

   b. Clitic - Verb – DP_{subject}: Lo lava l’orso.

   him-Cl washes the bear

   ‘The bear is washing him.’

   c. Clitic - Verb: Lo lava.

   pro him-Cl washes

   ‘(it) is washing him.

The category ‘ClLD’ includes all sentences with an overt left-dislocated topic and a resumptive clitic pronoun; the subject again can be preverbal (12a,b), post-verbal (12c), or null (plural or singular) (12d):

(12) a. DP_{subject} - DP_{object} - Clitic – Verb: L’orso l’elefante lo lava.

   the bear the elephant him-Cl washes

   ‘The elephant, the bear is washing him.’

   b. DP_{object} - DP_{subject} - Clitic – Verb: L’elefante l’orso lo lava.

   the elephant the bear him-Cl washes

   ‘The elephant, the bear is washing him.’

   c. DP_{object} - Clitic - Verb - DP_{subject}: L’elefante lo lava l’orso.
the elephant him-Cl washes the bear
‘The elephant, the bear is washing him.’

d. DP_{Object} - pro - Clitic – Verb: L’elefante lo lava/lo lavano.

the elephant pro him-Cl washes/wash
‘The elephant, (it) is washing him.’

Under the category of ‘Passives’ we coded copular/venire passives, i.e. passives with the auxiliaries essere/’to be’ or venire/’to come’ (13a), and si-causative passives (13b):


the elephant is/comes washed by the bear
‘The elephant is being washed by the bear.’

b. Si-causative Passive: (L’elefante) si fa lavare dall’orso.

(the elephant) si-makes wash by the bear
‘The elephant gets himself washed by the bear.’

‘Other’ contains any production that does not follow the criteria listed above (e.g. SVO active sentences, intransitive verbs, right dislocations, reflexive verbs, utterances that cannot be readily interpreted).

3.4. Main Results

We coded 569 utterances produced by children and 383 produced by adults. In Table 1, we report children’s and adults’ productions in the one-topic and in the two-topic conditions

| Table 1: Children’s and adults’ productions after questions in the one-topic and two-topic conditions |
|---------------------------------------------------------------|---------------------------------------------------------------|
|                                                                 | CHILDREN | ADULTS |
|                                                                 | One-topic condition | Two-topic condition | One-topic condition | Two-topic condition |
| Pronoun                                                       | 191          | 23          | 42          | 0          |
|                                                               | 67%          | 8%          | 22%         | 0%         |
| CHILD                                                          | 9            | 72          | 1           | 2          |
|                                                               | 3%           | 25%         | 1%          | 1%         |
| Copular/Venire Passive                                        | 1            | 0           | 86          | 94         |
|                                                               | 0%           | 0%          | 45%         | 49%        |
In the one-topic condition, children mostly resorted to *Pronoun* structures not involving the overt expression of the object topic (67%; cf. examples in 11). In contrast, the new result emerged in the two-topic condition, which yielded the production of 25% ClLDs with an overt left-dislocated topic, and in turn disfavored the production of *Pronoun* structures with no overt expression of the object topic (8%). Children also exhibited passive structures in their responses and these consisted exclusively of *si*-causative passive (except in one case with *venire*).

Adults consistently opted for copular/venire passives (one-topic condition, 45%; two-topic condition, 49%)\(^6\), and to a lesser extent for some *si*-causative passives (one-topic condition, 12%; two-topic condition, 19%). They also produced some *Pronoun* structures with no overt topics in the one-topic condition (22%), but virtually no ClLDs were found in their answers (1%).

Children and adults also used sentences coded as ‘Other’, which included a variety of structures with SVO active sentences as the most common type (overall 47% of ‘Other’ in children and 48% in adults)\(^7\).

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\(^6\) The result is robust as it has been confirmed by a further group of adults with a low level of schooling that has been later tested through the same elicitation task (data are not reported here). Hence, use of passive is not the reflex of educated Italian, but rather the reflex of a productive syntactic construction.

\(^7\) Use of SVO structures in response to patient-oriented question has been already observed in previous studies, in children and -to a lesser extent- in adults as well (Del Puppo and Pivi 2015; Manetti 2013; Volpato et al. 2014; Anonymous 1 2017). SVO answers allowed children and adults to convey the information on the patient, which the question asked for, through an all-new description in which the object is not singled out as a topic. Notice that children produced SVO structures more often in the two-topic condition (18 SVO in one-topic condition vs. 84 in two-topic condition) which is the one requiring the overt expression of the topic in the ClLD. Hence, use of ClLD would have to comply with an intervention configuration, a notoriously hard structure for children to compute (see Section 2.1, Sections 5.1 and 5.2 for detailed discussion). A subgroup of children (7/36=20%) systematically adopted the SVO answer in this condition (SVO=48, 86% of their answers) and never produced ClLDs; in contrast, the same group produced *Pronoun* structures with no overt expression of the topic in the one-topic condition (*Pronoun*=46, 82% of their answers). This further reveals
3.5. Analysis of main results

The present analysis of the data examined whether the manipulation of the experimental questions (referred to one topic patient vs. two topic patients) led to a significant difference in children’s production of *Pronoun* (with no overt expression of the object topic) vs. CILD (with an overt left-dislocated object).

In the first analysis, we included 295 answers (200 produced in one-topic condition, and 95 in two-topic condition) corresponding to the utterances coded as *Pronoun* and CILD. By focusing on the production of *Pronoun* and CILD across conditions (one topic vs. two topic), a clear pattern emerged in our data: children produced 89% of *Pronoun* structures in the one-topic condition (191/214), and 11% in the two-topic condition (23/214). In contrast, the CILD production predominantly emerged in the two-topic condition, 89% (72/81), and only 11% of CILDs appeared in the one-topic condition.

We ran a mixed linear effect model analysis using the statistical software R (R Development Core Team, 2008) and the lme4 package (Bates et al. 2015), in order to check for the effect of the manipulation of the *Topic condition* (one patient vs. two patients) on the production of *Pronoun* vs. CILD. We first considered topic conditions and age group (4-year-olds: 4-4;11 y.o. vs. 5-year-olds: 5-5;11 y.o.) as fixed effects, and subjects and items as random effects. The final best-fit model only included the topic conditions as the fixed factor, subjects and items as intercepts, as shown in Table 2.

|                  | Estimate | Std. Error | z value | Pr(>|z|) |
|------------------|----------|------------|---------|----------|
| (Intercept)      | 5.4886   | 0.8558     | 6.413   | <.001 ***|
| *Topic condition*| - 7.1747 | 0.9816     | - 7.309 | <.001 ***|

Table 2: Linear mixed-effect model on the production *Pronoun* vs. CILD across topic conditions

The model revealed a significant effect of *Topic condition* manipulation on the use of *Pronoun* vs. CILD with overt topics. No difference emerged between 4-year-olds and 5-year-olds.

3.6. Detailed description of the results

3.6.1. Types of CILDs: nature of the subject and types of left-dislocated objects

the great difficulty that the DP₁-DP₂-Cli-V structure with both DPs overt and lexical poses to children, which is the fundamental insight of the intervention account.
In this section, the ClLDs produced by children are analyzed in terms of the type of subject (lexical vs. null) and the type of left-dislocated object\(^8\).

Children’s ClLDs (in total 81 structures) mainly used preverbal lexical subjects (64%), as in (14a,b)\(^9\). Only 12% presented a post-verbal subject (14c) and the subject was null in 24% of ClLDs (14d)\(^10\):

\[(14)\]  
- a. Il coniglio l’orso lo veste. \((O., 5;2)\)  
  The rabbit\(_{\text{subj}}\) the bear\(_{\text{obj}}\) him-Cl dresses  
- b. La formica la rana l’asciuga. \((A., 5;10)\)  
  The ant\(_{\text{obj}}\) the frog\(_{\text{subj}}\) her-Cl dries  
- c. Il coniglio lo sta accarezzando il gatto. \((N., 4;8)\)  
  The rabbit\(_{\text{obj}}\) him-Cl is caressing the cat\(_{\text{subj}}\)  
- d. Il re lo sta pettinando. \((A., 4;11)\)  
  The king\(_{\text{obj}}\) him-Cl is combing

A closer look at ClLDs also reveals that the left-dislocated object is often preceded by the preposition ‘a’ (=to), a possibility is allowed only to a very limited extent in standard Italian with pre-posed, left dislocated direct objects (Benincà 1986, Belletti & Rizzi 1988, Anonymous 3 2017 for recent discussion). Moreover, Standard Italian is not a Differential Object Marking/DOM language: direct objects are never marked through use of a preposition in their clause internal object position, as it is instead the case in many languages, including closely related ones like e.g. standard Spanish. In our data, when the preposition ‘a’ (to) precedes the left-dislocated object in a ClLD, the topic will be referred to as a-topic (15), which differs from the left-dislocated object without the preposition, named as Simple Topic (16), as shown in the examples below:

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\(^8\) ClLDs were practically absent in adults’ answers (only three produced by one participant).

\(^9\) When the subject was preverbal, it either preceded (S-O-cl-V: 62%) or followed the pre-posed left-dislocated object (O-S-cl-V: 38%): the preference for the S-O order is not replicated in Experiment 2, where the preference is reversed (O-S 71% vs. S-O 19%; see footnote 12), for this reason we do not analyze this order issue any further.

\(^10\) Note that the discourse condition of the experiment did not favor the post-verbal position of the subject, which was among the introduced characters in the pictures. Hence it did not count as a new information focus, the most typical interpretation of a post-verbal subject in Italian (Belletti 2004). The realization of the subject as null –pro– in the answer is also not favored as the question refers to two different subjects. It is then not surprising that the subject was mostly overt, lexical and preverbal. See Section 5.2 in the discussion.
(15)  
\[ a\text{-Topic:} \]

Al re il bambino lo pettina.  

(G., 5;11)

To the king the child him-Cl combs

‘The king, the child is combing him.’

(16)  

Simple Topic:

La formica la rana l’asciuga.  

(A., 5;10)

the ant the frog her-Cl dries

‘The ant, the frog is drying her.’

Overall, the majority of CILDs contained an \[ a\text{-Topic} \] (74%, as in 15); while only 26% contained a Simple Topic (as in 16). Interestingly, in the CILDs in which the subject is preverbal (either preceding or following the left dislocated object), the left-dislocated object clearly tended to be an \[ a\text{-Topic} \] (46/52= 88%) and the Simple Topic only amounts to 12% (6/52). In contrast, when the subject was null or uttered in post-verbal position the use of Simple Topics and \[ a\text{-Topics} \] was evenly distributed (14/29=48% \[ a\text{-Topics} \]; and 15/29=52% Simple Topics). It is worth highlighting that the DP\(_{obj}\) was preceded by the preposition ‘\[ a\]’ (to) only when it was left-dislocated. The \[ a\]-marking never occurred when the answer was an SVO sentence: this observation confirms that the (Tuscan) Italian variety of the children participating in the study is not a DOM language and does not allow the \[ a\]-marking of the object when it is not pre-posed. This clear-cut distinction of use of \[ a\]-marking is shown in the production in (17): within the same answer, the same child used a SVO sentence in the first description, in which the direct object is not marked through any preposition and fills the direct object position, and a CILD in the second description, where the pre-posed object is realized as an \[ a\]-Topic:

(17)  

a. Che cosa succede ai miei amici, il pinguino e la mucca?

‘What is happening to my friends, the penguin and the cow?’

b. La giraffa sta leccando la mucca, e il coniglio al pinguino lo sta grattando.

The giraffes is licking the cow and the rabbit to the penguin him-Cl is scratching

‘The giraffe is licking the cow and the rabbit the penguin is scratching him.’

(O. 5;2)

3.6.2. Types of Passives

Passive was the most typical answer in adults, who seldom relied on the use of CILDs, but it was also present in some of children’s productions, even though to a much lesser extent (cf. Table 1).
As for children, passive amounted to the 9% of the production in the first condition and 11% in the second condition, exclusively consisting of *si*-causative passives (98%) and only one *venire* passive (2%).

In adults’ production, we found the opposite pattern since the passive was predominantly periphrastic (78%) (with a preference for the auxiliary ‘*venire’*/to come, 69%).

Despite this difference in the type of passive structure produced, both adults and children preferred passive sentences with null subjects in the one-topic condition (74% in adults, 92% in children, see 18). In contrast, in the two-topic condition, adults and children always resorted to lexical preverbal subjects (see 19):

(18) a. Che cosa succede al mio amico, il bambino?
   ‘What is happening to my friend, the kid?’

   b. Prima si fa vestire dal fratello e poi si fa pettinare dal nonno.
   ‘First (he) gets himself dressed by his brother, and then (he) gets himself combed by his grandfather.’

   (N., 5;0)

(19) a. Che cosa succede ai miei amici, il coniglio e la formica?
   ‘What is happening to my friends, the rabbit and the ant?’

   b. Allora, la formica si fa asciugare dalla rana e poi il coniglio si fa grattare dal gatto.
   ‘So, the ant gets herself dried by the frog and then the rabbit gets himself scratched by the cat.’

   (N., 5;0)

As this pattern equally emerged both in children and adults, it indicates that children correctly alternated between null subject and lexical subject as an effect of the discourse manipulation, in an adult-like manner. This guaranteed topic continuity in the one-topic condition, and helped the identification of the two possible patient referents in the two-topic condition.

4. **Experiment 2**

In this second experiment, we further explored the acquisition of CILDs in the production of overt left-dislocated topics (DP$_1$-DP$_2$-Cl-Verb), in a situation of number mismatch between the two DPs (DP$_{subj}$ plural and DP$_{obj}$ singular), as in (20), adapting the design of the previous experiment:

(20) Il cane i gatti lo lavano

The dog$_{obj}$ sing the cats$_{subj}$ plural him-Cl wash

‘The dog, the cats are washing him.’
By introducing the number mismatch between the subject and the object, we aimed at testing the potential role of number mismatch in the production of such structures (see Manetti et al. 2016).

4.1. Participants
We tested 37 typically developing Italian-speaking children ranging in age from 4;0 to 6;0 (MA= 60 in months; SD= 3.8 in months) recruited in a kindergarten of Florence and 20 adults (from 19 to 27 y.o.; MA= 22 y.o.), recruited at the University of Siena. One child was excluded as she did not complete the session (hence we included 36 children in the analysis).

4.2. Method and Materials
In Experiment 2 we adapted the design and the material from Experiment 1 to the number mismatch condition between the two DP arguments of each verb, with a plural subject (e.g. two bears) and a singular object (e.g. one elephant). See Figure 3 and 4.

![Figure 3](image1.png)

Figure 3: Experimental trial of the one-topic condition (One topic patient: the elephant)

![Figure 4](image2.png)

Figure 4: Experimental trial of the two-topic condition (Two topic patients: the rabbit and the ant)

The one-topic condition presented one topic patient (Final question: Che cosa succede al mio amico, l’elefante? ‘What is happening to my friend, the elephant?’), and the two-topic condition presented two topic patients (Final question: Che cosa succede ai miei amici, il coniglio e la formica?, ‘What is happening to
my friends, the rabbit and the ant?’, see Figure 4c). Recall that each question elicited an answer containing the description of two separate events, depicted on the third slide (inside the house).

Based on the results of Experiment 1, in the first condition, we expected to elicit Subject-Clitic-Verb structures (e.g. Gli orsi lo lavano/The bears him-Cl wash; see Figure 3c) with no explicit mention of the object topic. In the second condition, we aimed to elicit full CILDs, with an overt left dislocated object, for instance in the form of DP_{Obj}-DP_{Sub}-Cl-V (e.g. Il coniglio i gatti lo accarezzano/The rabbit the cats him-Cl caress; see Figure 4(c)). This expectation holds for children only, given that for adults we expected to observe the production of passives (see also footnote 9).

4.3. Coding Criteria

We followed exactly the same coding criteria as in Experiment 1, see section 3.3 for details.

4.4. Results

The table reports the results for each condition, shown by groups (children vs. adults), including 570 utterances produced by children and 318 by adults.

| Table 3: Children’s and adults’ productions after questions in the one-topic and two-topic conditions |
|-------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|
|                                                     | CHILDREN                                              | ADULTS                                               |
|                                                     | One-topic condition                                   | Two-topic condition                                  | One-topic condition                                   | Two-topic condition |
|                                                     |                                                      |                                                      |                                                      |                     |
| Pronoun                                             | 253                                                   | 37                                                   | 36                                                   | 6                    |
|                                                      | 89%                                                   | 13%                                                  | 23%                                                  | 4%                   |
| CILD                                                | 11                                                    | 182                                                  | 0                                                    | 5                    |
|                                                      | 4%                                                    | 64%                                                  | 0                                                    | 3%                   |
| Copular/Venire Passive                               | 0                                                     | 0                                                    | 88                                                   | 83                   |
|                                                      | 0%                                                    | 0%                                                   | 55%                                                  | 52%                  |
| Si-causative Passive                                 | 1                                                     | 2                                                    | 7                                                    | 10                   |
|                                                      | 0%                                                    | 1%                                                   | 4%                                                   | 6%                   |
| Other                                               | 19                                                    | 65                                                   | 28                                                   | 55                   |
|                                                      | 7%                                                    | 22%                                                  | 18%                                                  | 35%                  |
In the present experiment, the difference between adults’ and children’s production is sharp: children overwhelmingly answered with *Pronoun* structures in the one-topic condition (89%) and with ClLDs in the two-topic condition (64%); virtually no passives were produced (1%). As expected, adults answered with passive sentences in both conditions (59% and 58%)

11 and made use of some *Pronoun* structures in the one-topic condition (23%). Once again they produced virtually no ClLDs in the two-topic condition (3%). Both children and adults produced some ‘Other’ responses. Whereas the amount of ‘Other’ in adults was comparable to the one of Experiment 1 (see table 1 and footnote 7), in children it decreased: a result most likely related to the concomitant increase of ClLDs in Experiment 2 (see section 4.6.1 and section 5.2).

4.5. Analysis of main results

Differently from Experiment 1, in Experiment 2 children only resorted to *Pronoun* and ClLDs, and no passives. Parallel to Experiment 1, the use of *Pronoun* with no overt topic and ClLDs with overt expression of left-dislocated topics varied across conditions: *Pronoun* structures were more often used in the one-topic condition (253/290, 88%), whereas ClLDs (with overt expression of the object topic) more frequently appeared in the two-topic condition (182/193, 94%).

We now analyze whether the use of *Pronoun* vs. ClLD significantly varied across conditions. We ran logistic mixed effect models (Jaeger, 2008), using the software R (R Development Core Team, 2008) and the lme4 package (Bates et al., 2015). The dependent variable was the production of clitic structures with no overt vs. overt left dislocated topics (*Pronoun* = 0; ClLD = 1); the fixed effects were *Topic condition* (one topic patient vs. two topic patients) and Age group (4-year-olds: 4;0-4;11 vs. 5-year-olds: 5;0-6;0). We also included random effects by-items and by-subjects. The final best-fit model, reported below, only includes *Topic condition* as the fixed effect, and the age group factor was not included as it did not improve the model; by-items and by-subjects random intercepts, and the random slope parameter were added for *Topic condition* for subjects only.

<table>
<thead>
<tr>
<th>Table 4: Linear mixed-effect model on the production of <em>Pronoun</em> vs. ClLD in children</th>
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<tbody>
<tr>
<td>Estimate</td>
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<tr>
<td>(Intercept)</td>
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</table>

11 Overall, adults preferred the periphrastic passive with the auxiliary *venire/to come* (81%), as in Experiment 1 (see Section 3.6.2.)
| Topic condition | 8.4507 | 1.0137 | 8.336 | < .0001 ** |

To summarize, the analysis showed a significant main effect of *Topic condition*, confirming that children were more likely to produce a CILD with an overt left dislocated topic in the two-topic condition, when the question presented two distinct topic patients. In line with Experiment 1, 4- and 5-year-old groups did not differ in the production of such structures.

### 4.6. Detailed description of the results

#### 4.6.1. Types of CILDs: nature of the subject and types of left-dislocated objects

Children produced 193 CILDs, of which 80% were in the form of (a)DP<sub>obj</sub>-Clitic-Verb with a plural null subject, as shown in (21). In the remaining CILDs, the subject was either preverbal (12%, see 22a)<sup>12</sup> or postverbal (8%, see 22b); (cf. footnote 10). As for the left-dislocated object, as already emerged in Experiment 1, it was often introduced by the preposition ‘a’ (a-Topic: 138 CILDs, 72%; the remaining 28% were Simple Topics).

(21)  
a. Il coniglio l’accarezzano. (B. 4;7)  
the rabbit<sub>obj</sub> pro<sub>plu</sub> him-Cl caress  
‘The rabbit, they are caressing him.’

b. Al re lo pettinano (C., 5;3)  
To the king pro<sub>plu</sub> him-Cl comb  
The king, they are combing him

(22)  
a. Al pinguino i conigli lo stanno grattando. (T. 5;5)  
To the penguin the rabbits him-Cl are scratching  
‘The penguin, the rabbits are caressing him.’

b. Il cane lo stanno lavando i gatti. (M. 4;6)  
The dog him-Cl are washing the cats  
‘The dog, the cats are washing him.’

---

<sup>12</sup> The subject preceded the object in 29% of CILDs (7, S-O-cl-V), and followed the object in the 71% (17, O-S-cl-V). (cf. footnote 9).
When the subject was lexical and preverbal, the object was nearly always an $a$-Topic (88%, 21/24); whereas when the subject was null or post-verbal, children still preferred the use of an $a$-Topic (117/169=69%) but we also found 52 sentences in which the object was uttered as a Simple Topic (52/169=31%): this distribution of $a$-Topics and Simple topics stands in line with the results of Experiment 1, as well as the fact that the object of a transitive verb was never preceded by the preposition ‘$a’/to in children’s SVO sentences.

4.7. Summary of the Experiments

The main and new result in both experiments is that children made use of ClLDs with overt expression of the left-dislocated topic under the appropriate discourse condition, specifically when the question presented two distinct topic patients (two-topic condition). Interestingly, the production of ClLDs differed across the two experiments.

Experiment 2 (number mismatch) led to a larger number of ClLDs (64% in the two-topic condition), in contrast to Experiment 1 (number match), which instead led to a more restricted production of ClLDs (25% in the two-topic condition).13

Additionally, in Experiment 2 children mainly produced ClLDs with a null plural subject (80% e.g. (A) l’coniglio lo accarezzano/’ (To the rabbit, they are caressing him’); whereas in Experiment 1 ClLDs more often presented a preverbal lexical subject (64%, e.g. Al coniglio l’orso lo veste/ To the rabbit, the bear is dressing him.). Table 5 summarizes the ratio of these types of subjects in the two experiments (the remaining subjects, not reported in the table, were either post-verbal or a few singular null ones in Experiment 1, see footnote 10):

<table>
<thead>
<tr>
<th>Table 5: Types of subject in ClLDs</th>
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<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Null Plural Subject</strong></td>
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<tr>
<td>---------------------------------</td>
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<tr>
<td><strong>Experiment 1</strong></td>
</tr>
<tr>
<td><strong>Experiment 2</strong></td>
</tr>
</tbody>
</table>

The selection of null vs. lexical subjects in the ClLDs and the role of the number mismatch will be discussed in detail in the discussion section (cf. 5.2).

---

13 The larger number of ClLDs in Experiment 2 also reflects the larger number of children producing the structure (89%) compared to the more restricted group of children producing ClLDs in Experiment 1 (47%).
Use of passive was low in Experiment 1 (up to 11%) and virtually absent in Experiment 2 (1%), in which the most produced structures were CILDs (64%). Table 6 summarizes children’s production of CILDs and passives comparing the two experiments in the two-topic condition:

| Table 6: Percentage and number of CILD and Passive produced by children in the two-topic condition (cf. Table 1, Table 3) |
|-----------------|----------------|
|                 | CILD | Passive |
| **Experiment 1** | 25%  | 11%     |
|                 | (72)  | (32)    |
| **Experiment 2** | 64%  | 1%      |
|                 | (182) | (2)     |

Finally, in adults’ answers, no relevant differences emerged between the experiments, since in both cases the preferred structure produced was the passive. The graphs below illustrate children’s and adults’ main choices in Experiment 1 and Experiment 2:

5. General Discussion

In this section we discuss what we take to be the most salient results of our experiments and their theoretical implications. We will focus on children's productions of CILD and passives, the way children realized these structures as well as how children's results compare to adults' results.

5.1. Children’s mastery of left peripheral Topic positions (and other discourse related positions)

One main result of our study is that children know how to access the left peripheral topic position(s) of the clause and use this position appropriately. Specifically, they use overt pre-posed object Topics in CILDs in the two-topic condition and simple *Pronoun* with no overt expression of the topic in the one-topic condition of both Experiments 1 and 2. Children also show that they know the new information value of the verbal
constituent of the clause, as their answers are informative and the new information provided concerns the verb. As for the status of the preverbal subject in the number match condition of Experiment 1, in the order DP_{sub} \text{DP}_{obj}-\text{Cl}-V the subject is clearly also left dislocated and fills a topic position in the left periphery that is higher than the one occupied by the object:\textsuperscript{14}

(23) \begin{array}{ccc} S & O & [\langle S \rangle - \text{CL} - V \langle O \rangle] \end{array}

Making the subject a left peripheral topic may be appropriate in our experimental setting since the subject is also given in the presentation of the characters. It could thus be treated as a further topic, even if it is not the argument on which the question bears (see also section 5.4). Instead, the argument the question is about is the patient. The patient is thus necessarily a topic. Since the eliciting question explicitly refers to the object patient only, it is not surprising that the subject is not always treated as a topic in the answer, but rather as a regular preverbal subject filling the clause internal subject position and thus expressing a simple ‘aboutness’ interpretation (Rizzi 2005, 2017 and the further discussion of this point in Section 5.4). CILDs with the order DP_{obj} DP_{sub} Clitic Verb can thus be amenable to either one of the following analyses: in (24) the subject is in a topic position below the pre-posed object, in (25) it remains clause internal:

(24) \begin{array}{ccc} O & S & [\langle S \rangle - \text{CL} - V \langle O \rangle] \end{array}

or

(25) \begin{array}{ccc} O & [\langle S \rangle - \text{CL} - V \langle O \rangle] \end{array}

\textsuperscript{14} On the possibility of iterating topic positions in the Italian left periphery see the original discussion in Rizzi (1997). On the possibly different discourse value of the different topic positions see Bianchi & Frascarelli (2010), Frascarelli & Hinterhölzl (2007). See Manetti et al. (2016) on the possible relevance of the Frascarelli & Hinterhölzl’s (2007) distinction in the comprehension of these CILD by adults. In the interest of clarity in the following discussion we will assume that both positions iterate topics of the same type in the children’s grammar (see also footnote 19 and below).
Note that the exact position of the subject cannot be explicitly determined in standard Italian as the resumptive pronoun of a left dislocated topic subject as in (24) would be a silent pro (similarly in 23), the closest analogue to complement clitics in Italian (Cardinaletti 2004).

Putting the question of the precise status and position of the preverbal subject on the side for now in the order DP_{obj} DP_{subj}, one crucial aspect of our results is that, taken together, they allow us to conclude that at age 4 children have developed an appropriate use of the topic position(s) in the left periphery and of the syntax of CILD, including the obligatory presence of the accusative resumptive clitic in the clause following the left dislocated object topic (Cinque 1977, 1990).

On the discourse/information structure side, as already noted, children overtly express the object topic in CILDs when it is appropriate to do so, as in the two-topic condition (of both experiments). This is a first clear result of the acquisition of the cartography of discourse related left peripheral positions, such as topic positions. As mentioned, Pronoun structures (with no overt expression of the topic) and CILD structures involve a new information focus verbal constituent in the clause. To the extent that new information focus is represented in a dedicated position in the low periphery of the clause (Belletti 2004, and reference cited there), these results also clearly indicate that children at age 4 properly master the discourse value of this low area of the clause and its syntax (Belletti & Guasti 2015, chapter 7). Clearly, children’s CILDs are informative answers both as far as the interpretation of the topic is concerned and as for the new informative status of the verbal constituent.

5.2. How children deal with the intervention configuration: The role of fRM in discourse appropriate CILDs

As discussed in the introduction, CILDs of the type DP_{1}-DP_{2}-Cl-V give rise to an intervention configuration, no matter to what interpretation the order of the two DPs may correspond, i.e. DP_{subj}+DP_{obj}-Cl-V or DP_{obj}+DP_{subj}-Cl-V. The main result of our study differs across the two experiments: in Experiment 1 (number match of the two DPs) in their CILDs, in the two-topic condition, children mostly used an a-Topic to express the preposed direct object (cf. example (15)) and the pre-posing of the direct object as a Simple Topic was extremely limited. In these structures children produced a preverbal lexical subject, as was appropriate in the discourse
conditions of the experiment in order for their answers to be fully informative\textsuperscript{15}. In Experiment 2 (number mismatch of the two DPs) the overwhelming majority of children’s ClLDs had the subject realized as a null plural subject (80%, 154/193; cf. examples 21, and example 27c below), with the pre-posed object realized either as an \textit{a}-Topic or as a Simple Topic. At the age of the experiments children are known to properly master use of lexical vs. null referential subjects (Belletti & Guasti 2015; Anonymous 1 2017), depending on discourse conditions: Our results of Experiment 1 confirm this ability as children mainly used overt lexical subjects as this allowed for the answer to be completely informative as to what character performed a given action on the object topic patient. This in turn clearly suggests that the most natural interpretation of the null pronominal subject present in several children’s productions in the ClLDs of Experiment 2 should not be a referential interpretation. It should rather count as a generic one.

That a null plural pronominal has access to a generic interpretation is a possibility allowed in several languages, including standard Italian. A plural generic null subject is compatible both with a singular and with a plural referent. So, a sentence like (26a) in Italian can be felicitously continued either as in (26b) or as in (26c):

\begin{enumerate}
\item a. \textit{pro\textsubscript{pl}} Hanno bussato
\begin{itemize}
\item (they) have knocked at the door
\end{itemize}
\item b. Deve essere Gianni
\begin{itemize}
\item (it) must be Gianni
\end{itemize}
\item c. Devono essere gli invitati
\begin{itemize}
\item (they) must be the guests
\end{itemize}
\end{enumerate}

\textsuperscript{15} In few of their ClLDs children used a post-verbal lexical subject or a null subject. In both cases the answer is not completely appropriate: in the former case because the subject should not count as new information in the answer as it is one of the introduced characters; in the latter because it should be overt as it cannot be distinguished from the other subject if it is not pronounced. The fact that the only inappropriate children’s answers concern the position (post-verbal) and nature (null) of the subject suggests that the presence of the lexical preverbal subject is particularly hard to handle by children in the ClLD configuration. This conclusion is consistent with the account in the text and does not run into conflict with the general early mastery of position and nature of subjects by young children previously mentioned in the text and below.
In their answers using a null plural pronominal subject in the given experimental conditions, children adopt a discourse strategy similar to the one illustrated in (26a) above: they use a plural null subject in its generic interpretation, i.e. they are not specific about the referent of the subject, which in all of the relevant stimuli happened to also be plural. Hence, with this type of answer, children have been completely informative about the Topic of the question, the pre-posed object, and have remained vague about the subject of the following sentence. These answers were anyway felicitous, as the question was specifically about the object. So, once again, children display a discourse felicitous behavior. One can speculate that, possibly, the presence in Experiment 2 of a plurality of subjects (two characters performing the action in each stimulus) has somehow primed resorting to the plural generic null subject for children. Indeed, this option was only seldom used in Experiment 1 (cf. section 3.6.1, footnote 10), where the referent of the subject was always a singular character in the stimuli and the subject was mostly overt in children’s CILDs answers, as discussed. Be that as it may, one interesting question to ask is why children have so overwhelmingly relied on the generic plural null subject, the clearly preferred option in their CILDs in Experiment 2.

Before proposing an account for this and more generally for the articulated children’s behavior, let us remember a further critical result of our experiments, i.e. the frequent realization of the pre-posed object in the form of an a-Topic. Recall, first of all, that a+DP (DP=patient) in the answer was not primed by the eliciting question, which was formulated as i.e. ‘What is happening to my friends, the rabbit and the ant?’ precisely to avoid a repetition effect in the answer: hence, the a-Topic does not constitute a simple repetition of the PP just heard by the child.

For reasons of space and in order not to divert too much the main focus of our discussion, we do not develop here a detailed analysis of the syntax and interpretation of a-Topics in child Italian nor of their marginal possibility in adult Italian (Anonymous 3 2017 and references cited therein for further elaboration). We only point out here that a-marking of object Topics is a property of the Italian left periphery, which correlates with a peculiar interpretation of the pre-posed object Topic itself, which we characterize as an affected interpretation. This left peripheral marking is not an isolated property of Italian, but is shared by other languages as well, a closest one being Spanish which makes use of the same preposition and in which a-marking has been shown to correlate with topicality: a-marking is obligatory with all direct objects when they are clitic left dislocated, even in those cases in which it is not obligatory in clause internal direct object position (Spanish being a DOM language in which direct objects are generally marked with -a- also clause internally,
Leonetti 2004 for discussion\textsuperscript{16}). As noted above, \textit{a}-Topics were mainly overtly realized in Experiment 1 when the subject of the following clause was generally overt, lexical and preverbal. In other words: the presence of an \textit{a}-Topic correlates with the preverbal position and with the lexical nature of the subject (see 3.6.1).\textsuperscript{17} Recall that in these configurations, the subject counts as an intervener in the establishment of the dependency between the pre-posed object in the left peripheral topic position and its merge position within the clause (cf. Section 2). We want to propose that both the significant presence of \textit{a}-Topics in the described structural conditions of Experiment 1 and the overwhelming recourse of null plural subjects in Experiment 2 can find an account within the fRM approach, as developed in Friedmann, Belletti & Rizzi (2009) and Belletti et al. (2012).

The following chart in (27) summarizes the main results of Experiments 1 and 2, relevant to the present discussion. For Experiment 1 the chart puts together both orders DP\textsubscript{obj}-DP\textsubscript{subj}-Cl-Verb and DP\textsubscript{subj}-DP\textsubscript{obj}-Cl-Verb present in children’s productions as the different order does not change the intervention configuration as discussed (in both conditions; see also footnote 19). For Experiment 2, both \textit{a}-Topics and Simple Topics are grouped together as there is no difference in children’s realization of the topic depending on the nature of the subject since the subject is overwhelmingly the generic plural null subject in Experiment 2:

(27) \textbf{Children’s CILDS}

\textit{Experiment 1} (Number match condition)

a. \textit{O\textsubscript{lex} S\textsubscript{lex} Cl V \_<> // S\textsubscript{lex}O\textsubscript{lex} Cl V \_<> } \hspace{1cm} (6/81, \textit{7\%}) \hspace{0.5cm} \textit{O = Simple Topic - S/lexical}

Il cane il gatto lo morde

The dog the cat bites him-Cl

b. \textit{aO\textsubscript{lex} S\textsubscript{lex} Cl V \_<> // S\textsubscript{lex} aO\textsubscript{lex} Cl V \_<> } \hspace{1cm} (46/81, \textit{57\%}) \hspace{0.5cm} \textit{O= a-Topic - S/lexical}

Il gatto al coniglio lo tocca

\textsuperscript{16} See also Escandell-Vidal (2009) on Balearic Catalan in which \textit{a}-marking only concerns left dislocated objects in a way that closely corresponds to the distribution found in the Italian developing children, who are thus adopting a possible grammatical option as is typically the case in stages of acquisition (see Anonymous 3 and references cited therein for some speculation on the possible innovation that this type of children’s productions may lead to in Standard Italian, as happened in previous stages of e.g. Spanish and Japanese).

\textsuperscript{17} \textit{a}-Topics are evenly distributed in the few cases in which the subject was either a null referential 3\textsuperscript{rd} person singular pronominal or a post-verbal one (cf. 3.6.1).
For interpretation of former the comprehension of X set theoretic terms: Identity, Inclusion, Intersection, Disjunction. The establishment of the dependency between X (the target) and Y (the origin) is modulated according to the chart in (29). Whereas Identity in relevant features is excluded by both children and adults and Disjunction is available for both, there is development in the proper computation of the intermediate relation of Inclusion, which is excluded by young children, but is possible for adults (Starke 2001, Rizzi 2004). As for Intersection, this relation appears to be properly mastered by young children (and also by adults)\(^{18}\).

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\(^{18}\) The conclusion is based on Belletti et al.‘s (2012) results on the effect of gender mismatch in enhancing the comprehension of Object relative clauses in Hebrew. The main result of that work is that gender is a feature relevant for the computation of fRM in Hebrew but not in Italian. An Intersection relation of relevant features is created in Hebrew Object relatives in a gender mismatch condition but not in Italian, enhancing the comprehension of Object relatives in the former language but not in latter. For further details on the implementation of fRM in these terms and its relevance to interpret development, see Friedmann, Belletti & Rizzi (2009), Belletti et al. (2012), Bentea (2016), Guasti et al. (2012). For an original related approach in terms of the grammatical principle fRM to account for impaired computations of object long distance dependencies in aphasic patients see Grillo (2008). Friedmann et al. (2015) on the relevance of the approach in the production of Object relatives in the SLI population, Belletti & Rizzi (2013) on the relevance of the principle in adult processing; Friedmann, Rizzi & Belletti (2017) for recent further illustration on the (lack of) role of Case. On the
(29) fRM in children and adults:

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>Z</th>
<th>Y</th>
<th>Children</th>
<th>Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identity</td>
<td>+A</td>
<td>+A</td>
<td>&lt;+A&gt;</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Inclusion</td>
<td>+A</td>
<td>+B</td>
<td>+B</td>
<td>&lt;+A+B&gt;</td>
<td>*</td>
</tr>
<tr>
<td>Intersection</td>
<td>+A+B+C</td>
<td>+B+D</td>
<td>&lt;+A+B,+C&gt;</td>
<td>ok</td>
<td>ok</td>
</tr>
<tr>
<td>Disjunction</td>
<td>+A</td>
<td>+B</td>
<td>&lt;+A&gt;</td>
<td>ok</td>
<td>ok</td>
</tr>
</tbody>
</table>

(A, B, C, D abstract features relevant for the principle)

With this background in mind, we can now directly interpret the results reviewed in this section and summarized in (27) along the following lines. The CILDs structures which are seldom present in children’s productions (7%) are those where the intervention configuration gives rise to the Inclusion of the nominal feature [+NP] as both the left dislocated object and the preverbal subject share the [+NP] feature, as illustrated in (30)\(^{19}\):

(30) (7% of CILDs) **Inclusion**

Il cane il gatto lo morde

+Top +NP +NP

The dog the cat bites him-Cl

Children’s CILDs using an \(\alpha\)-Topic modulate intervention by adding a feature to the pre-posed object Topic which is realized through “a”. For concreteness, let us call this feature an affected feature, following the brief discussion above (and the reference quoted there). Let us dub it [+a]; a Simple Topic or a non-topic noun role of the feature number in creating an intersection relation enhancing the comprehension of CILDs in Italian, see Manetti et al. (2016).

\(^{19}\) The subject can also be left dislocated in DP₁-DP₂-Cl-V, as discussed in 5.1 and illustrated in (23) and (24). If the two topic positions are treated as different (see footnote 14), with the highest one endowed with a further feature, the structure would still instantiate the Inclusion relation, the hard relation for children. See Manetti et al. (2016) for discussion along these lines, in the spirit of Frascarelli & Hinterhölzl (2007), Bianchi and Frascarelli (2010). Alternatively, children may not differentiate the two topic positions as assumed here for the sake of simplicity (see footnote 14; see also the following structure in (31)). If this were the case the structures would reduce to a case of Identity (with both DPs endowed with the same Top and NP features).
phrase will be [+u], i.e. it will be marked as being unaffected. As illustrated in (31) in ClLDS in which the intervention configuration is created between the left peripheral object in Topic and the intervening lexical subject, both [+NP], use of an a-Topic changes the Inclusion relation to one of Intersection, the type of relation that children have been shown to master well (cf. footnote 18). These structures are mastered rather well by children as indicated in (27b) of the summary chart (57%), clearly significantly better than those involving Inclusion (7%), see (27a/30):

(31) (57% of ClLDS) Intersection

a. La giraffa alla mucca _ la sta leccando_
   +Top +NP +u +Top+NP +a
   the giraffe to the cow her-Cl is licking

b. Al re il bambino _ lo sta pettinando_
   +Top +NP +a (+Top)21 +NP +u
   to the king the boy him-Cl is combing

The summary chart in (27) indicates that the overwhelmingly preferred ClLD structure for children in their ClLDS is the one in which the left dislocated object may or may not be introduced by “a”, but the subject is systematically a null plural pronominal subject with the generic interpretation associated to it. The fact that the topic may or may not be an a-Topic suggests that children may or may not interpret it as affected in the relevant sense, both interpretations being allowed in the experimental conditions. The crucial property of these frequent children’s productions is then the presence of the null generic subject in the clause following the left dislocated

20 As shown in Costa, Friedmann, Silva & Yachini (2014) on PP relatives in EP and Hebrew, the categorical distinction DP vs. PP cannot be considered the relevant distinctive factor, as PP relatives are as hard for children as (direct) Object relatives, despite presence of the Preposition in the former case.

21 The feature +Top is indicated in parenthesis since, as discussed, with this word order the subject could be either left dislocated or fill the subject position within the clause (cf. 5.1). The fact that the relevant feature for fRM is lexicalized through the preposition ‘a’ may make the intersection relation more readily available to children. Thanks to one reviewer for suggesting this possible supplementary factor.
Topic. Let us assume that this null subject is a silent pro\textsubscript{pl} with the generic interpretation. Since it is pronominal, it is not, by definition, lexically restricted, as there is no lexical description associated with a pronominal element in general and \textit{a fortiori} with a null pronominal. Hence, it does not contain the feature [+NP] in its feature composition. We take this to be the crucial property accounting for the much-preferred use by children of ClLDs with an overt Topic and the silent pro\textsubscript{pl} as the subject of the following clause. Since there is no [+NP] feature associated with pro\textsubscript{pl}, even if the [+NP] feature is associated with the left dislocated lexically restricted object, no relation of Inclusion is ever created, hence the pre-posed object and the subject remain in a relation of Disjunction as far as this critical feature is concerned. Disjunction is the relation that is mastered best, by both children and adults. The relevant configuration is given in (32):

(32) \hspace{1cm} (80\% of ClLDs) \textbf{Disjunction}

(al) La giraffa \hspace{0.5cm} [pro\textsubscript{pl} la lavano <\_>]

+Top +NP

(to) the giraffe (they) wash it

As the subject is not lexically restricted, the structure is fully mastered by children: 80\% of children’s ClLDs has this form, thus further confirming the crucial role of the [+NP] feature for fRM\textsuperscript{22}.

Finally, we also point out that the number mismatch condition of our Experiment 2 led to the widespread production of ClLD structures of the form O\textsubscript{ex} [pro\textsubscript{pl} Cl V\textsubscript{pl} <\_>] just discussed, with the plural null generic pronominal subject. As the lack of the [+NP] feature on the pronominal subject shown in (32) plays the described crucial role, we cannot determine whether the null nature and the plural number of pro also play any role in the mismatch condition of Experiment 2. As for the feature number, the mismatch in both number and lexical restriction in children’s productions in the experimental conditions may play a cumulative role in facilitating children’s performance in the straightforward way that the production results indicate. We leave

\textsuperscript{22} These children’s data on the production of ClLDs in Italian share close resemblance with data on children’s comprehension and production of Object relative clauses in Hebrew presented and discussed along similar lines in Friedmann, Belletti & Rizzi (2009). Hebrew similarly to Italian has a generic plural null subject and use of such a generic plural null subject significantly enhanced children’s comprehension and production of the otherwise hard headed object relatives.
this as an open question in need of further investigation together with the possible role played by the non-overtness of null generic pro$^{23}$.

5.3. Different types of passives in children and adults. Plural (generic) null subjects as an alternative to passive in children

Overall, children produced relatively few sentences in which the topic patient of the question formulated in the active voice is the subject of their answer formulated in the passive voice (up to 11% in Experiment 1). In contrast, this was the preferred answer produced by adults (about 60%, in both experiments). We delay until the following section a closer discussion of how much (and possibly why) children’s and adults’ CILD responses differ. We first consider here how children’s and adults’ answers compare when they are formulated in the passive. Two aspects of our results should be highlighted: i. All passive answers produced by children were passives in the causative voice, i.e. $si$-causative passives like il pinguino si fa lavare dal gatto/the penguin makes himself-Cl wash by the cat. Some $si$-causative passives have also been produced by adults, but the majority of adults’ passives were copular passives or passives using the auxiliary venire/come, a possible option in Italian in our experimental conditions. ii. In Experiment 2 adults’ passive answers contrast with children’s use of CILDs with a null pronominal subject with the generic interpretation. As the latter production is very robust since it reaches 80% of children’s CILDs, a closer comparison with the adults’ passive answers is called for.

As for point i., our new results confirm those of previous studies whereby $si$-causative passive appears to be the type of passive that Italian-speaking children access first in their development and that they seem to privilege somewhat despite its relative rarity in the input (see Belletti 2017 for closer discussion of this poverty of the stimulus issue)$^{24}$. Our results are particularly striking in this respect, as the only passives that children

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$^{23}$ The likelihood of a cumulative role played by the feature number comes from the consideration of previous comprehension results (see Manetti et al. 2016, footnote 18), which reported that the number mismatch condition did significantly enhance children’s comprehension of the CILD structures, which had both the left dislocated direct object and the subject in the following clause realized as lexical noun phrases, hence both [+NP] (of the type: Il pinguino, i gatti lo lavano / the penguin the cats him-Cl wash), in line with the fRM approach.

$^{24}$ See Manetti & Belletti (2015), using the priming technique adapted from Messenger et al. (2008). See also Contemori and Belletti (2013) indicating use of $si$-causative passive structures in Passive Object Relatives/PORs (cf. section 2.2.).
have produced are *si*-causative passives. A detailed elaboration of the possible reason(s) as to why *si*-causative passive should have this privileged status in development would take our discussion too far afield. Here we just list three of the factors discussed in the relevant literature that may converge in making this type of passive early mastered by children: 1. Overtness of the causative morpheme (Manetti & Belletti 2015), the verb *fare*, may provide a clearly visible head attracting movement of a chunk of the verb phrase, thus triggering the *smuggling* operation along the lines of Collins’ (2005), which is a crucial step in the passive computation. This step is probably somewhat costly for children otherwise (Snyder & Hyams 2015 for a related generalized freezing approach). 2. Next to the overtness of *fare*, its causative value may constitute a further clear indication that a complex event leading to a change of state is at play in the described situation; the causative voice may thus provide a crucial interpretive ingredient yielding to the passive computation along the lines proposed in Gehrke & Grillo (2009). 3. The presence of the reflexive *si* morpheme may also contribute to triggering the necessary computation (Anonymous 2 2016). Whatever the precise characterization of the crucially relevant properties of the *si*-causative passive turn out to be, the interesting conclusion that we want to highlight here is that our new experimental results are completely consistent with previous findings in confirming early access to *si*-causative passive in young children.

As for point ii., we point out the existence of a very tight relation between sentences in the passive voice and active sentences containing a null plural subject interpreted as generic. Specifically, Italian speakers rate sentences like (34), as being equally felicitous in the discourse conditions of our Experiment 2:

(34) a. Il cane viene lavato (dal gatto).

the dog comes washed (by the cat)

‘The dog is being washed (by the cat).’

b. Il cane lo lavano.

the dog<sub>obj</sub> *pro* him-Cl wash

‘The dog, (they) are washing him.’

Moreover, there are languages in which passive is not a very productive structure. In such languages, the equivalent of sentences like (34b) is preferred to the equivalent of sentence like (34a) by adult speakers and used as a readily available alternative to sentences in the passive voice\(^{25}\). Thus, it is natural to conclude that

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\(^{25}\) For instance, Hebrew appears to be a language with this type of distribution (Ur Shlonsky p.c.), as well as Greek (as one reviewer has pointed out).
productions of sentences like (34b) in our Experiment 2 can be seen as a way for children to produce a felicitous answer without implementing a passive computation. Thus, on the one side these productions indicate a dis-preference for passive by the young children investigated (at age 4 to 6); on the other, they also indicate an appropriate felicitous type of answer in Italian, that corresponds to passive in relevant respects.

5.4. CILDs vs. Passives: Children’s and adults’ answers may not differ in their discourse properties as much as they differ in their morphosyntax

Let us concentrate once more on the comparison between children’s CILD answers with adults’ passive answers. The sentences produced by the two groups look very different. However, we want to submit here the proposal that they may in fact be closer than meets the eye.

Recall that the object patient is the main discourse topic of our experimental conditions: the prompting question concerns the object. In the two-topic condition of both experiments, which elicited a higher number of CILDs with the overt realization of the topic, it concerns two topics (i.e. what happens to my friends, the rabbit and the ant?). In children’s CILD answers, these topics are properly pre-posed in the topic position of the left periphery in all of the produced CILDs, with a resumptive clitic in the following clause. In the CILD answers of Experiment 1, children also typically produced an overt lexical subject (27a,b above) thus being completely informative. In Experiment 2, they left the subject vague through the much-preferred production of a null generic plural subject in the clause following the topic (27c above), which we have considered close to a passive type answer in the previous section.

Thus, children are completely felicitous as for the way in which they deal with the left-dislocated object Topic: they put it in the left peripheral topic position. The question that arises then is: Are they more discourse-appropriate than adults, who do not seem to make the patient also a Topic in their passive answers, since they realize it as the subject which the sentence is about? A possible suggestion is that adults do in fact topicalize the patient of the question in their answer, the difference with respect to children being that they left-dislocate a subject and not an object. If this is the case the resumptive pronoun in the following clause corresponds to a silent null subject pro (the closest analogue to a resumptive clitic in a null subject language like standard Italian, Cardinaletti 2004, and cf. 5.1). Thus, both children’s and adults’ answers may, in fact, correspond to CILD structures as indicated in (35a,b) and (35c) respectively:

Children

(35)   a.  [\text{force} \ldots [\text{TOP} \textit{Al cane}] \ldots [\text{fin}][\text{TP} \textit{il gatto} \textit{lo}, \textit{lava}].]
to-the dog the cat him-Cl washes
b. $\text{[Force} \ldots [\text{TOP} \text{l cane}], \ldots [\text{Fin}[\text{TP} \text{pro}]] \text{lo]} \text{lavano} \ldots$
   the dog (they) him-Cl wash

Adults
c. $\text{[Force} \ldots [\text{TOP} \text{l cane}], \ldots [\text{Fin}[\text{TP} \text{pro}]] \text{viene lavato <________________> dal gatto} \ldots$
   the dog - is/comes washed by the cat

If an analysis along these lines is on the right track, then children’s and adults’ answers are, in fact, rather close in that the patient of the question is treated as the topic by both. This is a welcome and interesting conclusion, as children and adults appear to be discourse appropriate in the same way as far as the patient is concerned, the salient topic of the question. The only difference is that for adults, but not for children, the topic is also a subject, as they passivize the sentence, hence the resumptive pronoun in the clause is a silent pro. Children leave the sentence in the active voice. Thus, the topic is the pre-posed object, and the resumptive pronoun in the following sentence is the accusative clitic. Passive, either in its copular version or using the auxiliary venire, appears not to be readily available to the young children. This is the main difference with adults. Si-causative passive is however somewhat present in the children’s answers, as discussed. Of course, if children’s CILD answers and adults’ passive answers are analyzed as in (35a,b) and (35c), children’s si-causative passive answers should also involve left dislocation of the derived subject, as indicated in (36):

(36) $\text{[Force} \ldots [\text{TOP} \text{l cane}], \ldots [\text{Fin}[\text{TP} \text{pro}]] \text{si fa} \text{lavare dal gatto} \ldots$
   the dog - makes himself-Cl wash by the cat

In conclusion, we speculate that adults’ recourse to passive can be due to the fact that passivization allows adults to have the subject both as the left dislocated topic of which the following sentence predicates some property, and as the subject that the sentence is “about”. Following Rizzi’s (2005, 2017) approach, ‘aboutness’ is the relation that a preverbal subject always entertains with the following clause. Since the eliciting

26 The aboutness relation holds even if the subject has not been previously mentioned in discourse, hence even if it is not a discourse topic. This is illustrated by all new sentences, which can have a preverbal new indefinite subject:

(ii) a. Q: Cosa è successo?
   What happened?
b. A: Un camion ha tamponato una macchina
   A truck has bumped into a car
Here the sentence is about “un camion”/a truck. In the passive sentence as (iii):
experimental question was about the patient, it is natural that adults have also made it not only the topic of their answer (since it was given) but also the subject. As the crucial informative value of the answer concerned the topic status of the patient, children have limited themselves to make it the topic of their answer; they went for the active ClLD, given that their mastery of the passive morphosyntax is still delayed. In order to refine and support our for now speculative proposal, more evidence needs to be gathered in order to determine whether the adults’ passive productions in the given experimental conditions are (always) implemented precisely along the lines proposed in (35c). As the resumptive subject pronoun is null in a null subject language like Italian, we do not have direct evidence that ClLD is indeed implemented by solely looking at this language.\(^\text{27}\) Comparative evidence looking at a non-null subject language with ClLD structures of the Italian type may play a crucial role, as the resumptive subject pronoun should be overt in this case. Cross-linguistic experimental evidence, which is currently underway in a closely related non-null subject language like French, will allow us to better determine this point and ultimately properly address the issue of the relation between subjects and topics, through comparative evidence from acquisition and adult grammars.

We leave this issue at this stage, ready for further development.

6. Conclusions

We conducted two elicited production experiments with the aim of investigating how Italian-speaking children use the left-periphery of the clause with respect to topics. To this aim we explored the relevant Clitic Left dislocated structure. Since the discourse conditions eliciting ClLD are felicitous for the production of passives as well, we also asked whether children would produce passives, which type of passives and how their passive production would compare to the adults’.

The results obtained from the experiments are rich and variegated. Thus, we explored and discussed in some detail those aspects that we believe to be the main and most significant ones, which are the following:

---

(iii) a. A’: Una macchina è stata tamponata da un camion
A car has been bumped into by a truck

The sentence is about “una macchina”/a car. See Rizzi (2005, 2017) for relevant discussion, and Anonymous 1 (2017) for related considerations with children.

\(^{27}\) Prosodic experimental evidence may also be of help in determining this point. An open question for now.
1) Children made use of the left-peripheral topic positions already at age 4, under the appropriate discourse conditions.

2) Whenever children relied on passive, they opted for the si-causative passive.

3) As for the use of CILD, we observed that, first, children mostly expressed the left-dislocated object topic as an a-Topic (introduced by the preposition ‘a’/to) when the subject of the sentence was lexical and preverbal; second, the majority of children’s CILDs had plural null subject as the subject of the following sentence.

4) Children’s answers sharply contrasted with adults’ in two fundamental ways: adults uniformly answered to the patient-oriented question with a passive and CILDs were virtually absent in their descriptions; moreover, the passive chosen by adults (mainly venire/’come’ passive) differed from children’s passive (exclusively si-causative).

We have analyzed the production of CILD in children in terms of fRM, and in particular we have focused on how children dealt with the intervention configuration arising in the CILD structure DP₁ DP₂ Cl V by resorting to featural relations between the two DPs that they are known to be able to handle well, such as intersection (in the case of recourse to object a-Topics) and disjunction (in the case of recourse to a null pro_pl subject interpreted as generic).

Towards the end of our paper, we highlighted that, although children were fully discourse-appropriate in their answers, they sharply differed from adults, and this divergence between adults and children may be due to children’s avoidance of the passive computation at this particular age. We finally suggested that this apparent and sharp difference between adults and children may be less strong than it seems at first sight. By using a generic pro_pl, as they did overwhelmingly in the second experiment, children made the subject in their CILDs somewhat lighter in the relevant sense: this allowed them to deal with the intervention configuration, due to presence of an intervening lexical subject, in a drastic way by creating a featural disjunction situation. Moreover, by somehow demoting the subject, children’s resulting sentences (DP₂_obj pro_pl Cl V) were mainly ‘about’ only one topic referent, the topic patient, since the subject referent was left as generic and unpronounced. Our tentative suggestion is that children’s reliance on the generic pro_pl strategy goes in the same direction as adults’ use of passive, in which the answer to the patient-oriented question is about one single referent: the topic patient, which, given our proposed analysis, in the passive happens to be both the topic and the subject of the sentence.
A fairly complex and variegated array of results found a rational and a relatively simple interpretation in terms of the formal grammatical constraints and computational mechanisms assumed, combined with the fine characterization of relevant discourse conditions, for both Italian-speaking children and adults.

**Acknowledgment**

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**References**


Appendi
### Eliciting questions in Experiment 1, corresponding to Figure 1 and Figure 2

<table>
<thead>
<tr>
<th>Eliciting Question (One-topic Condition)</th>
<th>Event 1</th>
<th>Event 2</th>
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</thead>
<tbody>
<tr>
<td>Che cosa succede alla mia amica, la gatta? ‘What happens to my friend, the cat?’</td>
<td>cow licking cat</td>
<td>hedgehog caressing cat</td>
</tr>
<tr>
<td>What happens to my friend, the elephant?</td>
<td>bear washing the elephant</td>
<td>ant covering elephant</td>
</tr>
<tr>
<td>Che cosa succede al mio amico, l’elefante?</td>
<td>grandfather dressing kid</td>
<td>grandfather combing kid</td>
</tr>
<tr>
<td>What happens to my friend, the kid?</td>
<td>brother pushing kid</td>
<td>grandpa covering kid</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Eliciting Question (Two-topic Condition)</th>
<th>Event 1</th>
<th>Event 2</th>
</tr>
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<tbody>
<tr>
<td>Che cosa succede ai miei amici, il cane e l’orso? ‘What happens to my friends, the dog and the bear?’</td>
<td>cat washing dog</td>
<td>rabbit dressing bear</td>
</tr>
<tr>
<td>What happens to my friends, the cat?</td>
<td>kid combing king</td>
<td>dwarf photographing kid</td>
</tr>
<tr>
<td>Che cosa succede ai miei amici, il re e il principe? ‘What happens to my friends, the king and the prince?’</td>
<td>rabbit pushing penguin</td>
<td>giraffe licking cow</td>
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<tr>
<td>What happens to my friends, the penguin and the cow?</td>
<td>cat caressing rabbit</td>
<td>frog covering ant</td>
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</table>

### Eliciting questions in Experiment 2, corresponding to Figure 3 and Figure 4:

<table>
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<tr>
<th>Eliciting Question (One topic Condition)</th>
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<tr>
<td>Che cosa succede alla mia amica, la gatta?</td>
<td>cows licking cat</td>
<td>hedgehogs caressing cat</td>
</tr>
<tr>
<td>What happens to my friends, the cat?</td>
<td>bears washing the elephant</td>
<td>ants covering elephant</td>
</tr>
<tr>
<td>Che cosa succede al mio amico, l’elefante?</td>
<td>painters dressing kid</td>
<td>grandfathers photographing kid</td>
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<tr>
<td>What happens to my friend, the elephant?</td>
<td>brothers pushing kid</td>
<td>grandfathers combing kid</td>
</tr>
<tr>
<td>Che cosa succede al mio amico, il bambino?</td>
<td>cats washing dog</td>
<td>rabbits dressing bear</td>
</tr>
<tr>
<td>What happens to my friends, the kid?</td>
<td>kids combing king</td>
<td>dwarfs photographing prince</td>
</tr>
<tr>
<td>Che cosa succede ai miei amici, il pinguino e la mucca?</td>
<td>rabbits pushing penguin</td>
<td>giraffes licking cow</td>
</tr>
<tr>
<td>What happens to my friends, the penguin and the cow?</td>
<td>cats caressing rabbit</td>
<td>frogs covering ant</td>
</tr>
<tr>
<td>Che cosa succede ai miei amici, il coniglio e la formica?</td>
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