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Edited by Cornelia Hamann and Esther Ruigendijk

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## TABLE OF CONTENTS

Introduction .....	ix
The editors	
Input, Learner Populations, and the Human Language-Making Capacity .....	1
Susanne E. Carroll and Jürgen M. Meisel	
The Acquisition of PP Relatives in Hebrew and European Portuguese: Another Window into the Atoms of Intervention .....	35
João Costa, Naama Friedmann, Carolina Silva and Maya Yachini	
The Acquisition of Syntactic Microvariation in Silent Categories .....	49
João Costa, Elaine Grolla and Maria Lobo	
(In)Definiteness and Near-Nativeness: Article Choice at Interfaces .....	61
Lena Dal Pozzo and Simona Matteini	
Elicited Production of Cleft Sentences in 6-10 Year-Old Italian-speaking Children .....	83
Giorgia Del Puppo, Margherita Pivi and Anna Cardinaletti	
On Focus Encoding in Adult and Child Hebrew .....	98
Rachel Eitan and Jeannette Schaeffer	
The Acquisition of Mandarin Relative Clauses by Preschool Children .....	120
Anna Gavarró and Shenai Hu	
Not Fully Lexical Verbs in (A)typical Child Language: A Synopsis .....	132
Kleanthes K. Grohmann and Maria Kambanaros	

Optimal Acquisition: Why Children’s Language Production Can Exceed their Comprehension.....	148
Petra Hendriks	
Non-word-repetition in Hearing Impaired Children: The Influence of Word Length, Syllable Complexity and Syllable Position .....	171
Johannes Hennies, Martina Penke, Eva Wimmer, Markus Hess and Monika Rothweiler	
Comprehension and Production of Double-Embedded Structures: A Kindergardenpath in Long-distance Dependencies in Dutch School-aged Children? .....	190
Bart Hollebrandse and Angeliek van Hout	
Japanese Direct Passive: Parental Input and Child Comprehension .....	205
Miwa Isobe and Reiko Okabe	
Lexical-Grammatical Deficits in Multi-lingual SLI: A Case Study from Cyprus .....	218
Maria Kambanaros	
The Development of Object Clitics in French: A Comparative Study between Production and Real-time Interpretation via Eye-tracking while Listening.....	232
Elodie Léger, Philippe Prévost and Laurie Tuller	
Two Analyses for Simultaneous Construals of Relative Clauses in L1 French .....	259
Oana Lungu	
Causatives and the Acquisition of the Italian Passive .....	282
Claudia Manetti and Adriana Belletti	
Disentangling Bilingualism from SLI in Heritage Russian: The Impact of L2 Properties and Length of Exposure to the L2..	299
Natalia Meir and Sharon Armon-Lotem	

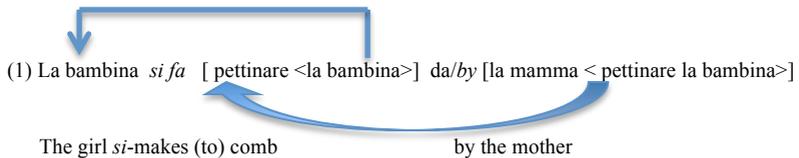
Pragmatics vs. Grammar: The Interpretation of Modals and Nominal Quantifiers in Child Language.....	315
Vincenzo Moscati, Jacopo Romoli and Stephen Crain	
The Interaction of Focus Particles and Information Structure in Acquisition .....	330
Anja Müller, Barbara Höhle and Petra Schulz	
The Interface Hypothesis and L2 Acquisition of Japanese Pronouns by L1 English Speakers.....	343
Tokiko Okuma	
The Nature of Single Clitics and Clitic Doubling in Early Child Grammar: New Evidence from Bulgarian.....	360
Teodora Radeva-Bork	
The Use of Case in the Comprehension of <i>wh</i> -questions in German-speaking Children with and without SLI.....	379
Anne D. Roesch and Vasiliki Chondrogianni	
Aspects of the Acquisition of Control and ECM-type Verbs in European Portuguese.....	403
Ana Lúcia Santos, Anabela Gonçalves and Nina Hyams	
Gender Marking Strategies in L2 Children and Monolingual Children with SLI.....	416
Maureen Scheidnes	
Finiteness and Verb Placement in Early Second Language Learners with SLI.....	429
Rabea Schwarze, Magdalena Wojtecka, Angela Grimm and Petra Schulz	
Right Branching Indirect Object Relatives in Child Romanian ...	446
Anca Sevcenco	
Locality and Disjointness in Adult Second Language Acquisition .....	460
Tomohiko Shirahata, Noriko Yoshimura and Koichi Sawasaki	

Acquiring Pronominal Subjects in European Portuguese: Interpretation in Indicative and Subjunctive Contexts .....	476
Carolina Silva	
Insights into the Syntactic Deficit of Children with Hearing Impairment from a Sentence Repetition Task .....	492
Ronit Szterman and Naama Friedmann	
Object Clitic Placement for the Diagnosis of SLI in Cypriot Greek .....	506
Eleni Theodorou and Kleanthes K. Grohmann	
On the Acquisition of Ordinal Numbers in German .....	521
Corinna Trabandt, Alexander Thiel, Emanuela Sanfelici and Petra Schulz	
Specific Language Impairment and Bilingualism: Assembling the Pieces .....	533
Laurice Tuller, Layal Abboud, Sandrine Ferré, Alice Fleckstein, Philippe Prévost, Christophe dos Santos, Maureen Scheidnes and Rasha Zebib	
Resumptive Relatives and Passive Relatives in Italian Cochlear- Implanted and Normal Hearing Children .....	568
Francesca Volpato and Anna Cardinaletti	
Comprehension of who Questions in German Children with Hearing Impairment .....	584
Eva Wimmer, Monika Rothweiler, Johannes Hennies, Markus Hess and Martina Penke	
List of Contributors .....	604

# Causatives and the acquisition of the Italian passive

## 1. Introduction

We report here on results investigating the acquisition of the Italian passive in young Italian speaking children. The main aim of our work was to assess children's mastery of three types of passive possible in standard Italian, which will be referred to as *essere* and *venire* passive, according to the passive auxiliary utilized in the periphrasis *Aux + Pst Part (+by)*, and *si*-causative passive. The latter passive combines properties of both the other types *venire* and *essere* passive, and properties of Italian causatives. Specifically, as in all types of passive the internal argument (of the verb in the complement of *fare*) becomes the subject of the clause; as in all Romance/Italian causatives a chunk of the verb phrase is pre-posed to a position immediately next to the causative verb *fare* and the external argument (of the verb in the complement of *fare*) may either remain unpronounced or be realized as an explicit *by*-phrase. (1) illustrates the essential aspects of the derivation just outlined:



Note that the causative derivation shares crucial similarity with the derivation of (copular) passive as proposed in Collins (2005) also involving movement of a chunk of the verb phrase containing the verb and the internal argument. Passive has been traditionally assumed to be a complex construction acquired late, around age 5 (e.g. Fox & Grodzinsky 1998; Maratsos et al. 1985; Borer & Wexler 1987, Hirsh & Wexler 2006), with possible differences depending either on presence (long) vs. absence (short) of the *by*-phrase; or on the nature of verb, actional- easier and earlier acquired - vs. non actional/psychological - harder later acquired -; or on the stative/resultative adjectival nature of the past participle - easier,

not involving the same syntactic movement of the internal argument as a verbal passive. Over the years, however, several studies have shown that not all passives are alike, and that certain passives are not specially demanding for even young children. This is the case for *get*-passive in English (Crain 1991), and more generally for those cases in which use of passive may be clearly favoured by the pragmatics of the discourse situation (Crain et al. 1987/2009, O'Brien et al. 2006, Crawford 2012, Snyder & Hyams 2008). Young children may not have special difficulty with passive in these circumstances already around age 3-4.

Recent results on the acquisition of passive in Italian have reached similar conclusions (Volpato et al. 2012; Manetti 2012, 2013). For instance, although full mastery of the passive is reached around the age of 5 coherently with standard assumptions and cross-linguistic results, children are able to comprehend both long and short passives with either auxiliary *essere* or *venire* at earlier ages. Furthermore, young children are also already able to produce passive sentences with both auxiliary *essere* and *venire* at early ages, although at this time of development they do so rarely. Typically, when a passive is elicited, they prefer to resort to the production of other types of structures. E.g. young children tend to react to a patient-oriented question with an active sentence using a pronoun, as in: *Che cosa succede al re? La mucca lo lecca* /what happens to the king? The cow licks him-cl, instead of: *È-viene leccato dalla mucca*/He is-comes liked by the cow. However, under appropriate experimental conditions, young children properly produce passive sentences also in the young age of 3-4. Hence, at this age, they show to be able to properly compute the passive derivation.

The new empirical contribution of the present study is to check whether also the *si*-causative passive illustrated in (1) is properly computed by children in their young age, 3 to 4. The results to be presented show that not only this is the case, but the *si*-causative passive has in fact a somewhat privileged status in that young children appear to resort to this type of passive early on, and in priming conditions, they are particularly prone to the production of a significant amount of *si*-causative passive sentences.

The article is organized as follows: in section 2 we present the experimental priming design utilized; section 3 illustrates the results. Section 4 discusses the results and hints at a possible principled account for the early access to *si*-causative passive in children, within the frame of the assumed analysis of passives and causatives.

## 2. The study

### 2.1 Participants

Sixty Italian-speaking children, aged from 3; 5 to 4; 6 (MA= 4;0) took part in the study<sup>1</sup>. They were recruited in kindergartens in the area of Florence and Siena and they were all Italian monolingual with no language or developmental impairment. In each experiment we tested 20 children, as shown in Table 1.

	Children (n=)	Age (Months)	Mean Age (SD)
Experiment 1	20	41 – 54	48 (4.41)
Experiment 2	20	41 – 54	47 (4.40)
Experiment 3	20	41 – 54	47 (4.09)

Table 1

### 2.2 Method and materials

In order to test the production of the three types of passives, we utilized a syntactic priming paradigm, adapted from Messenger et al. (2008, 2011 and subsequent work) by Manetti (2012). The test consisted of a picture-description game (*snap* game, Branigan et al. 2005) in which children heard both active and passive sentences in the prime, and then they were asked to describe a set of pictures depicting transitive actions.

Primes and targets represented different verbs and different character pairs, in order to avoid lexical repetition between the prime sentence and the child's description. The active/passive prime alternation was presented as a within-subjects manipulation; in contrast, the passive prime varied as a between-subjects manipulation so that different children at the same age range were tested in the three experiments, as in the original design (see Messenger et al. 2011; Messenger et al. 2012).

Specifically, each child heard 12 *active* primes and 12 *passive* primes presented in individually randomized order. After the description of the

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<sup>1</sup> Notice that data of Exp. 1 and Exp. 2 refer to data reported in Manetti (2013), to which we added two further participants in each experiment.

prime card by the experimenter, the child described her card and no repetition of the prime sentence was required. Children’s production was audio-recorded and analyzed following the coding criteria described in the following section (section 2.3).

Prime cards depicted 6 different actional verbs (agent-patient verbs): *picchiare* ‘to hit’, *colpire* ‘to kick’, *sfiurare* ‘to touch lightly’, *accarezzare* ‘to stroke’, *portare* ‘to carry’, *tirare* ‘to pull’; we then created 24 prime sentences, in which each prime verb was used four times, twice in the active form and twice in the passive form.

Target cards depicted the following 12 transitive verbs: *catturare* ‘to capture’, *baciare* ‘to kiss’, *abbracciare* ‘to hug’, *toccare* ‘to touch’, *schiacciare* ‘to squash’, *inseguire/rincorrere* ‘to chase’, *graffiare* ‘to scratch’, *prendere* ‘to catch’, *lavare* ‘to wash’, *leccare* ‘to lick’, *mordere* ‘to bite’, *spingere* ‘to push’. Figure 1 and figure 2 below show an example of prime-target pair.



Figure 1: *Prime card*



Figure 2: *Target card*

In all experiments, the *active prime* consisted of an active sentence in the form of Subject – Verb – Object; whereas the type of passive prime varied across the experiments (see table 2):

	<b>Active Prime</b>	<b>(Type of) Passive Prime</b>
<b>Exp. 1</b>	<i>La rana picchia il re</i> The frog hits the king	<i>Il re viene picchiato dalla rana</i> ‘The king comes hit by the frog’
<b>Exp. 2</b>	<i>La rana picchia il re</i> The frog hits the king	<i>Il re è picchiato dalla rana</i> ‘The king is hit by the frog’
<b>Exp. 3</b>	<i>La rana picchia il re</i> The frog hits the king	<i>Il re si fa picchiare dalla rana</i> ‘The king makes himself hit by the frog’

Table 2: Active and passive prime sentences.

## 2.3 Coding criteria

Children's descriptions were coded under the categories of (S)VO *active*, *Clitic-Verb*, *Passive*, *Si-causative Passive* and *Other responses*. Children's (S)VO *active* included any active (S)VO sentences (e.g. *(La mucca) lecca il re* / (the cow) licks the king). *Clitic-verb* included sentences with an active verb and an object clitic (e.g. *(La mucca) lo lecca* / (the cow) him.cl licks).

The category *Passive* was further divided into *Target Passive*, *Deviant passive* and *Reversed passive*. *Target passive* consisted of adult-like (short and long) *venire* and *essere* passives (e.g. *Il re viene/è leccato (dalla mucca)* / The king comes/is licked (by the cow)); *Deviant passive* included periphrastic passive structures with non-adult-like passive morphosyntax, and incomplete passives (e.g. *Il pagliaccio viene schiacciato sotto il maiale* / The clown comes squashed under the pig); finally, *Reversed passives* included those passives in which the subject of the passive sentence is the agent and the *by*-phrase is the patient (e.g. *Il leone<sub>.agent</sub> è stato catturato dalla regina<sub>.patient</sub>* / The lion<sub>.agent</sub> has been caught by the queen<sub>.patient</sub>).

As for the production of *si-causative* passives, we coded adult-like short and long *si-causative* passives as *Target si-causative* (e.g. *Il re si fa leccare (dalla mucca)* / the king *si*-makes himself lick (by the cow)); we then coded *si-causative* passives with non-adult-like morphology as *Deviant si-causative* (e.g. *L'altra strega si fa accarezzare all'elefante* / The other witch *si*-makes herself stroke to the elephant); finally *si-causative* passives with reversed order of thematic roles were categorised as *Reversed si-causative* (e.g. *il leone<sub>.agent</sub> si fa tirare dal re<sub>.patient</sub>* / the lion *si*-makes himself pull by the king). The category *Other responses* refers to those utterances that included intransitive verbs, copulas, DPs.

## 3. Results

In section 3.1, we will first present the analysis of children's data showing the effect of the prime manipulation on the production of *active* and target *passive* sentences; in section 3.2, we will provide a more qualitative picture of the overall production, irrespective of the priming conditions, and we will focus on *si-causative* passives.

### 3.1 Analysis of priming effect

The following tables (3a, 3b, 3c) present the proportion (%) of *(S)VO active*, *Target passive*, *Clitic-Verb*, and *Other* categories out of the total number of utterances produced<sup>2</sup> - after active and passive prime conditions – and the difference across prime conditions. Note that below we focus on (S)VO actives and target passives only; non-adult-like structures were all grouped under the *Other* category and were not included in the analyses.

<b>Venire (Experiment 1)</b>				
<b>PRIME</b>	<b>(S)VO</b>	<b>Clitic - Verb</b>	<b>Target Passive</b>	<b>Other</b>
<b>Active</b>	74%	5%	7%	14%
<b>Passive</b>	43%	5%	26%	26%
<b>Difference</b>	+31%	-	<b>+19%</b>	+12%

**Table 3a:** *(S)VO* = all SVO active sentences; *Clitic - Verb* = clitic and verb ; *Target Passive* = Target Passives; *Other* = reversed passives + deviant passives + other responses.

<b>Essere (Experiment 2)</b>				
<b>PRIME</b>	<b>(S)VO</b>	<b>Clitic - Verb</b>	<b>Target Passive</b>	<b>Other</b>
<b>Active</b>	64%	9%	1%	25%
<b>Passive</b>	42%	12%	14%	32%
<b>Difference</b>	+22%	+3%	<b>+13%</b>	+7%

**Table 3b:** *(S)VO* = all SVO active sentences; *Clitic - Verb* = clitic and verb; *Target Passive* = Target Passives; *Other* = reversed passives + deviant passives + other responses.

<b>Si-causative (Experiment 3)</b>				
<b>PRIME</b>	<b>(S)VO</b>	<b>Clitic - Verb</b>	<b>Target Passive</b>	<b>Other</b>
<b>Active</b>	69%	7%	10%	15%
<b>Passive</b>	45%	11%	18%	27%
<b>Difference</b>	+24%	+4%	+8%	+12%

**Table 3c:** *(S)VO* = all SVO active sentences; *Clitic - Verb* = clitic and verb; *Target si-causative* = Target *si-causative*; *Other* = reversed *si-causative* + deviant *si-causatives* + other response.

<sup>2</sup> For a detailed discussion on the different possibilities for coding and analysing children's productions in syntactic priming studies, see Bencini and Valian (2008).

We used R (R Core Team, 2012) and the package *lme4* (Bates, Maechler & Bolker, 2012) to run a mixed logit model (see Jaeger 2008) which controlled for the effect of *prime* and *passive auxiliary* manipulations onto children’s active and passive sentences (Active (S)VO, Target passive). In the model, we included *prime* (active vs. passive) and *passive auxiliary* (*venire/essere/si-causative*) as fixed effects and we controlled for the interaction effect as well. As random effects, we entered subjects and items. We then added random slopes for main effects and interaction in forward selection (first for subjects and then for items). The factor labels (*prime*) were centered to obtain a mean of 0 and a range of 1. Below we report the model that improved the fit relative to the simpler model.

First, we analyzed the main effect of *prime* on children’s active structures: as fixed effect, we only entered *prime* into the model; as random effects, we included intercepts for subjects and items, as well as by-subject random slopes for the effect of *prime*. The analyses showed a significant main effect of *prime* for the production of active (S)VO structures (+26%,  $p < .001$ ) (see table 4).

Predictor	Coefficient	Std. Error	Walz Z	p
Intercept	0.29	0.13	2.12	<.05
<i>Prime</i>	-1.22	0.14	-8.19	<.001

**Table 4a:** Active SVO analysis: coefficients and probabilities.

The analysis on the production of *target passives* was carried out by including *prime*, *auxiliary* as fixed effects and the interaction of main effects (*prime\*auxiliary*) into the model; we entered by-subject intercepts as random effects; random slopes for *prime* effect were also included.

Predictor	Coefficient	Std. Error	Walz Z	p
Intercept	- 2.40	0.34	- 6.91	< .001
<i>Prime</i>	1.80	0.44	4.05	< .001
<i>Si-caus.*essere</i>	-1.45	0.58	-2.50	< .05
<i>Venire*essere</i>	-1.42	0.58	-2.42	< .05
<i>Prime*Essere*Si-caus.</i>	1.64	0.86	1.90	= .056
<i>Prime*Venire*Si-caus.</i>	-1.03	0.60	- 1.71	= .08

**Table 4b:** Target passive analysis: coefficients and probabilities.

The best-fit model, summarized in table 4b, shows a significant increase of target passives after passive primes (+13%;  $p < .001$ ). As for the *auxiliary* effect, we observed a significant difference in the overall production of target passives across groups: children exposed to *essere* passives produced significantly less passives (36/465, 8%), compared to

the *venire* condition (77/467, 16%;  $p < .05$ ) and the *si-causative* condition (65/468, 14%;  $p < .01$ ); no significant difference emerged between the *venire* and *si-causative* groups with respect to the overall amount of target passive structures produced ( $p > .9$ ). The model also showed a marginally significant *prime\*auxiliary* interaction effect: in particular, the priming effect on target *si-causative* structures marginally differed from priming effect in the *venire* condition (8% vs. 19%,  $p = .08$ ) and from the priming effect in the *essere* condition (8% vs. 13%,  $p = .056$ ). No significant difference emerged between the *essere* and *venire* condition with respect to the priming effect.

We now report the results for each experiment, focusing on the effect of active and passive primes on actives and target passives in children's descriptions. In *Experiment 1* - the model, including *prime* as fixed effect and by-subject and by-item intercepts as random effects - showed a significant increase of active (S)VO sentences after active primes (+31%,  $p < .001$ ). As for target passives, in the model we had by-subject intercepts as random effect and *prime* as fixed effect, and it showed a significant effect of *prime* on target passives production (+19%;  $p < .001$ ). In *Experiment 2*, the model, in which we had by-subject and by-item intercepts, and by-subject random slopes for *prime*, showed a significant effect of *prime* on active (S)VO sentences (+22%,  $p < .001$ ). As for target passives, we entered *prime* as fixed effect, and by-subject random slopes for the effect of *prime*: the increase of passive production (+13%) is only marginally significant ( $p = .09$ ). In *Experiment 3*, the exposure to active primes led to +24% active (S)VO sentences after actives ( $p < .001$ ): the model included by-subject and by-item intercepts as random effects. The analysis on passives revealed a significant increase of *si-causatives* after *si-causative* primes (+8%,  $p = .01$ ); into the model we had by-subject intercept and by-subject random slopes for *prime* effect. Table 5 shows the best-fit models for each experiment, regarding the production of target passives only<sup>3</sup>.

	Predictor	Coefficient	Std. Error	Walz Z	p	Slope
EXP.1 ( <i>Venire</i> )	Intercept	-2.45	0.39	-6.29	< .001	no
	<i>Prime</i>	1.98	0.35	5.63	< .001	
EXP.2 ( <i>Essere</i> )	Intercept	-3.67	0.40	-8.98	< .001	Yes
	<i>Prime</i>	1.32	0.79	1.68	= .09	
EXP. 3 ( <i>Si-causa</i> )	Intercept	-2.31	0.27	-8.32	< .001	yes
	<i>Prime</i>	1.03	0.41	2.48	< .05	

**Table 5:** coefficients and probabilities for target passive responses.

<sup>3</sup> We do not report the coefficients for the active responses for space reason.

To summarize the results of the analyses, the exposure to active primes led to a significant increase of *Active (S)VO* sentences in the target descriptions, both in the overall and each group analyses. As for target passive production, the increase of passive was also significant in the overall analysis (+13%,  $p < .001$ ). In the separate analyses for each group, children exposed to either *venire* or *si-causative* passives showed a significant priming effect (+19%,  $p < .001$ ; +8%,  $p < .05$ ); which instead was only marginally significant in the *essere* group (+13%,  $p = 0.09$ ). Moreover, the production of passives differed across groups: children produced more passives in the *venire* (77/467, +16%) and *si-causative* conditions (65/468, +14%); while the *essere* group produced fewer target passives (36/465, +8%). Finally, the interaction (auxiliary\*prime) analysis revealed a marginal significant difference in the priming effects for passives only across groups. We do not examine this difference in further details, and we leave it open for further investigation and analysis (Belletti and Manetti in progress).

### 3.2 Analysis of children's descriptions

In this section we present a qualitative description of the structures used by children, regardless of the prime manipulation. We focus on the overall production in order to analyze which kind of structures children produced to describe the transitive action depicted on the target cards. As mentioned in Section 1, our main interest here is to examine whether children master the production of the *si-causative* passive.

Table 6 shows the raw numbers and percentages of the sentences produced in each category<sup>4</sup>, and it also specifies the number and types of passives produced in terms of adult-like and non-adult-like structures. Note that for Experiment 3, the labels 'Target passive', 'Reversed passive' and 'Deviant passive' refer to *si-causative* passives.

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<sup>4</sup> Note that in Table 6, differently from Tables 3 (a.b.c), we do not distinguish between the production after active and passive prime conditions.

	(S)VO	Clitic - Verb	Target Passive	Reversed Passive	Deviant Passive	Other responses
<b>Exp. 1</b> ( <i>venire</i> )	274/467 59%	23/467 5%	77/467 16%	23/467 5%	5/467 1%	65/467 14%
<b>Exp. 2</b> ( <i>essere</i> )	246/465 53%	50/465 11%	36/465 8%	15/465 3%	10/465 2%	108/465 23%
<b>Exp. 3</b> ( <i>si-caus.</i> )	265/468 57%	42/468 9%	65/468 14%	33/468 7%	9/468 2%	54/468 11%

Table 6: overall children's production: raw number for each coding group out of the total number of utterances produced; percentages.

As illustrated in Table 6, children preferred the use of active SVO sentences to describe a transitive action (59% in Exp. 1; 53% in Exp.2; 57% in Exp. 3). This tendency is in line with previous priming studies with English-speaking adults and children (e.g. Messenger et al. 2012) and also with Italian-speaking adults, which reported a strong preference for active SVO sentences when describing a transitive action, despite the exposure to passive primes (e.g. Manetti 2012). For space reason we do not address here a close comparison between children and adult controls (Belletti and Manetti in progress)

Children's production also included a set of sentences containing an object clitic followed by an active verb (Exp. 1 5%; Exp. 2 11%; Exp.3 9%). Under the general 'Clitic - verb' category, children produced sentences in which the topicalized object (full DP) was either overt (example 2), or left unpronounced (example 3). We do not go further in discussing the structure of pronominalized sentences, and we will address this topic (e.g. with analysis of this structure under different discourse conditions) in future research (Belletti and Manetti in progress).

- (2) Il re, la mucca lo lecca  
The king, the cow him.cl licks  
*The king, the cow licks him*
- (3) La mucca lo lecca  
The cow him.cl licks  
*The cow licks him*

As for passives, exposure to passive primes elicited the production of the three types of target passives: children from the age of 3;5 master the production of *essere* and *venire* passives (as previously shown in Manetti 2012, 2013 and Volpato et al. 2012); results from Exp.3 revealed that they also master the production of *si-causative* passives. Specifically, as

reported in section 3.1, children numerically produced more *venire* and *si*-causative passives, compared to *essere*-passives. Moreover, the analysis of individual productions shows that in *venire* and *si*-causative experiments, 80% of children (16/20) produced at least a target passive (Experiment 1) and a target *si*-causative passive (Experiment 3); this differs from Experiment 2, in which only half of subjects produced a target (copular) passive (10/20, 50%).

A closer look at the *si*-causative production revealed that children produced 23 *si*-causatives after active primes and 42 *si*-causatives after *si*-causative passive primes, resulting in +8% difference across priming conditions. This increase is smaller than in Exp. 1 and 2, in which the production of passives occurred more often after passive primes, resulting in a greater effect across priming conditions (in Exp. 1: 17 *passives* after active primes, 60 *passives* after passive primes; +19%; in Exp. 2: 3 *passives* after active primes, 33 *passives* after passive primes, +13%). This numerical difference led to marginal significant difference, as reported in section 3.1, which we will further investigate in future work.

In addition, it is worth reporting that children produced (some) *si*-causatives after being exposed to copular passive prime: this tendency was already found in previous independent findings, in another priming study with Italian-speaking children (Manetti 2012). In (4) the child started with a copular passive and then completed her description using a *si*-causative passive:

- (4) Il dottore è colpito...si fa graffiare da un gatto  
The doctor is hit ... makes himself scratch by the cat

As concerns the non-adult-like production of passives, we observed a similar pattern of non-target passive structures in the three groups (for further details on *venire* and *essere* non-adult-like passives, see Manetti 2013): children's non-adult-like passives mainly consisted of reversed passives, together with a small number of deviant passives, in which the passive morphosyntax diverged from adult grammar (e.g. the oblique object was preceded by a preposition different from *da*), as shown in the following examples:

- (5) Il dottore è stato dato un bacio *alla* rana  
The doctor *has been given* a kiss *to* the frog  
(6) L'uomo viene annaffiato *sotto* la ranocchia  
The man comes watered under the frog  
(7) La fatina si fa accarezzare *all'*elefante  
The fairy *si*-makes stroked *to* the elephant

## 4. Discussion

Coherently with previous studies on Italian (Manetti 2013, Volpato et al. 2012), the results reported in this study have shown that young children are able to compute both *venire* passive and *essere* passive already at early ages (see also Delage 2008 and Cronel-Ohayon 2004 on French). The effect of syntactic priming has been sharper with *venire* passive than with *essere* passive. We interpret this as the consequence of the fact that all verbs used in the priming experiment were actional verbs: the lexical and aspectual (Gherke & Grillo 2009) properties of these verbs should then be at source of the wider resort to passive under priming when the auxiliary was *venire* than when it was *essere*.

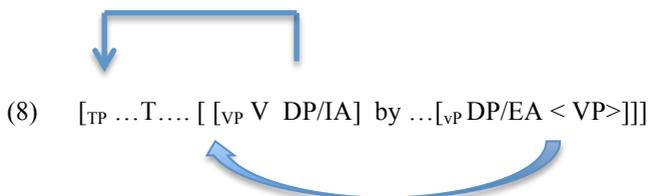
The most salient result of our study, which we want to focus on in this discussion, is the significant resort to the *si*-causative passive by young children emerged in the priming experiment. It should be noted that children had both a significant number of productions of *si*-causative passives under *si*-causative priming and also produced some *si*-causative passives when the priming sentence was either a copular *essere* passive (see also Manetti 2012), and also after active primes (as noted in connection with table 3c in section 3.1); the opposite has never occurred; i.e. it has never been the case that either a *essere* or *venire* passive was produced after a *si*-causative passive prime. This seems to suggest a sort of privileged status of the *si*-causative passive over the others. The special status of the *si*-causative passive that our results indicate is coherent with the fact that *si*-causative passive has also shown an analogous privileged status in other studies.

Results presented in Contemori & Belletti (2013) on the production of relative clauses by Italian speaking children have shown that children tend to conform to the systematic behavior of Italian speaking adults in that they tend produce Passive Object Relatives/PORs when (lexically headed, active) object relatives are elicited, a very robust result in Italian. The first type of passive to appear in young children's productions of PORs is precisely the *si*-causative passive already at the age 3;4-4 (e.g.: *Vorrei essere la bambina che si fa pettinare dalla mamma*/I would rather be the girl that *si*-makes comb by the mother). Moreover, data from comprehension presented in Contemori & Belletti (2013) have clearly shown that older children aged 6 to 8;10, not only systematically better comprehend PORs than (active) object relatives – an interesting fact *per se* – but also, among the different passives tested (*si*-causative, copular,

reduced), they have the best comprehension of those PORs containing a *si*-causative passive.

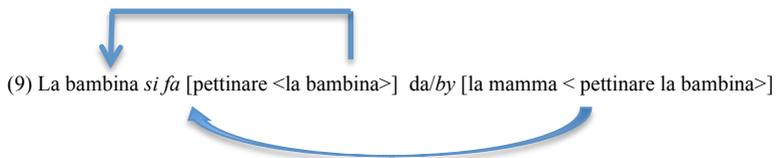
Taken together, the results from the priming experiment presented in this study and the previous results from PORs just described indicate that the *si*-causative passive has a special status for (young) children; it may also be the first type of passive in children's development, as the production results of PORs suggest. We would like to conclude this discussion with an outline of the reasons as to why it should be so, leaving for future research a closer investigation of different facets of the developmental question.

We assume a derivation of passive *à la* Collins (2005) according to which a chunk of the verb phrase containing the (past participle) verb and the internal argument (DP/IA) is moved to a position in the clause structure higher than the external argument (DP/EA) in the specifier of vP. This movement, *smuggling* in Collins' terms, is triggered by a component of the passive voice that, for the sake of simplicity, can be identified with preposition *by*, present as part of the clause functional architecture (Kayne 2004). The assumed derivation is schematically presented in (8), details aside:



The most salient feature of the *smuggling* derivation is that it provides a computation for passive which is in compliance with the general locality of syntactic derivations (i.e. Relativized Minimality, Rizzi 1990, 2004): in contrast with traditional derivations, the DP/IA moves into the subject position of the clause from the derived position, with no crossing over the DP/EA which remains lower in the structure in the vP-internal Merge position.

The derivation of passive illustrated in (8) shares one crucial formal ingredient with the assumed derivation the *si*-causative schematically illustrated in (1) in the introduction, repeated in (9) for convenience:



In both cases a chunk of the verb phrase is moved to a position higher than the external argument, *la mamma* of the example in (9) (the trigger here is the causative voice of the verb *fare*). From this derived position, the internal argument moves into the clausal subject position. Hence, the fact that *si-causative* passive is properly mastered by young children when other types of passive are also mastered is not surprising, as they all share a derivational mechanism which involves movement of a chunk of the verb phrase.

As for the developmental question raised in this discussion, which indicates a possibly privileged status of *si-causative* passive in (young) children we submit the following speculation. The earlier/privileged appearance of *si-causative* passive in young children may be due to the fact that the pre-posed chunk of the verb phrase containing the (infinitival) verb and the internal argument is overtly visible with causatives (Burzio 1986, Rouveret & Vergnaud 1980, Zubizarreta 1985 for classical analyses of Romance causatives involving so called VP-preposing). Consider in this respect an Italian active causative as the one in (10):

- (10) Maria farà [pettinare la bambina] dalla mamma  
 Maria will make [comb the girl] by the mother

Thus, young children may relatively easily recognize the crucial property of the causative head, the functional verb *fare* as a head attracting syntactic movement of the relevant chunk of the verb phrase (Belletti 2014). This would make movement of the chunk of the verb phrase containing the (infinitival) verb and the internal argument also readily available for children in the *si-causative* passive. The (Case) properties most likely induced by presence of clitic *si-* should then be responsible for the further movement of the internal argument into the clausal subject position, an operation that children also master with *essere* and *venire* passives. We leave the further elaboration of this line of interpretation open to further investigation as it is the topic of currently ongoing research.

## References

- Bates, Douglas, Martin Maechler and Ben Bolker (2012), *lme4: Linear mixed-effects models using Eigen and Eigenfaces*. R package version 0.999999-0.
- Bencini, Giulia M.L., and Virginia V. Valian (2008), “Abstract sentence representation in 3-year-olds: evidence from comprehension and production,” *Journal of Memory and Language* 59, 97–113
- Belletti, Adriana, and Carla Contemori (2010), “Intervention and attraction. On the production of Subject and Object relatives by Italian (young) children and adults,” in: João Costa et al. (Eds), *Language Acquisition and Development*, 3, Cambridge, UK: CSP.
- Belletti, Adriana, and Luigi Rizzi (2012), “Moving Verbal Chunks,” in: L. Brugé et al 2012 (Eds.) *Functional Heads*, Oxford: Oxford University Press.
- Belletti, Adriana (2014), "Voices: The shared mechanisms of passive, causatives and passive in the causative, with some evidence from acquisition", talk given at GIST7: Cartography and Beyond 2014, University of Ghent, June 4 – 6.
- Borer, Hagit, and Ken Wexler (1987), “The maturation of syntax,” in: Thomas Roeper and Edwin Williams (Eds.), *Parameter setting*, 123-172, Dordrecht: Reidel.
- Branigan, Holly P., and Janet F. McLean, and J. & Jones, M. (2005), “A Blue cat or a cat that is blue? Evidence for abstract syntax in young children’s noun phrases,” in Brugos, Alejna, Manuella R. Clark-Cotton and Seungwan Ha (Eds.), *The Proceedings of the Twenty-Ninth Boston University Conference on Language Development*, 109–121, Somerville, MA: Cascadilla Press.
- Burzio, Luigi (1986), *Italian Syntax*. Dordrecht: Reidel.
- Collins, Chris (2005), “A Smuggling Approach to the Passive in English,” *Syntax* 8, 2, 81-120.
- Contemori, Carla, and Adriana Belletti (2013), “Relatives and Passive Object Relatives in Italian speaking children and adults: Intervention in

production and comprehension,” *Applied Psycholinguistics*, DOI: <http://dx.doi.org/10.1017/S0142716412000689>.

Crain, Stephen (1991), “Language acquisition in the absence of experience,” *Behavioral and Brain Sciences*, 14, 597–650.

Crain, Stephen, Rosalind Thornton and Keiko Murasugi (1987), “Capturing the evasive passive”, Paper presented at 12th Annual BUCLD 1987, Boston, MA.

Crain, Stephen, Rosalind Thornton and Keiko Murasugi (2009), Capturing the evasive passive. *Language Acquisition*, 16(2), 123-133.

Crawford, Jean (2012), *Developmental Perspectives on the Acquisition of the Passive*, Doctoral Dissertation, University of Connecticut.

Cronel-Ohayon, Stéphanie (2004), *Etude longitudinale d'une population d'enfants francophones présentant un trouble spécifique du développement du langage: Aspects syntaxiques*, PhD thesis, University of Geneva.

Delage, Helene (2008), *Evolution de l'hétérogénéité linguistique chez les enfants sourds moyen légers: étude de la complexité morphosyntaxique*. PhD thesis, University of Tours.

Fox, Danny, and Yosef Grodzinsky (1998), “Children’s Passive: a view from the By-Phrase,” *Linguistic Inquiry*, 29, 311-332.

Gehrke, Berit, and Nino Grillo (2009), “How to become passive,” in: Kleantes K. Grohmann (Ed.), *Exploration of Phase Theory: features, arguments, and interpretation at the Interfaces*, 231-268, Berlin: De Gruyter.

Hirsch, Christopher and Ken Wexler (2006), “Children’s passive and their resulting interpretation”, in: Kamil Ud Deen, J. Nomura, B. Schulz, and B.D. Schwartz (Eds.), *The Proceedings of the Inaugural Conference on Generative Approaches to Language Acquisition North America, University of Connecticut Occasional Papers in Linguistics*, 4, 125-136, Honolulu, HI: University of Connecticut Occasional Papers in Linguistics, 4.

- Kayne, Richard (2004), "Prepositions as probes," in Adriana Belletti (Ed.) *Structures and Beyond. The Cartography of Syntactic Structures*, Vol. 3, Oxford University Press: New York.
- Maratsos, Michael, Dana E.C Fox, Judith A. Becker, and Mary Anne Chalkley (1985), "Semantic restriction on children's passive," *Cognition*, 19, 167-191.
- Manetti, Claudia (2012), *The acquisition of Italian passives: Evidence from comprehension, production and syntactic priming studies*, Ph.D dissertation, University of Siena.
- Manetti, Claudia (2013), "On the production of passives in Italian: evidence from an elicited production task and a syntactic priming study with preschool children," in Sarah Baiz, Nora Goldman, and Rachel Hawkes (Eds.) *BUCLD 37 Online Proceedings Supplement*, Boston University.
- Messenger, Katherine, Holly P. Branigan, Janet F. McLean and Antonella Sorace (2008), "English-Speaking Children's Early Passives: Evidence from Syntactic Priming," in: Harvey Chan, Heather Jacob and Enkeleida Kopia, (Eds.) *BUCLD 32: Proceedings of the 32nd annual Boston University Conference on Language Development*, 275-286, Boston: Cascadilla Press.
- Messenger, Katherine, Holly P. Branigan and Janet. F. McLean, (2011), "Evidence for (shared) abstract structure underlying children's short and full passives," *Cognition*, 121, 268-274.
- Messenger, Katherine, Holly P. Branigan, Janet F. McLean and Antonella Sorace (2012), "Is young children's passive syntax semantically constrained? Evidence from syntactic priming", *Journal of Memory and Language*, 66, 568-587.
- O'Brien, Karen, Elaine Grolla and Diane Lillo-Martin (2006), "Long passive are understood by young children," Bamman, David, T. Magnitskaia, and C. Zaller (Eds.), *Proceedings of the 30th Annual Boston University Conference on Language Development*, 441-451, Somerville, MA: Cascadilla Press.
- R Core Team (2012), *R: A language and environment for statistical computing*. R Foundation for Statistical Computing, Vienna, Austria.

- Rizzi, Luigi (1990), *Relativized Minimality*. Cambridge, MASS: MIT Press.
- Rizzi, Luigi (2004), "Locality and the left periphery," in: Adriana Belletti (Ed), *Structures and Beyond: The cartography of syntactic structures*, Vol. 3., 223-251, New York: Oxford University Press.
- Rouveret, Alain, and Jean-Roger Vergnaud (1980), "Specifying Reference to the Subject: French Causatives and Conditions on Representations," *Linguistic Inquiry*, 11, 97-202
- Snyder, William and Nina Hyams (2008), Children's passives: The role of discourse features. UConn Psycholinguistics Brownbag, 6 September 2008.
- Volpato, Francesca, Laura Verin and Anna Cardinaletti (2012), "The acquisition of passives in Italian: Auxiliaries and answering strategies in an experiment of elicited production," Paper presented at The Romance Turn V, Universidade Nova de Lisboa.
- Zubizarreta, Maria Luisa (1985), "The relation between morphophonology and morphosyntax: the case of Romance causatives," *Linguistic Inquiry* 16, 247-289.