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The Acquisition of Italian

Morphosyntax and its interfaces in different modes of acquisition

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A major contribution to the study of language acquisition and language development inspired by theoretical linguistics has been made by research on the acquisition of Italian syntax. This book offers an updated overview of results from theory-driven experimental and corpus-based research on the acquisition of Italian in different modes (monolingual, early and late L2, SLI, etc.), as well as exploring possible developments for future research. The book focuses on experimental studies which address research questions generated by linguistic theory, providing a detailed illustration of the fruitful interaction between linguistic theorizing and developmental studies. The authors are leading figures in theoretical linguistics and language acquisition; their own work is featured in the research presented here. Students and advanced researchers will benefit from the systematic review offered by this book and the critical assessment of the field that it provides.

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"A highly readable, truly informative, and remarkably thought provoking piece of work."

Gennaro Chierchia, *Harvard University*

"*The Acquisition of Italian* is a comprehensive, up-to-date overview of grammatical development in Italian-speaking children. [...] I highly recommend this volume to anyone interested in grammar acquisition in young children, especially as viewed through the lens of Italian."

Nina Hyams, *UCLA*

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CHAPTER 4

The acquisition of passive voices

1. Introduction.

Following traditional descriptions, the term passive refers to structures in which, by virtue of the presence of a dedicated verbal morphology and other properties, such as the presence of a special preposition, in sum in the presence of a passive voice, the nominal arguments of a transitive verb are associated with different grammatical functions compared to sentences containing the same verb in the active voice. Active-passive pairs of sentences containing the same verb are illustrated by the English sentences in (1):

(1) The mother washes the girl
(2) The girl is washed by the mother

That the verb is the same verb in the two cases is indicated by the fact that the roles present in its argument structure are exactly the same in the two sentences; e.g. an agent and a patient in the standard pair in (1)-(2), or a theme and a goal, a theme and a source, a theme and an experiencer in the pairs in (3):

(3) John received the letter // The letter was received by John
(4) John sent the box // The box was sent by John
(5) John fears the enemy// The enemy is feared by John

The pairs in (1)-(5) clearly illustrate the fact that the interpretation of both the external and internal argument of the different verbs, which are respectively associated with the grammatical function of subject and direct object in the active sentences containing them, remains exactly the same in the passive sentences, in which the internal argument is the subject of the clause and the external argument is the object of preposition *by*, a crucial component of the passive voice in English (see the classical work by Williams 1981 for the terms external/internal arguments). The well known facts in (1)-(5) are thus crucial properties, which any treatment of passive must capture; they have been given the deserved prominence since the first accounts in formal generative treatments (e.g. Chomsky 1965), and in particular since the P&P model up to the most recent accounts also in the minimalist tradition, as well as in the acquisition literature (e.g. Chomsky 1981, Baker et al. 1989; Collins 2005; Fox and Grodzinsky 1998). The relation that the pairs in (1)-(5) explicitly illustrate is

at the source of the core mechanism of the analysis for the derivation of passive involving movement of the internal argument into the subject position of the clause. The trigger of the movement computation is (some component of) the passive voice, which in English and several other languages is periphrastically expressed through a dedicated auxiliary BE + past participle + preposition *by* introducing the external argument, optionally overtly present. The Italian passive in these respects is very similar to the English one as is illustrated by the pairs in (6). The pairs in (6) also illustrate the possibility that beside the auxiliary *essere* the auxiliary *venire* can also be used (otherwise a verb of motion when not used as a passive auxiliary):

(6) a La mamma lava la bambina
The mother washes the girl

b La bambina è/viene lavata dalla mamma
The girl is/comes washed by the mother

c Gianni spedì la lettera
Gianni sent the letter

d La lettera fu/venne spedita da Gianni
The letter was/came sent by Gianni

Essere and *venire* are not always interchangeable and are not always equally adequate or even well formed to enter the passive voice of different lexical verbs. For instance, whereas *essere* allows for a stative interpretation *venire* is plainly felicitous with an eventive interpretation, e.g. *La porta è chiusa*/*La porta viene chiusa* (The door is closed/the door comes closed). The eventive reading becomes the much preferred option in the past tense and it is the only option also with auxiliary *essere* with any tense when the *by* phrase is overt: e.g. *La porta fu chiusa*/*La porta è chiusa dal responsabile del presidio* (The door was closed// The door is closed by the guardian of the structure). Furthermore, with some verbs, in particular in the present tense, *venire* is preferred over *essere*: *Il permesso viene rilasciato dal responsabile*/?*Il permesso è rilasciato dal responsabile* (The permit comes delivered by the responsible/? The permit is delivered by the responsible)*; La traduzione viene trascritta in inglese/?La traduzione è trascritta in inglese* (The translation comes transcribed in English/?The translation is transcribed in English) . There are thus interesting and subtle factors guiding the choice of the passive auxiliary in the Italian passive, which point both to

the relevance of temporal/aspectual distinctions and to lexical properties of different verbs. No detailed systematic account is present in the theoretical literature for these often subtle differences. We just mention them here at this purely observational level, as we will occasionally make reference to them in describing some results from acquisition studies to be reviewed, which may bear in part on these distinctions. That aspectual and lexical factors, ultimately related to the aspectual properties of the event that the verb describes, may be implicated and may constrain the computation of passive is proposed in Gerhke & Grillo (2009). Thus, that auxiliary choice may be partly sensitive to the same distinctions is not unprecedented and surprising.

The cross-linguistic acquisition literature has agreed over the years that a full and productive mastery of passive is somewhat delayed until the age of 5-6 in typically developing children, with possible, although not necessary, differences according to: i. whether the *by*-phrase is expressed, commonly referred to as long passive, or not, as in short passive (Fox & Grodzinsky 1998); ii. whether the verb describes an actional event or a non actional/psychological one (Maratsos et al. 1985); iii. whether the past participle can be given an adjectival stative/resultative interpretation or not (Borer & Wexler 1987, Hirsh & Wexler 2006, Gavarró, Parramon, Rallo 2013, the latter also testing structures according to the different stative auxiliary *ser* vs the resultative one *estar* in Catalan). [1] However, other studies have shown that different languages may differ as to the earlier mastery of passive (Demuth 1989), and different auxiliaries may yield different better results (e.g. *get* in English vs *be*, Crain 1991) also in those languages in which passive appears to be delayed. Furthermore, if appropriate discourse conditions are created (e.g. focus interpretation of the *by*-phrase, presence of purpose clause) young children are able to both produce and comprehend passive also in a language like English already around age 3-4 (Crain et al. 1987/2009, O'Brien et al. 2006, Crawford 2012, Snyder & Hyams 2014).

Italian is no exception to this mixed picture. A full adult-like comprehension of passive can be documented at around age 5 (Ciccarelli 1998, and the discussion in Guasti 2007; Volpato et al. 2012, Manetti 2012 for more recent results to be reviewed in 3). In contrast, experimental studies utilizing the syntactic priming technique have documented an earlier mastery of passive in the production of 3 to 4 y.o. children, which also indicates a proper comprehension of the passive construction and the redistribution of arguments that it implies (Manetti 2013, section 2, 2012 section 3).

[1] Further cross-linguistic studies include Pierce (1992), Lau (2011), Terzi & Wexler (2002). See also Armon-Lotem et. al. (2014) for an overview and a cross-linguistic study.

As for the acquisition of passive in different populations, little is known about the SLI population in Italian, although studies run in English (Marinis & Saddy 2013 for recent overview and new results for English) point to a general specific difficulty in the comprehension of passive sentences. Similar difficulties are found in the young L2 population analysed in this study. In addition, some indirect evidence for the later acquisition of passive may be provided for the adult L2 population; the relevant data are those presented in chapter 5, which have indicated that recourse to passive in relative clauses, i.e. production of PORs/Passive Object Relatives when object relatives are elicited increases with the growth of the level of knowledge attained in Italian; the least advanced adult L2 speakers (from different L1s, most of them English L1) rather produced the hard object relative structure than a POR, i.e. passive in the relative. This result has been interpreted as a sign of the difficulty in processing and efficiently accessing inflectional morphology, hence including the passive morphology, characteristic of the (adult) L2 population (consistent also with Franciotti 2014 recent experimental results on the adult L2 acquisition of the Italian passives)[2]. In this respect this result conforms to the one just mentioned from Marinis & Saddy's study of English L2 children. Finally, a difficulty with the proper interpretation of non-actional reversible passives has been documented in a preliminary study by Reggiani (2009) run with dyslexic Italian speaking children. Given the scarcity of data on the acquisition of the Italian passive(s) in different populations, we do not further develop this theme here, and limit our presentation in this chapter to the illustration of the state of the art in the domain of typical monolingual development.

The chapter is organized as follows. The following subsection 1.2 illustrates the assumed derivation of passive in terms of the operation moving a chunk of the verb phrase, often referred to as *smuggling* (Collins 2005). Sections 2-2.1 are dedicated to the presentation of the experimental results on production of different types of passives in young children with special attention to what we will refer to as the *si*-causative passive; section 3 reports on the available results from comprehension. Section 4 concludes the chapter and suggests elements for future research.

1.2. The derivation of passive

Although for the reasons discussed in the previous section, the derivation of passive should involve movement of the internal argument of the verb into the subject position of the clause, this movement cannot directly occur from the object position in which the internal argument (IA) is merged. One crucial reason for this is locality/Relativized Minimality (Rizzi 1990, 2004a; see also

[2]MA thesis, University of Siena.

the related discussions in chapters 5 on PORs, and chapter 6 on POQs). Given a schematic representation as (7), direct movement of the internal argument into the subject position of the clause would inevitably cross over the external argument (EA) merged into a higher position of the vP- predicate:

(7) [$_{TP}$ …T.....[$_{vP}$ *DP/EA* v [$_{VP}$ V DP/IA]]]

On the basis of locality considerations of this type, Collins (2005) proposed to reconsider the standard derivation and to assume that the derivation of passive is stepwise: it first involves movement past the external argument of a chunk of the verb phrase containing (at least) the (past participle of the) verb and its object/internal argument. The derivation, that Collins called *smuggling*, is triggered by the passive voice, identified with the preposition *by* in the schematic derivation in (8), one of its crucial components; the internal argument can then move from this position in the specifier of the passive voice into the subject position of the clause with no violation of locality/Relativized Minimality, as the external argument does not intervene anymore in the path of this movement from the higher position (see chapter 5):

movement of internal argument/object DP

(8) [$_{TP}$ …T..... [$_{Passive\ voice}$ [$_{VP}$ V DP/IA] [*by*] [$_{vP}$ DP/EA v <[$_{VP}$ V DP/IA]>]]]

movement of verbal chunk/*smuggling*

The derivation of passive along the lines illustrated in (8) indicates that passive is not just a process, which crucially involves movement of a DP, i.e. the internal argument; movement of part of the predicate VP also takes place in the derivation. We note here, without further discussion, that this latter aspect of the derivation of passive is taken to be crucial also in an approach *à la* Gerhke & Grillo's (2009) where it is also tightly linked to the aspectual and discourse-pragmatic properties of the event described through passive (see the quoted work for details).

In the rest of this chapter, the analysis of passive along the lines illustrated in (8) will be assumed as the background analysis.

2. The production of Italian passive sentences in typically developing monolingual children

Recent studies by Manetti (2012, 2013) have investigated the ability to produce passive of young monolingual children acquiring Italian aged 3;5-4;6. Two picture descriptions tasks have been designed, which we review in turn. In the first task, children had to describe transitive actions involving an agent and a patient depicted in different pictures in a set of picture cards. They had to do so in response to two questions: a general question (referred to as neutral), *Che cosa succede?*/What happens?, and a patient-oriented question, e.g. *Che cosa succede al re?*/What happens to the king? In principle, the patient-oriented question can have two felicitous answers in Italian: an active sentence in which the object is realized as a pronoun (9a), with or without presence of the lexical topic object in a left or right peripheral topic position ((9)b, c); or a passive sentence with an expressed *by*-phrase (10). The sentences in (9) can be considered variants of the same structure (the one in (9a) involving a silent topic, Belletti 2009). The sentences in (9), (10) are all appropriate answers to the question depicted in the picture in Figure 1 from Manetti's set of cards:

Figure 1

Question: *Che cosa succede al re?*/What happens to the king?

(9) a La mucca lo lecca
the cow him-CL licks

b Il re, la mucca lo lecca
the king, the cow him-CL licks

c La mucca lo lecca, il re
the cow him-CL licks, the king

(10) (Il re) è/viene leccato dalla mucca
(the king) is/comes licked by the cow

12 children aged 3;5-4;6 have been tested on a total of 24 questions, 8 neutral questions, 8 agent-oriented questions, and 8 patient-oriented questions. The agent-oriented questions elicited active SVO answers (
La mucca) lecca il re//(the cow) licks the king, with a null subject preferred in Italian in the given context). There was a group of 12 adult controls. Table 1 summarizes the results of this task:

Table 1 Percentages of children's and adults' productions of passive sentences and other structures as a function of question type, Agent-oriented, Patient-oriented and Neutral. (adapted from Manetti 2013)

	Children				**Adults**			
Question Type	(S)VO	Pronoun	Passive	Other	(S)VO	Pronoun	Passive	Other
Ag-or	65%	25%	0	10%	97%	0	0	3%
Pat-or	26%	**62%**	0	7%	5%	3%	**90%**	2%
Neutral	54%	36%	0	10%	81%	0	15%	4%

The most striking and highly significant result of this production task is that the young children tested never produced a passive answer, not even in the patient-oriented question condition, where passive was instead the overwhelmingly preferred answer obtained from the adults. In this condition, children rather strongly preferred the use of a transitive active structure with a pronoun expressing the topic object of the type in (9). It thus seems that the young children tested did not spontaneously choose the passive answer, which was one of the appropriate choices in the discourse condition set by question-answer setting. Rather, they went for the pronominalization of the object as in (9). Children also selected a simple transitive clause in a number of cases in the same condition (26%), thus providing a purely descriptive statement (rather than a real answer). In contrast, adults reacted with a simple (S)VO transitive clause, and again overwhelmingly so, only in answering agent-oriented questions (97%). A simple (S)VO response was also the preferred answer given by children (65%) in this condition, although children also reacted with a sentence with a pronoun object in the same condition (e.g. *Che cosa fa la mucca?/*What does the cow do? Expected answer: *(La mucca) lecca il re*/(The cow) licks the king – Given answer: *(La mucca) lo lecca*, i.e. same as (9)). Essentially, children have overproduced sentences with a pronominalized object, also in situations in which the object was not the topic. For this latter point, we may speculate that since both characters were given in the picture, children simply assumed that the object was shared knowledge with the experimenter and thus used the pronoun for it (Manetti 2013; De Cat 2009 for

rather similar overuse of pronouns by young children acquiring French)[3]. Finally, the SVO answer is the preferred option for adults also in the neutral question condition (81%), although some descriptive statements in the passive are also given (15%). In the same condition, children did also prefer the simple transitive SVO answer (54%), but they also answered with a pronoun object (type (9)) in 36% of the cases, thus giving further support to the speculation just made for this further instance of overuse of pronoun. Again, in contrast to adults, no passive is produced by children in the neutral condition as well (adults: 15%). Taken together, these results indicate that, on the one hand, children provide types of answers which are less clear-cut in the different conditions; on the other hand, they also show that passive is never a selected option, independently of the condition. In the answer to a patient-oriented question, children preferred to use a pronoun to express the object, with overt or non-overt presence of a lexical topic in the left or right periphery of the clause (as in (9)).

Production of sentences with a pronoun for the object has also been found in an elicitation experiment by Volpato et al. (2012a), who tested, with a picture selection task, 75 Italian speaking children ranging in age from 3;5 to 6;2 (17 children belonged to the youngest group 3;5-4;3 almost perfectly matching the age of Manetti's group; the other groups of comparable size were: 4;4-5;1; 5;2-6;0; 5;6-6;2). Each child was presented with two pictures containing the same character for the patient, but two different characters for the agent, thus aiming at creating felicitous conditions for the expression of the the *by*-phrase (Crain et al. 1987/2009). Also in this study, the authors found that sentences with a pronoun for the object were produced in a significant proportion across the different age groups. Manetti's results are sharper in showing children's preference for the pronominalization solution, thus indicating that the type of experimental setting may play a role. Be it as it may, resort to pronominalization of the object and no resort to passive (or very limited, 14% in Volpato et al. 2012a,), clearly indicate that in an elicitation situation in which children are relatively free to select their answer, they clearly prefer not to select passive. Based on these results and given the sharp contrast with adults, who resorted to passive up to 90% in the relevant condition, one could conclude that children acquiring Italian have barely any knowledge yet of the passive computation in this young age range. This would be in line with the similar conclusion of some of the cross-linguistic literature mentioned in the introductory section[4].

[3] It could also be that since the same experiment also contained conditions in which use of the pronoun was felicitous (those with the topic object), this very fact constituted a sort of indirect priming for use of the pronoun for children. A question worth exploring further..

[4] The reason why adults almost never selected answers with an object pronoun also in the condition in which it would be a felicitous answer in Italian (3% in the patient-oriented condition) is an independent question. A similar behavior has been found in the production of wh questions by adults. See chapter 6. A possible reason could be a normative

However, this is probably not the correct conclusion, also in line with some (other) of the cross-linguistic literature mentioned in the introductory section. It was already observed in chapter 1, section 12 that omission of auxiliary BE and use of bare past participles by 2 to 3 year old Italian speaking children witness an early access to some of the components of the passive computation. We noted in passing above that Volpato et al. (2012a) found a 14% of production of passive answers in the youngest group of children they tested, thus indicating that, even if selected in a limited (though not negligible) amount, children do have access to the computation involved in the derivation of passive. Moreover, the 14% passive sentences have been produced by young children with both auxiliary *essere* (42%) and with auxiliary *venire* (58%), thus suggesting a productive and differentiated access to the passive computation from the early ages. As noted in the introduction, the auxiliary *venire* is only compatible with an eventive interpretation and incompatible with a resultative/stative, hence possibly adjectival, interpretation. The idea of analyzing early passive productions as cases of adjectival passives, which would not involve any syntactic movement but just a lexical operation, does consequently not look plausible (contra Borer & Wexler 1998, and related literature; Guasti 2002, 2007 for an overview of the acquisition issues raised in the literature assuming the standard analysis with direct movement of the internal argument from the object position into the subject position of the clause). Notice that also in Manetti's results from adults, the vast majority of passives were produced with the auxiliary *venire* (75%) all involving an eventive, non-stative interpretation. Moreover, Volpato et al. (2012a) also report early use of long passives containing a *by*-phrase (i.e. a *da*-phrase the Italian equivalent of *by*, contra Fox & Grodzinsky 1998); this is a further clear indication of a syntactic derivation of the passive structures produced. Interestingly, similar findings on early productions of passives, including long passives, are also reported in Manetti's (2013) results from the second task referred to above, to which we now turn.

Manetti's (2013) second task used a syntactic priming technique adapted to Italian from the design developed in Branigan et al. (2005) (already utilized to test the production of passive in 3-year-olds in English by Messanger et al. 2008, Messanger et al. 2011); Branigan et al., in turn, partly adapted Bencini & Valian's (2008) priming design in the form of a picture-description *snap*-game that children enjoyed playing. The rationale behind the priming technique is that the exposure to a given

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pressure, which attributes a rather informal colloquial status to dislocation structures, thus considered inappropriate in the experimental situation. We leave the question here and just make two further observations: i. adults' behavior indicates that passive is a productive computation in standard Italian; ii. Children do not reproduce adult-like behavior. This latter feature of children's behavior does not lead to non-target/incorrect productions, but to the selection of productions that are adequate, both morphosyntactically and as for their discourse-pragmatics, but just different from those that adults prefer. It is natural to conclude that the ultimate formal grammatical mechanisms involved may be responsible for children's selection. This is a research question under current study.

structure may enhance the production of that structure in a different utterance. Moreover, since, as we saw, other structures with an object pronoun with or without an overt dislocated lexical phrase are possible alternative answers that children appeared to even prefer to passive in the previous elicitation task, the priming technique avoids the difficulty of providing a felicitous discourse context in which passive may be the only option. Differently from the pure elicitation task described above, production of passive may thus be facilitated through the priming of the passive structure. Passive was primed through the *snap*-game in which cards describing transitive events were depicted. In the game, the experimenter and the child are given two different sets of covered cards. The experimenter describes and uncovers his/her own card, the child does the same with his/her own card. In describing the uncovered card, the experimenter utters a simple sentence. The child has then to describe the card that she has uncovered. The primed structures in the passive are interspersed among the randomized descriptions pronounced by the experimenter. The effect of priming is measured on the description provided by the child, according to the sentence prime pronounced by the experimenter. The set of cards to be uncovered by the experimenter and the set of cards to be uncovered by the child describe different events. The difference of the two sets of actions depicted is important as it distinguishes priming from repetition, a crucial distinction. The pictures used were the same as in the elicitation task described earlier. 12 target actional verbs were utilized; 6 verbs were used as prime cards. The target cards consisted of 24 sentences that children had to describe and there were 24 prime sentences/cards. Active primes were SVO sentences; passive primes used the auxiliary *essere* or the auxiliary *venire* (Manetti 2013 for a detailed description). There were two lists, in one list the passive prime was with auxiliary *essere*, in the other list it was with auxiliary *venire*. Thus, for a picture like the one in Figure 2, the active prime sentence, the passive prime sentence for the *essere* list and the passive prime sentence for the *venire* list are given right below. The child had then to describe an unrelated picture in turn, e.g. the one depicted in Figure 3:

Figure 2: Prime card described by the experimenter

Figure 3: Target card to be described by the child

Active Prime: La rana picchia il re
the frog hits the king
Passive Prime *venire*: Il re viene picchiato dalla rana
the king comes hit by the frog
Passive Prime *essere*: Il re è picchiato dalla rana
the king is hit by the frog

The general picture emerging from the results is the following: active primes significantly favored the production of active SVO sentences (68.4%; 287 out of a total of 419 sentences produced); passive primes with *venire* and with *essere* significantly favored the production of passive sentences, and significantly more so with *venire* (26%; 55 out of a total of 209 sentences produced) than with *essere* (15%; 31 out of a total of 210 sentences produced). Children also produced sentences with an object pronoun of the type in (9), with no difference according to whether the prime was active or passive and to the auxiliary used in the passive prime (5%, 22 out of a total of 420 sentences produced in the *venire* list; 10%, 42 out of a total of 418 sentences produced in the *essere* list, amounting to 7.6%, 64 out of 838 sentences produced). This last result indicates that the pronominalized structure may be occasionally chosen by children independently of discourse conditions, hence also in the neutral setting of the picture description task (possibly because the object could be taken as shared knowledge by the child once she uncovers the card she has to describe; see above for a similar consideration on the use of structures like (9) in the agent-oriented questions of the elicitation task).

Results from Manetti (2012), as also discussed in Manetti & Belletti (2014), indicate that adult controls did not show sensitivity to the primed structures as they overwhelmingly selected a simple active transitive structure SVO to describe their card, irrespective of the priming (up to 88% under a passive prime). This different sensitivity to priming between adults and children which has emerged in the Italian priming experiment remains as an open question for the time being; it could be due to a number of factors, not all necessarily grammatical-formal factors which we will not attempt to make explicit and leave as a topic of further research.[5] Let us concentrate instead on the relevance of the priming effect emerged in children's productions as for the question whether and how much

[5] Vernice (2009) did find sensitivity to passive priming in adults as well in a different priming experiment in which animacy of two nominal arguments was manipulated: more passive sentences were produced under a passive prime when the agent was inanimate (e.g. *La ragazza è colpita dal masso*/the girl is hit by the stone vs *Il masso colpisce la ragazza*/ the stone hits the girl).

of the passive computation young children acquiring Italian can be claimed to know. The answer to this question supported by the results is that children in the early age tested appear to know the computation involved in passive, and this with both auxiliaries. A conclusion, which is consistent with the one reported above based on the elicitation experiment by Volpato et al. (2012a). Furthermore, the fact that the priming effect was stronger with active primes than with passive primes is not particularly telling, since, as just noted, for adults it was even more so as they resorted to active SVO sentences at a much higher rate; hence, this does not reveal much about the knowledge of the formal computation involved in passive. It just indicates that a neutral description as the one required, is preferably realized with an active sentence. The overall priming effect in children is summarized in Table 2:

Table 2 Percentages of different sentences produced by children as a function of priming condition, active or passive prime, and in the last case with auxiliary venire or essere. On the last line, the priming effect in children calculated as the result of the difference between the primed sentence pronounced by the experimenter and the sentence produced by the child (adapted from Manetti 2013)

Prime	***venire***				***essere***			
	SVO	Pronoun	Passive	Other	SVO	Pronoun	Passive	Other
Active	72%	5%	7%	16%	65%	9%	1%	25%
Passive	39%	5%	26%	30%	43%	10%	15%	31%
Effect	+33%	0%	+19%	+14%	+22%	+2%	+14%	+6%

The category "Other" in Table 2 groups together productions of short, incomplete, non-adult like passives (e.g. correct passive morphology but Th-roles reversed, passive with morphosyntactic errors such as selection of a preposition different from *da* to introduce the agent), with productions of intransitive verbs, copular sentences and single noun phrases which also occurred in children's productions.[6] Most of the passive sentences that children produced were correct adult-like passive sentences. If also short passives are included in the counting (see footnote 6), correct adult-like passives amount to 72% of children's productions with auxiliary *venire* and to 59% with auxiliary *essere*. The most common mistake that children made while producing a sentence with the passive voice was the reversed assignment of Theta-roles, i.e. children used the passive morphology, but assigned the arguments' roles in a reversed way, as in an active sentence (e.g *La mucca è leccata dal re*/The cow is licked by the king, as a description of the picture in Figure 1). Sentences with the

[6] This is a very restrictive counting criterion, as especially for the case of short passives, it underestimates the ability to compute passive by children, in particular with the auxiliary *venire*, as it turns out. The criterion has been strict since the description should have included the *by*-phrase to be complete.

passive voice and reversed Theta-roles are equivalent with both *venire* and *essere* auxiliaries (23% and 25% respectively)[7]. Deviant passives (e.g. with the wrong preposition) amount to 5% and 16% in the two *venire* and *essere* lists.

On the basis of the results presented in this section, it is then fair to conclude that when young children produce a passive sentence in Italian they do so mostly correctly as in their target language; hence, they manipulate grammatical functions and verbal morphology in a way that properly describes the event they are supposed to describe. Assuming a derivation of passive along the lines in (8), this amounts to concluding that young children (age range under discussion 3;5-4;6) can master the *smuggling* operation triggered by the passive voice, moving a chunk of the verb phrase.[8] Presumably, this is a complex operation somewhat hard to perform for their relatively immature computational system. This may explain why in the less constrained task eliciting more spontaneous answers, children rather resorted to the pronominalization of the object than to passive, in contrast with adults, whose system is better equipped for this complex computational step (Table 1). However, in appropriate conditions such as under priming, passive both with auxiliary *venire* and with auxiliary *essere* can be correctly performed/produced by children; this was also (partly) the case in the picture description task of Volpato et al. (2012a), which elicited the production of 14% of correct passives in the answers provided by the youngest group of children analyzed in that study. The computation involved in passive may be considered complex for a number of possible reasons. We list three of them in concluding this section: i. The identification of the relevant chunk of the verb phrase to move; ii. The identification of the morphosyntactic property of the relevant head that contributes to the passive voice as the head attracting syntactic movement of the relevant chunk of the verb phrase into its specifier; iii. The fact that further movement must occur from the smuggled constituent. Other reasons may also be at play; this is where the research on these issues now stands and from which it is currently moving further[9].

[7] Note that this may suggest that the priming technique could also favor a "match" type production to some extent. I.e. the child describes the card with a SVO sentence but uses the wrong morphology corresponding to the passive prime sentence. However, the match-effect alone would be silent on the reason why, in both lists, children also correctly assign Theta roles and redistribute the grammatical functions accordingly, as required in passive. The ample amount of redistribution of grammatical functions concomitant to passive prime and related passive morphology in children's productions thus strongly indicates access to the passive computation.

[8] Hence, the apparent delay in the acquisition of passive cannot be simply due to unavailability of smuggling, although this operation may be costly for children. See Hyams & Snyder (2005) for relevant discussion; Belletti (2014, 2012) for discussion connected to the development of Passive Object Relatives in children. See infra and the following footnote 9.

[9] In a recent article Snyder & Hyams (2014) have proposed that, differently from adults, young children may be assumed to derive passive through direct movement of the internal argument into the subject position of the clause, as in standard accounts, presumably for an intrinsic complexity of the *smuggling* operation moving a chunk of the verb phrase (see footnote 8 and discussion in the text on this). According to Snyder & Hyams (2014) this direct derivation is only possible if compatible with featural Relativized Minimality (Rizzi 2004a, and discussion in chapter 5). Hence,

2.1. Notes on *si*-causative passive in young children

Manetti & Belletti (2014) have extended the same priming technique utilized in the priming experiments just described by introducing a different type of passive prime sentence that we will refer to as *si*-causative passive. A sentence containing a *si*-causative passive is illustrated in (11):

(11) Il bambino si è fatto pettinare dalla mamma
the kid SI-Cl/himself is made combed by the mum
t*he kid had himself combed by the mum*

Let us first provide some of the essential elements of the assumed analysis for this type of passive and then present the results from the experiment. The crucial property of the *si*-causative passive is that a Romance-type causative structure, so called *fare-da* (*Faire-par* of Kayne's 1975) is utilized in combination with reflexive clitic SI. In the *fare-da* causative the external argument of the infinitival complement of the functional causative verb *fare* is introduced through preposition *da*/by, i.e., the same preposition introducing the external argument in *copular* and *venire* passive sentences. This is also possible in active causatives of the *fare-da* type, exemplified in (12):

(12) Il papà ha fatto pettinare il bambino dalla mamma
the dad has made comb the kid by the mother

In contrast with (12), in the *si*-causative passive the external argument of the functional causative verb *fare* is not present; instead the reflexive clitic SI occurs. Its presence appears to have the same effect as a (component of) passive voice in that movement of the object of the embedded infinitival verb into the matrix subject position occurs. Both active *fare-da* causatives as in (12) and passive *si*-causatives as in (11) may be assumed to involve movement of a chunk of the verb phrase along the

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passive is available to young children only in cases in which the moved internal argument is enriched with a feature (e.g. Topic) not shared with the intervening external argument. This is an interesting account consistent with the literature quoted in the introduction according to which passive is best mastered by young children if appropriate discourse conditions are created, i.e. conditions in which the internal argument is a discourse topic and the external argument/*by*-phrase is the focused argument. Snyder & Hyams' proposal may very well be on the right track for these cases; however, the results discussed in this section have indicated that young children appear to master passive to a fairly significant extent also independently of the pragmatics of the discourse exchange, as appears to be the case in the priming setting. This suggests a "primed" access to the hard/complex passive derivation involving movement of a chunk of the verb phrase.

same lines as in periphrastic passive (cfr. (8))[10]. The *si*-causative passive also involves movement of the internal argument from the smuggled infinitival complement of the causative verb into the matrix subject position. The crucial steps of the assumed derivations are illustrated in (13)a and (13)b for the active causative (12) and the *si*-causative passive (11); (13)c illustrates the partly analogous derivation of the periphrastic passive (exemplified with auxiliary *venire*)[11]:

(13)

a Il papà ha [$_{vP}$ <il papà> fatto [$_{VP}$ pettinare il bambino] [dalla [$_{vP}$ mamma <VP>]]]

movement of verbal chunk/*smuggling*

b Il bambino SI-cl è [$_{vP}$<SI-cl> fatto [$_{VP}$ pettinare <il bambino>] [dalla [$_{vP}$ mamma <VP>]]]

movement of the internal argument

movement of verbal chunk/*smuggling*

c Il bambino viene [$_{VP}$ pettinato <il bambino>] [dalla [$_{vP}$ mamma <VP>]]

movement of the internal argument

movement of verbal chunk/*smuggling*

As (13) illustrates, *si*-causative passive includes a *smuggling* type step in the derivation, as in both active *fare-da* causative and in periphrastic passive; with periphrastic passive it shares movement of the internal argument from the *smuggled* position into the subject position.

Results from the priming experiment utilizing *si*-causative passive as the passive prime have indicated that children were somewhat especially sensitive to this type of passive. Looking at their overall productions of passive sentences under the priming experiments, results have indicated that periphrastic copular passive with auxiliary *essere* constituted the 8% (36/444 sentences); periphrastic passive with auxiliary *venire* the 17% (77/466 sentences); *si*-causative passive the 14%

[10] The analysis of causatives involving a *smuggling* type operation sketched out in text may be seen as an update of traditional accounts such as Burzio's (1986), Rouveret & Vergnaud's (1980) analyses in terms of VP-preposing, in the spirit of Kayne (1975); Guasti (1993,) for an approach in terms of incorporation à la Baker (1988); Zubizarreta (1985) for a first functional characterization of *fare*.

[11] Belletti (2013a) and Manetti & Belletti (2014) for further details on the assumed argument structure and related derivation, which are given here in a schematic fashion intended to highlight the crucial steps and the common properties of the structures considered: active *fare-da* (13a), *si*-causative passive (13b) and periphrastic passive (13c) illustrated with the auxiliary *venire*. The Merge position of the moved constituents is indicated between < > parentheses as is usual practice. On the analysis of causatives in related terms see also Guasti & Moro (2001).

(65/468 sentences). Notice incidentally that the passive with *venire* auxiliary is the type of passive produced at the highest rate by children in these experiments. This is not surprising since the verbs used in the lists were all actional verbs implying an eventive interpretation, and *venire* auxiliary is particularly felicitous with actional verbs, as mentioned in the introduction. The results from the priming experiment in which the prime were *si*-causative passive sentences indicate that children's production of *si*-causative passive is about the same as the production of passive with auxiliary *venire*. A further important fact is that, in the *si*-causative passive experiment – i.e. the experiment in which the passive prime sentences were of the *si*-causative type – children have produced *si*-causative passive sentences also in cases in which the prime description pronounced by the experimenter were active sentences. A similar response never occurred in the experiments in which the passive primes were passive sentences with either auxiliary *essere* or auxiliary *venire*. Furthermore, children also happened to produce *si*-causative passive sentences when the prime sentence was a periphrastic copular passive sentence; this never happened in the symmetric condition (i.e. never a *si*-causative passive prime lead to the production of periphrastic passive, with either auxiliary *essere* or *venire*). Hence, production of *si*-causative passive seems to be somewhat privileged for children. We will not attempt to formulate hypotheses here as to why it should be so since this is a topic of ongoing research.[12] We just note in conclusion a possible relation between these results from the priming experiments with two previous findings from independent unrelated studies. Belletti & Contemori (2010) and Contemori & Belletti (2013) have found that the earliest productions of PORs (Passive Object Relatives; i.e. relatives with passive when an Object relative is elicited, chapter 5) by young children (3;4-3;11 and 4-4;11) included just *si*-causative passives. Contemori & Belletti (2013) have then found that PORs with *si*-causative passive were those best comprehended by older children (6;5-8;10) when compared to both Object relatives in the active and to different types of PORs which were also found in children's productions, i.e. containing copular passive and reduced passive relatives (e.g. *il bambino (che è) pettinato dalla mamma*/the child (that is) combed by the mother). There is thus a convergence between these independent results from PORs and the results reviewed here from the syntactic priming experiment: *si*-causative passive appears to be the type of passive that children master best and (possibly) first in their development.[13] More data and results will have to support this conclusion.

[12] Adults produced virtually no *si*-causative passive in the experiment with *si*-causative passive as a prime (2%; 7/288 sentences); they rather produced some periphrastic copular passive in this condition (5%, 13/288 sentences). This result is almost symmetric to the result from children described in the text, it is also especially telling since adults tended to produce very few passives in all of the conditions anyway, as mentioned. The comparison adults/children is the topic of current study by Belletti & Manetti.

[13] The *si*-causative passive is the closest analogue to the English *get*-passive that is also interestingly known to be accessed early by children (Crain 1991). The derivation of *get*-passive may be assumed to also involve movement of a

3. **Some results from comprehension in monolingual children**

Volpato et. al (2012) have examined the comprehension of passive sentences in 75 Italian speaking children aged 3;4-6;2 using an adaptation to Italian of the picture-sentence matching task first designed and applied to Greek by Driva & Terzi (2008) (see also Terzi & Wexler 2002). The material included both action and non-action verbs, long and short passives, and passive with auxiliary *venire* and with auxiliary *essere*. The picture mismatch condition was realized with either reversal of roles between the two nominal arguments or with presence of a different agent. Table 3 below summarizes their main results:

Table 3 Percentages of correct responses in a picture-sentence matching task examining comprehension of passive sentences based on action and non-action verbs and including or not by-phrase. Passive sentences included the auxiliaries essere and venire. (from Volpato et al. 2012)

Age Groups	By-Phrase	Act. verbs	Act. verbs	Non-act. verbs	Non-act. verbs
		essere	*venire*	*essere*	*venire*
G1	Yes	77%	76%	58%	59%
3;4-3;11	No	89%	85%	67%	61%
G2	Yes	77%	78%	68%	48%
4;0-4;8	No	75%	74%	56%	53%
G3	Yes	89%	96%	56%	58%
4;9-5;5	No	94%	96%	56%	67%
G4	Yes	95%	92%	66%	75%
5;6-6;2	No	100%	100%	75%	94%
Adult	Yes	100%	100%	99%	100%
20-24	No	100%	100%	100%	100%

Children's performance became better with age, ranging from the lowest 48% in the younger groups and 94% in the older with non-actional verbs and between 76% and 100% with actional verbs, thus suggesting a development. These results show that there is no difference in the comprehension of long or short passive, no interaction between verb type and long passive (contra Fox and Grodzinsky 1998), and no difference in the comprehension of passive sentences with either auxiliary *essere* or *venire*. Volpato et al. (2012) found that by age 5 children comprehended the passive of action verbs at ceiling, whereas comparable adult-like comprehension of non- actional

verbal chunk of the causative type (Belletti 2014; see also Alexiadou 2006 for a different approach with no syntactic movement).

passive sentences was reached later around age 6. Thus, these results are in line with the cross-linguistic evidence mentioned in the introduction, and in particular with Driva & Terzi's (2008) results whose design had been extended to Italian in this study (see also Hirsh & Wexler 2006 on English for similar conclusion). As the authors have pointed out, good comprehension of passive sentences with both auxiliary *venire* and auxiliary *essere* provides clear evidence that even young children appear to be able to master the morphosyntactic passive computation at a fairly good level. This is particularly clear in the case of passive with the auxiliary *venire* since this type of passive does not admit the interpretation as a resultative state, hence it is a verbal passive and cannot be an instance of adjectival passive not involving syntactic movement, as might be possible in other cases involving auxiliary *essere* (contra Hirsh & Wexler 2006).

Manetti (2012) has addressed the study of the comprehension of passive sentences with three different experimental methods:

- Comprehension through a Truth Value Judgment Task (TVJT) of scenes shown in short videos: three groups of 20 children each, age range 4;1-6;11. The passive sentences were tested with actional verbs (reversible) and auxiliary *essere*; stimuli contained long and short passives. A puppet pronounced a sentence and the child was supposed to say whether or not what the puppet said was true.[14]
- Comprehension through an Act-Out Task (AOT): three groups of 33 (younger) children, age range 3;5-5;11. The passive sentences were tested with action verbs (reversible) and auxiliary *venire*; the *by*-phrase was present in all the stimuli. Each child heard a sentence pronounced by the experimenter and had to act out the scene with little puppets.
- Comprehension through an adaptation of Messanger et al.'s (2008) Picture Matching Task (PMT): two groups of children, age range 3;5-4;6; the experimental sentences contained passive sentences with both actional and non-actional verbs.

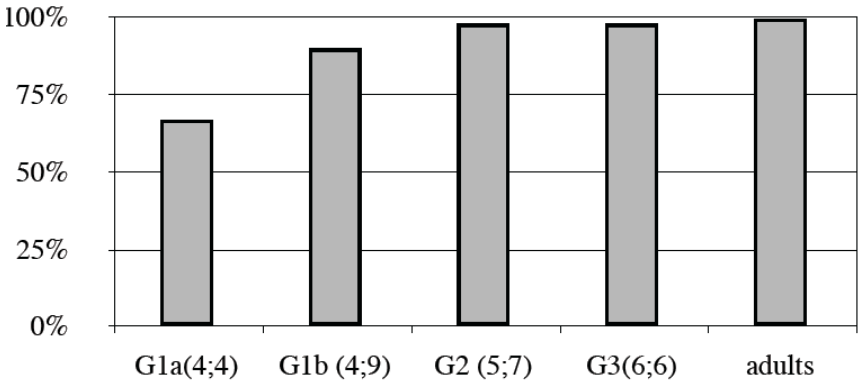
The interesting feature of the overall results, details of the results of each single task aside, is their coherence: the only group of children which had difficulties in comprehending the passive sentences proposed and which showed a variation among the participants, always was the youngest one. Around the age of 4;6 children showed a very good comprehension of the passives tested. There were some (probably) task-related peculiarities that emerged in the third task, likely to be due

[14] If the answer was "no", the child was then asked: "What happened in fact?" The task thus partly turned into a production task. Both children and adults tended to answer with an active clause. There were also passive sentences produced, though, from 32% in the younger group of children up to 44% in the older; adults produced 45% of passive answers. Hence, the amount of passive answers provided by the older children matched that of adults; whereas younger children produced less passives in these conditions.

to the complexity of the design. Hence, we now highlight in better detail some of the most significant results of the first two tasks.

In the first study with the TVJY, the group of younger children was further divided into two subgroups, and this clearly revealed the developmental point, as is illustrated by Figure 4:

Figure 4: Percentages of correct responses in the TVJT examining comprehension of long and short passive sentences including actional verbs and the auxiliary essere (from Manetti 2012)



G1a age range: 4;-4;6 (mean age 4;4). G1b age range 4;7-4;11 (mean age 4;9). G2: age range 5;0-5;11 (mean age 5;7) . G3: age range 6;0-6;11 (mean age 6;6).

The analyses revealed that G1a children had a lower comprehension of passive (67%) than the older children, in particular G1b children, whose comprehension already reached 90%. Long or short passive did not make a difference, coherently with the results from Volpato et al. (2012) discussed above.

In the second AOT, all groups of children were at ceiling in the comprehension of active sentences, and reached a comparable level of comprehension of passive sentences with actional verbs around age 4; again, as in the TVJY experiment, the crucial age turned out to be 4;6, as it is at this age that children showed a well above chance performance (84%) of good comprehension of passive sentences. It can be pointed out that in the third PMT, a significant effect of voice emerged only the younger group aged 3;5-4;0 whose comprehension of the passive sentences (70%) was lower compared to the comprehension of the active sentences presented in the task (86%). There was no such effect in the older group aged 4;1-4;6, as these children comprehended active and passive sentences of action verbs equally well (92% in both cases). This result is in line with those of the two other tasks (TVJT, AOT).

All in all, the results from the comprehension studies reviewed in this section have indicated that young children have a good comprehension of passive sentences containing actional verbs from the early age, although they may experience some difficulty in the earliest stages tested. Somewhere

between age 4 and 5, the proper comprehension of the passive tested with both auxiliary *essere* and auxiliary *venire* reaches ceiling and is adult like. The comprehension of non- actional passives is generally harder, and sometimes related to the complexity of the design, coherently with cross-linguistic findings. Furthermore, the fact that both long and short passives are equally well comprehended by young children in the described tasks in which presence of the *by*-phrase was pragmatically appropriate, indicates that there is no special difficulty with long passives *per se* (contra e.g. Fox & Grodzinsky 1998, Hirsh & Wexler 2006, in line with Crain et al. 1987/2009).

6. Summary and questions for future research

The study of the acquisition of the Italian passive, in both production and comprehension has been the focus of this chapter. New evidence from recent results has been accumulating over the last few years indicating a fairly early access to the passive computation by Italian speaking children. Around age 4, but also before that already at 3;5, children have been shown to be able to produce sentences with verbal passive morphology and to understand them also in the so called *long* version containing the *by*-phrase. Different passive auxiliaries have been tested and the one that is mastered best by young children is auxiliary *venire*, better than auxiliary *essere*. The former is the auxiliary that best accompanies actional verbs; hence this result is in line with previous crosslinguistic findings that actional passives are mastered better by young children than non-actional ones; it was pointed out that this indicates access to the relevant syntactic computation involved in passive, which has movement as one of its crucial ingredients. The results thus also indicate that early passives in children are not (all, necessarily) instances of adjectival passives, as had been previously proposed because auxiliary *venire* is inconsistent with the adjectival reading. Results also seem to indicate a preference by children to access the type of passive labelled *si*-causative passive in the studies reported here.

Several new research questions are opened by the results reviewed in this chapter. First of all, there is a need to enrich the database of results in this domain since we do not know anything about the status of the different types of Italian passive in the atypical population, nor do we have evidence on the adult L2 population and on bilingual children. Since the baseline from typically developing children is by now fairly rich and articulated, it should become possible to start collecting this new type of evidence.

A number of questions can be based on these results of direct theoretical interest, which deserve attention. We mention a few of them. If the derivation of passive through movement of the relevant verbal chunk is involved in all types of passives, the question of what the origin of the special status of the *si*-causative passive is arises, and this is also in need of further confirming evidence. As is always the case, crosslinguistic evidence may help us understanding this result, as it is known that passive involving causatives are very common across languages. A natural comparison to do, which is in fact the topic of current research is with French. Notice that children's preference for *si*-causative passive in standard Italian cannot be considered an input related effect, as this type of passive is virtually absent in adult Italian. This has been shown by the results from some of the experiments on passive presented in this chapter and from those presented in chapter 5 in connection with the discussion of Passive Object Relatives/PORs: adults hardly ever produce *si*-causative passives.

More generally, the assumed derivation opens up the study of other structures that involve similar movements of chunks of the verb phrase, such as e.g. causatives, psych-verbs, raising…This is an ongoing project in the theoretical work on Italian and also crosslinguistically, as mentioned; it would be most interesting to enrich the database with evidence from acquisition.

The relation between the aspectual and lexical properties of the verb and the nature of its argument structure are also a very relevant topic to pursue also in light of the results available so far, which have been presented here. The more readily access by young children to passives using the auxiliary *venire* rather than the auxiliary *essere* deserves careful study along the aspectual and lexical dimension.

Some of the results presented come from experiments in which syntactic priming techniques have been used. What the exact status of syntactic priming is and what aspects of the speaker's linguistic knowledge it may reveal is an interesting open question to address in detail. The results presented have suggested that children are more sensitive to syntactic priming than adults, who have rather systematically reacted with an active sentence to a passive prime. In contrast, children did sometimes react with a passive sentence to a passive prime. Taken at face value, this would seem to indicate that children are better at passive than adults, a rather paradoxical conclusion. Hence, more needs to be understood on the specific contribution of syntactic priming in different populations.