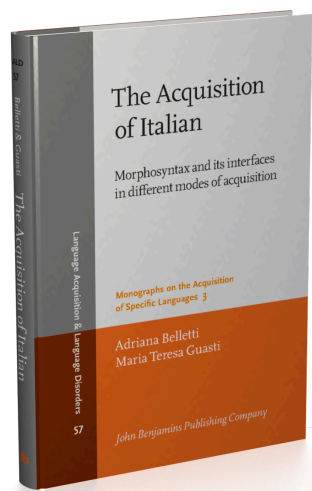


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The Acquisition of Italian

Morphosyntax and its interfaces in different modes of acquisition

Adriana Belletti and Maria Teresa Guasti

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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 7

The acquisition of the syntax and interpretation of subjects

1. Introduction.

Italian is a null subject language, in which pronominal subjects are unpronounced unless some special discourse reason requires their overt realization. For instance, given the sentence in (1), the appropriate continuation could be a sentence like (2)a; (2)b is perceived as an inappropriate repetition (annotated as %), much like (2)c:

- (1) Gianni è uscito alle 5
Gianni went out at 5
- (2) a Ha preso la metropolitana ed è arrivato a casa alle 6
- took the metro and –arrived at home at 6
- b % Lui ha preso la metropolitana e (lui) è arrivato a casa alle 6
He took the metro and he arrived at home at 6
- c % Gianni ha preso la metropolitana e (Gianni) è arrivato a casa alle 6
Gianni took the metro and Gianni arrived at home at 6

To illustrate with another clear context, in the question answer pair in (3), an appropriate answer to the question in (3)a is (3)b, whereas (3)c is again felt as an inappropriate repetition:

- (3) a Che cosa ha fatto Gianni?
What did Gianni / “What did Gianni do?”
- b È uscito alle 5
- went out at 5
- c % Lui è uscito alle 5
he went out at 5

In a different type of context, the overt realization of the pronominal subject may instead be felt as perfectly appropriate. For instance, in a context such as the one in (4)a, the overt realization of the subject pronoun in the continuation in (4)b allows for the required distinction between the two referents; similarly in (4)d as the continuation of (4)c, involving a first or second person pronoun; in (4)e use of the overt pronoun provides a corrective focalization with respect to the statement in (4)a:

- (4) a Gianni e Maria sono usciti alle 5
Gianni and Maria went out at 5
- b Lui ha preso la metropolitana, lei è andata a piedi
he took the metro, she walked
- c Io e Maria siamo uscite alle 5/ Tu e Maria uscirete alle 5
I and Maria went out at 5 /You and Maria went out at 5
- d Lei ha preso la metropolitana, io sono andata a piedi/ Lei prenderà la metropolitana, tu andrai a piedi
She took the metro, I walked/ She will take the metro, you will walk
- e No, LUI è uscito, non lei/lei no (lei/Maria è rimasta a casa)
No, HE went out, not she/ she didn't (she/Maria stayed home)

Hence, pronominal subjects, characteristically known and given from the context, are generally null in standard Italian, unless the need exists to express them for referent identification or types of focalization such as contrast/correction.

Overt lexical subjects fill a pre-verbal position in the structure of the clause and are associated with an interpretation that is characteristically associated to clausal subjects, sometimes called “aboutness” (Frascarelli’s 2007, Rizzi 2005): The clausal predicate predicates some properties of the subject of the clause; in this sense, the clause is “about” the subject. A pre-verbal subject can be known from the context, and in this sense it has topic-like properties (5a), or else it can be introduced for the first time in an out of the blue context (5b,c) and thus it may typically be indefinite:

- (5) (Context: we all know Gianni; and we also have some expectation about him in the event described by the sentence)
- a Gianni parlerà alle 5
Gianni will talk at 5
- (Context: out of the blue)
- b Un conferenziere parlerà alle 5
A speaker will talk at 5

c Uno stagista ha incontrato il direttore alle 5

An intern met the director at 5

In cartographic terms, pre-verbal subjects have been analysed as occupying different positions in the high part of the clause, according to their lexical or pronominal nature, across languages (Cardinaletti 2004, Rizzi & Shlonsky 2007). Null pronominal subjects, often labelled *pros*, fill the same position as the weak, topic-like overt subject pronouns of non-null subject languages such as e.g. English and French illustrated in sentences like (6), analogous to the Italian one in (3)b:

(6) (Context: Q. What did John do?/ Qu'est-ce-que Jean a fait?)

a He went out at 5

b Il est sorti à 5 heures

Null-subject languages typically avail themselves of the further important grammatical option of allowing a lexical subject to fill a post-verbal position. Indeed, since the first work on the null-subject parameter (Rizzi 1982, Jaeggli & Safir 1989), the grammatical possibility of admitting the subject in a post-verbal position has been identified as a direct consequence, in fact a correlated property, of the positive setting of the parameter itself. Italian sentences with a post-verbal subject are given in (7), illustrating some contexts favouring the post-verbal location of the subject:

(7) a (Context: Q. Chi ha parlato alla conferenza?)

Who has talked at the conference?

➤ Ha parlato Gianni

Has talked Gianni

b (Context: Q. Chi ha letto la sentenza?)

Who read the verdict?

➤ L'ha letta il giudice

It-cl read the judge

c (Context: Q. Chi è entrato nella stanza?)

Who entered the room?

➤ È entrato Gianni

(Is) entered Gianni

d (Context: Q. Che cosa è successo?)

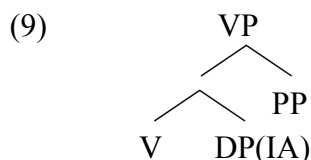
What happened?

- È entrato un pompiere/?? il pompiere dalla finestra
(Is) entered a firemen /?? The fireman from the window

In (7)a-c the post-verbal subject constitutes the new information focus constituent, answering with the identification required by the question; in (7)d the subject is post-verbal in a so called all-new context. The sentences in (7)a-c contain verbs belonging to three different verb classes, intransitive (sometimes called unergatives), transitive, unaccusative (Burzio 1986). As the examples show, the new information subject is uniformly post-verbal with all verb classes. (7)d contains an unaccusative verb and an all-new/out of the blue type context. In this type of context the post-verbal subject is preferably indefinite with unaccusatives. This is the phenomenon that goes under the label Definiteness Effect (DE), illustrated by the two question marks on the sentence in (7)d in the version containing a definite post-verbal noun phrase. With unaccusative verbs, the internal argument of the verb corresponds to the argument, which may become the pre-verbal subject of the clause, or which can remain post-verbal, filling the internal argument position; in both cases in standard Italian the verb agrees with it. (8) illustrates the agreement, and (9) gives the (assumed) argument structure for unaccusatives, e.g. *entrare* of the examples in (7)d above and (8)a,b below.

(8) a Due/Alcuni/Dei/ I pompieri sono entrati dalla finestra
Two/Some/some/The firemen (are) entered from the window

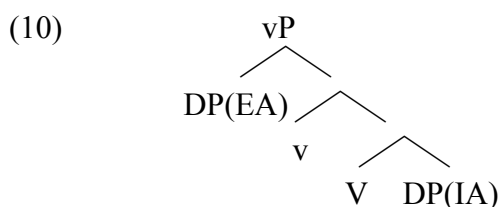
b Sono entrati due/alcuni/dei/??i pompieri dalla finestra
(Are) entered two/some/some/?? The firemen from the window



As (8)a indicates, there is no DE when the argument fills the pre-verbal subject position. DE has been assumed to be an effect that characteristically concerns the position of the internal argument of unaccusative verbs. Following the proposal in Belletti (1988), briefly put, there is no accusative Case available in sentences containing unaccusative verbs due to the somewhat reduced argument structure of this verb class illustrated by (9) that does not contain any functional “v” type head

normally implicated in the assignment of accusative Case. The position of the internal argument has thus only access to a lexical/inherent type Case that can be directly assigned by the lexical verb.¹ This Case has the same properties overtly manifested by partitive Case in languages that morphologically realize it. In particular, only indefinite noun phrases can carry it and are compatible with the type of interpretation that this Case marker implies (Belletti & Bianchi 2014 for recent re-discussion of the proposal and of its semantic implications). If the noun phrase argument of an unaccusative verb is not filling the internal argument position, DE is not an issue anymore, and the noun phrase can be definite. This is what happens when it becomes a pre-verbal subject as in (8)a, which contrasts with (8)b in the definite version of the post-verbal subject.

This is in fact also the case when the subject fills the post-verbal position and is interpreted as the focus of new information. The examples in (7)a-c illustrate this fact, as in all of the examples, including the one with the unaccusative verb *entrare*, the subject is (hence, can be) a definite subject. It is then natural to assume that the noun phrase is not filling the internal argument position in examples like (7)c, in contrast with those in (8)b, and also in (7)d. Indeed, it can be assumed to fill a position external to the verb phrase in all of the examples in (7)a-c. Expressing this property in cartographic terms, the subject can be assumed to fill a position dedicated to the new information focus interpretation (Belletti 2001b, 2004a); this position should be low, in the immediate periphery of the verb phrase, and could be filled by the noun phrase subject of the clause with all verb classes. Such noun phrase is the external argument with transitive and intransitive verbs, whose schematic representation of the argument structure is given in (10) below, and it is the internal argument of unaccusatives, as illustrated by the unaccusative argument structure in (9). In (10) the verb phrase is bigger than the unaccusative verb phrase in (9), as it contains the external argument whose presence is mediated by the functional verbal head labelled “v” (Chomsky 1995, Larson 1988):²



¹ Possibly, accusative is in fact never directly accessible to the position in which the internal argument is merged, also with transitive verbs, as in the following structure (10). The implications of the technical implementation of the way accusative is assigned and its possible interaction with DE are beyond the scope of the discussion in this chapter. As nothing hinges on these details, the slightly simplified assumptions in the text can be adopted.

² The small “v” is the abstract head, which is overtly realized in the so called light-verb constructions that are found in various languages (Grimshaw 1988, Collins 1997). It is then natural to assume that what is overt in some language may be left covert in others, but still be present. This is a research strategy which has allowed for quite significant empirical discoveries, in particular in the P&P tradition, and we will follow it here in line with a long-lasting tradition.

The low new information focus position is external to the verb phrase. To the extent that the constraint regarding definiteness concerns the VP-internal position of the low internal argument of the verb, it is expected that no such constraint should affect a new information focus subject that fills an external position in the periphery of the verb phrase. The relevant focus position and the overall structure of a sentence containing a new information focus subject is schematically illustrated in the (simplified) structure in (11) (see Belletti 2004a for detailed discussion); in (11) the pre-verbal subject position of the clause is filled with a silent (expletive like) pronoun, *pro*. Following the traditional approach to the null subject parameter as in the references quoted above, this analysis captures the fact that the possibility of so called subject-inversion structures displaying the order VS is tightly linked to the positive setting of the null subject parameter. According to the analysis in (11), the order VS is obtained by moving the external argument of transitive and intransitive verbs or the internal argument of unaccusatives into the specifier of the low focus position external to the verb phrase; the verb moves in turn into a higher inflectional position and this yields the linear order VS. Given the positive setting of the null subject parameter, this is the way in which the low focus position in the periphery of the verb phrase can be exploited in a null subject language like Italian. (11) illustrates the structure and the derivation with an intransitive verb (*parlare/speak*):

(11) [_{CP} ..[_{TP} *pro* ... ha ... [_V parlato]... [_{FocP} [_{DP} Gianni] ... Foc ... [_{VP} < Gianni> ... <V>.....]]]]

Let us now make explicit a property that has been left implicit so far, but which can be directly deduced from the presentation above. As discussed, in sentences containing unaccusative verbs, the order VS can result from two very different computations: the argument can either remain in the position where it is first merged as the internal argument of the verb, or it can be moved into the specifier of the low new information focus position. The difference depends on its discourse value illustrated in paradigms (7) and (8). In the former case the VS order reflects the linearization of the result of the first merge operation (verb-internal argument, in head initial Italian); in the latter case, the order results from the internal argument moving into the specifier of the new information focus position peripheral to the verb phrase, and the verb moving higher into a relevant inflectional position, as illustrated in (11). In the former case, some DE is manifested; in the latter case no such effect is manifested as (7)c has illustrated. Hence, as for the nature and interpretation of the post-verbal subject in the latter case, sentences with unaccusatives behave just like sentences with verbs belonging to any other verb class, transitive or intransitive ((7)a,b). In conclusion, with

unaccusative verbs there are in principle two ways to obtain the linear order VS: i. as a reflex of first merge, with the noun phrase in the internal argument position, as in (9); ii. as a consequence of focalization in the low periphery of the verb phrase, as in (11). With transitive and intransitive verbs the order VS only derives from a computation as in (11), i.e. it is an instance of (new information) focalization³.

In the case of all new/out of the blue sentences, virtually corresponding to the answer to a question like *what happened?* (as in e.g. 7d), when the verb is transitive and intransitive, the subject can be pre-verbal as illustrated by examples presented in (5b, c) above. In this type of context, the subject can also be post-verbal both with intransitive (12a) and with transitive verbs (12b), in the latter case the object is a clitic (Calabrese 1992, Rizzi 1996 for discussion):

(12) (Cosa è successo?)

What (is) happened?

a Ha parlato Gianni/un ragazzo

Has spoken Gianni/a boy

b (Il libro) L'ha presentato Gianni/uno scrittore

(The book) it-cl has presented Gianni/a writer

This order can be assumed to be obtained through movement of the entire verb phrase into the (Spec of) the new information low focus position; the linear order VS is again obtained through further movement of the verb into a higher inflectional position. (13) illustrates the derivation for sentence (12)a, as the answer to the question *what happened?* Notice that the derivation in (13) shares the fundamental insight of (11) and is in this respect a very similar derivation. The only difference between the two cases is that in (11) a new information post-verbal subject is derived, whereas (13) illustrates an all new verb phrase, with the subject also being post-verbal:

(13)[_{CP} ..[_{TP} *pro* ... ha ... [_v parlato]... [_{FocP} [_{VP} Gianni <V>] Foc...[_{vP} Gianni v [VP....]]]]]

³ The new information focus interpretation of post-verbal subjects in the vP external periphery is the most typical interpretation. See Belletti (2004a) for a discussion of the possible topic (-like) interpretation of some post-verbal subjects in the vP-periphery, which count as right dislocated and are associated with a special prosody. See also Cardinaletti (2001) for the discussion of other types of structures referred to as “marginalization” (Antinucci & Cinque (1977). Here we consider what we take to be the core of the phenomenon concerning post-verbal subjects, i.e. the new information focus interpretation in contexts like those in (7)a-c.

As a final descriptive remark, we point out that in the VS order, with S=subject of new information in contexts as in (7)a-c, the post-verbal subject can also be realized as an overt pronoun. Consider (14) in this respect:

(14) a (Context: Q. Chi ha parlato alla conferenza?)

Who spoke at the conference?

b A: Ha parlato lui

Has spoken he

The well-formedness of (14) is consistent with the interpretation of the post-verbal subject in this context as a subject of new information. A focalized subject must be overt, hence if it is pronominal it must be an overt pronoun.

The acquisition of the overall distribution of subjects, as can be deduced from the synthetic presentation above, involves several dimensions. It includes both the setting of the fundamental null subject parametric property of Italian and also the related interpretive properties which concern: the discourse-appropriate use of null vs overt pronominal subjects; the ability to properly locate the lexical subject in pre-verbal or post-verbal position according to discourse related factors concerning the information content to be expressed. Hence, we may say that there is one crucial formal grammatical property to be determined by any child acquiring Italian: the null subject property expressed by the null subject parameter; the positive setting of the parameter then requires the ability to properly use null and overt pronominal subjects and to locate overt subjects in the pre-verbal or in the post-verbal position in a way which is appropriate to the pragmatics of discourse exchanges. Furthermore, the distribution of post-verbal subjects has been described above to interact in complex ways with the verb class to which the verb belongs. This is a further property that has to be mastered for the proper computation and interpretation of Italian subjects.

The present chapter reports on the current state of the art on these aspects in the acquisition of the syntax and interpretation of Italian subjects. The developmental question will consider different populations, with special attention to typical development and adult L2 and bilingual acquisition for which the literature is rather rich. In the case of adult L2 and bilingual acquisition the interesting

situation may arise in which the setting of the parameter is different in the two languages involved. Some reference will also be made to atypical development in the domain of subjects.

The chapter is organized as follows: Section 2 presents the acquisition of null and overt subjects in typically developing children, including the acquisition of the conditions regulating the pre- or post-verbal location of the subject according to discourse and lexical factors and to definiteness (2.1). Section 3 addresses the acquisition of the syntax and interpretation of Italian subjects in different populations with considerations regarding the SLI population (3.1); special attention will be dedicated to (adult) L2 and to attrited Italian in this domain (3.2) as well as to the acquisition of overt and null subjects in bilinguals (3.3). Section 4 summarizes and concludes the chapter.

2. Null and overt subjects in typically developing children

Typically developing children acquiring Italian have been generally reported to display a behavior compatible with the positive setting of the null subject parameter from very early on, namely from their first productions. For instance, typically developing children acquiring Italian have been described as not undergoing a Root infinitive stage in contrast with children acquiring non-null subject languages (e.g. French, Pierce 1992, English, Hyams 1986, Rizzi 1993/4, Wexler 1994, see chapter 1)); they were also reported as being able to master verbal agreement morphology from their first productions (Guasti 1993/94, and Chapter 1). These two properties of very young Italian-speaking children together are also an implicit indication that they are able to properly use the null subjects from early on, as their first morphologically correct productions also involve null subjects. Specifically, Lorusso (2003) and Lorusso, Caprin, Guasti (2005) counted the ratio overt-null subjects in the spontaneous productions of Italian-speaking children from the Childe database, aged between 18 and 36 months, Diana, Martina, Raffaello, Rosa and compared it to the same ratio in the speech of the adults interacting with them. The finding is a remarkable parallel ratio in the two groups, which is matched by the results of every single child, as reported in Table 1 from Lorusso et al. (2005)

Table 1. Percentages of overt-null subjects in children (aged between 18 and 36 months) and in adults interacting with them
(from Lorusso, Caprin, Guasti (2005))

	Overt subjects	Null subjects
Diana	27%	73%
Martina	33%	67%
Raffaello	21%	79%
Rosa	23%	77%
Total Children	25%	75%
Total Adults	26%	74%

Lorusso et al. (2005) also studied the distribution of overt subjects according to the different verb classes present in the children’s spontaneous productions (see also Lorusso 2014 for further consideration of the issue), both in the corpora from CHILDES and in newly collected corpora from a cross-sectional study. Interestingly, the two data sets showed a remarkable similarity. There were 59 children from the cross-sectional study aged from 22 to 35 months, they were videotaped and audiotaped in a natural conversational setting while playing with their caregivers. Overall, both studies have shown two basic patterns: i. there were more overt subjects with unaccusatives than with transitive and intransitives, hence subjects were null in a smaller proportion with unaccusative verbs than with transitives and intransitive verbs (Table 2); ii. overt subjects occurred more frequently in the post-verbal position with unaccusatives than with transitives and intransitives (Table 3).

Table 2. Percentages of overt subjects according to verb classes in children and in adults interacting with them. Longitudinal data from Childes and from cross-sectional data from Lorusso et al. (2005)

	Unaccusatives	Transitives	Intransitives
Children from CHILDES	36%	22%	25%
Adults	41%	20%	40%
Children from cross-sectional corpus	29%	11%-15%*	12%

*Divided according to presence/absence of complement; see Lorusso et al. for details

Table 3. Percentages of Pre- and Post-verbal subjects according to verb classes in children and in adults interacting with them. Longitudinal data from Childes and from cross-sectional data from Lorusso et al. (2005)

	Unaccusatives		Transitives		Intransitives	
	Pre	Post	Pre	Post	Pre	Post
Children from CHILDES	34%	66%	72%	28%	79%	21%
Adults	43%	57%	63%	37%	83%	17%%
Children from cross-sectional corpus	46%	54%	74%	26%	74%	26%

Since the highest percentage of overt subjects in children’s productions occurs with unaccusative verbs, as shown by Table 2, this indicates that null subjects are less frequent with unaccusatives than with the other verb classes. This fact together with the highest percentage of overt subjects in the post-verbal position, shown by Table 3, indicates that young children treat the subject of unaccusative verbs differently from the subject of the other two classes. In particular, young children from early ages may be taken to be sensitive to the fact that the post-verbal subject of an unaccusative verb is in fact an internal argument. As discussed in section 1, the order VS with unaccusatives may directly reflect the merge position of the nominal argument as the internal argument of the verb. It is known that children may omit subjects also in non-null subject languages in the so called early child-null subject stage (Hyams 1986, Rizzi 1993/4); however, omission of internal arguments is much rarer in the same stage. Hence, the fact that null subjects are less frequent with unaccusatives in the children’s earliest productions strongly supports the conclusion that they are treating the subject as the internal argument of the verb. Null subjects are licensed only in the (dedicated, Cardinaletti 2004) pre-verbal subject position; hence, a post-verbal subject of an unaccusative verb in its merge position cannot be a null subject.⁴

Italian speaking young children master null subjects from early on also as far as their appropriate use in concrete discourse exchanges is concerned. This is the conclusion that is drawn by Serratrice (2005) on the basis of her longitudinal study of the Calambrone corpus from the CHILDES database (containing the children studied in Lorusso et al. 2005 and two more children: Guglielmo

⁴ Notice incidentally, that a post-verbal subject can never be null with the other verb classes either, since, as discussed in section 1, the post-verbal subject of a transitive or intransitive verb is typically a new information focus subject (as in (11), or is part of a focalized vP as in (13)), hence it is necessarily overt. See below for further discussion on new information post-verbal subjects.

and Viola). Further specific evidence comes from the production experiment discussed in Chapter 4, dedicated to the acquisition of passive. Manetti (2012) tested 12 children aged 3;5-4;6 on the type of answer given to Patient oriented and Agent oriented questions (the former type of question tested possible passive answers as discussed in Chapter 3). In the present discussion, the relevant questions to consider are the Agent oriented ones, which naturally elicit (S)VO answers and in which the (pre-verbal) subject is most naturally null. E.g.: Q: *Che cosa fa la mucca*/What does the cow do? A: *(La mucca) Lecca il bambino*/(the cow) licks the kid. Overall, children answered with an appropriate null subject in 69% of sentences (65/94) and with an overt (lexical) one in 31% (29/94), similar to the adults' performances (80% vs 20%).⁵

2.1. More on post-verbal subjects in typically developing children according to verb classes and definiteness

In the light of the complex interaction of the different factors governing the distribution and interpretation of post-verbal subjects in Italian presented in the introductory section 1, the results from Lorusso et al. (2005) presented in the previous section leave an important question open: if post-verbal subjects are more numerous with unaccusative verbs due to the possibility only available with this verb class to process the post-verbal subject as the internal argument of the verb merged in the direct object internal argument position as illustrated in structure (9), can we be reasonably sure that young children are aware of the interpretive limitations constraining the distribution of the internal argument/post-verbal subject of unaccusative verbs? Recall that this internal argument must be indefinite as it is constrained by the DE; the effect is in turn attributed to the Case property of this verb class and to the fact the only partitive Case is available to this position, a Case which only indefinites can carry, along the lines of Belletti (1988). If it can be proved that young children are aware of the indefiniteness requirement on the post-verbal subject of unaccusatives, then the fact that their post-verbal subjects are more numerous with unaccusatives is indeed a strong indication that they are able to treat this subject as an internal argument, according to the unaccusative hypothesis (Burzio 1986, Perlmutter 1989). Recall that the post-verbal subject of unaccusatives can also be a new-information focus subject, as it is the case with transitive and intransitive verb classes. Hence, as discussed in section 1, there are two possible types of post-verbal subjects with unaccusatives: the post-verbal subject internal argument, and the post-verbal

⁵ The ability to master the null-overt distinction in the discourse pragmatics of the question-answer exchange is also indirectly shown by the fact that in the Patient oriented questions subjects had been overtly expressed by children appropriately in 74% of the answers; there was also a neutral condition (*cosa è successo?*/what happened) and also in this case subjects were appropriately overt in the majority of cases, 86%.

new information focus subject, derived as in 11 (or 13). Hence, unaccusatives are expected to occur with post-verbal subjects more than transitives and intransitives, as it was indeed the case for both adults and children in Lorusso et al.'s data (Table 3). But in order to make this conclusion strong for children, the question indicated above needs to be raised; simply put: are children aware of the possible double source of the post-verbal subject with unaccusatives? A crucial step in answering this question is whether it can be shown that they are aware of the DE; this would in turn be an indication that they are aware of the different verb classes and treat them differently according to the structural distribution of their arguments, in particular of the subject: Only with unaccusatives the subject is merged as the internal argument (structure 9), whereas it is the external argument with transitives and intransitives (structure 10).

The question has been raised in all its complexity by Vernice and Guasti (2014), who checked and manipulated its three fundamental ingredients: definiteness of the subject, verb class, word order SV/VS. Vernice and Guasti (2014) tested a group of 25 monolingual Italian-speaking children in the age range 4;2-5;11 in a repetition task. The rationale behind the use of a repetition task comes from the idea that repetition is not simple retelling but rather active reconstruction of a sentence, along the lines of Friedmann (2007) (see also Lust 2005). Hence, incorrect repetition of an impossible sentence provides a kind of grammaticality judgment in disguise, in that it suggests that the ungrammaticality has been somehow detected.⁶ The way a sentence is repeated is in turn an indication of the knowledge that children have of a given structure, since they should be able to repeat/produce only structures that involve computations that they can master. Thus, the incorrect repetition of an impossible sentence may in fact count as a correction of the sentence, which is in turn revealing of the children's internal grammar. Vernice and Guasti (2014) provide an articulated quantitative and qualitative analysis of their results, of which we report here the main features, directly relevant to the question under discussion.

The authors tested children's ability to repeat sentences like those in (15), where the marginality of (15)b illustrates the DE under the argument structure in (9) since the internal argument of an unaccusative verb can only be indefinite. The presence of the PP is a crucial indication that the noun phrase is kept in the internal argument position, along the lines of structure (9) and as in example (7)d of section 1:

(15) a Esce un orsetto con i suoi amici

⁶ The identical repetition of an ungrammatical sentence is expected to be harder.

Goes out a little bear with its friends

b *Esce l'orsetto con i suoi amici

Goes out the little bear with its friends

The sentences were presented with neutral intonation⁷ in an all-new type context referring to a picture presented to the children. The sentences were introduced by a preamble like: *C'è un bel sole nel bosco, Poi...*/It's a sunny day, then... In this situation, sentence (15)a is well-formed, whereas (15)b is not, as an instance of DE. Children were less prone to correctly (i.e. literally) repeat sentences like (15)b than they were to correctly (i.e. literally) repeat sentences like (15)a : the ratio is 31% literal repetitions in the case of (15)b and 52% literal repetitions in the case of (15)a, as illustrated in Table 4 below. The statistical analysis shows that this difference is highly significant, which is in turn a strong indication that at age 4 children have a clear sense of the DE with unaccusative verbs, hence of the fact that the post-verbal subject of unaccusatives can be processed as an internal argument. Recall that the pragmatics of the sentence to be repeated involved an all new/out of the blue context; hence, in this type of context the post-verbal subject is not in the vP external peripheral focus position through a derivation like (11). Hence, in this type of context the order V S PP is only obtained with S in its internal argument position. This in turn implies that the noun phrase (S) must be indefinite, hence the DE and the unacceptability of (15)b. Interestingly, children repeated sentences like (15)b by changing the word order, thus producing sentences with the SV order in 57% of the cases (the remaining 12% were other type of answers, Table 4), i.e. they produced sentences like (16), which are perfectly grammatical, since definiteness does not condition the pre-verbal subject position:

(16) (Poi..) L'orsetto esce con i suoi amici

(Then) The little bear goes out with its friends

Children also transformed VS into SV with intransitive verbs, as in paradigms like (17) also taken from the stimuli used in the study. Thus, sentence (17)a/b were transformed into (17)c:

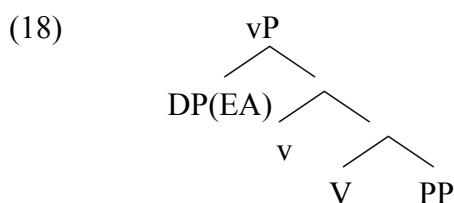
(17) a (Poi...) Passeggia un orsetto con i suoi amici

(Then...) Walks a little bear with its friends

⁷ I.e. with application of the Nuclear Stress Rule implying alignment to the right in Italian, Cinque (1993), Frascarelli (1997)

- b (Poi) Passeggia l'orsetto con i suoi amici
 (Then...) Walks the little bear with its friends
- c (Poi..) Un orsetto/L'orsetto passeggia con i suoi amici
 (Then...) a little bear/the little bear walks with its friends

(17)c corresponds to the type of repetition produced by children in 63% of the cases for sentences like (17)a and 67% of the cases for sentences like (17)b. Essentially, children transformed VS into SV with intransitives at a very similar rate in both cases, with no significant difference depending on the definite or indefinite nature of the subject noun phrase. This suggests that children know that the post-verbal subject is never an internal argument with intransitives. Hence, definiteness is not an issue in (17) and the sentences are repeated/changed with SV order independently of this variable. The relevant argument structure should be along the lines in (10), modulo presence of the PP argument, as illustrated in (18):



Given the argument structure in (18), in order to get the order verb-subject-PP with intransitives, the subject should be a focalized subject, filling a vP-peripheral position as in the derivation in (11).⁸ However, this analysis and the related interpretation was not compatible with the discourse conditions set by the experiment in which the sentence was an all-new sentence, of the type presented in (5) in the introductory section 1. Children's answers show that they did not entertain this analysis.

As discussed in connection with the sentences in (12) of the introductory section 1, an all-new context of a similar type as the one set by the experiment could also be compatible with a derivation along the lines in (13), in which the whole verb phrase is the focus of new information and the verb is further moved to an higher inflectional position; given the argument structure in (18), this derivation could yield the order V S PP, once verb movement has occurred. However, as noted, children appear to have disfavored this type of derivation, as they have correctly (i.e. literally) repeated the sentence with the V S PP order only in a minority of cases with intransitive verbs,

⁸ We assume that the subject does not remain in the vP/spec position. We have expressed this in cartographic terms in the introductory section deriving the new information focus interpretation of the post-verbal subject in the terms described there.

irrespective of the definite (23%) or indefinite (25%) nature of S (Table 4). This was in sharp contrast with their behavior with unaccusatives for which the correct (i.e. literal) repetition of the V S PP order reached 52% when S was indefinite.

As mentioned, children often “corrected” the sentences of the type in (17a, b) with intransitives by producing in their repetitions sentences as in (17)c with the SV order, up to 67% of the cases. Since they did so independently of whether the subject was definite or indefinite, this indicates that they were dealing with this noun phrase as the external argument of the intransitive verb for which there is no definiteness requirement as it is merged in a high position of the intransitive vP. It should be noted that children preferred the SV repetition in general, indicating a general preference for this word order in the all-new context set by the experiment. However, the preference was much stronger with intransitives than it was with unaccusatives, and especially so in the indefinite condition. Indeed, with unaccusatives the correct repetition with the VS order reached a level (52%) when the post-verbal subject was indefinite, which was very close to the repetition/correction into SV order (57%) when the subject was definite. Hence, the order VS, which mirrors the order in which the noun phrase S is merged within the VP with unaccusatives, is much more readily available in an all new context with this verb class than it is with intransitive verbs, provided that S corresponds to an indefinite noun phrase⁹. Table 4 summarizes the articulated shape of the repetition results.

Table 4. Percentages of repetition according to verb class and definiteness of the Subject (adapted from Vernice & Guasti (2014))

Sentence to be repeated	SV repetition	VS repetition	Other
VS indef			
Intransitive	63%	25%	13%
Unaccusative	39%	52%	9%
VS def			
Intransitive	67%	23%	9%
Unaccusative	57%	31%	12%

Vernice and Guasti (2014) is the first study, which has manipulated the definiteness of the post-verbal subject in order to analyze children’s awareness of the different positions in which the

⁹ VSPP, with V=unaccusative in the all-new context could also involve a derivation like (13) with the whole VP focalized in the periphery of the verb phrase. This derivation does not affect the word order which, with unaccusatives, has the subject in the post-verbal position anyway as it is merged as the internal argument.

subject is first merged in the argument structure of the different verb classes of unaccusatives and intransitives. The results have shown that children at age 4 are aware of this difference. Indeed, children's behavior in repetition resembled the grammaticality scale produced by a group of adults also tested in the experiment, which provided a kind of baseline of the acceptability status of the sentences utilized. We can align with the authors' conclusion that children at age 4 have shown to be able to distinguish the syntax and interpretation of the post-verbal subject of unaccusative verbs in a way which is consistent with the unaccusative hypothesis and with the different argument structure (9) of unaccusative verbs, on one side, and intransitive (and transitive) verbs, on the other (10, 18).

The conclusion that there are more VS sentences with unaccusatives in children's early spontaneous productions because these sentences may reflect the linearization of the first merge order, as was proposed in connection with Lorusso et al.'s (2005) data, is thus supported by the new experimental results presented in Vernice & Guasti (2014). Furthermore, the overall results of the latter study have also shown that there was a preference in children's repetition for the VS order with unaccusatives, with S indefinite, and for the SV order with intransitives, with S either definite or indefinite; these overall results strongly indicate that children treat the subject of sentences containing verbs belonging to the two verb classes differently and, at age 4, they know the grammatical/interpretive and the discourse factors constraining its distribution.¹⁰

Recent converging evidence for the early mastery of different verb classes and specifically of the special status of the indefinite post-verbal subject/internal argument of unaccusatives comes from Lorusso's (2014) recent recounting of the productions of the children from the CHILDES corpora (studied in Lorusso 2003 and Lorusso et al. 2005). Lorusso's recent recounting was performed according to the definiteness of the overt subject produced by the (young) children with different verb classes. A very sharp distinction emerged for the first time: whereas children produced few indefinite subjects overall across the three verb classes, the majority of indefinite subjects were produced with unaccusatives and they were located post-verbally in the overwhelming majority of cases (total of 26 indefinite subjects with unaccusatives, of which 3 pre-verbal and 23 post-verbal). Furthermore, whereas the quantity of pre-verbal indefinite subjects is very limited and equivalent across verb classes (2 with intransitives, 3 with transitives and 3 with unaccusatives), post-verbal

¹⁰ As the authors discuss in detail, these results argue strongly against the proposal in Babyonyshev (2001) (and also Borer & Wexler 1987) according to which young children would first analyze unaccusatives as intransitives; their conclusion is in line with Friedmann (2007), and Friedmann & Costa (2011), and also with Snyder, Hyams and Crisma (1995) and more recently Snyder & Hyams (2014), although none of these studies had also manipulated the definiteness feature of the subject.

indefinite subjects are relatively numerous with unaccusatives, but are simply absent with the other verb classes (23 with unaccusatives, and 0 with both intransitives and transitives). Results are summarized in Table 5.

Table 5. Raw figures and percentages of indefinite and definite subjects across verb classes
(adapted from Lorusso 2014)

	Pre-verbal indefinite	Pre-verbal definite	Post-verbal indefinite	Post-verbal definite
Unaccusatives	3 (4%)	70 (96%)	23 (18%)	130 (82%)
Intransitives	2 (4%)	55 (96%)	0 (0%)	14 (100%)
Transitives	3 (1%)	290 (99%)	0 (0%)	117 (100%)

These results are further clear evidence that children know different verb classes from early on, that they master the syntax of subjects accordingly and, crucially, that they also master the DE, which singles out the post-verbal subject/internal argument of unaccusatives from very early on. These are interesting new results as they also indicate that even very young children know enough about an intuitively, pre-theoretically complex property such as definiteness.

3. Subjects in different populations

3.1. Considerations on null subjects in SLI

There is not much dedicated research on the mastery of the syntax and interpretation of subjects by SLI Italian speakers. This poverty may reflect the intuition that this area of syntax does not represent a special difficulty in this population. No specific research has been conducted on the distributional and interpretive subtleties involving overt pre- and post-verbal subjects. Hopefully, new evidence will be produced in the future. As research now stands, however, some evidence is available on the mastery of null subjects by SLI Italian speaking children. Arosio et al. (2010, 2014) quoted in Chapter 3 have provided indirect evidence concerning the ability to use null subjects by SLI Italian speaking children in a discourse appropriate way. The conclusion has been reached in the context of the study concerning their mastery of object clitics. The quoted study showed the

difficulty of the SLI population investigated in supplying object clitics. As observed by the authors, however, children did not show any general difficulty in the mastery of discourse pragmatics; in particular, the group of SLI children investigated (age range 6;4 – 8;7) showed absolutely no difficulty in the mastery of null subjects. Recall that in the experimental design, children had to supply a clitic in the familiar question-answer pair, e.g. *Che cosa fa la rana alla farfalla?*/what is the frog doing to the butterfly?; expected answer: *La mangia*/It eats it(cl). Whereas object clitics were hardly supplied in the answers, as discussed in Chapter 3, the SLI children had no difficulty in producing the discourse appropriate null subject that the question also elicited in the answer. Null subjects have been supplied at ceiling in 90% of the cases, as they were expected.

3.2. Post-verbal and null subjects in (adult) L2

3.2.1. Post-verbal new information subjects

The L2 acquisition of the discourse appropriate use of new information focus post-verbal subjects was directly addressed by Belletti & Leonini (2004). This study investigated the ability to provide a post-verbal subject in the answer concerning its identification as in the pairs in 7a-c, of section 1. The study used verbs of different classes, as in (19)¹¹:

- | | |
|-------------------------------------|----------------|
| (19) a <i>Chi ha urlato?</i> | (intransitive) |
| who has screamed | |
| b <i>Chi è arrivato?</i> | (unaccusative) |
| who is arrived | |
| c <i>Chi ha aperto la finestra?</i> | (transitive) |
| who has opened the window | |

26 L2 speakers aged between 19 and 35 were tested. They were all visiting students in Italy, whose time of residence in Italy ranged from 1 month to 5/6 years. Their level of Italian was generally not advanced (although some were more advanced than others). The most numerous group was constituted by L1-German speakers (16); there was also a small group of (3) L1-French speakers.

¹¹ Also questions containing existential constructions were present as in: *Cosa c'è sopra il tavolo?*/what is there on the table? These were the only ones systematically leading to VS type answers in the L2 productions, e.g. *Ci sono le chiavi*, /there are the keys, indicating that the existential structure has its own peculiarity, shared across languages. We leave these structures out of our presentation.

We report results from this two groups.¹² Each L2 speaker was presented with 22 short video clips through a Power Point presentation, in which everyday actions/events were displayed. At the end of each video a number of questions were asked, among which a question of the type in (19). A group of 10 adult L1-Italian speakers served as controls. The same video elicitation task was then run with another group of 17 L1-English speakers by Belletti, Bennati, Sorace (2007); the level of the L2 speakers was *near native* this time (under White & Genesee 1996 procedure). A further group of 8 adult L1-Italian speakers served as controls in this second study. In both studies, Italian-speaking controls answered with the order VS (98% and 93%), as indicated in (20)¹³:

- (20) a *Ha urlato la ragazza*
has screamed the girl
b *E' arrivato Francesco*
is arrived Francesco
c *L'ha aperta Silvia*
it-CL has opened Silvia

Belletti (2013) discusses the relevance of these experimental results in enriching both the database on which formal linguistic theory can rely, and their descriptive relevance for language comparison and the characterization of (adult) L2 language development. We mainly concentrate here on the latter aspect. Table 6, adapted from the synthesis reported in Belletti (2013), summarizes the main results of both studies:

Table 6*. Percentages of answers to subject questions by adult L2 speakers of Italian as a function of structures used (VS=post-verbal subject; SV= pre-verbal subject, Cleft=subject cleft sentence)
(from Belletti 2013)

L1	VS	SV	Cleft
German	27%	68%	0
French	21%	9%	69%
Italian controls1	98%	1%	0
English <i>near native</i>	29%	71%	0

¹² The rest was so constituted: 2 L1-Polish, 1 L-Russian, 1-L1Bosnian, 1 L1-Albanian, 1 L-Dutch, 1 L1 Greek.

¹³ Since the order VS with transitive verbs requires use of the clitic, the L2 speakers were been tested on their capacity to produce object clitics. The results are reported in Chapter 3. Cliticization may add to the complexity of these structures with transitive verbs, which are the least produced by the L2 speakers of both experiments. From Belletti & Leonini (2004): L1-German: 14% vs 23% with unaccusatives, 16% with intransitive; L1 French: 2% vs 42% with unaccusative, 13% with intransitives. From Belletti Bennati Sorace (2007): L1 English: 20% with transitives, 32% with unaccusatives, 34% with intransitives.

Italian controls2	93%	7%	0
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*Results of L1-German, French and Italian controls1 from Belletti & Leonini (2004). Results of L1-English near-natives and Italian controls 2 from Belletti, Bennati, Sorace (2007)

Results in Table 5 indicate that the L2 speakers, independently of their level of Italian – both the non-advanced group and the *near native* group – tended to preserve the type of *answering strategy* of their L1 also in their L2 answers. Thus, both the L1-German speakers and the L1-English speakers answered more frequently with the order SV (and associated prosody as in their L1) than with the order VS; the L1 French speakers provided a high number of subject-cleft answers (e.g. *È una donna (che ha portato i fiori)/it is a woman who has brought the flowers*). SV and subject-clefts are the characteristic answering strategies of the L1s of the L2 speakers (Belletti 2007, 2009, 2013 for detailed discussion). The tendency to preserve in the L2 the L1 answering strategy was also observed in the adaptation to Finnish of the same video elicitation experiment run by Dal Pozzo (2011): 25 non-advanced L1-Finnish speakers of L2 Italian answered with their L1 SV order in 80% of the cases.¹⁴ Taken together these results indicate that: i. the adult L2 speakers of Italian whose L1 was a non-null subject language in all cases had reset the value of the null subject parameter since they all did produce a significant proportion of VS structures, an option tightly connected to the positive value of the parameter; ii. despite this, all groups of L2 speakers, also at the near native level, continued to prefer, at a remarkably steady proportion, the answering strategy of their L1 also in the L2 Italian. This finding contributes to a characterization of adult L2 development: although the relevant grammatical property (i.e. null subject parameter) is properly mastered, yet in the discourse conditions identified by the elicitation experiment, the answering strategy of the L1 remains active and promptly accessible in the L2. This is clearly connected to the fact that the L1-type answer is not in conflict with any grammatical property of the L2. The SV order is clearly possible in Italian; it is a fact that it is overwhelmingly not adopted in L1 standard Italian where the VS answering strategy systematically prevails.

An interesting question that is opened by these results and by the interpretation just given is whether, in the opposite situation, e.g. L1-Italian, L2-English, the prevalence of the L1 strategy continues to be observed. If the interpretation given is on the right track, we should expect that this should not be the case since in English an Italian type VS sentences like those in (21) mimicking (20) are ruled plainly ungrammatical – contrary to SV in Italian – due to the non-null subject nature of English:

¹⁴ The percentage decreased a bit with the increase of the VS order in advanced L1-Finnish speakers all living in Italy suggesting that some development can occur. Individual variation may also play a role. We leave open at this level of elaboration this potentially subtle and very articulated issue.

- (21) a (*)Screamed the girl
b (*)Has arrived Francesco
c (*)Opened it Silvia

The question was raised by adapting to English the video elicitation task; the results are presented in Belletti (2013). As expected, virtually no VS was produced by the 19 adult L1-Italian speakers of L2 English who answered with the appropriate English SV order in 72% of the cases (1% of verb-subject order only; the rest were 27% of other type answers);¹⁵ 91% of SV answers have been produced by the L1 English speakers, comparably to the systematic VS answers of the L1 Italian controls of the previous experiments summarized in Table 5.

In conclusion, we can conclude that the appropriate answering strategy for the realization of a new information focus subject is relatively hard to acquire and the L1 preferred strategy remains active in the L2 grammars also at very advance levels of attainment. Interestingly, however, this is typically the case only when the non native-like answer is compatible with the L2 grammar, as it is the case for L2 Italian of L1 speakers of non-null subject languages investigated. The same does not happen in the opposite direction, which suggests that once the null subject parameter is reset on the L2 value, the extension of the L1 answering strategy to the L2 does not occur, as it would lead to the production of ungrammatical L2 sentences. This is what elicited production data have indicated so far.¹⁶

3.2.1.2 Post-verbal subjects with unaccusatives

Some spontaneous productions of the same group of *near native* speakers were tested in Belletti Bennati Sorace (2007). In the relevant experimental task the L2 *near natives* had to describe a silent movie (*Storytelling*). Their descriptions were compared with those of the Italian controls. The aim was to provide a comparison of the two groups as to their productions of post-verbal and null subjects. The latter results will be discussed in the following subsection. Here we report the results on post-verbal subjects: they were remarkably similar for both *near natives* and controls, 16% and 15% respectively. Taken at face value, this result may appear in contradiction with the results on

¹⁵ The experiment has been run and the data have been collected by Giulia Bellucci in 2010. Whereas word order was appropriate, the prosody of the SV L2 answers, which should require a particular stress on the pre-verbal subject, was not native like. On the general difficulty in acquiring L2 prosodic properties, see Zubizarreta & Nava (2011).

¹⁶ Possibly, mistakes yielding the ungrammatical VS order may be found in spontaneous production data of L2 English, possibly at the early stages of attainment. This is an open question for which further study is required.

new information post-verbal subjects reported in the previous section. These results indicated that productions of post-verbal subjects were low in the *near native* group, and much lower than in the control group. The incoherence is, however, only apparent if the nature of the verbs and the type of subjects used in the *Storytelling* are considered. Since the verbs described the situation depicted in the silent movie they were the same in both groups and they were, for both groups, all unaccusatives; in most of the cases the post-verbal subject was indefinite.¹⁷ Thus, we are in the situation in which the post-verbal subject is in the internal argument position, as in structure (9). It is then not surprising that the L2 speakers did not have any special difficulty in dealing with this type of post-verbal subject, whose possibility is due both to the lexical class to which the verbs belong and as for its indefinite nature to the fact that it is the internal argument of the unaccusative verb. This cluster of properties is different and independent from the properties relevant for the licensing of new information post-verbal subjects discussed in the previous section. Indeed, post-verbal indefinite subjects with unaccusative verbs are possible in English as well in *there* sentences of the type: *there came a man*. Hence, the universal status of the lexical semantics of the unaccusative class on the one side, combined with the possibility of similar structures in the L1 must be at the source of the parallel behavior of the *near native* group and the control group in this experiment. Some of the sentences produced by the *near native* group are given in (22):

- (22) a Manca un cesto
 is missing a basket (A basket is missing)
- b Arriva un ragazzino
 arrives a boy (A boy arrives)
- c Passa un uomo
 goes by a man (A man goes by)
- d Cade una pera
 falls down a pear (A pear falls down)

Following traditional analyses of the null subject parameter, the pre-verbal subject position of these sentences is filled by a silent expletive *pro*, the equivalent of the overt English expletive *there* (Rizzi 1982, Cardinaletti 1997, 2004). In this respect, these sentences are a further indication that the null subject parameter has been adequately reset by these speakers, coherently with the same

¹⁷ The residue were definite noun phrases with a special interpretation, labeled *uniqueness* (i.e. having a unique single referent, as in e.g. *il portafoglio/the wallet*). This interpretation was assumed to be compatible with partitive Case in Belletti (1988).

conclusion reached in the previous subsection. We now move to a description of the L2 mastery of referential null subjects.

3.2.2 Null and overt pronominal subjects in (adult) L2 with reference to attrition

The same group of 17 *near native* L2 speakers of Italian (with English as their L1) has been tested on the Picture Verification task (PVT) design developed in Tsimpli et al. (2004). We report here on the clearest results of this experiment (all relevant further details in Belletti Bennati Sorace 2007). The L2 speakers were tested on their comprehension of sentences containing a pronominal or a null subject in a subordinate clause as to the possible antecedent that could be picked up for it either in the matrix clause, subject or object or, alternatively, in the external context of the event described by the sentence. The L2 speakers saw a sentence and had to choose between three pictures the one that corresponded to the intended meaning of the sentence. The choice indicated the intended referent selected by the speakers. The two type of sentences whose results we report here are given in (23):

- (23) a L'anziana signora saluta la ragazza, quando lei attraversa la strada
the old lady says hello to the girl, when she crosses the road
- b La mamma dà un bacio alla figlia, mentre *pro* si mette il cappotto
the mother kisses the daughter, while (she) *pro* puts on the coat

Whereas Italian speaking controls had a clear preference for the selection of the direct object of the matrix clause as the antecedent of the overt pronoun in sentences like (23)a (C: 85%), almost never selected the subject (S: 5%), and only marginally selected the external referent (E:10%), L2 *near natives* reacted very differently: they also preferred the direct object (C: 65%), however they selected the matrix subject to a significantly higher proportion (S: 30%); selection of the external referent was comparably marginal (E: 5%).¹⁸ In contrast, the reaction to sentences of the type in (23b) with a null subject in the subordinate clause was quite parallel in the two groups. S: 54%, C: 45%, E: 1%, for the L2 *near natives*; S: 40%, C: 54%, E: 6% for the controls. These results are summarized in Table 7:

¹⁸ On the preference for the non-subject antecedent of an overt subject pronoun in a null subject language like Italian, see Carminati (2002), Frascarelli (2007).

Table 7. Percentages of choice of S= Subject; C= Complement; E= External referent as antecedent for overt and null subject pronoun in the subordinate clause by adult near native speakers of L2 Italian (L1= English) and control subjects (adapted from Belletti Bennati Sorace 2007)

	S	C	E
L2 near natives <i>overt</i>	30%	65%	5%
Controls <i>overt</i>	5%	85%	10%
L2 near natives <i>pro</i>	54%	45%	1%
Controls <i>pro</i>	40%	54%	6%

Table 7 indicates that the L2 *near native* speakers master the interpretation of null subjects at a native level. However, they do not have a native-like behavior as far as the interpretation of the overt pronominal subject is concerned: although there is a clear preference to pick the matrix object as the preferred antecedent as also controls do, they also pick the matrix subject as a possible antecedent for the overt subject pronoun at a significantly higher rate than controls (30% vs 5% is a highly significant difference). This behavior is most likely an indication of an analysis of the overt subject pronoun *lei* as a weak pronoun (Cardinaletti & Starke 1999). Since overt subject pronouns are in fact strong tonic pronouns in standard Italian¹⁹, it seems reasonable to conclude that this misanalysis is influenced by the weak nature of the overt subject pronouns of their L1-English. Thus, the interpretation of overt subject pronouns seems to represent a residual area of influence from the L1 also at the near native level.

The shape of these results is robust. A different group of 14 adult L2 *near native* speakers of Italian with English as their L1 were also tested with the same PVT by Sorace & Filiaci (2006) (L2 speakers living in Italy; see also Filiaci 2003, with L2 speakers living in the UK); their performance was compared against that of a different control group of L1 Italian speakers (living in Italy). The results are remarkably parallel those in Table 7, as summarized in Table 8:

¹⁹ According to Cardinaletti (2004a) third person subject pronouns *lei* and *lui* may be undergoing a change from strong stressed pronouns to possibly weak. This may be an interfering factor accounting for the behavior of the *near natives*. However, the fact that Italian speaking controls do not have the same reaction strongly suggests that the weak pronoun analysis is favored as a type of transfer from their L1.

Sorace and Filiaci (2006), in line with Sorace (2004) speculate that the preference for the “overt” pronoun that these results seem to indicate may reflect a sort of unmarked choice due to processing load considerations characteristic of the L2 situation, irrespective of the parametric properties of the L1 (see also Clahsen & Felser 2006). Notice, however, that the attrition facts to be reported in the test suggest a wider effect and a plausible role played by the “other” non null subject language and the nature of its pronominal subjects.

Table 8. Percentages of choice of S= Subject; C= Complement; E= External referent as antecedent for overt and null subject pronoun in the subordinate clause by adult near native speakers of L2 Italian (L1= English) and control subjects
(adapted from Sorace & Filiaci 2006)

	S	C	E
L2 near natives <i>overt</i>	27%	60%	13%
Controls <i>overt</i>	8%	82%	11%
L2 near natives <i>pro</i>	46%	43%	11%
Controls <i>pro</i>	51%	44%	8%

Interestingly, similar results were been obtained by Tsimpli et. (2004), which tested L2 speakers of English on their L1 Italian in situations of attrition with the same PVT. The authors tested 20 very advanced/near native speakers of L2 English with Italian as their L1, who had been living in the UK for at least six years and whose Italian might in principle have been subject to attrition. Indeed, the clearest attrited area in the domain investigated by the PVT task on the interpretation of null and overt subject pronouns concerned precisely the interpretation of overt pronominal subjects. In sentences of the type in (23a), both the L1-Italian attrited speakers and the Italian speakers acting as controls preferred the matrix complement as the antecedent of the overt subject pronoun (between 70 and 80% for the two groups); however, a significant difference emerged between the groups in that the L1-Italian attrited speakers selected the matrix subject as a possible antecedent for the overt subject pronoun to a much higher rate than the controls: 21.5% vs 7.6% respectively. Again, this may be interpreted as the sign of a misanalysis of the overt subject pronoun as a weak pronoun also in Italian, as it is the case in English, the L2 of the very advanced/near native speakers whose first language was undergoing attrition.

A similar conclusion can also be drawn on the basis of the results of the *Storytelling* task. We have seen in 3.2.1.2 that L2 *near natives* and controls had a completely parallel behavior as to the amount of post-verbal subjects produced in their spontaneous descriptions, all involving unaccusative verbs. Results on the descriptions provided by the L2 *near natives* and the Italian speaking controls, however, were very different as far as the distribution of overt and null subject pronouns is concerned: although L2 *near natives* and Italian speaking controls supplied a comparable amount of null subjects (52% and 59% respectively), yet the amount of overt subject

pronouns used by the L2 *near natives* in their spontaneous descriptions was significantly higher than that used by the Italian speaking controls: 14% vs 4% respectively. Interestingly, this is the only choice in which the two groups had a distinct behavior, as they had also been very close in the distribution of overt lexical subjects. Table 9, summarizes these results:

Table 9. Percentages of overt and null subjects in spontaneous descriptions by adult L2 near native speakers of Italian (L1=German or English) and their controls
(adapted from Belletti Bennati Sorace 2007)

	Null	Overt Pronominal	Overt lexical noun phrase
<i>L2 near natives</i>	52%	14%	18%
Controls	59%	4%	22%

Again, we can speculate that the possible analysis of overt subject pronouns as weak pronouns may be favored in the L2 *near natives* due to L1 influence and it is thus at the source of this residual different behavior of the two groups.

3.3. Overt and null subjects in bilinguals

As was clearly revealed by the interpretive judgments of the Italian-speaking controls in the experiments on the interpretation of pronouns reviewed in 3.2.2, an overt subject pronoun tends to pick up as its antecedent the complement of the matrix clause or, to some extent an external referent, but only very marginally the matrix subject (Tables 7 and 8). Results are less neat for a null pronominal subject, which is both compatible with a subject or a complement antecedent (Table 7), as well as, to the same extent as in the previous case, with an external referent. In the L2 population and in situations of attrition, the interpretation of the overt subject pronoun was shown to work differently, with the possibility of a significant higher acceptance of the matrix subject interpretation compared to L1-Italian-speaking controls. Hence, in the L2 situation overt pronouns have a wider range of possible interpretations. The question whether something similar also happens in the bilingual situation has been addressed in a number of studies, which investigated whether any overuse of overt subject pronouns can be detected in simultaneous bilinguals being exposed to two languages from birth.

Overall, studies, which have collected and analyzed production data repeatedly detected an overuse of overt subject pronouns in simultaneous bilinguals. In these studies dealing with Italian as one of the two languages, the other language was always a non-null subject (Germanic) language; in

addition, the data collected were from young bilingual children, overall from 1;07 up to 4;6 (Serratrice et al., 2004/English-Italian, one child: 1;10-4;6; Müller et al. 2006a/German-Italian, five children: 1;7-3;1, 1;8-3;1, 2;0-3;5, 1;9-3;5, 1;6-3;0; Pinto, 2006/Dutch-Italian, two children: 1;9-4;1, 2;9-3;9). Serratrice (2007) extended this line of research to English-Italian bilingual children (age 6;11-8;4) by means of a PVT of the type discussed in the previous section 3.2.2 (in connection with adult L2). The test contained sentences like (24):

- (24) a La mamma dà un bacio alla figlia, mentre si mette il cappotto
the mother kisses the daughter, while (she) puts her coat on
b Il portiere saluta il postino, mentre lui apre la porta
the porter greets the postman, while he opens the door

Also in this setting, bilingual children preferred the matrix subject as the antecedent for the overt pronominal subject of the subordinate clause to a significantly higher proportion than Italian speaking adults and children controls.²⁰

Sorace et al. (2009) also addressed the issue experimentally with simultaneous bilingual children whose “other” language next to Italian was either English or Spanish. The rationale behind the choice of having an older population was that this allowed one to put to test a relatively complex task while being reasonably sure that the relevant syntactic knowledge was well in place in the two languages; the reason to have the same material tested in both English-Italian and Spanish-Italian bilinguals was that this allowed a direct comparison on a combination of languages, which were either different (English/Italian) or the same (Spanish/Italian) as for the setting of the null subject parameter. This could in principle highlight possible crosslinguistic influences between the two grammatical systems. We now report the main results of this study on the Italian sentences on which the bilingual children have been tested.

Overall 90 bilinguals were tested: 20 English-Italian bilinguals living in the UK, 39 English-Italian bilinguals living in Italy, 31 Spanish-Italian bilinguals living in Spain. Each group was divided in two subgroups of younger (Mean age: 6;9, 6;8, 6;7) and older (Mean age: 8;8, 8;8, 9;0) children. Two subgroups of Italian speaking monolinguals (Mean ages: 6;8, 8;9) and two subgroups of

²⁰ The preference also obtained in the so called cataphoric condition in Serratrice’s terms, i.e. in cases in which the subordinate clause containing the overt subject pronoun precedes the matrix clause. This condition was also tested with L2 adults in the PVT experiment presented in section 3.2.2. However, as mentioned in text, we decided to only illustrate the clearest results, which typically concern sentences like those in (23)/(24), the anaphoric condition in Serratrice’s (2007) terms. The reader is referred to the quoted works for all detailed results.

English speaking monolinguals (Mean ages: 6;7, 8;9) and one Italian monolingual group of adults and one English monolingual group of adults acted as controls. In total, 167 children were tested in this study. The English-Italian bilinguals were also tested on English sentences parallel to those utilized for the Italian material. In this test, they behaved at ceiling in a way wholly comparable to that of the monolingual controls. Since the English material contained both grammatical (e.g. *Donald said that she sneezed*) and ungrammatical (e.g. *Donald said that sneezed*) sentences, the English task was essentially a grammaticality judgment task, for which both bilinguals and monolingual controls behaved alike. The Italian material instead did not contain ungrammatical sentences, but the selection had to be made on the basis of preference in the interpretation. The Italian material was constituted of sentences like those in (25) which referred to a scene that each child watched on a video clip; four characters were present in each scene (Mickey and Donald; Minnie and Daisy), two in foreground and two in the background. One of the characters in the foreground said something, then each of the two characters in the background referred what the previous character had just said by beginning the sentence with e.g. “Minnie ha detto che (Minnie said that)...”. One sentence had a null subject the other an overt pronominal subject in the embedded complement of the verb “ha detto”. Children were told that the characters were learning Italian and that they should decide which one had spoken better Italian. The two relevant conditions are defined by the authors as [- Topic shift/TS] and [+ Topic shift/TS] respectively since in the former case the null/overt pronominal subject of the embedded clause is meant to refer to the subject of the matrix clause (i.e. a topic type argument), in the latter the null/overt pronominal subject of the embedded clause is meant to refer to a different argument, i.e. the other character in the foreground; hence, the [+TS] cases mimic the situation of sentences like those in (24a) of the PVT of the previous sections. Recall that in those sentences the object was the preferred antecedent of the overt pronominal subject for native controls. In the [+TS] of this study the referent for the overt pronominal subject may be taken from the contextual situation. Examples of the stimuli used are illustrated in (25)a, b:

- (25) a [-TS]
 (Minnie and Daisy in the foreground; Mickey and Donald in the background)
- | | |
|---------|---|
| Minnie: | sono caduta! |
| | I have fallen |
| Donald: | Minnie ha detto che <i>pro</i> è caduta |
| | Minnie has said that (she) has fallen |

Mickey: Minnie ha detto che lei è caduta
 Minnie has said that she has fallen

b [+TS]

(Minnie and Daisy in the foreground; Mickey and Donald in the background)

Minnie: Daisy è caduta!
 Daisy has fallen

Donald: Minnie ha detto che *pro* è caduta
 Minnie has said that (she) has fallen

Mickey: Minnie ha detto che lei è caduta
 Minnie has said that she has fallen

The clearest result of this study is that the bilingual children preferred the overt pronoun option also in [-TS] contexts in which the null option is the preferred one by controls to a significantly higher rate. The effect was stronger in the English-Italian bilinguals than in Spanish-Italian bilinguals; the latter group, however, did so to a rate comparable to that of the younger group of monolingual controls²¹. Figure 1, reproduced from Sorace et al. 2009, illustrates these results. A further aspect of the result was that in the [+TS] condition, the Italian controls preferred, as expected, the overt subject pronoun option, but they did so significantly more than both groups of bilinguals.

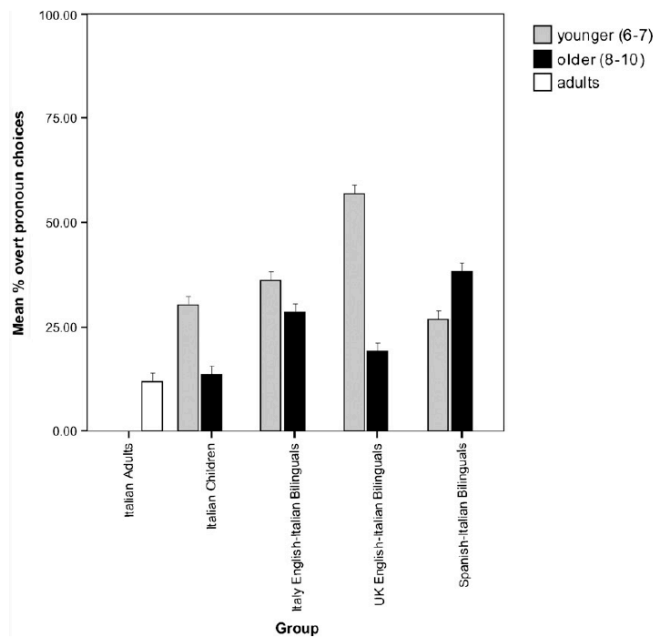
The first result is in line with the results of previous studies mentioned; the novelty of the present study is that the preference is confirmed also in Spanish-Italian bilinguals thus indicating that the choice of the overt option cannot simply be a matter of cross-linguistic influence, since Spanish, much like Italian, is a null subject language. The authors suggest that the overt option might be the unmarked initial choice, possibly preferred by immature processing systems, as also suggested by the fact that younger Italian speaking controls also adopted it in [-TS] condition, as indicated in Figure 1. The effect is stronger in English-Italian bilinguals resident in the UK, and this is plausibly interpreted as an effect of the bilingual input, which instantiates many overt subject pronouns in English, hence ultimately as a real cross-linguistic influence.

²¹ Overuse of overt (3rd person) subject pronouns has also been informally observed (no formally documented counting available, unfortunately) in some corpora of spontaneous production of young monolingual Italian speaking children. Thanks to Nina Hyams for pointing out this potentially very interesting observation, which deserves further work in the future.

It may be noted however that also the adult controls did sometimes select the overt pronoun option, as Figure 1 indicates. Thus, the choice of the null subject option in these cases is in fact a matter of preference, a strong preference in adults' Italian (and also in older control children); but the overt option is not a source of ungrammaticality. We can speculate that this contributes to account for the bilingual children's behavior and for the fact that also Spanish- Italian bilinguals explore the overt subject option, the interesting new result of this study. The results illustrated in Figure 1 suggest that the exploration lasts longer in the bilingual groups than it does in the monolingual (children) controls. We may conjecture that the bilingual setting favors the exploration of different (UG) options, which is something that all children do, but may last a bit longer for bilinguals.²² But what would the explored relevant option be? Again, the answer could be the analysis of the overt subject pronoun as a weak, instead of just a strong pronoun, as it typically is in standard Italian. This analysis may also be favored by an ongoing possible reanalysis of the third person singular pronouns *lui* and *lei* (those contained in the experimental stimuli) from solely strong to also possibly weak (see Cardinaletti 2004a for a development of this idea, and footnote 18). If a weak form is the most appropriate one in the so called [-TS] contexts, then not only *pro* but also an overt weak pronoun can be selected as the subject of the subordinate clause, co-referent with the matrix subject. Note that, if this speculation is on the right track, the ambiguous status of the overt third person singular pronouns *lui* and *lei* as either strong or weak may also explain the adult controls' choice referred to above; furthermore, it may be an interfering factor in conditioning the behavior of adult L2 speakers discussed in the previous section, probably favored, in that case, by the convergence with the weak status of subject pronouns in the L1, as discussed, hence as a case of cross-linguistic influence.

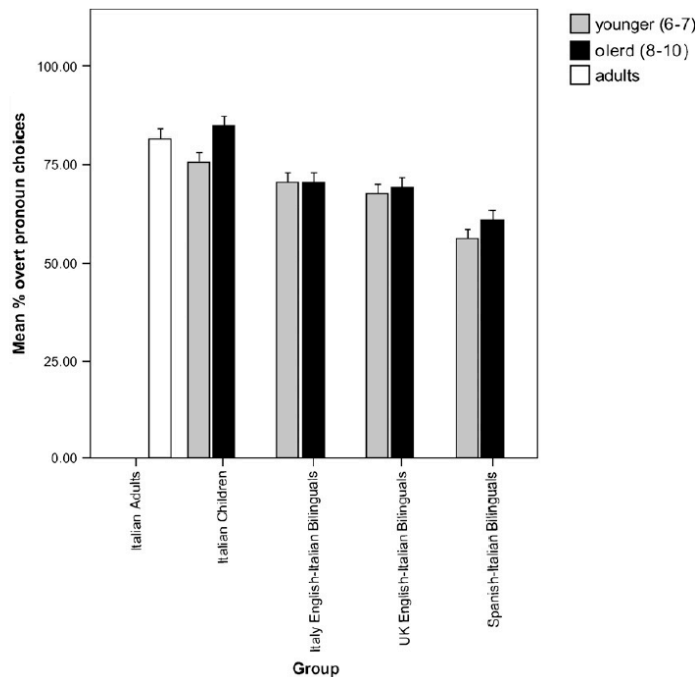
²² See Sorace et al. 2009 for a partly different hypothesis in terms of bigger processing demands for the null option.

Figure 1. Percentages of overt subject pronouns choice in [-TS] contexts by various groups of bilingual children and one group of Italian-speaking adults
(from Sorace et al. 2009)



In a similar vein, the initially surprising wider use of null subjects in the [+TS] context manifested in the bilinguals' preferences referred to above and illustrated in the following Figure 2 from Sorace et al.'s (2009) study could be interpreted along the following lines, close to the authors' proposal: use of the null subject option in the [+TS] context does not yield to ungrammaticality. It rather leads to a somewhat more ambiguous sentence, since the overt (strong) option would be preferable in the standard language. However, since the video clip context may also help in identifying the relevant referent that is present in the video, this may lead some of the bilingual speakers to select the null option. Yet, preference for the strong option is not as clear as for all controls; this may also interact with the previous observation that the overt subject option is not so clearly analyzed as strong by these speakers.

Figure 2. Percentages of overt subject pronouns choice in [-TS] contexts by various groups of bilingual children and one group of Italian-speaking adults
(from Sorace et al. 2009)



Several interesting issues are raised by these results, which concern both the proper analysis of subject pronouns in different languages and a fine-grained characterization of the bilingual acquisition mode in an often intricate and non trivial way.

4. Summary and questions for future research

The acquisition of the different properties of Italian subjects has been the topic of the present chapter. Robust results from spontaneous production have indicated a very early access to appropriate use of null subjects by Italian speaking young children. Good mastery of null subjects by Italian speaking young children converges with their early access to the proper mastery of verbal agreement inflectional morphology thus indicating that the null subjects that Italian speaking children use from early on are of the type found in a null subject language and do not correspond to the so called child null subjects documented in children's early productions of non-null subject languages. Whereas children also properly use overt lexical subjects from their earliest productions, they do not use overt subject pronouns inappropriately; hence the different nature of overt and null pronouns appears to be in place from the beginning. Although the literature is relatively poor as for the acquisition of null and overt subjects in atypical development, from what is known in the research on SLI it can be concluded that null subjects are properly accessed and used in a felicitous way by SLI children in the age range examined, 6;4-8;7.

We have illustrated in the introduction and reconsidered throughout this chapter the intricacies of the syntactic distribution and interpretation of overt subjects in standard Italian. More specifically, overt subjects can be located in positions that either precede or follow the lexical verb. The post-verbal location of the lexical subject is not a unitary phenomenon though, as it is conditioned both by considerations related to the pragmatics of discourse exchanges, in particular to the focalized status of the post-verbal subject or of the whole verb phrase, and by factors depending on the lexical class to which the verb belongs. Typically developing Italian speaking children at age 4 have been shown to be aware of both types of properties from early on as they treat the post-verbal subjects of unaccusative verbs differently from those of intransitives, and they are also aware of the indefinite restriction holding on them, known as the Definiteness Effect/DE.

The lexical factor governing the distribution and indefinite nature of post-verbal subjects with unaccusative verbs appears to be relatively easily acquired also by adult L2 speakers of Italian, as can be deduced from the spontaneous description they provided in storytelling. In contrast, the strongly preferred post-verbal location of a new information focus subject characteristic of Italian appears to resist proper acquisition in adult L2, as is shown by robust results from work on answering strategies, where a peculiar instance of transfer and cross-linguistic influence clearly emerges. Finally, the L2 population, and to some extent also bilingual children, have been shown to overuse overt subject pronouns to an extent that is not found in the same proportion in the monolingual population, converging with similar results from attrited Italian.

New questions are raised by the results on the acquisition of the syntax and interpretation of Italian subjects reviewed here. One main question concerns the acquisition of this domain in the atypical populations on which very little is specifically known so far. It would be interesting to extend the elicitation designs from which robust results are now available to different types of atypical speakers; this would allow us to check on a peculiar type of discourse ability concerning the appropriate use and interpretation of pre-verbal and post-verbal focalized subjects, as well as null vs overt subject pronouns for which only indirect evidence is so far available. Similarly, the proper acquisition of new information post-verbal subjects in both monolingual and bilingual children deserves special attention, in particular in the domain of answering strategies for which only preliminary evidence starts being gathered from on-going research. The question is particularly relevant from the theoretical point of view in the bilingual population when different strategies are preferably adopted in the different language combinations; a number of sub-questions naturally

arise: is there a prevailing strategy? Are the different strategies equally early accessible in bilinguals? Is there cross-linguistic influence in simultaneous bilinguals as it appears to be the case in adult L2 speakers? These are among the questions naturally inspired by the research so far that may contribute to enhance our knowledge of both different acquisition modes and also the nature and precise theoretical characterization of the different strategies.

A domain of further investigation concerns the Definiteness Effect constraining the nature of the internal argument of unaccusatives; more data are welcome which should further reveal the different status of the post-verbal subject of unaccusatives depending on definiteness and its information value. Overall, the results already available that we have presented here indicate a sensitivity of young children to different verb classes as well as to the different information value of the VS order with unaccusatives with respect to intransitives. These data suggest an early mastery of both lexical properties and discourse properties in young children around age 4 and, partly, even earlier; more data from even younger children should continue to be gathered as this is a privileged complex domain simultaneously hinging on both lexical and discourse pragmatics competence for which developmental data may help in disentangling the various, often subtle, distinctions involved.