

Theoretical and developmental issues in the syntax of subjects: Evidence from near-native Italian

Adriana Belletti · Elisa Bennati · Antonella Sorace

Received: 31 October 2006 / Accepted: 10 June 2007 /

Published online: 10 November 2007

© Springer Science + Business Media B.V. 2007

Abstract This article reports the results of experiments targeting the production and interpretation of postverbal subjects, and null and overt pronominal subjects, by near-native speakers of Italian whose native language is English. The results directly bear on both theoretical issues and developmental acquisition questions. It is argued that properties related to the null-subject parameter are sensitive to discourse factors that determine the use of both postverbal subjects and pronominal subjects. More specifically, it is claimed that the availability of null pronominal subjects and the availability of postverbal subjects do not necessarily correlate. The near-native grammars analyzed here illustrate a special instance of this lack of correlation. Furthermore, near-natives show non-native-like behavior in the use of postverbal subjects, and in the overuse of overt pronominal subjects in tensed clauses. The proposal is put forward that, although resetting of the null-subject parameter has taken place in the speakers' L2 Italian grammar, the relevant L1 computations are preserved and accessed in L2 use, without violating any formal conditions; this is the source of non-target behavior. The analysis proposed exploits cartographic insights on discourse-related computations, and suggests that the principles of economy may be instantiated differently in native and near-native grammars.

Keywords Null subject parameter · New information focus subjects · Cartography · Discourse interface · L2 acquisition · Near-nativeness

A. Belletti (✉) · E. Bennati

Facoltà di Lettere, CISCL - Centro Interdipartimentale di Studi Cognitivi sul Linguaggio,
Università degli Studi di Siena, Complesso S. Niccolò, Via Roma, 56, I-53100 Siena, Italy
e-mail: belletti@unisi.it

E. Bennati

e-mail: elisabennati@unisi.it

A. Sorace

Linguistics and English Language, University of Edinburgh, 40 George Square,
Edinburgh EH8 9LL Scotland, UK
e-mail: antonell@ling.ed.ac.uk

1 Introduction

The syntax of subjects has been a privileged domain of investigation in both developmental and theoretical linguistic research over the last twenty years. In recent years there has been a partial shift of emphasis: while earlier studies within the Principles and Parameters model (Chomsky 1981) focused on the differences among languages with respect to the possibility of licensing null subjects, and contributed to the formulation of the “Null Subject (NS) parameter”, more recent research has devoted special attention to the discourse-related nature of the constraints governing the distribution of lexical and pronominal subjects. Thus, although the availability of null and postverbal subjects is traditionally regarded as a direct consequence of the positive setting of the null subject parameter (Rizzi 1982 and subsequent literature), this view now appears to be only partly correct, since discourse factors also play a crucial role. This paper contributes some experimental evidence that directly addresses this point.

The article reports the findings of experiments conducted on elicited and spontaneous production and interpretation of postverbal subjects and null and overt pronominal subjects by L1 English near-native speakers of Italian. In a nutshell, the experimental results show that although the near-native speakers appear to have reset the NS parameter to the Italian value - as null subjects are correctly produced and understood - important differences between native and non-native grammars remain. In particular, there is a discrepancy in near-natives between native-like use and interpretation of null pronominal subjects and the overuse of overt pronominal subjects in inappropriate discourse conditions (consistent with previous results, e.g. Tsimpli et al. 2004; Sorace and Filiaci 2006). Furthermore, a persistent difficulty is found with the appropriate use of discourse-related postverbal subjects, which are available but only to a limited extent (also consistent with previous findings, e.g. Belletti and Leonini 2004). These results are discussed here in terms of both their theoretical and developmental implications.

2 Background

2.1 Theoretical assumptions

The point of departure of this study is the hypothesis that the central property of the null subject parameter is the licensing of a phonetically null (referential) pronominal element—*pro*—in a dedicated preverbal subject position of the clause, as in the original formulation of the parameter (e.g. Rizzi 1982).¹ This property is taken to be the necessary condition for the availability of structures with a postverbal subject, which display the order VS (and a silent preverbal subject). Recent studies, however, have highlighted

¹ See Borer (1989) and, more recently, Alexiadou and Anagnostopoulou (2001) and Holmberg (2005) for partly different characterizations of the parameter and of the status of the null element *pro*, the details of which would be beyond the scope of this paper. Here we phrase our analysis within the traditional formulation of the parameter; nothing crucial hinges on this particular decision for the arguments developed in this paper.

On the existence of different subject positions dedicated to different types of subjects in the high part of the IP-clause see Cardinaletti (2004b).

the fact that it is not a sufficient condition, as the order VS is also constrained by discourse factors (Belletti 2004b and references cited there). Here we assume the general guidelines of the cartographic projects (Cinque 2002; Rizzi 2004; Belletti 2004a), according to which a fine-grained and detailed clausal architecture is enriched with dedicated heads and specifiers directly visible to the interpretive systems at the interface with discourse and prosody. In particular, we assume, with Belletti (2004b), that the low part of the clause contains discourse-related positions currently labeled Topic and Focus. These discourse-related positions constitute a clause internal VP-periphery. According to this proposal, postverbal subjects may fill one of these VP-peripheral dedicated positions, depending on their interpretation in discourse contexts. For example, a sentence like (1b), where the subject constitutes the focus of new information, is associated with the representation in (2), where the subject fills the specifier of the (new information) low Focus projection and is therefore interpreted as conveying new information.

- (1) a. Chi parlerà?
Who will-talk
- b. Parlerà Gianni.
Will-talk Gianni
Gianni will talk.

(2) [_{CP} [_{TP} *pro* ...parlerà ... [_{TopP} [_{FocP} Gianni [_{TopP} [VP]]]]]

Postverbal subjects of unaccusative verbs can be amenable to the same analysis, but can also be related to the lexical property that characterizes this verb class: the subject, which is merged in the VP-internal complement position, originates directly in a postverbal position. In the first case the subject expresses the new information focus of the clause in the same way as in (1b) (e.g. *Chi è arrivato?* - Who is arrived? *E' arrivato Gianni* - Is arrived Gianni) and can be definite. In the second case, the subject is part of a clause which may express new information as a whole, but its nature is constrained and is characteristically modulated by definiteness; the indefinite postverbal subject may remain in VP-internal position in this case, as traditionally assumed. In this study we will mainly concentrate on the interpretation of postverbal subjects as the focus of new information, as illustrated in (1)b and analyzed as in (2).²

A further discourse-related domain where the null subject nature of the language appears to play a crucial role is the complex interpretive relationship that is known to

² The word order VS, with S = focus of new information, possible with all verb classes in Italian, is obtained by moving the verb or a larger portion of the VP to a position above the subject in Spec/FocP. See Belletti (2004b) for further details also concerning the VP-peripheral analysis of the also possible Topic interpretation of postverbal subjects (the so-called “marginalized” subject, Antinucci and Cinque 1977; Cardinaletti 2001). On a similar conception of the low IP, VP-peripheral area see also Jayaseelan (2001).

On postverbal subjects with unaccusatives see 6.4, 6.5 below for more detailed discussion.

We take cartographic analyses of the kind assumed here as a most transparent way to explicitly express the fact that syntactic positions-ultimately word order-directly affect aspects of the interpretation, which can thus be read off the syntactic configuration. However, see Costa (2004) for a different view, according to which the bulk of the interpretation of relatively impoverished syntactic structures is achieved by the interpretive systems and the specific principles operating therein. We assume that some of these principles may contribute to interpretation in domains where word order is not the only crucial factor: see the discussion below on use of overt vs null pronominal subjects.

exist between the overt or null realization of pronominal subjects and their possible antecedents (Calabrese 1986; Renzi 1988; Grimshaw and Samek-Lodovici 1998). The fundamental empirical distinction is the following: a lexical subject in preverbal position is normally interpreted as given, topic-like³ information; typically, an overt pronominal subject of an embedded clause does not refer to the preverbal lexical subject of a superordinate clause (see 3b), whereas a null subject does (see 3a). Instead, an overt subject pronoun is characteristically interpreted as introducing a new topic. This is illustrated by contrasts such as those in (3):

- (3) a. Maria_i telefonerà quando *pro*_{i/?j} ne avrà voglia.
 Maria will-call when pro will feel like
 b. ?*Maria_i telefonerà quando lei_{?*i/j} ne avrà voglia.
 Maria will-call when she will feel like

These different interpretive possibilities are tightly linked to the two grammatical options available in a null subject language like Italian, where both null and overt pronominal subjects can be formally licensed.⁴

2.2 L2 developmental issues

The distinction between formal licensing of a null *pro* and the discourse-related conditions on its manifestations also influences the way in which these aspects of grammar are approached in research on language development, as is particularly evident in the domain of adult second language acquisition.

The acquisition of the properties related to the null subject parameter was one of the first developmental aspects to be investigated in theoretical L2 research. Early studies typically focused on the clustering of formal consequences of the parameter in L2 acquisition as evidence of the role played Universal Grammar (UG) constraints (White 1989). The aims were to establish the directionality of difficulty in L1–L2 language pairs that instantiated different settings of the parameter (White 1985; Liceras 1989) and whether there was an ‘unmarked’ setting which could guarantee successful parameter resetting (Phinney 1987). The results, on the whole, supported the view that the properties of the null subject parameter-null subjects, subject-verb inversion/availability of postverbal subjects, and lack of *that*-trace effect-are developmentally unrelated in the adult L2 grammar, and therefore that there are maturational effects on parameter (re)setting.⁵

³See Rizzi (2005) for discussion on some distinctions between subjects and topics.

⁴See also Montalbetti (1984) for the characterization of domains where the null vs overt realization of a pronominal subject has interpretive effects on the possible bound interpretation of the pronoun.

⁵The data also pointed to L1 effects on the developmental paths and outcomes. For example, French- and Spanish-speaking learners of English differ in their acceptance of illicit null subjects (White 1985). L1 speakers of Chinese and Japanese acquiring English use both referential and expletive subjects correctly from the earliest stages, but do so significantly more often in sentence-initial position than in sentence-internal position (Lakshmanan 1991; Roebeck et al. 1999). Moreover, they tend to generalize expletives to inappropriate contexts. In contrast, L1 speakers of Greek have initial problems with the requirement that subjects are always expressed overtly in English, and even more protracted problems with expletive subjects (Tsimpli and Roussou 1991).

These early results, however, left a number of phenomena unexplained. To mention a few, differences were found between null referential subjects and null expletive subjects (Phinney 1987), and between the rates of acceptance of subject-verb inversion with unaccusative and unergative verbs (Liceras 1989). In addition, the conclusion that both null subjects and postverbal subjects appear early in the production of L2 learners of null subject languages did generally not take into account their contextual appropriateness. Although learners in some studies were found to use inappropriate overt subjects more often than inappropriate null subjects (Liceras 1988; Liceras and Díaz 1998; Liceras et al. 1999), the underlying causes of this behavior were not addressed (one exception is Liceras 1988, who identified ‘stylistics’ as the source of the problem).⁶ Finally, since the vast majority of the early studies were done on learners at intermediate and advanced levels, the question remained open of whether the cluster of properties of the null subject parameter were ultimately learnable, that is, if they could be acquired completely at the highest levels of L2 proficiency.

The latter question, and some of the previously unaddressed questions, have become more central to the current debate in L2 acquisition. In particular, they figure prominently in a new strand of research that focuses on ‘near-native’ L2 speakers, that is, speakers who have learned a second language in adulthood and have reached exceptionally high levels of ability in it (Sorace 2003; White 2003). This research has singled out the interface between syntax and discourse as a domain that presents residual problems at the near-native level (Tsimpli and Sorace 2006; Lozano 2006a), and has especially focused on the use of anaphoric pronominal subjects as a privileged syntax-discourse interface domain (see Sorace and Filiaci 2006 on the interpretation of antecedent possibilities of null and overt subjects in complex clauses).⁷ It is worth noting, however, that the L2 acquisition literature on near-native speakers relevant to this topic has focused predominantly on (preverbal) pronominal subjects. The use and interpretation of postverbal subjects has so far received considerably less attention in

⁶Furthermore, discrepancies were noticed in the acquisition of L2 English by speakers of L1 null subject languages between the early acceptance of (ungrammatical) null subjects and the rejection of (ungrammatical) postverbal subjects, indicating a split in the likelihood with which these two properties may transfer from the L1 (White 1989). These early findings are, in a sense, complementary with some of the results reported in the present article (Section 5).

⁷Problematic aspects of this particular interface have emerged in other bilingual populations, for example in studies of native language ‘attrition’, which investigate the process(es) of change that take place in the native language of speakers who have been exposed to a second language for an extended period of time (Seliger and Vago 1991). Tsimpli et al.’s (2004) study of L1 attrition in Italian and Greek speakers who were very advanced speakers of English revealed asymmetric patterns of change in the speakers’ L1 involving an overuse of inappropriate overt subjects. Serratrice et al. (2004) report an analogous overuse of overt pronominal subjects in an Italian-English bilingual child, consistent with other studies of early bilingual children simultaneously acquiring a null- subject and a non- null- subject language, e.g. Paradis and Navarro (2003), Hacoen and Schaeffer (in press). While the majority of developmental studies indicate the same asymmetric tendency for the scope of overt subjects to be extended, a few studies of L1 attrition and L2 acquisition have also reported the apparent illicit use of null subjects to refer to non-topic antecedents (e.g. Gürel 2006; Montrul 2004; Montrul and Louro 2006). Thus the data, as a reviewer points out, are not completely consistent in showing an asymmetric pattern. However, the significant fact is that the overproduction of overt subjects is attested significantly more frequently than that of illicit null subjects in the performance of both near-native second language speakers and native speakers in an attrition situation. Furthermore, the production of illicit null subjects may be due to a variety of other causes (see discussion in Sorace 2004).

studies of L2 speakers at this high proficiency level.⁸ The importance of filling this gap is reinforced by a recent study by Belletti and Leonini (2004), which found that the production of postverbal subjects was significantly lower than that of null subjects in low intermediate learners of L2 Italian from different language backgrounds. The question arises of whether this imbalance is a developmental effect bound to disappear in the longer term, or whether it persists despite long-term exposure to the L2.

3 The contribution of this study

The present study combines a number of experimental paradigms that were previously used separately with different populations of speakers and makes a twofold contribution. First, it provides a rich array of production and comprehension data from L1 English speakers who have reached a near-native level of competence in L2 Italian in the domain of the syntax of subjects. Speakers at this high level might be expected to have full mastery of both the syntax and the pragmatics of the realization and placement of subjects: however, it is shown here that—consistent with previous research—residual difficulties persist in this domain, not across the board, but typically with respect to aspects interfacing with discourse. In contrast, the formal mechanisms involved in *pro* licensing are fully acquired. Specifically, the near-native speakers continue to manifest dissociation between an almost native-like availability of null subjects and the more limited availability of postverbal subjects, thus confirming the trend already reported for lower proficiency learners. These results constitute important developmental evidence for the different status of the two properties related to the null subject parameter.⁹

Second, the results bear on a number of general issues of theoretical import and therefore may shed light on some of the unresolved developmental questions raised by previous research. In particular, the discussion devotes special attention to the following questions: (a) the necessary but not sufficient status of *pro* licensing for the realization of postverbal subjects, which needs to be complemented by discourse relations; (b) the economy factors underlying the use of null *pro*, as opposed to an overt subject pronoun, in a null subject language (Italian), and the possible reasons why near-natives appear to disregard these factors; (c) the partly different status of VS structures with unaccusative and other verb classes; (d) the formal nature of the conditions governing both the placement of pre- vs. post-verbal lexical subjects and the choice of overt vs. null subject pronouns. It is argued that L2 speakers of Italian at the near-native level have a wider range of parametrically compatible grammatical options than are available to L1 speakers.

4 Experiment

Two groups of speakers participated in the study.¹⁰ The experimental group consisted of native speakers of American and British English who had been resident in Italy for

⁸Both Hertel (2003) and Lozano (2006a, b) investigated the acquisition of word order in Spanish as a second language, but did not test near-native speakers.

⁹See the discussion on the dissociation of the two properties in Belletti and Leonini (2004) in adult L2 Italian and in Nicolis (2005) in the context of Creole languages.

¹⁰The experiments were conducted at the University of Siena during the spring of 2004.

periods of varying length, and who were recruited through word of mouth and personal acquaintances among university staff and students and teachers at language schools. The age range was 22–49. All participants had learned Italian as an L2 after puberty. They had been resident in Italy for a mean of 8.35 years (range 1–24). Participants were selected on the basis of White and Genesee's (1996) screening procedure, originally designed to identify near-nativeness.¹¹ As a result of this procedure, 17 speakers were tested and recruited for the study. There was also a control group of 8 native speakers of Italian, all monolingual resident in Italy.¹² Biographical information on the L2 speakers is summarized in Table 1 (for all tables, see [Appendix](#)).

4.1 Tasks

The experimental method included different off-line tasks designed to test both elicited and spontaneous production and interpretation of subjects in Italian:

1. VS Videos (to elicit narrow focus new information postverbal subjects)
2. Story Telling (to test spontaneous production of subjects)
3. Picture Verification (PVT) (to test the interpretation of null and overt pronominal subjects)
4. Headlines (to test the production of pre - and postverbal subjects according to their definiteness, in all focus sentences).

These tasks have been used successfully in previous studies: Task 1 was adapted from Belletti and Leonini (2004); tasks 2, 3 and 4 were adapted from Tsimpli et al. (2004) and Filiaci (2003).

The tasks were presented to each participant in a randomized order. All tasks were untimed, although participants were encouraged not to spend too much time on each individual item.

1. *VS Videos*: This task aimed at testing the production of postverbal subjects interpreted as focus of new information, across different verb classes: transitive, unaccusative and unergative. The participants were shown 21 short videos. At

¹¹We used an adaptation of the White & Genesee procedure, previously developed by Tsimpli et al. (2004), which included: (a) an extensive face-to-face interview in Italian, and the elicitation of language samples; (b) the evaluation by two native judges of selected portions of language samples from non-native speakers, randomly interspersed with samples from native speakers. The evaluation focused on pronunciation, morphology, syntax, choice of vocabulary and overall impression of near-nativeness. Each of these aspects was assessed on an 18-point scale from 0 (Non-native) to 18 (Native). Only speakers rated between 17 and 18 on all scales by both judges, with a maximum of one exception falling below 17, were deemed to be near-native and were therefore included in the study. Despite the wide range in terms of length of residence in Italy, all speakers had been learning Italian before they arrived, and all passed the screening procedure. For a discussion of the relationship between length of L2 exposure and proficiency (and the occasional lack of a positive correlation between the two), see Tsimpli et al. (2004).

¹²A reviewer remarks that the control group could have included more subjects, given the subtlety of the phenomena investigated in this study. While it would always be preferable to test larger groups, it should be noticed that the controls in our study behave almost identically to the controls in three other published studies-Tsimpli et al. (2004), Belletti and Leonini (2004), Sorace and Filiaci (2006)-which employed the same methods. The native speaker data therefore seems reliable.

the end of each video they were asked some questions about what they had just seen. In order to avoid elliptical answers, the speakers had been instructed to include the verb in their answer, and were asked to be as spontaneous and natural as possible. Some examples of the questions asked in the videos are given in (4) and the expected answers are exemplified in (5):

- (4) a. Chi ha telefonato?
who has phoned
 b. Chi è partito?
who is left
 c. Chi ha bevuto il mio caffè?
who has drunk my coffee
 d. Quante ragazze ci sono nella scena?
how many girls there are in the scene
- (5) a. Ha telefonato una ragazza.
has phoned a girl
 b. E' partito Francesco.
is left Francesco
 c. L'ha bevuto una ragazza.
It.CL-has drunk a girl
 d. Ci sono tre ragazze.
there are three girls

2. *Story Telling*: This task was designed to obtain spontaneous productions of subjects in a narrative context. Participants were shown a short silent film lasting about 5 minutes and were asked afterwards to tell the story of the film in their own words.
3. *Picture Verification (PVT)*: The purpose of this task was to test the interpretation of null and overt pronominal subjects in biclausal forward and backward anaphora contexts. Participants saw a sentence and three pictures on the computer screen; they had to indicate which picture(s) corresponded to the meaning of the sentence. Each picture represented a different referent for the null or overt pronominal subject of the subordinate clause (i.e. (i) the matrix subject, (ii) the complement of the main clause and (iii) an external referent).

Some examples of the experimental items are given in (6)–(9):

- (6) L'anziana signora saluta la ragazza, quando **lei** attraversa la strada.
 The old lady greets the girl, when **she** crosses the road.
- (7) 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.
- (8) Appena **lui** chiude la borsa, il fattorino dà il denaro al cassiere.
 As soon as **he** closes the bag, the postman gives the money to the cashier.
- (9) Mentre **pro** sbadiglia, il controllore prende il biglietto al passeggero.
 While **he/pro**yawns, the inspector takes the ticket from the passenger.

4. *Headlines*: This task aimed at testing the production of preverbal and postverbal definite and indefinite lexical subjects in an all-focus context. Participants saw a photograph representing some event (the “news”), and a series of sentence fragments in random order below it. The verbs used were all eventive unaccusative verbs (e.g. *crollare* ‘collapse’, *succedere* ‘happen’, *esplodere* ‘explode’). They were asked to pretend that they were reporting the news to a friend who did not know about the event, using the fragments and starting by saying *Hai sentito che...* ‘have you heard that ...’, e.g. *Hai sentito che è crollato un palazzo?* ‘Have you heard that a building collapsed?’

5 Results

5.1 VS videos

One of the most striking results of the VS Videos task is that the production of postverbal subjects is significantly lower overall for the near-natives compared to the native speakers: ($\chi^2=160.3114$; $p<0.0001$).¹³ The distribution of frequencies of production of VS across verb classes is given in Table 2.

It is worth noting that VS is systematically produced by near-natives only in “*ci*-existential” structures. A further observation emerges from the comparison between the L2 VS productions with unergatives and unaccusatives on the one hand, and the L2 VS productions with transitives on the other (34% and 32% vs. 14%). Postverbal subjects with transitives are more problematic (the difference is statistically significant: $\chi^2=27.1313$; $p<0.0001$).

Tables 3, 4, 5 show the different patterns of answers produced by participants across verb classes in more detail. It can be seen that the preferred near-native answer (highlighted in the tables) involves a preverbal subject focalized in situ (indicated by the notation *S*).

As Table 5 indicates, when a transitive verb is used the near-natives tend to realize the direct object with a lexical noun phrase rather than a clitic (71% vs. 26%). However, presence of the clitic does not favor the production of a VS structure (14% *cIVS* vs. 12% *SclV*), suggesting that *SV* is preferred regardless of the presence and the nature of the object. Notice that *VOS* is produced with very low frequency and *VSO* is never produced by either group.

The three tables together indicate that the near-natives tend to prefer the “focalization in situ” of the preverbal subject rather than the placement of the

¹³All results were statistically analysed by means of the Chi-squared test, which was chosen as a suitable non-parametric procedure for comparisons of relative frequencies of responses. Analyses of individual results of this and all the other tasks did not reveal the presence of outliers. The group means are therefore representative of individual performance profiles.

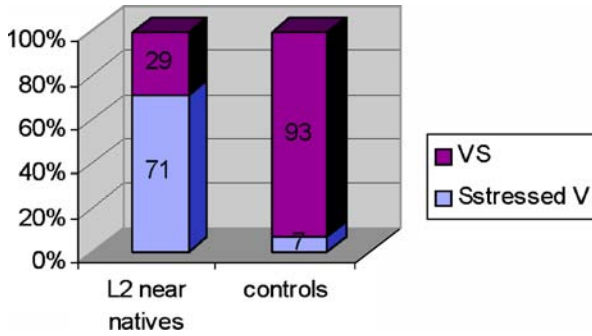


Fig. 1 Relative proportion of occurrences of SV vs. VS in the Videos Task (all verb classes)

subject in postverbal position, as illustrated in the example in (10) from the experimental data:

- (10) a. Chi è caduto per le scale?
Who fell down the stairs?
- b. *Il ragazzo* è caduto.
 The boy fell down.

The total of SV and VS is illustrated in Fig. 1.

Note that the SV answer would be appropriate in English, the participants' L1:

- (11) a. Who fell down the stairs?
- b. *The boy* fell down.

5.2 Story telling

Table 6 and Fig. 2 illustrate the overall production of subjects in the spontaneous narratives obtained with the story telling task:

The task yields a comparable number of occurrences of null subjects in the native and near-native groups. However, the use of overt pronominal subjects is significantly higher in the near-native than in the control group (14% and 4%, respectively; $\chi^2=23.2134$; $p<0.0001$).

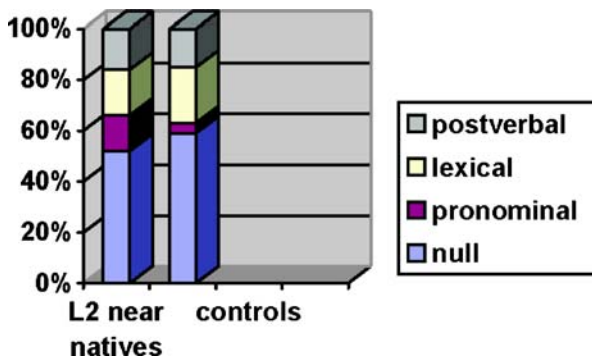


Fig. 2 Types and position of subjects produced in the Story Telling Task

Another noteworthy aspect of the results is that the use of postverbal subjects is nearly the same in near-natives and controls: 16% vs. 15%. The situation represented in the film to be described in the task led both groups to make virtually the same lexical choices in sentences with postverbal subjects: all verbs utilized by both groups are eventive unaccusatives, as shown in the examples in (12), drawn from the experimental data:

- (12) 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 a pear
 A pear falls.

5.3 Picture verification task

The most important result of the Picture Verification Task concerns the interpretation(s) chosen by the participants with respect to overt subject pronouns in forward and backward anaphora contexts, like those illustrated in (13) and (14):

- (13) L'anziana signora saluta la ragazza, quando *lei* attraversa la strada.
 The old lady says hello to the girl, when **she** crosses the road.
 (14) Appena *lui* chiude la borsa, il fattorino dà il denaro al cassiere.
 As soon as **he** closes the bag, the deliveryman gives the money to the cashier.

As shown in Tables 7 and 8 and Figs. 3 and 4, overt subject pronouns are interpreted in these contexts as possibly coreferential with the matrix subject at a

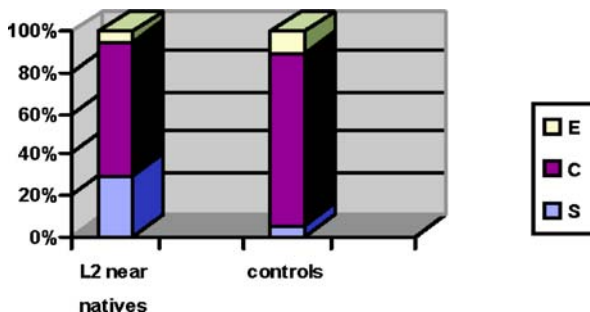


Fig. 3 Forward anaphora with overt pronominal subjects in the PVT task

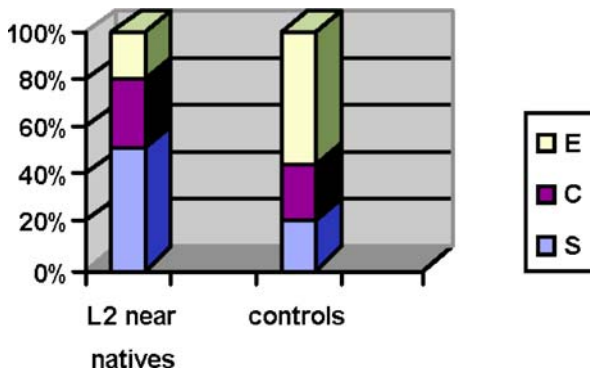


Fig. 4 Backward anaphora with overt pronominal subjects in the PVT task

significantly higher rate by the near-natives than by the controls (30% vs. 5%, $\chi^2=8.9220$; $p<0.0028$; 51% vs. 20%, $\chi^2=11.8491$; $p<0.0006$).

However, differences emerge in the distribution of responses in the two anaphora cases. In the forward anaphora case, coreference of the overt pronoun and the matrix subject is very seldom chosen by the controls, whereas in the backward anaphora case this option is chosen more frequently (although significantly less so than by the near-natives). In the forward anaphora case, coreference with the matrix object is the preferred option by both groups. In the backward anaphora case, responses are more evenly distributed across options for both groups: however, controls tend to prefer the interpretation of coreference with the extralinguistic referent, whereas the near-natives tend to prefer coreference with the matrix subject.

The pattern obtained for the interpretation of null subjects is strikingly different. The relevant contexts are given in examples (15) and (16):

- (15) La mamma dà un bacio alla figlia, mentre *pro* si mette il cappotto.
The mum kisses the daughter, while **she/pro** put on the coat.
- (16) Mentre *pro* sbadiglia, il controllore prende il biglietto al passeggero.
While **he/pro** yawns, the inspector takes the ticket from the passenger.

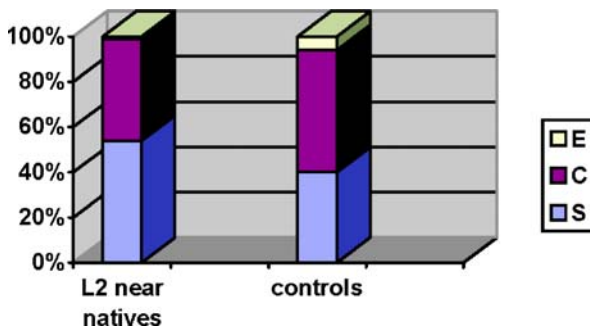


Fig. 5 Forward anaphora with null subject in the PVT task

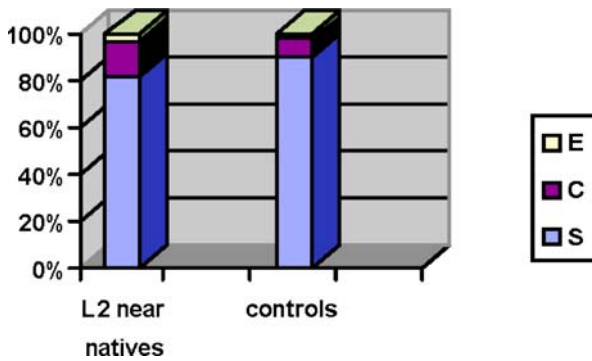


Fig. 6 Backward anaphora with null subject in the PVT task

As shown in Tables 9 and 10 and in Figs. 5 and 6, no significant differences emerge between the two groups in either forward or backward anaphora. In forward anaphora sentences, both the near-natives and the controls interpret the null subject of the subordinate clause as coreferential with either the subject or the complement of the matrix clause. In backward anaphora sentences, both the near-natives and the controls overwhelmingly interpret the null subject as coreferential with the matrix subject (difference not significant: $\chi^2=1.0330$; $p<0.3095$).

5.4 Headlines

The Headlines Task elicited all-focus sentences with unaccusative verbs; the variables of interest were the definite vs. indefinite nature of the subject and its placement with respect to the verb. Table 11 and Figs. 7 and 8 show that near-natives, overall, have a significantly stronger preference for preverbal subjects than the controls. This result is consistent with the findings of the VS Video task, where SV is the preferred order across verb classes, including unaccusatives. However, the definiteness of the subject plays the same role in the two groups with respect to subject placement: there are more indefinite than definite subjects in postverbal position (41% vs. 26%, respectively, for the near-natives; 69% vs. 46% for the controls).

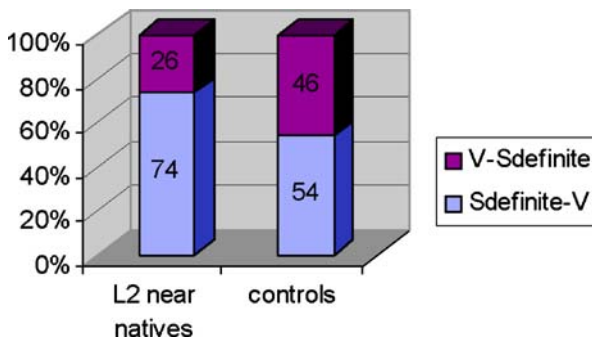


Fig. 7 Production of definite subjects (in all-focus contexts) in the Headlines task

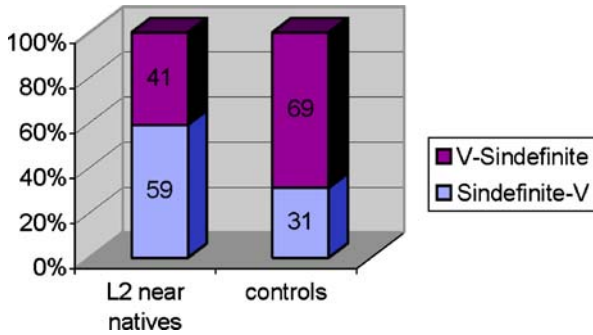


Fig. 8 Production of indefinite subjects (in all-focus contexts) in the Headlines task

The L2 near-natives tend to produce a higher percentage of preverbal subjects than the controls, in both the definite and the indefinite subject condition (74% vs. 54% in the definite subject condition and 59% vs. 31% in the indefinite subject condition), as exemplified in (17)–(18):

- (17) Hai sentito che **molti voli** sono stati cancellati per sciopero?
Have you heard that a lot of flights have been cancelled for a strike?
- (18) Hai sentito che **il rapido Roma-Parigi** è deragliato a causa dell’alta velocità?
Have you heard that the Rome-Paris express has run off the rails as a result of excessive speed?

The χ^2 analysis shows a significant difference between the L2 near-natives and the controls in both conditions ($\chi^2=9.6557$, $p<0.0019$ and $\chi^2=17.2586$; $p<0.0001$ respectively).

A noteworthy result of this task is that there is a divergence with the Story Telling task, in which subjects of unaccusative verbs in all-focus sentences were placed in postverbal position at a comparable rate by native and non-native participants. In contrast, the Headlines task shows a significant difference between the two groups: the near-natives place both definite and indefinite subject preverbally more often than the natives, although when they do place subjects postverbally, they have a slight preference for indefinite subjects in this position. It is possible that this apparent contradiction is due to the presence of an adverbial phrase in the sentence (such as *nel centro di Roma* ‘in the centre of Rome’ or *a causa del maltempo* ‘because of bad weather’), which modulates the wide-focus establishing function of the opening phrase “have you heard that...”.¹⁴

¹⁴Although the adverbial phrase was meant to induce an all-focus interpretation in which all elements of the sentence are new, the information structure of the sentences produced may be affected by the placement of the adverbial either at the beginning or at the end of the embedded sentence. The data presented here do not allow us to assess the plausibility of this account, for which further research is needed.

Tables 12 and 13 show the frequencies of occurrence of the possible orders of constituents with definite and indefinite subjects, respectively.

The tables show that in most cases both groups place the adverbial in sentence-final position. The order with the adverbial in sentence-initial position is produced with much less frequency, and the intermediate position of the adverbial between the subject and the verb is hardly ever produced by either group. The two groups, however, differ with regard to the relative positioning of the subject and the verb: overall, the near-natives place subjects before the verb at a higher rate than the natives. Furthermore, the two groups display differential sensitivity to the definiteness of the subject. The native speakers tend to place the subject after the verb more often when it is indefinite than when it is definite. The near-native speakers, in contrast, prefer to place the subject in preverbal position regardless of its (in)definiteness. There is a difference, however, between the percentage of V-Sdef-Adv (19%) and that of V-Sindef-Adv (36%) in the near-native group, which suggests a (weak) preference for indefinites over definites in the postverbal position.

6 Discussion

The combination of the experimental tasks reveals various properties of native and near-native Italian grammars with respect to subjects, as well as crucial differences between them. In particular:

- While null pronominal subjects are produced at a comparable rate in spontaneous production by both the near-native and the control groups, the use of overt pronominal subjects is significantly higher in the L2 near-native group than in the control group (Story Telling; see discussion in 6.1).
- The over-use of overt subjects is consistent with the patterns of interpretations of subject pronouns in forward and backward anaphora contexts: overt subject pronouns are interpreted as coreferential with the matrix subject at a significantly higher rate by the near-native group than by the control group (PVT; see discussion in 6.2).
- Postverbal subjects are underused across verb classes by the near-natives in comparison to the controls. A dissociation emerges between the wider availability of null subjects and the more restricted availability of postverbal subjects in near-native speakers (VS Videos; see discussion in 6.3).
- SVO is the most frequently produced word order by the near-natives; other orders are produced very infrequently, and VSO is never produced (VS Videos; see discussion in 6.3.1).
- In spontaneous production, where the same unaccusative verbs are used by both groups, no difficulty with postverbal subjects is observed and there is no difference between the two groups (Story Telling; see discussion in 6.4).
- The special status of unaccusatives that was observed in spontaneous production appears to correlate in part with the results from controlled production, where the postverbal placement of the subject is available, to both near-natives and controls, to a greater extent with indefinite subjects of unaccusative verbs

(Headlines; see discussion in 6.5). Nevertheless, SV is the preferred word order by near-natives overall (as in the VS Video elicited production task, see comments in 6.5).

The general picture emerging from the results is one in which L2 near-native speakers appear to display native-like behavior with respect to crucial properties related to the positive setting of the null subject parameter (as well as properties directly related to UG, as will become clear in the discussion). However, the near-natives optionally manifest grammatical and discourse-related features of their non-null-subject L1 grammatical system that are non-target with respect to Italian but-crucially-not incompatible with the syntax of a null subject grammar. In the following discussion this specific form of cross-linguistic influence will be considered as the key for the interpretation of the results.

6.1 Pronominal subjects: null vs. overt

The results highlight a residual problem in the near-natives' syntax of pronominal subjects, which concerns only overt subject pronouns. The overwhelmingly frequent and appropriate use of null referential subject pronouns in spontaneous production indicates that the near-native speakers have reset the null subject parameter to the Italian value—a conclusion that is further reinforced by the limited, but yet well-attested, use of postverbal subjects. The question then arises as to why the overuse of overt subject pronouns should occur and how it could be analyzed.

Assuming a tripartite typology of pronouns as strong, weak and clitic (Cardinaletti and Starke 1999), the null *pro* subject in null subject languages can be regarded as the non-overt analogue of overt weak subject pronouns (Cardinaletti 2004b). Given the proximity of subject *pro* and weak pronominal subjects, it can be hypothesized that the L2 near-natives optionally access the overt instead of the null realization of the weak subject pronoun. What needs to be explained is why they do this to a greater extent than native speakers. One possibility is that the grammatical analysis of overt subject pronouns as weak pronouns is instantiated in English, the speakers' L1, and therefore is more readily available to the near-natives through this route.¹⁵ According to this account, then, the L2 near-natives have a wider range of options available to them for the realization of pronominal subjects than native

¹⁵Moreover, access to this analysis might be reinforced by the somewhat ambiguous status of overt subject pronouns in contemporary standard Italian, which may be undergoing a process of change from exclusively strong (stressed) to possibly weak. These considerations apply in particular to third person subject pronouns *lui* 'he' and *lei* 'she'. See Cardinaletti (2004a) for discussion on the possible analysis of these pronouns as weak and their gradual taking over of the now obsolete *egli*, *ella*.

speakers typically have; crucially, however, there is no formal incompatibility between these options and the positive (re)setting of the null subject parameter.^{16,17}

Native Italian speakers under attrition from prolonged exposure to English (as the ones studied by Tsimpli et al. (2004), who were living in the UK), have been found to display a very similar behavior in the spontaneous production of overt pronominal subjects to the L1-English near-native speakers of the present study (who were resident in Italy). This is an interesting indication that input ‘external’ factors do not seem to play any decisive role in determining the observed behavior, as the amount of exposure to Italian in the two groups is completely different in the two environments. In contrast, ‘internal’ factors are closely comparable in the two groups: in both cases, speakers have equally ready access to the grammatical systems of the two languages. Hence, different grammatical options are more accessible to them than to monolingual native speakers, in the typical case.¹⁸ Moreover, the direction of the influence between systems is the same—from English to Italian—regardless of whether English is the native or the second language.

6.2 The interpretation of overt and null referential subject pronouns

Let us now consider the interpretation allowed for overt subject pronouns in forward and backward anaphora contexts in turn. In the forward anaphora case, both groups prefer coreference with the complement of the matrix clause; this indicates that the near-natives prefer the interpretative option that is also favored by native speakers. However, the most striking result in forward anaphora is the significantly higher tendency by the near-natives to interpret the overt subject pronoun as coreferential with the lexical matrix subject. While this interpretation does not violate any grammatical principles (e.g. binding), it results in an infelicitous mapping of a grammatical option onto discourse in Italian. The native speakers select either the matrix complement (in the vast majority of cases, for reasons that we will not

¹⁶This interpretive hypothesis predicts that in a symmetrical situation of L1-Italian near-native speakers of L2 English, the extension of the *pro* option to English should be impossible, since it would be incompatible with the reset of the null subject parameter to the negative value.

¹⁷An additional possible reason for the overuse of overt subject pronouns, which will not be explored here in any detail, is that this may be a “default” option that speakers adopt when they are faced with different sorts of processing difficulties. Suggestive evidence in this respect comes from studies on the L2 acquisition of Italian by Spanish speakers (e.g. Bini 1993); since in this case the two languages have the same setting of the null subject parameter, parametric crosslinguistic influence cannot be a factor (see Sorace 2005; Sorace and Filiaci 2006 for further discussion).

¹⁸Converging evidence is provided by other studies on L1-English near-native speakers of L2 Italian, both resident in the UK (Filiaci 2003) and resident in Italy (Sorace and Filiaci 2006). Consistent results are also found in Gürel’s (2006) study on pronominal subjects in the endstate of L2 Turkish speakers. Turkish has similar syntactic and pragmatic constraints on the choice of null vs. overt subject pronouns as Italian, except that an overt subject pronoun of an embedded clause cannot refer to the matrix subject at all. Near-native L2 Turkish speakers accept matrix clause subjects as antecedents for overt subjects in embedded clause significantly more often than native Turkish speakers; however, they also occasionally accept null pronouns in contrastive contexts.

explore here) or an extralinguistic referent (but to a much lesser extent) as an antecedent for the overt subject pronoun, whereas they select the subject antecedent only in very few cases. Let us assume that this may indicate the operation of a discourse condition governing the interpretation of pronouns that leads speakers to look for an antecedent other than the matrix subject for an overt subject pronoun. To the extent that a preverbal subject is interpreted as given/topic-like information, the condition amounts to limiting the use of an overt subject pronoun to signal reference to a different topic. The constraint does not appear to operate with the same strength in the near-native grammar, whence the higher rate of infelicitous interpretation of the overt subject pronoun. A plausible reason for the weaker strength of the assumed discourse condition in L2 Italian is that no similar constraint is operative in the L1 of the near-natives, which is in turn due to the non-null subject nature of English.

The case of backward anaphora is slightly different. On the one hand, the near-natives tend to prefer coreference between the overt pronoun and the matrix subject to a significantly greater extent than the native speakers; in this respect their behavior is similar to that displayed in forward anaphora. On the other hand, this type of coreference is also chosen by the native speakers at a higher rate than in the case of forward anaphora. A possible reason for this behavior may lie in the inherent processing difficulty of backward anaphora compared to forward anaphora (see Sorace and Filiaci (2006) for a discussion of processing strategies in anaphora resolution). Suppose that interpreting a backward anaphora sentence involves the additional load of holding the subject pronoun in memory until a possible referent is encountered, thus favoring coreference with it. This strategy results in the selection of the matrix subject as the preferred coreference option.¹⁹ However, for native speakers of Italian this strategy is in conflict with the discourse condition that an overt subject pronoun typically signals an antecedent other than the subject of the matrix clause, discussed above; for near-natives this constraint is weaker, as already seen. Thus, coreference with the matrix subject is more frequent in this group. Both groups choose coreference with the complement of the matrix clause to an almost identical extent, although for neither group is this the favored option. The favored option, instead, is coreference with the matrix subject for the near-natives and coreference with an extralinguistic referent for the native speakers.

In contrast with what has been observed for the interpretation of overt pronouns, the pattern of interpretation of null subject pronouns (*pro*) is essentially identical in the two groups. This can be regarded as further evidence that the near-natives have a null subject grammar.

The backward anaphora case is particularly striking: both groups select the matrix subject as the favored antecedent in almost all cases. As speculated before, this may be related to some processing computational load on backward anaphora, which favors coreference with the first encountered possible referent, i.e. the matrix subject. In contrast with the interpretation of the overt subject pronoun, however, this type of coreference is in line with the discourse condition that null subject pronouns typically refer to topic antecedents. Thus, the selection of this interpretation is not problematic for either group and it is therefore preferred.

¹⁹As has indeed been found also in monolingual English (Kazanina et al. 2005).

Given the proposed interpretation of the data, the following question should be asked: what is the nature of the discourse condition which was hypothesized to be operative in the native grammar? Note that the operation of the condition is made particularly visible through the behavior of the Italian control group of native speakers in the forward anaphora case (see the sharp contrast in the preferred coreference possibilities in Table 7/ Fig. 3 and Table 9/ Fig. 5). We speculate that it may ultimately be related to the following two complementary economy reasons: on the one hand, the null pronoun option can be considered a more economical option than the overt one in a direct way, since “null” may be reasonably taken to be more economical than “overt”, all things being equal.²⁰ On the other hand, the null option also appears to be compatible with different coreference possibilities, as revealed by the native speakers’ behavior, which allows for coreference with either the matrix subject or the matrix complement (Table 9/ Fig. 5). The overt subject pronoun option is thus restricted to one interpretation—mostly the complement interpretation (Table 7/ Fig. 3)—and it typically excludes the matrix subject.²¹ Because of the simultaneous availability of the L1 discourse options, which are tightly connected to the non-null-subject nature of English, it is natural to hypothesize that the economy factors conditioning the coreference possibilities of null vs overt subject pronouns do not affect the near-natives’ grammar to the same extent as the natives’ grammar. Hence, overt subject pronouns are not equally costly for the near-natives and are not restricted to coreference with a non-subject matrix antecedent.

6.3 Postverbal subjects

If the Story Telling task reveals a native-like use of null-subjects, the results of the VS Videos task are very different. The overall pattern confirms at the near-native level the results obtained in Belletti and Leonini (2004) with intermediate L2 speakers of Italian: postverbal subjects are not produced in a native-like fashion by the near-natives in the relevant discourse conditions, regardless of the class to which the verb belongs.²² The experimental situation thus reveals a persistent area of difficulty even at this very advanced level of L2 acquisition. The interest of this finding is twofold. First, when compared with the Story Telling task, it highlights a dissociation between two properties which are currently related by the classical formulation of the null subject parameter: the availability of null subject *pro* and the availability of VS (Belletti and Leonini 2004). Second, it reveals the persistent availability of the L1 answering

²⁰Assuming the spirit of the original “Avoid Pronoun” principle of Chomsky (1981).

²¹Hence, a one way implication holds:

if coreference with topic/subject *then pro* (cf. controls, Table 8/ Fig. 3)

The other direction of the implication does not hold:

if *pro then* coreference with subject/topic (cf. controls and near native Table 9/ Fig. 5).

²²Similar results had also been obtained with advanced/near native L1 English speakers of Italian in a written test by Bennati (2002, 2003).

strategy²³: in the majority of the testing experimental contexts where the native speakers use VS in answering the questions on the subject present in the videos, the near-natives use SV, i.e. the word order and characteristic stress pattern of their L1. Let us consider these two aspects more closely.

As for the dissociation between the availability of null subjects and postverbal subjects, the L2 data contribute towards highlighting the different status of the two properties generally linked to the null-subject parameter: the availability of null-subject *pro* is a necessary, but not a sufficient condition to license postverbal subjects. The analysis of the discourse-related structures containing a postverbal subject developed within the cartographic approach illustrated in 2.1 formalizes this property: the postverbal subject, which is the focus of new information, fills a dedicated position in the VP-periphery of the clause. In these structures the (relevant) preverbal subject position is filled by a silent *pro* (see 2). Thus, the formal conditions licensing *pro* are a prerequisite for VS; but the postverbal subject crucially requires the activation of the VP-periphery in specific discourse conditions. The results obtained in the VS Video task indicate that this activation is not native-like in the near-natives: it is present to some extent (i.e. VS is produced in some cases) but not as systematically as in native speakers. In contrast, null referential subjects are significantly more available (see the results of the Story Telling task). Hence, the two properties - the formal licensing condition and the discourse condition - are manifestly disjoint in the near-native grammar.^{24,25}

The continuing effect of the L1 is visible even at this very high level of adult L2 attainment. The near-native speakers appear to extend to the L2 the kind of answer they would have most likely produced in their L1 (when, as required by the experimental design, the answer is a clause, thus containing the lexical verb). This can be interpreted as direct evidence that the L1 discourse strategy remains active in these speakers' grammar. Is this residual L1 effect in contradiction with the assumption that the same speakers appear to have reset the null subject parameter to the positive value? The answer is no if this resetting is seen as a necessary, but not sufficient condition to license

²³The issue concerning the existence in different languages of different answering strategies for questions on the subject and their possible analysis is addressed in detail in Belletti (2007). This study also shows that the VP-peripheral Focus position can be used also in non-null subject languages such as English and French, but in a way compatible with the negative setting of the null subject parameter; one case in point is the domain of cleft sentences.

²⁴As pointed out in Belletti and Leonini (2004) this dissociation is also attested in some languages; the Bantu languages, where null pronominal subjects are available but postverbal subjects are not, may be a case in point (L. Rizzi p.c.). As pointed out by an anonymous reviewer, Brazilian Portuguese (BP) is also relevant in this connection. BP is known to have lost a productive null subject nature with referential pronominal subjects (Kato 2000, and the works collected in Kato and Negrão 2000). Accordingly, VS of the kind discussed here is also not productively available. In BP postverbal subjects typically occur with unaccusative verbs (Figueroa 1996, 2000); in this case the preverbal subject position should be filled by an expletive null *pro* (see Nicolis 2005; Belletti 2005a for discussion on the possibly different licensing conditions of referential vs expletive *pro*).

From a broader perspective on language change, see Roberts (1993) and the recent discussion in Roberts (2006) on the loss of referential null subjects and related properties in the history of French and BP and the different paths the change has taken in the two languages.

²⁵Once the necessary null subject property has been set, in L1 (monolingual) acquisition VS appears to be available relatively early on in the discourse conditions identified in this work (Belletti 2007; Bel 2003). Lexical factors have also been shown to play a role; see e.g. the early occurrence of VS with unaccusatives in L1 acquisition (Bel 2003; Lorusso 2006).

a postverbal subject. Moreover, the extension of the L1 (English) strategy to the L2 does not involve any violation of formal grammatical principles (see Belletti 2005b, 2007 for further discussion on this point). Indeed, this can be assumed to be the crucial factor that makes the extension possible.²⁶

A further consideration is prompted by these results and by the comparison between the near-natives and the native controls: since no formal condition is violated by the use of *SV*, one might expect that this word order (and, possibly, the associated stress pattern as well) could also be produced by the native speakers to some extent. Tables 2–5 show that this order, although not completely absent, is only very marginally used in native productions. The emerging picture is rather clear: the use of *SV* is indeed strongly reinforced by the L1, as proposed here. Thus, the L2 speakers appear to have more strategies available to them for the same discourse situation than native speakers, who clearly tend to opt for the preferred strategy in their language.²⁷ This can be considered a characteristic of the adult L2-bilingual grammar: there can be a contact between different grammatical systems, but only in compliance with the satisfaction of general formal conditions (see Müller and Hulk 2001 for related discussion). In contrast, monolingual speakers do not have the different options equally available to them. Since they have only one grammar, no internal conflict arises and they adopt the option typically instantiated in that grammar. Furthermore, the existence of different answering strategies, which is revealed by the L2 data (Belletti 2005b, 2007), indicates that a sort of “learning by forgetting” development, along the lines discussed for infants and early first language acquisition (Mehler and Dupoux 1992; Rizzi 2005; Belletti 2007), also occurs at the level of the syntax-discourse interface in native monolinguals: once a particular strategy takes over, other grammatically compatible options are not “seen” anymore by the internal grammar, despite the fact that no formal incompatibility would prevent their use.

This pattern of results suggests that different economy considerations may underlie the choice of grammatical options in monolingual and bilingual speakers. In the monolingual null subject grammar, *VS* is formally possible and is selected as the preferred strategy at the expense of other formally compatible, but likely less economical strategies (Belletti 2005b, 2007). In contrast, in adult L2-bilinguals the economy principles involved necessarily take a different path, as they have to comply with the simultaneous accessibility of more than one grammatical system.

6.3.1 Postverbal subjects and transitive verbs

The results of the *VS* Video task indicate that the most infrequent cases of subjects in postverbal position are those containing a transitive verb (Table 2). The sentences elicited in these cases, and produced to a very high rate by the native control group, typically contained a direct object realized as a clitic pronoun. One might then think

²⁶One would therefore expect that, in a symmetrical situation, L1 native Italian speakers who are near-native speakers of English would be unlikely to produce a postverbal subject in the discourse conditions set by the experiment, since this would be formally incompatible with the resetting of the null subject parameter to the negative value. This question is being addressed in ongoing research.

²⁷*SV* is produced very infrequently by native speakers: up to 7% of the total number of answers (Fig. 1).

that the greater difficulty in realizing a postverbal subject with transitive verbs, compared to other verb classes, is an indirect consequence of the well-known difficulty in the production and acquisition of clitic pronouns.²⁸ This factor, however, is only in part relevant. The near-natives' data reveal the application of some avoidance strategy, whereby clitics are produced in just 26% of the total number of cases, as opposed to 80% of native productions.²⁹ In all the remaining cases, the near-natives produced an overt lexical object.³⁰ However, since all instances of clitic productions are evenly distributed (14% and 12%) between structures with a postverbal and a preverbal subject, the difficulty with clitics does not seem to affect the production of postverbal subjects directly. Rather, the postverbal placement of the subject appears to be difficult *per se* in the experimental context, as also clearly indicated by the other verb classes.³¹

The difficulty with clitics, however, may be taken to affect the placement of the subject indirectly. The complement of the verb is realized as an overt lexical noun phrase instead of a clitic in the majority of cases (71%); it is interesting to see that, in these cases, the subject is typically located in the preverbal position (64%). This can be interpreted as a consequence of the fact that the postverbal location of the subject is virtually incompatible with the occurrence of a full lexical object, as has often been observed in standard Italian (see Calabrese 1992 for an early discussion). Belletti (2004b) provides a principled account of this incompatibility along the following lines. The possible orders with a lexically realized object and a postverbal subject are VOS and VSO.³² Phrasing the proposal within the Minimalist vocabulary (Chomsky 2001, 2004), in both cases, interference of one noun phrase over the other (O over S; S over O) blocks the establishment of the relation with an external probe, which is necessary to value Case on the noun phrase (nominative or accusative). Thus, both orders are ruled out, ultimately for the same reason: a Relativized Minimality (Rizzi 1990) effect blocking the establishment of the appropriate (Case) relation. However, as discussed in detail in Belletti (2004b), the VOS order can be amenable to a different analysis whereby the VO portion is moved to the Spec of a Topic projection in the VP-periphery, immediately dominating the Focus projection which hosts the postverbal subject in its Spec. According to this analysis, which crucially implies a particular discourse interpretation of the VO sequence as given/topic information, no intervention of O over S occurs anymore: the appropriate Case

²⁸Clitics represent an area of difficulty across different modes of acquisition, monolingual, bilingual, adult and child L2, and pathology. See Hamann and Belletti (2006) and references cited therein for an overview.

²⁹This pattern is also confirmed in spontaneous production (see the Story Telling task) where use of clitics was significantly higher in natives than in near natives.

³⁰This is in line with previous findings, e.g. Granfeldt and Schlyter (2004), Leonini and Belletti (2004).

³¹We do not consider the special case of existential *ci* sentences, also found in previous results. Furthermore, we do not develop here an account for the reasons behind this special status, which would take the discussion too far afield. We just note that, given the homogeneity of the results on postverbal subjects with all other verb classes, these L2 results strongly reveal that existential sentences have some peculiar properties not shared by other clause types. These properties must be compatible with both the native and non-native grammar.

³²We can disregard the OVS order, which displays the lexical complement in a non-canonical preverbal position and thus requires special discourse conditions, different from those of the test; in fact, this order is produced to an extremely limited extent.

relation can therefore be established between S and the high (nominative) probe, and the structure becomes licit.

(19)

- a. * [_{CP} [_{TP} ... Nom ... Acc [_{TOPP} TOP [_{FOCP} [S] FOC [_{TOPP} ... [_{VP} ... V O ...]]]]]]
 (*VSO)
- b. * [_{CP} [_{TP} ... Nom ... Acc [_{TOPP} [O] TOP [_{FOCP} [S] FOC [_{TOPP} ... [_{VP} ... V ...]]]]]]
 (*VOS)
- c. ok [_{CP} [_{TP} ... Nom ... Acc [_{TOPP} [V O] TOP [_{FOCP} [S] FOC [_{TOPP} ... [_{VP} ...]]]]]]
 (ok [V O] S)³³

No corresponding analysis can rescue the order VSO, either from the structural or from the discourse point of view. Thus, VSO is an impossible order altogether in Italian, for principled reasons.³⁴ The behavior of near-natives shown in Table 5 is remarkably coherent with this interpretation: in the presence of a lexical direct object, the subject is overwhelmingly placed preverbally. It is occasionally placed postverbally, following the direct object (VOS), but in no case is the subject postverbal and preceding the direct object (*VSO). This option, excluded for principled reasons, is never chosen by the L2 speakers.³⁵

6.4 Postverbal subjects and unaccusatives

The results of the VS Videos task and of the Story Telling task are *prima facie* contradictory: new information focus postverbal subjects are infrequently produced by the near-natives in the former task, but postverbal subjects are produced at an almost identical rate by near-natives and by natives in the latter task. What is the difference between the two tasks that can account for this discrepancy? One crucial difference lies in the fact that in the Story Telling task the verbs used by the two groups are the same: they

³³To illustrate, for concreteness, we make the hypothesis that, in VOS, the relevant offending intervention would occur with respect to the VP-peripheral positions of O (and S, see 19b). See the more detailed discussion in Belletti (2004b: 34–38). Note that O does not intervene to block the Case relation of S with the nominative probe head in (19c) for lack of c-command, since O is contained within the topicalized portion of the VP.

³⁴As for the possibility of VSO in Spanish, Rumanian, Greek, etc, see the discussion in Belletti (2004b) and the references cited there, and Zubizarreta (1998). See also Ordoñez (2007) for more recent discussion carefully distinguishing different instances of postverbal subjects in Spanish, only partly overlapping with the VP-peripheral focalized subjects of the kind discussed for Italian (Belletti 2004b). See also Costa (2004) for partly different analyses of similar word orders in European Portuguese. Interestingly, the L2 speakers analyzed in our study do not resort to a Spanish type VSO order, thus indirectly confirming the idea that VSO excludes a new information focus interpretation of the postverbal subject (Ordoñez 1998, 2007), the interpretation required in the elicitation experiment.

³⁵A similar result was also found in Belletti and Leonini (2004) with intermediate L2 speakers.

are all eventive unaccusatives. In many cases, the subject is an indefinite noun phrase.³⁶ It is then plausible to identify the reason for the apparent contradiction in the fact that the postverbal subject, not being a new information focus subject *per se*,³⁷ does not occupy the postverbal position as the consequence of a discourse-related property, but rather because of a lexical property: the subject is the internal argument of an unaccusative verb. Hence, the licensing of the postverbal subject in these cases follows a totally different path from that of the new-information postverbal subjects. Suppose that the crucial feature is that the final configuration involves the noun phrase in the Merge complement position inside the VP: this directly yields VS, as in the classical formulation of the unaccusative hypothesis.³⁸ The preverbal subject position can be filled with the expletive version of *pro*, as in the original analysis of “subject inversion” with unaccusatives (Belletti and Rizzi 1981; Burzio 1986). Thus, an Italian clause displaying VS, in these cases, can be assigned a very similar structure to that of parallel clauses in non null-subject languages like English or French, where an overt expletive is explicitly present:

- (20) a. There came a man.
 b. Il est arrivé trois filles.
 it is arrived three girls

If VS with unaccusatives is primarily the consequence of a lexical, general property, the fact that the behavior of natives and near-natives is virtually identical in these cases is not surprising. Moreover, the two grammatical systems of the L2 speakers operate in an almost identical way in this area, modulo the overt vs. null realization of the expletive subject, a difference related to the null subject parameter.³⁹ This might constitute a further reason for the native-like behavior of the near-natives in these cases.

³⁶The cases where the subject is definite generally receive the so-called “uniqueness” interpretation characteristically available with unaccusatives (Belletti 1988), as in the following examples from the experimental data:

- i. è caduta la bici ‘the bike fell’
 ii. gli vola via il cappello ‘his hat flew away’
 iii. gli parte il cappello ‘his hat is gone’

³⁷The sentences with unaccusatives and a postverbal subject in the Story Telling task introduce new information as a whole; in this sense they are all-focus sentences carrying no special presupposition. In contrast, in the sentences elicited through the VS Videos task only the subject is new information, hence these are narrow focus sentences.

³⁸We do not elaborate here on the (rather natural) possibility that the all-focus interpretation might involve the placement of the whole VP in the specifier of the VP-peripheral focus projection. The argument in the text would remain unchanged with this assumption.

³⁹In order not to complicate the discussion, the simplifying, but fairly standard assumption is made that expletive *there*-clauses in English and expletive *il*-clauses in French can be assimilated. Nothing crucial hinges on this decision here. See Moro (1997) for the analysis of *there* as a predicate.

It remains to be explained why the near-natives behave so differently from the native speakers in the VS Videos task, even when unaccusative verbs are used (Table 4). The reason is that the postverbal subjects of unaccusatives elicited in the experimental situation of the VS Videos task occupy the VP-peripheral discourse related Focus position exactly as they would with any other verb class. As with the other verb classes, the postverbal placement of the subject in this position is rarely chosen by near-natives, as was shown earlier. In conclusion, the VS order with unaccusative verbs can be obtained in two different ways: either as a lexical property, with the subject remaining in its Merge VP-internal complement position, or as a discourse function, with the subject filling the VP-peripheral new information Focus position. Near-natives and natives pattern alike in the first case, but differently in the second (see also Lozano 2006b for converging results).

6.5 More on indefinite postverbal subjects and unaccusatives

The results of the Headlines task add another piece to the postverbal subjects puzzle. Recall that all verbs presented in this task were eventive unaccusatives, which participants were asked to produce in an all-focus question introduced by “Have you heard that...” containing either a definite or an indefinite subject, as well as an adverbial phrase. The overall pattern of the Headlines Task confirms the two general tendencies already discussed with respect to the other tasks. First, the near-natives have residual problems in producing postverbal subjects systematically. Second, the postverbal position of the indefinite subject with unaccusatives can have, at least in part, a lexical origin. Recall that the fact that the VP-internal argument of unaccusatives is generally reserved to indefinite noun phrases is a well-known and widely discussed property of these verbs, often referred to as the “definiteness effect” (DE).⁴⁰ Knowledge of this property is evidenced in the native speakers’ performance, and also, to a more limited extent, in the near-natives.

The difference between spontaneous and elicited production, which also emerged from the comparison between Story Telling and VS Videos, may be again due to the full availability to native speakers of two means of obtaining postverbal subjects: lexically, as the internal argument of an unaccusative verb, or focally, in a VP-peripheral dedicated position. The near-natives, on the other hand, can fully rely only on the former, but have difficulty with the latter, as we have already seen.

7 General conclusions

The aim of this study was to investigate the properties of non-native competence in the syntax of subjects in L2 Italian at a very high level of attainment. The

⁴⁰Once again, this is a somewhat simplified picture; see Bobaljik and Jonas (1996) for relevant discussion. Assume that the crucial factor determining DE is that the noun phrase remains VP internal, a conclusion shared by traditional accounts (e.g. Belletti 1988).

results discussed here are relevant to both a theory of language acquisition and general linguistic theory. The patterns obtained highlight the fact that the question of ultimate attainment is more complex than simply assuming (or not) the presence of UG constraints: there are in fact sources of protracted divergence between native and non-native grammars that do not appear to involve formal grammatical principles *per se*, but rather the interplay of formal principles and grammatical options in domains at the interface with discourse. In this study, one such source of divergence was identified in the unsystematic mapping between a particular pronominal subject option (overt pronouns) and the felicitous pragmatic principles determining its contextual appropriateness: the visible outcome is the overproduction of overt subject pronouns, and the misinterpretation of overt subject pronouns in anaphora resolution. Another source of divergence is the unsystematic use of the low focus position in the VP-periphery of the clause dedicated to the new-information postverbal subjects: in this case, the visible outcome is an overproduction of new-information focused preverbal subjects. These persistent non-native features of L2 Italian betray the possible influence of the speakers' L1-English, but otherwise occur alongside complete mastery of the properties of a null subject grammar, as well as complete mastery of universal lexical and locality constraints. This indicates that L2 grammars are natural language grammars, and thus a rich database for linguistic theory. Indeed, the dissociation between native-like null subjects and still problematic postverbal subjects in L2 speakers is of direct theoretical relevance because it suggests that *pro*-licensing, traditionally regarded as the unifying cause of both properties, may be necessary but not sufficient: any formulation of the null subject parameter has to be augmented by consideration of the discourse factors determining the distribution of syntactic options, and how they are instantiated in the syntax.

To conclude, this study has shown that a formalization of the syntax-discourse interface within a model of linguistic theory is necessary to explain the characteristics of near-native L2 grammars, since at least some of the residual difficulties experienced by speakers at this level are located in this area. Furthermore, it has highlighted that L2 acquisition data constitute an important source of evidence for linguistic theory, that they may reveal a different instantiation of principles of economy, and that they can thus further our understanding of the functioning of the language faculty.

Acknowledgements A preliminary version of this paper was presented at the *XXXI IGG* (Incontro di Grammatica Generativa) held at the University of Roma-3 in February 2005. We wish to thank the audience at this event for comments and reactions as well as the linguists with whom we had a chance to discuss parts of the material included here on different occasions in the recent past. Thanks also to two anonymous referees for their careful comments, which encouraged us to spell out some of our general and specific hypotheses in more detail. Finally, we want to gratefully mention our (at the time) graduate students Francesca Filiaci and Chiara Leonini for their significant help with the original experimental designs. This work was in part supported by a grant from the UK's Arts and Humanities Research Council (AN 4054/APN 17833) to Antonella Sorace. Elisa Bennati's research was supported by the doctoral program in Cognitive Sciences of the University of Siena.

Appendix

Tables

Table 1 Biographical information on the non-native participants

L2 Speakers	Age	Length of permanence in Italy	Italian classes	Use of Italian at home	Use of Italian at work
RK1	27	5 years	Yes	No	Yes
EN2	26	5 years	Yes	No	Yes
MM3	25	4 years	Yes	No	Yes
MM4	44	21 years	Yes	Yes	Yes
SL5	39	10 years	Yes	Yes	Yes
BE6	25	3 years	Yes	Yes	Yes
JC7	23	1 year	Yes	Yes	Yes
NP8	27	2 years	Yes	Yes	Yes
BF9	23	3 years	Yes	No	Yes
ST10	22	2 years	Yes	Yes	No
VL11	28	5 years	Yes	Yes	Yes
PV12	39	3 years	Yes	Yes	Yes
AC13	49	24 years	No	No	No
TK14	42	16 years	Yes	No	No
HA15	30	4 years	Yes	No	No
KM16	40	14 years	Yes	No	No
RL17	47	20 years	No	Yes	No

Table 2 Frequencies of production of VS across verb classes

	VS Unergative	VS unaccusative	CVS transitive	VS existential “ci”	VS total
L2 near-natives	34%	32%	14%	98%	38%
Total	(58/170)	(27/85)	(24/170)	(83/85)	(192/510)
Controls	86%	90%	80%	100%	87%
Total	(69/80)	(36/40)	(64/80)	(80/80)	(209/240)

Table 3 Position of verbs and subjects produced in the VS Video task: unergative verbs

Patterns produced with unergatives				
	VS	SV	SV	Other
L2 near-natives	34%	60%	3%	3%
Total	(58/170)	(102/170)	(5/170)	(5/170)
Controls	86%	5%	6%	3%
Total	(69/80)	(4/80)	(5/80)	(2/80)

Table 4 Position of verbs and subjects produced in the VS Video task: unaccusative verbs

Patterns produced with unaccusatives				
	VS	SV	SV	Other
L2 near-natives	32%	59%	8%	1%
Total	(27/85)	(50/85)	(7/85)	(1/85)
Controls	90%	8%	2%	0%
Total	(36/40)	(3/40)	(1/40)	(0/40)

Table 5 Position of verbs and subjects produced in the VS Video task: transitive verbs

Patterns produced with transitives									
	CIVS	ScIV	ScIV	SVO	SVO	OVS	VOS	VSO	Other
L2 near-natives	14%	12%	0%	56%	8%	1%	6%	0%	3%
Total	(24/170)	(20/170)	(0/170)	(95/170)	(13/170)	(1/170)	(11/170)	(0/170)	(6/170)
Controls	80%	0%	1%	6%	8%	0%	1%	0%	4%
Total	(64/80)	(0/80)	(1/80)	(5/80)	(6/80)	(0/80)	(1/80)	(0/80)	(3/80)

Table 6 Types and position of subjects produced in the Story Telling Task

	Preverbal subjects			Postverbal subjects
	Null	Pronominal	lexical	
L2 near-natives	52%	14%	18%	16%
Total	(375/714)	(97/714)	(127/714)	(115/714)
Controls	59%	4%	22%	15%
Total	(209/351)	(14/351)	(76/351)	(52/351)

Table 7 Interpretation of forward anaphora with overt pronominal subjects in the PVT task

	S	C	E
L2 near-natives	30%	65%	5%
Total	(30/101)	(65/101)	(6/101)
Controls	5%	85%	10%
Total	(2/41)	(35/41)	(4/41)

S: subject of the subordinate clause = matrix subject

C: subject of the subordinate clause = matrix complement

E: subject of the subordinate clause = extralinguistic referent

Table 8 Interpretation of backward anaphora with overt pronominal subjects in the PVT task

	S	C	E
L2 near-natives	51%	28%	21%
Total	(49/94)	(27/94)	(18/94)
Controls	20%	23%	57%
Total	(8/40)	(9/40)	(23/40)

Table 9 Forward anaphora with null subject in the PVT task

	S	C	E
L2 near-natives	54%	45%	1%
Total	(54/100)	(45/100)	(1/100)
Controls	40%	54%	6%
Total	(19/48)	(26/48)	(3/48)

Table 10 Backward anaphora with null subject in the PVT task

	S	C	E
L2 near-natives	82%	14%	4%
Total	(75/92)	(13/92)	(4/92)
Controls	90%	7%	3%
Total	(37/41)	(3/41)	(1/41)

Table 11 Production of definite and indefinite subjects (all-focus contexts) in the Headlines task

	Sdef V	V Sdef	Sindef V	V Sindef
L2 near-natives	74%	26%	59%	41%
Totals	(125/170)	(45/170)	(101/170)	(69/170)
Controls	54%	46%	31%	69%
Totals	(43/80)	(37/80)	(25/80)	(55/80)

Table 12 Order of constituents in the Headlines Task (sentences with definite subjects)

	Native speakers		Near-native speakers	
	Frequencies	%	frequencies	%
Adverbial S V	0/80	0%	7/170	4%
S V Adverbial	41/80	51%	117/170	69%
Adverbial V S	10/80	12.5%	8/170	4.5%
V S Adverbial	24/80	30%	32/170	19%
V Adverbial S	3/80	4%	5/170	3%
S Adverbial V	2/80	2.5%	1/170	0.5%

Table 13 Order of constituents in the Headlines Task (sentences with indefinite subjects)

	Native speakers		Near-native speakers	
	Frequencies	%	frequencies	%
Adverbial S V	1/80	1%	14/170	8%
S V Adverbial	21/80	26%	86/170	51%
Adverbial V S	12/80	15%	8/170	4.5%
V S Adverbial	42/80	53%	61/170	36%
V Adverbial S	1/80	1%	0/170	0%
S Adverbial V	3/80	4%	1/170	0.5%

References

- Alexiadou, A., & Anagnostopoulou, E. (2001). The subject in situ generalization, and the role of Case in driving computations. *Linguistic Inquiry*, 32, 193–231.
- Antinucci, F., & Cinque, G. (1977). Sull'ordine delle parole in italiano: l'emarginazione. *Studi di Grammatica Italiana*, 6, 121–146.
- Bel, A. (2003). The syntax of subject in the acquisition of Spanish and Catalan. *Probus*, 15, 1–26.
- Belletti, A. (1988). The case of unaccusatives. *Linguistic Inquiry*, 19, 1–34.
- Belletti, A. (Ed.) (2004a). *Structures and beyond. The cartography of syntactic structures*, Vol. 3. New York: Oxford University Press.
- Belletti, A. (2004b). Aspects of the low IP area. In L. Rizzi (Ed.), *The structure of CP and IP. The cartography of syntactic structures*, Vol. 2 (pp. 16–51). New York: Oxford University Press.
- Belletti, A. (2005a). Extending doubling and the VP-periphery. *Probus*, 17, 1–35.
- Belletti, A. (2005b). Answering with a cleft. In L. Brugè et al. (Eds.), *Contributions to the thirtieth "Incontro di Grammatica Generativa"* (pp. 63–82). Università Ca'Foscari Venice: Editrice Cafoscarina.
- Belletti, A. (2007). Answering strategies. A view from acquisition. To appear. In S. Baauw et al. (Eds.), *Romance languages and linguistic theory 2005*. Amsterdam/Philadelphia: Benjamins Publications.
- Belletti, A., & Leonini, C. (2004). Subject inversion in L2 Italian. In S. Foster-Cohen et al. (Eds.), *Eurosla Yearbook 4* (pp. 95–118). Amsterdam: John Benjamins.
- Belletti, A., & Rizzi, L. (1981). The syntax of *ne*: some theoretical implications. *The Linguistic Review*, 1, 117–154.
- Bennati, E. (2002). *Soggetti nulli e soggetti postverbalì nell'italiano L2 di parlanti adulti di madrelingua inglese*. "Laurea" Thesis, University of Siena.
- Bennati, E. (2003). *Soggetti postverbalì in italiano L2 di parlanti near-natives con inglese L1. Un esperimento*. "Laurea Specialistica" Thesis, University of Siena.
- Bini, M. (1993). La adquisición del italiano: mas allá de las propiedades sintácticas del parámetro *pro-drop*. In J. Liceras (Ed.), *La lingüística y el análisis de los sistemas no nativos* (pp. 126–139). Ottawa: Doverhouse Editions.
- Bobaljik, J. D., & Jonas, D. (1996). Subject position and the roles of TP. *Linguistic Inquiry*, 27, 195–236.
- Borer, H. (1989). Anaphoric Agr. In O. Jaeggli & K. Safrir (Eds.), *The null subject parameter* (pp. 69–109). Dordrecht: Kluwer.
- Burzio, L. (1986). *Italian syntax*. Dordrecht: Reidel.
- Calabrese, A. (1986). Pronomina. In N. Fukui, T. R. Rapoport & B. Sagey (Eds.), *Papers in Theoretical Linguistics* (pp. 1–46). MIT Working Papers in Linguistics.
- Calabrese, A. (1992). Some Remarks on focus and logical structures in Italian. *Harvard Working Papers in Linguistics* 1, 19–27.
- Cardinaletti, A. (2001). A second thought on Emarginazione: Destressing vs. Right Dislocation. In G. Cinque & G. Salvi (Eds.), *Current studies in Italian syntax. Essays offered to Lorenzo Renzi* (pp. 117–135). Amsterdam: Elsevier Publishers.
- Cardinaletti, A. (2004a). L'italiano contemporaneo: Cambiamento in atto e competenza dei parlanti. In A. Cardinaletti & F. Frasnèdi (Eds.), *Intorno all'italiano contemporaneo* (pp. 49–75). Milano: Franco Angeli.
- Cardinaletti, A. (2004b). Toward a cartography of subject positions. In L. Rizzi (Ed.), *The structure of CP and IP. The cartography of syntactic structures*, Vol. 2 (pp. 115–165). New York: Oxford University Press.
- Cardinaletti, A., & Starke, M. (1999). The typology of structural deficiency. A case study of the three classes of pronouns. In H. van Riemsdijk (Ed.), *Clitics in the languages of Europe* (pp. 145–233). Berlin: Mouton de Gruyter.
- Chomsky, N. (1981). *Lectures on government and binding*. Dordrecht: Foris.
- Chomsky, N. (2001). Derivation by phase. In M. Kenstowicz (Ed.), *Ken Hale: A life in language*. Cambridge, MA: MIT Press.
- Chomsky, N. (2004). Beyond explanatory adequacy. In A. Belletti (Ed.), *Structures and beyond. The cartography of syntactic structures*, Vol. 3 (pp. 104–131). New York: Oxford University Press.
- Cinque, G. (Ed.) (2002). *Functional structure in DP and IP. The cartography of syntactic structures*, Vol. 1. New York: Oxford University Press.
- Costa, J. (2004). *Subject positions and interfaces*. Berlin: Mouton de Gruyter.

- Figuerido, C. (1996). *A Posição Sujeito no Português Brasileiro: Frases Finitas e Infinitivas*. Campinas, Editora da UNICAMP.
- Figuerido, C. (2000). Main and embedded null subjects in Brazilian Portuguese. In M. Kato & E. Negrão (Eds.), *Brazilian Portuguese and the null subject parameter* (pp. 127–145). Madrid: Vervuert.
- Filiaci, F. (2003). *The acquisition of null and overt subjects by English-near-native speakers of Italian*. MSc dissertation, University of Edinburgh.
- Granfeldt, J., & Schlyter, S. (2004). Cliticisation in the acquisition of French as L1 and L2. In P. Prévost & J. Paradis (Eds.), *The acquisition of French in different contexts* (pp. 333–370). Amsterdam: John Benjamins.
- Grimshaw, J., & Samek-Lodovici, V. (1998). Optimal subjects and subject universals. In P. Barbosa et al. (Eds.), *Is the best good enough? Optimality and competition in syntax* (pp. 193–219). Cambridge, MA: MIT Press.
- Gürel, A. (2006). L2 acquisition of pragmatic and syntactic constraints in the use of overt and null subject pronouns. In R. Slabakova, S. Montrul & P. Prévost (Eds.), *Inquiries in linguistic development*. Amsterdam: John Benjamins.
- Hacohen, A., & Schaeffer, J. (in press). Subject realization in early Hebrew/English bilingual acquisition: The role of crosslinguistic influence. In *Bilingualism: Language and Cognition*.
- Hamann, C., & Belletti, A. (2006). Developmental patterns in the acquisition of Romance complement clitics: comparing different acquisition modes with an emphasis on French. Ms., University of Oldenburg and University of Siena.
- Hertel, T. J. (2003). Lexical and discourse factors in second language acquisition of Spanish word order. *Second Language Research*, 19, 273–304.
- Holmberg, A. (2005). Is there a little *pro*? Evidence from Finnish. *Linguistic Inquiry*, 36, 533–564.
- Jayaseelan, K. A. (2001). IP-internal topic and focus phrases. *Studia Linguistica*, 55, 39–75.
- Kato, M. (2000). The partial *pro*-drop nature and the restricted vs order in Brazilian Portuguese. In M. Kato & E. Negrão (Eds.), *Brazilian Portuguese and the Null Subject Parameter* (pp. 223–258). Vervuert.
- Kato, M., & Vailati Negrão, E. (Eds.) (2000). *Brazilian Portuguese and the Null Subject Parameter*. Vervuert.
- Kazanina, N., Lau, E., Liberman, M., Phillips, C., & Yoshida, M. (2005). Constraints on Coreference in the Online Processing of Backwards anaphora. Poster presented at the 18th Annual Meeting of the CUNY Conference on Human Sentence Processing, Tucson, AZ, April.
- Lakshmanan, U. (1991). Morphological uniformity and null subjects in child second language acquisition. In L. Eubank (Ed.), *Point counterpoint: universal grammar in the second language* (pp. 389–411). Amsterdam: John Benjamins.
- Leonini, C., & Belletti, A. (2004). Adult L2 acquisition of Italian clitic pronouns and subject inversion structures. In J. van Kampen & S. Baauw (Eds.), *Proceedings of Gala 2003* (pp. 293–304). Utrecht: LOT.
- Liceras, J. (1988). Syntax and stylistics: more on the *pro*-drop parameter. In J. Pankhurst, M. Sharwood Smith & P. van Buren (Eds.), *Learnability and second languages: A book of readings* (pp. 71–93). Dordrecht: Foris.
- Liceras, J. M. (1989). On some properties of the *pro*-drop parameter: Looking for missing subjects in non-native Spanish. In S. M. Gass & J. Schachter (Eds.), *Linguistic perspectives on second language acquisition* (pp. 109–133). Cambridge: Cambridge University Press.
- Liceras, J. M., & Díaz, L. (1998). Topic drop versus *pro*-drop: Null subjects and pronominal subjects in the Spanish L2 of Chinese, English, French, German and Japanese speakers. *Second Language Research*, 15, 1–40.
- Liceras, J. M., Díaz, L., & Maxwell, D. (1999). Null subjects in non-native grammars: The Spanish L2 of Chinese, English, French, German, Japanese and Korean speakers. In E. C. Klein & G. Martohardjono (Eds.), *The development of second language grammars*. Amsterdam: John Benjamins.
- Lorusso, P. (2006). The L-Syntax of Verbs in the Acquisition of L1 Italian. In A. Belletti et al. (Eds.) *Language acquisition and development. Proceedings of Gala 2005* (pp. 349–356). Newcastle, UK: Cambridge Scholars Press.
- Lozano, C. (2006a). The development of the syntax-information structure interface: Greek learners of Spanish. In V. Torrens & L. Escobar (Eds.), *The acquisition of syntax in romance languages* (pp. 371–399). Amsterdam: John Benjamins.
- Lozano, C. (2006b). Focus and split intransitivity: The acquisition of word order alternations in non-native Spanish. *Second Language Research*, 22, 145–187.
- Mehler, J., & Dupoux, E. (1992). *Naitre humain*. Paris: Editions Odile Jacob.

- Montalbetti, M. (1984). After Binding. On the Interpretation of Pronouns. Doctoral dissertation, MIT.
- Montrul, S. (2004). Subject and object expression in Spanish Heritage speakers: A case of morphosyntactic convergence. *Bilingualism: Language and Cognition*, 7, 125–142.
- Montrul, S., & Louro, C. R. (2006). Beyond the syntax of the null subject parameter: A look at the discourse-pragmatic distribution of null and overt subjects by L2 learners of Spanish. In V. Torrens & L. Escobar (Eds.), *The acquisition of syntax in romance languages* (pp. 401–418). Amsterdam: John Benjamins.
- Moro, A. (1997). *The raising of predicates*. Cambridge: Cambridge University Press.
- Müller, N., & Hulk, A. (2001). Crosslinguistic influence in bilingual language acquisition: Italian and French as recipients languages. *Bilingualism: Language and Cognition*, 4, 1–21.
- Nicolis, M. (2005). *On pro drop*. Doctoral dissertation, University of Siena.
- Ordoñez, F. (1998). Postverbal asymmetries in Spanish. *Natural Language and Linguistic Theory*, 16(2), 313–346.
- Ordoñez, F. (2007). Two specs for postverbal subjects: Evidence from Spanish and Catalan. In S. Baauw, F. Drijkoningen & M. Pinto (Eds.), *Romance languages and linguistic theory 2005*. Amsterdam/Philadelphia: Benjamins Publications.
- Paradis, J., & Navarro, S. (2003). Subject realization and cross-linguistic interference in the bilingual acquisition of Spanish and English: What is the role of input. *Journal of Child Language*, 30, 1–23.
- Phinney, M. (1987). The *pro*-drop parameter in second language acquisition. In T. Roeper & E. Williams (Eds.), *Parameter Setting* (pp. 221–238) Dordrecht: Reidel.
- Renzi, L. (1988). *Grande Grammatica Italiana di Consultazione*, Vol. 1 (pp. 535–594). Bologna: Il Mulino.
- Rizzi, L. (1982). *Issues in Italian syntax*. Dordrecht: Foris.
- Rizzi, L. (1990). *Relativized minimality*. Cambridge, MA: MIT Press.
- Rizzi, L. (Ed.) (2004). *The Structure of CP and IP. The cartography of syntactic structures*, Vol. 2. New York: Oxford University Press.
- Rizzi, L. (2005). On the grammatical basis of language development: A case study. In G. Cinque & R. Kayne (Eds.), *The Oxford handbook of comparative syntax*. New York: Oxford University Press.
- Roberts, I. (1993). *Verbs and diachronic syntax: A comparative history of English and French*. Dordrecht: Kluwer.
- Roberts, I. (2006). Two ways to lose null subjects: Comparing French and Brazilian Portuguese. Ms., University of Cambridge, presented at *ELFE V/Romania Nova II*.
- Roebuck, R. F., Martínez-Arbelaiz, M. A., & Pérez-Silva, J. I. (1999). Null subjects, filled CPs and L2 acquisition. *Second Language Research*, 15, 251–282.
- Seliger, H., & Vago, R. (1991). The study of first language attrition: An overview. In H. Seliger & R. Vago (Eds.), *First Language Attrition* (pp. 3–16). Cambridge: Cambridge University Press.
- Serratrice, L., Sorace, A., & Paoli, S. (2004). Transfer at the syntax pragmatics interface: Subjects and objects in Italian-English bilingual and monolingual acquisition. *Bilingualism: Language and Cognition*, 7, 183–207.
- Sorace, A. (2003). Near-nativeness. In M. Long & C. Doughty (Eds.), *Handbook of second language acquisition* (pp. 130–151). Oxford: Blackwell.
- Sorace, A. (2004). Native language attrition and developmental instability at the syntax-discourse interface: Data, interpretations and methods. *Bilingualism: Language and Cognition*, 7, 143–145.
- Sorace, A. (2005). Syntactic optionality at interfaces. In L. Cornips & K. Corrigan (Eds.), *Syntax and variation: Reconciling the biological and the social* (pp. 46–111). Amsterdam: John Benjamins.
- Sorace, A., & Filiaci, F. (2006). Anaphora resolution in near-native speakers of Italian. *Second Language Research*, 22, 339–368.
- Tsimpli, I. M., & Roussou, A. (1991). Parameter-resetting in L2. *UCL Working Papers in Linguistics*, 3, 149–170.
- Tsimpli, I. M., & Sorace, A. (2006). Differentiating Interfaces: L2 performance in syntax-semantics and syntax-discourse phenomena. In D. Bamman, T. Magnitskaia & C. Zaller (Eds.), *Proceedings of the 30th Boston University Conference on Language Development* (pp. 653–664). Somerville, MA: Cascadia Press.
- Tsimpli, I. M., Sorace, A., Heycock, C., & Filiaci, F. (2004). First language attrition and syntactic subjects: A study of Greek and Italian near-native speakers of English. *International Journal of Bilingualism*, 8, 257–277.
- White, L. (1985). The *pro*-drop parameter in adult second language acquisition. *Language Learning*, 35, 47–62.

- White, L. (1989). *Universal Grammar and second language acquisition*. Amsterdam: John Benjamins.
- White, L. (2003). *Second language acquisition and universal grammar*. Cambridge: Cambridge University Press.
- White, L., & Genesee, F. (1996). How native is near-native? The issue of ultimate attainment in adult second language acquisition. *Second Language Research*, 12, 223–265.
- Zubizarreta, M. L. (1998). *Prosody, focus and word order*. Cambridge, MA: MIT Press.