On the Role of Children’s Deterministic Learning in the ‘No-Overt-Subject’ Stage in the L1 Acquisition of Spanish

JULIO VILLA-GARCÍA
Villanova University

Introduction

The occurrence of null subjects in the speech of children acquiring non-pro-drop languages like English has commanded a great deal of attention in a body of research that has resulted in a plethora of proposals, ranging from grammatical to processing explanations of the phenomenon in question (e.g., Bates 1976, Hyams 1986 et seq., Bloom 1990, Valian 1991, Hyams and Wexler 1993, Rizzi 1994). Child null subjects are also attested in the speech of children acquiring pro-drop languages like Catalan and Spanish (Grinstead 1998 et seq.). In fact, Grinstead has argued that unlike children learning English, Spanish-acquiring children pass through a ‘null-subject/no-overt-subject’ stage, during which all of the child’s subjects are null. This paper revisits Grinstead’s ‘null-subject’ stage, which has often been contested in the literature, and shows that children acquiring Spanish do go through a stage during which subjects are invariably silent. Analogously, it is shown that children acquiring Puerto Rican Spanish, a Caribbean dialect which has been reported to be moving toward the negative setting of the Null Subject Parameter of Chomsky (1981), behaves exactly like non-Caribbean Spanish in the relevant respects. The paper advances an explanation of the ‘null-subject’ stage in child Spanish which appeals to Snyder’s (2007) hypothesis of Grammatical Conservatism, which posits that children do not make use of a particular construction until they have acquired the linguistic requirements that regulate its appearance and distribution. Thus, children use null subjects at all times in Spanish because they have not yet determined the prerequisites needed to use lexical (i.e., overt) subjects.

The paper is organized as follows: Section 1 reviews the claims made in the literature with respect to child null subjects in pro-drop languages like Spanish. Section 2 outlines the current study and presents the results. Section 3 offers an account of the ‘null-subject’ phase in early Spanish. Section 4 concludes the paper.
Child Null Subjects in Spanish

Grinstead (1998 et seq.) claims that children acquiring paradigmatic null-subject languages like Catalan and Spanish pass through a ‘null-subject’ stage, which lasts approximately until age 2 (see also Austin et al. 1997). This contrasts markedly with the observation that both null and overt subjects coexist in the speech of English-acquiring children.

Several authors have raised a number of criticisms against Grinstead’s claim that children learning Catalan and Spanish do not use lexical subjects at an early stage in development. Most notably, Aguado-Orea and Pine (2002) argue against the ‘null-subject’ stage by claiming that Grinstead’s (2000) data for Spanish are rather sparse and his conclusions are based on only one child. Similarly, the authors note that Grinstead’s (2000) hypothesis is difficult to test, in part because children’s early utterances occur during the ‘one-word’ stage. In parallel fashion, Bel (2001, 2003) reports that Catalan and Spanish children produce a rate of approximately 33% of overt subjects from the earliest utterances, with no significant increments in the use of overt pronouns after that point. Thus, Bel concludes that English-, Catalan-, and Spanish-acquiring children do not differ from each other with respect to null-subject use.

Nevertheless, the criticisms against Grinstead’s original claims are not well justified. First, Grinstead (1998) and Grinstead and Spinner (2009) used data from more than one Spanish-acquiring child. Moreover, it is important to consider that Grinstead’s claim that the ‘null-subject’ stage ends at around age 2 is just an approximation (cf. Brown’s 1973 ‘stages, not ages’). Therefore, Grinstead’s estimate cannot realistically be taken to mean chronological age. A given child may move to a period during which his/her speech starts to exhibit lexical subjects at age 1;6, whereas another child may do so at age 2;3 (Grinstead and Spinner 2009):

1. The ‘null-subject’ stage in the acquisition of Spanish

\[\begin{align*}
&\approx 2 \text{ yrs.} \\
&100\% \text{ null subjects} \quad \text{null and overt subjects}
\end{align*}\]

In this connection, note that the earliest transcript examined by Bel for a Catalan-acquiring child contains data recorded at age 1;6, all remaining transcripts starting over age 1;7. Given the preceding discussion that the age of 2 is a mere approximation, it is entirely possible to find overt subjects in the earliest transcript analyzed, which is in fact confirmed by the data from one of the chil-
On the Role of Children’s Deterministic Learning

dren studied by Bel, namely María (cf. the López-Ornat Corpus, CHILDES). In fact, as shown below, all the children of the present study started using overt subjects before age 2. Consequently, it cannot be concluded based on the issues raised by the aforementioned authors that children acquiring prototypical null-subject languages like Spanish do not go through a ‘null-subject’ stage; the current paper actually provides novel support for a ‘no-overt-subject’ stage in development.

1.1 Grinstead’s Interface Delay Hypothesis

Grinstead’s explanation for the ‘null-subject’ stage in Catalan- and Spanish-acquiring children’s early speech contends that children use silent subjects all the time because they do not have access to the CP layer, which is the domain of the clause where Grinstead, following a highly influential line of research, assumes lexical subjects are located in languages like Spanish, as shown in (2).

(2) The CP account of lexical subjects in languages like Spanish

```
... CP
\|-- SUBJECT \-- TP
  \--\--\--\--
    \--\--\--
      ... 
```

On this view, subjects are considered to be left-peripheral phenomena whose occurrence and distribution is regulated by information-structure notions such as topic and focus. Drawing on the CP account of overt subjects in pro-drop languages of the Spanish type, Grinstead (1998) advanced his Interface Delay Hypothesis, where ‘interface’ refers to the syntax-pragmatics interface. Grinstead (1998 et seq.) claims that children’s access to the syntax-pragmatics interface is delayed, which accounts for why overt subjects start to appear later, crucially at the same time as uncontroversially left-peripheral phenomena such as topics (see also Villa-García and Snyder 2010).

Grinstead’s prediction is that overt subjects should be attested early on in the acquisition of non-null-subject languages like English, however, since in these varieties subjects occupy the canonical subject position (i.e., Spec,TP), rather than a CP-related position, as is the case of Spanish, under the account in (2). Therefore, children acquiring non-null-subject languages like English should able to project their subjects in Spec,TP, which amounts to saying that they do not have to access the syntax-pragmatics interface to use overt subjects, thus explaining why English-acquiring children are able to produce lexical subjects at a stage

377
when Spanish-acquiring children only use non-overt subjects.

Moreover, Ticio (2002, 2004) has argued with Toribio (1994, 2000), among others, that the Caribbean dialects of Spanish (Cuban, Dominican, and Puerto Rican Spanish) are no longer null-subject dialects per se (though see, e.g., Gutiérrez-Rey Bravo 2008 for a dissenting view). Ticio (2002) predicts based on Grinstead (1998) that children acquiring no-longer-fully-null-subject varieties such as Caribbean Spanish should not exhibit a ‘no-overt-subject’ phase, much like children acquiring English, since they do not have to wait until the interface between syntax and pragmatics is available in order to produce lexical subjects, as their overt subjects are located in Spec,TP. Put another way, children acquiring Caribbean varieties of Spanish are not expected to exhibit the pattern of behavior displayed by children acquiring null-subject varieties like European Spanish. In support of this hypothesis, Ticio (2002) reports that at age 1;7, Ana’s usage of overt subjects is 18.20%, which constitutes apparent evidence that there is no ‘null-subject’ phase in child Puerto Rican Spanish, as expected if Caribbean Spanish is a non-null-subject language. As will be shown in Section 2.3, however, Ticio’s claim for child Caribbean Spanish is not well supported.

The CP account of overt subjects in non-Caribbean Spanish varieties has also been challenged in the literature. For instance, Goodall (2001) and Ortega-Santos (2005 et seq.), among others, have argued in favor of a Spec,TP account of subjects in pro-drop Spanish. Similarly, a number of authors have proposed that subjects can (but need not) be in the CP (Casielles 2001, Camacho 2006, López 2009, Villa-García 2012). For instance, Casielles (2001) notes the contrast in (3) (see also Zubizarreta 1998 and Zagona 2002, among others).

(3) a. Ayer *(los) niños jugaban en el parque
   ‘Yesterday, the kids were playing in the park.’

b. Niños, no creo que vengan a la fiesta
   ‘As for kids, I don’t believe any will come to the party.’

As the data in (3) show, whereas bare nominals are disallowed in Spec, TP—possibly due to a requirement that a noun in this position be a full DP—(cf. 3a)), preverbal bare NPs are possible as subjects provided that they are bona fide left dislocated (cf. 3b)). The contrast in (3) shows that preverbal subjects in Spanish can occupy different preverbal positions, namely Spec,TP and Spec,CP, contrary to what is often assumed in the literature. Further, in Villa-García (2012), I argue that there exists a dedicated subject position in the preverbal field in Spanish which can only be occupied by subjects to the exclusion of non-subject preverbal XPs. The relevant evidence comes from exhortative sentences introduced by que, as illustrated in (4).
In (4), the complementizer que is mandatory. I take que to be the lexical realization of the subjunctive mood, and thus the head of the lowest left-peripheral projection under Rizzi’s (1997) articulated structure of the CP layer, namely FinitenessP, which Rizzi independently argues is the locus of finiteness and mood features. This claim is substantiated by the fact that dislocated phrases (i.e., topics) must precede the complementizer in the construction at hand (Demonte and Fernández-Soriano 2009, inter alia):

(5) a. ¡A mi madre, que la lleven!
    my mother that cl. take3.PL-Subj.
    ‘I demand that they take my mother (with them).’

b. *¡Que a mi madre la lleven!
    that my mother cl. take3.PL-Subj.
    ‘I demand that they take my mother (with them).’

The example in (5b) not only shows that the complementizer is a very low CP-related head, as indicated by the fact that topics are above it here, but also contrasts starkly with the data in (6), where a genuine subject can occur in the position sandwiched between que and the subjunctive verb.

(6) a. ¡Que mi madre se vaya!
    that my mother cl. go3.SG-Subj.
    ‘I demand that my mother go away.’

b. ¡Que nadie la lleve!
    that nobody cl. take3.SG-Subj.
    ‘I demand that nobody take her/it.’

Thus, the contrast between (5b) and (6) points to a crucial distributional asymmetry between topics and subjects, since subjects can occur between que and the subjunctive verb in the construction at hand, but a topic can only appear in a position higher than the complementizer. Under the CP account, whereby preverbal subjects are always left-dislocated, the different distribution of topics and of subjects in exhortative sentences headed by que remains unexplained (see Villa-García 2012 for further discussion). In sum, the empirical evidence just reviewed refutes the hypothesis that preverbal subjects in languages like Spanish are always topics in the left periphery, which in turn casts doubt on the adequacy of Grinstead’s Interface Delay Hypothesis, which relies on the assumption that overt subjects in Spanish are CP-related constituents (cf. (2)). I therefore conclude that the explanation for the ‘null-subject’ stage in the acquisition of null-subject languages like Spanish must lie somewhere else.
2 The Current Study

In light of the preceding discussion, the remainder of the paper aims to present the results of a new longitudinal study which provides acquisitional and statistical support for Grinstead’s claim that children acquiring Spanish pass through a ‘null-subject’ stage characterized by the complete absence of overt subjects with inflected verbs. Similarly, I show, contra Ticio (2002), that children acquiring Caribbean Spanish varieties display a pattern analogous to that of non-Caribbean-Spanish-learning children. In Section 3, I provide an account of the ‘null-subject’ stage which draws on Snyder’s (2007) prospect of Grammatical Conservatism in children’s spontaneous speech.

2.1 Longitudinal data

The data employed in this study include transcripts and not-yet-transcribed videotapes of four children’s spontaneous speech, retrieved from the CHILDES database (Child Language Data Exchange System) and from the UConn-CLESS database (The University of Connecticut’s Cross-Linguistic Early Syntax Study project). Details of the relevant corpora are provided in (7).

(7) Longitudinal data

<table>
<thead>
<tr>
<th>Child</th>
<th>Variety of Spanish</th>
<th>Corpus</th>
<th>Database</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ana (♀)</td>
<td>Caribbean</td>
<td>Ana</td>
<td>UConn-CLESS</td>
</tr>
<tr>
<td>Emilio (♂)</td>
<td>European</td>
<td>Vila</td>
<td>CHILDES</td>
</tr>
<tr>
<td>Inés (♀)</td>
<td>European</td>
<td>Inés</td>
<td>UConn-CLESS</td>
</tr>
<tr>
<td>Irene (♀)</td>
<td>European</td>
<td>Llinàs-Grau/Ojea</td>
<td>CHILDES</td>
</tr>
</tbody>
</table>

2.2 Research Methods

The corpora selected for the present study contain a significant number of early transcripts exhibiting no overt subjects with verbs. The data were counted manually, since at present there is no reliable computer-assisted method to find overt subjects in Spanish in the corpora at hand. In order to ensure that the children had indeed mastered the relevant constructions, the measure of acquisition was taken to be FRU (‘first of repeated uses’), that is, first clear use, followed soon after by additional, distinct uses (cf. Stromswold 1996 and Snyder and Stromswold 1997). Following standard practice, imitations, repetitions, and formulaic/lexicalized expressions were discarded. The statistical method used to check for concurrent emergence of null and overt subjects was the Binomial Test (Snyder, 2007: Ch.
5). The Binomial Test addresses the question of whether the apparent gap between two given constructions is plausibly due to a lower frequency of use for the construction emerging later, or whether there is in fact a statistically significant difference between the two ($p < .05$), as expected when the two constructions demand different prerequisites that the child needs to have prior to using the particular constructions successfully.

2.3 Results

As shown in (8), the corpora at hand contain a number of early transcripts for each of the four children analyzed which display no lexical subjects with inflected verbs. Recall from Sections 1 and 2.2 that care should be taken to ensure that the first transcript available does not already contain lexical subjects. By way of illustration, Inés’s first transcript includes spontaneous data recorded at age 1;2. Before the first clear use/FRU of overt subjects in Inés’s speech, I found 16 transcripts containing null-subject utterances, but crucially zero occurrences of lexical subjects with inflected verbs. It was actually not until age 1;6,5 that Inés produced her FRU of an overt subject.

(8) Age of Emergence of Overt Subjects

<table>
<thead>
<tr>
<th>Child</th>
<th>Variety of Spanish</th>
<th>Age of First Transcript Analyzed</th>
<th># of Transcripts With No Overt Subjects</th>
<th>Onset Age of Overt Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ana</td>
<td>Caribbean</td>
<td>01;07,01</td>
<td>11</td>
<td>01;08,12$^1$</td>
</tr>
<tr>
<td>Emilio</td>
<td>European</td>
<td>00;11,09</td>
<td>11</td>
<td>01;09,19</td>
</tr>
<tr>
<td>Inés</td>
<td>European</td>
<td>01;02,00</td>
<td>16</td>
<td>01;06,05</td>
</tr>
<tr>
<td>Irene</td>
<td>European</td>
<td>01;05,27</td>
<td>6</td>
<td>01;07,05</td>
</tr>
</tbody>
</table>

As (8) demonstrates, the first clear uses of overt subjects in all of the children’s speech were attested before age 2 in all cases (viz. the preceding discussion that the age at which the ‘null-subject’ stage concludes is merely an approximation). The child utterance in (9) is an example of an early overt subject in the transcripts under consideration.$^2$

---

$^1$ Note that the measure of acquisition employed in the current study was “first of repeated uses,” which is more conservative than that used by Ticio (2002).

$^2$ Preverbal and postverbal subjects in Spanish are acquired concurrently, as argued by Grinstead (1998 et seq.) for child Catalan and Mexican Spanish and Villa-Gareña (2011) for European Spanish (though see Pierce 1989 and Casielles et al. 2006 for a different view).

381
(9) Éste no cabe  
    this not fits  
    ‘This one doesn’t fit.’  [Inés, 01;09,03]  

Note that at the point when children use only null subjects, there is no ban on overt subjects _per se_, as argued by Grinstead. Children simply do not produce subjects with inflected verbs. In other words, subject + complement (cf. (10a)) and verb + complement/predicate (cf. (10b)) combinations are possible at the earlier stage, which shows that the children producing subjectless sentences are not necessarily at the ‘one-word’ stage (cf. Section 1).

(10) a. Mamá bigote  
    mom moustache  
    ‘Mom [has a] moustache.’  [Irene, 01;05,15]  

b. Es mío  
    is mine  
    ‘It is mine.’  [Emilio, 01;06,20]  

It is important to note that Grinstead (1998 _et seq._) based his results solely on chronological age (i.e., Grinstead did not employ statistical methods to check whether there is a significant discrepancy between the emergence of null subjects and the emergence of overt subjects). In order to ensure that there was a gap between the onset of null and overt subjects in child Spanish, a Binomial Test was performed (see Section 2.2). The results of the statistical analysis show that null subjects emerged significantly earlier than overt subjects in the speech of the children of this study (e.g., Puerto Rican Spanish – Ana: _p_ < .001; European Spanish – Emilio: _p_ < .001). This finding strongly argues for a grammar-based explanation of the discrepancy: the linguistic prerequisites that the children needed to acquire before making use of null and overt subjects were different in each case, with those for null subjects typically being acquired prior to those for overt subjects. This result confirms that the children analyzed passed through a ‘null-subject’ stage, as claimed by Grinstead (1998) and in contrast to Bel (2001, 2003) and Aguado-Orea and Pine (2002).

Furthermore, the results contradict Ticio’s (2002) contention that Puerto-Rican-Spanish-acquiring children do not go through a ‘no-overt-subject’ stage. More specifically, my re-analysis of Ana’s data shows that this child followed a trajectory akin to that of the European-Spanish-acquiring children, since 49 finite null subjects with inflected verbs were found before the first clear use of an overt subject. As a matter of fact, Inés and Irene, who were acquiring fully _pro-drop_ Spanish, started using overt subjects earlier than Ana (cf. (8)). Hence, Ticio’s (2002) claim that there is no ‘null-subject’ stage in the acquisition of Caribbean Spanish is no longer tenable, and the apparent absence of the ‘no-overt-subject’ phase in Ana’s early utterances can no longer be taken as evidence for the pre-
sumed non-*pro*-drop nature of the Caribbean dialects of Spanish. Future research should care to investigate this claim further, however, since the current results are based on data from only one child.

3 Accounting for the Gap: Children’s Deterministic Learning

Snyder (2007 and subsequent work) observes that children make strikingly few errors of “co-mission,” in contrast to their rampant errors of omission, when one examines transcripts of their spontaneous speech. This observation is the cornerstone of Snyder’s (2007:8) claim of Grammatical Conservatism:

[C]hildren do not begin making productive use of a new grammatical construction in their spontaneous speech until they have both determined that the construction is permitted in the adult language, and identified the adults’ grammatical basis for it.

Under the hypothesis of Grammatical Conservatism in children’s acquisition of syntax, children will use a construction only on condition that they have acquired the relevant (linguistic) prerequisites that the construction demands. Suppose further that children are conservative with respect to the production of overt subjects with verbs. It is well known that different languages place subjects in different positions. Children use subjects without verbs at an early stage, as noted by Grinstead (1998 *et seq.* (cf. (10a)), but they avoid using them with verbal predicates, since they have not yet identified their placement possibilities with respect to (inflected) verbs. Once the necessary linguistic prerequisites to start using overt subjects in full sentences are in place, children begin to make successful, and, crucially, virtually error-free use of the construction. This hypothesis is corroborated by the fact that there is a significant discrepancy by Binomial Test between the emergence of null and overt subjects in the acquisition of Spanish (see Section 2.3), a gap which strongly calls for a grammar-based explanation. This possibility is wholly compatible with the contention put forward by Grammatical Conservatism that in their naturalistic speech, children appear to reserve judgment on points of grammatical variation, rather than making unwarranted commitments to non-adult parameter settings. Children use null subjects at all times at an early stage (see Bel 2001 for evidence that children’s use of null subjects is pragmatically adequate), since the prerequisites for null subjects are already in place. Instead of attempting to use overt subjects tentatively, children “wait patiently” until the prerequisites for overt subjects are in place, consistent

---

3 See Villa-García (in press) for evidence in support of this claim with regard to subject placement in child Spanish. Snyder (2007 *et seq.*) shows that this is the case in the acquisition of the English verb-particle construction, and a similar pattern has recently been reported for the acquisition of Differential Object Marking in Spanish by Rodríguez-Mondoñedo (2008).
with the fact that children never make any mistakes regarding the position of overt subjects in Spanish (see fn. 3).

By adopting the hypothesis of Grammatical Conservatism, we avoid making (strong) claims about specific ‘grammatical stages’ in acquisition and circumvent the problem raised by adopting Grinstead’s Interface Delay Hypothesis, since not all subjects in Spanish are CP constituents (see Section 1.1).

At this point, an important question arises as to the exact nature of the linguistic prerequisites that the child needs to acquire before using null and overt subjects in Spanish, a matter that I leave for future research.

4 Conclusions

This paper has tackled the issue of the ‘null-subject’ stage in the acquisition of prototypical pro-drop languages like Spanish. The results of a longitudinal study involving four children acquiring Caribbean and European Spanish provide novel support for Grinstead’s (1998 et seq.) claim of the ‘no-overt-subject’ phase in development. However, it has been shown that Grinstead’s Interface Delay Hypothesis can no longer be maintained, for it relies on the incorrect assumption that overt subjects in languages like Spanish are always left-peripheral phenomena in the CP domain. Instead, this paper has pursued an alternative explanation which assumes that children are deterministic in their acquisition of language, and thus do not make use of a particular grammatical construction until they have acquired the necessary (linguistic) prerequisites for the construction. This, I claim, is what happens in the ‘null-subject’ stage: children do not begin to use overt subjects until the necessary prerequisites for the construction are acquired, and instead use null subjects at all times, which is a readily available option in adult Spanish. Further research should care to address the non-trivial issue of the exact nature of said prerequisites. An additional conclusion of this study is that children acquiring Caribbean Spanish do pass through a ‘no-overt-subject’ stage, contra the results reported in Ticio (2002).

References


On the Role of Children’s Deterministic Learning


Julio Villa-García


On the Role of Children’s Deterministic Learning


Julio Villa-García
Department of Romance Languages and Literatures
Villanova University
800 Lancaster Avenue
Villanova, PA 19085-1699

julio.villa-garcia@villanova.edu