Children’s Grammatical Conservatism: New Evidence’

Koji Sugisaki and William Snyder

Mie University and University of Connecticut

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Children’s Grammatical Conservatism: New Evidence

1. Introduction

The analysis of children’s errors has played a prominent role in studies of child language within the generative framework. For example, Hyams (1986) analyzed the erroneous subject-less sentences in child English as illustrated in (1), and attempted to account for this phenomenon in terms of an early non-adult-like setting of the Null Subject Parameter (Rizzi 1982).

(1)  a. want more apples
     b. need that

In addition, a number of experimental studies (e.g. Chien & Wexler 1990, Grimshaw & Rosen 1990) have found that English-speaking children in the pre-school years sometimes misinterpret sentences involving a pronoun, such as (2), which they incorrectly accept on the interpretation 'Mama Bear is washing herself'.

(2) Mama Bear is washing her.

Building on this observation, Grodzinsky & Reinhart (1993) argued for a version of Binding Theory in which bound pronouns and referential pronouns are constrained by different modules: The former are regulated by Principle B, while the latter are regulated by pragmatic constraints.

However, a growing number of recent studies suggest that the types of errors children make in the course of acquisition are quite restricted (e.g. Sugisaki & Snyder 2003; Snyder 2007, 2008, 2011; Rodriguez-Mondóñedo 2008). More specifically, in children’s spontaneous speech, the majority of errors are omissions, where required words or morphemes are simply omitted from the child’s utterance. In contrast, the types of “co-mission” errors, where the child puts words or morphemes together in a way that is disallowed by the adult grammar, are limited to a tiny subset of the logical possibilities. Thus, in their spontaneous speech, children appear to reserve

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1. The major co-mission errors that do occur in children’s speech include (a) the use of infinitive verbs in matrix contexts as in (i) (e.g. Déprez & Pierce 1993, Hoekstra & Hyams 1998, Wexler 2011), and (b) the use of non-nominative pronouns in subject position as in (ii) (e.g. Valian 1991, Schütze 1997):
judgment on points of grammatical variation, and to refrain from putting elements together in ways that might turn out to be disallowed in the target language. These observations have led Snyder (2007, 2008, 2011) to propose that children are “grammatically conservative”: At least in their natural, spontaneous speech, children do not begin using a new syntactic structure productively until they have both determined that the structure is permitted in the adult language, and identified the adults’ grammatical basis for it.

The present study provides two new pieces of evidence for children’s Grammatical Conservatism (GC): one from the acquisition of the Go-Verb construction in American English, and the other from children’s fragmentary answers to prepositional wh-questions in English and Spanish. Our findings suggest that children’s GC is operative even in the domain of inflection, and that there is at least one case in which GC actually overrides the general tendency of young children to omit function words.

2. Grammatical Conservatism with English Particles


(3)  a. Mary stood up.  
     b. Mary lifted the box up.  
     c. Mary lifted it up.  
     d. Mary lifted up the box.

The child must rely on the input, at least in part, to determine that the examples in (3) are permitted in English, because languages like French, Russian, and Swahili lack any such possibility for a directional particle (like up) to be semantically connected to a verb (like lift) yet surface as an independent word.

A few of the logically possible error-types that a child could make when acquiring this syntactic property are provided in (4).

(4)  a. * Mary lifted up it.  
     b. * Mary lifted up the box out.

| (i) | Pas manger la poupée. | (Nathalie, 1;09:03) |
| (ii) | Him fall down. | (Nina, 2;03:14) |
c. * Mary lift up+ed the box.

d. * Mary will up+lift the box.

For example, the error in (4a) is quite likely to occur if a child is reasoning by analogy from (3b-d). The error in (4b) could also result from simple distributional reasoning, if the child surmises from (3b) and (3d) that English provides two independent positions for directional particles. The error in (4c) could result if the child were swayed by the close semantic connection between *lift* and *up*, as well as their frequent occurrence side by side, and incorrectly concluded that they constitute a single word.

The error in (4d) might have a different source: It involves a prefixed particle, which is ungrammatical in English but fully grammatical in other West Germanic languages. In other words, the child could be led to (4d) because it corresponds to an option of Universal Grammar (UG), although it happens to be the wrong option for English. Thus, whether the child is reasoning by analogy (as in certain domain-general approaches to language acquisition), or trying out the options compatible with UG (as expected in many generative approaches to acquisition), the opportunities for co-mission errors are ample.

In order to determine whether English-learning children actually produce co-mission errors of the kinds in (4) and others, Snyder (2007) conducted a near-exhaustive search for errors with the English verb-particle construction in the longitudinal corpus for Sarah (Brown 1973) that is available in the CHILDES database (MacWhinney 2000; 1-July-2004 version). This corpus includes over 37,000 child utterances, covering an age span from 2(years);03(months) to 5;01. The results were striking: Sarah made almost no co-mission errors. From the beginning of her corpus through the age of 2;10 (approximately four months after she produced her first clear use), Sarah produced 102 examples of verb-particle combinations, of which 70 were correct from the standpoint of adult English. Of the remaining 32, at least 29 of them (90.6%) were errors of omission. Of the other three, only one was unambiguously a grammatical error:

(5) I [...] go down+ed. [Transcript 34, line 569, age 2;10:20]

Thus, the findings from the acquisition of the English verb-particle construction provide a first piece of evidence for GC in children’s spontaneous speech.

In light of this background, we now turn to the question of whether children’s GC is evident in two new areas of syntax: (i) the *Go*-Verb construction in American English and (ii) the short, fragmentary answers to prepositional questions that are permitted in English and Spanish.
3. Grammatical Conservatism and the Go-Verb Construction

3.1. The Go-Verb Construction in American English

As exemplified in (6), American English permits a construction in which the motion verbs *come* and *go* are immediately followed by a second verb.²

(6)  
   a. Go get me a coffee!  
   b. Come visit again soon!

A number of studies observe that this “Go-Verb” construction is subject to an intriguing morphological restriction: The construction is possible only when both *come/go* and the second verb take the bare form, or a form that is syncretic to (i.e. homophonous with) the bare verb (e.g. Zwicky 1969, Shopen 1971, Carden & Pesetsky 1977, Pullum 1990, Jaeggli & Hyams 1993, Pollock 1994, Cardinaletti & Giusti 2001, Bjorkman 2009). To put it more simply, the *come/go + V* sequence is acceptable only when both verbs lack an overt inflectional affix. Thus, this sequence can occur in (i) imperative mood, (ii) to-infinitives, (iii) modal complements, (iv) subjunctive complements, and also in (v) non-3rd-singular present-tense environments, as exemplified in (7).

(7)  
   a. Come visit us next week.  
   b. I want to go take a nap.  
   c. Birds will come play in your birdbath.  
   d. Her supervisor demanded that she go buy a replacement.  
   e. I/you/we/they go get the paper every morning.

The Go-Verb construction is impossible, however, with any overtly inflected verb form, including the (i) 3rd-singular present-tense, (ii) past, (iii) perfect, and (iv) progressive forms, as illustrated in (8).³

(8)  
   a. * He/she goes gets the paper every morning.  
      (also *go gets / *goes get)  
   b. * The delivery person came left the package on the doorstep.  
      (also *came leave / *come left)

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² According to Cardinaletti & Giusti (2001) and Bjorkman (2009), similar constructions can be found in Marsalese (a Western Sicilian dialect of Italian) and in Modern Greek.
³ Bjorkman (2009) reports that there are some English speakers who accept some or all of the inflected forms in (8). The source of these individual differences is not yet clear.
c. * He has gone bought the newspaper already.
   (also *go bought / *gone buy)

d. * Susan is coming having lunch with us.
   (also *come having / *coming have)

At least three types of analyses have been proposed in the theoretical literature. Jaeggli & Hyams (1993) argue that the impossibility of overt inflection in the Go-Verb construction stems from a conflict between the fact that come and go assign a “secondary θ-role,” and the consequences of affixing overt morphology to a verb. Pollock (1994) argues that the morphological restriction stems from complex-predicate formation, which incorporates the second verb into come/go. More recently, Bjorkman (2009) proposes that the constraint on come/go + V is the result of conflicting feature requirements on come/go and the second verb, which are resolvable only when the conflicting features are syncretic.

We will not go into a detailed review of these syntactic analyses here. What is important in the present context is that the GC hypothesis makes a strong prediction for the acquisition of the Go-Verb construction: Children learning American English will not extend this construction to contexts requiring inflection. In other words, the co-mission error of inflecting either verb will be quite rare in children’s utterances.

3.2. **Grammatical Conservatism with the Go-Verb Construction in Child English**

It is widely observed that English-learning children around the age of two often omit tense and agreement markers. The following conversation provides a representative example (Radford 1990:150).

(9) ADULT: What does the pig say?  
     CHILD: Pig say oink. (Clair, 2;01)

We now address the question of whether English-learning children also exhibit co-mission errors with inflection, in the special context of the Go-Verb construction.4

In our transcript analysis, we analyzed five longitudinal corpora for American English from the CHILDES database (MacWhinney 2000), which provided a total sample of more than 148,000 child utterances. The corpora we examined are summarized in (10). The CLAN program Combo, together with a file of all the possible forms of come/go, was used to identify potentially relevant child utterances,

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which were then searched by hand and checked against the original transcripts to exclude imitations, repetitions, and formulaic routines.5

(10) English Corpora Analyzed:

<table>
<thead>
<tr>
<th>Child</th>
<th>Collected by</th>
<th>Ages</th>
<th>Child utterances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abe</td>
<td>Kuczaj (1976)</td>
<td>2;04:24 - 5;00:11</td>
<td>22,688</td>
</tr>
<tr>
<td>Adam</td>
<td>Brown (1973)</td>
<td>2;03:04 – 5;02:12</td>
<td>45,555</td>
</tr>
<tr>
<td>Eve</td>
<td>Brown (1973)</td>
<td>1;06:15 - 2;03:23</td>
<td>11,563</td>
</tr>
<tr>
<td>Nina</td>
<td>Suppes (1973)</td>
<td>1;11:16 - 3;03:21</td>
<td>31,505</td>
</tr>
<tr>
<td>Sarah</td>
<td>Brown (1973)</td>
<td>2;03:05 – 5;01:06</td>
<td>37,012</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>148,323</td>
</tr>
</tbody>
</table>

(years;months;days)

The results were as follows. All five children produced the Go-Verb Construction reasonably frequently in their spontaneous speech. The ages of acquisition, which were taken as the first clear use that was followed soon afterwards by additional, distinct uses (Stromswold 1996), are summarized in (11).6 Crucially, the children produced extremely few come/go + V sequences in which one (or both) of the verbs were inflected, as shown in (12).7

(11) Ages of Acquisition:

<table>
<thead>
<tr>
<th>Child</th>
<th>Age of Acquisition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abe</td>
<td>2;05:07</td>
</tr>
<tr>
<td>Adam</td>
<td>2;06:17</td>
</tr>
</tbody>
</table>

5. The file of possible forms of come/go included: come, comes, came, coming, go, goes, went, gone, going. An anonymous reviewer suggests that the list should also contain over-regularized forms such as goed, wented, comed, camed, in order not to miss potential counterexamples. A follow-up study, which analyzes a larger number of corpora with the file containing these forms, is now in progress. We thank the anonymous reviewer for bringing these ungrammatical forms of come/go to our attention.

6. In order to be counted as “soon afterwards”, we required the additional uses to appear in the same file as the first clear use, or in the file which immediately follows this file.

7. Children’s utterances that appear to violate the morphological restriction are as follows:

(i) *CHI: I can’t Mom # can you come helps? (Abe, 3;00:29)
(ii) *CHI: it goes fall in the glass. (Adam, 3;00:25)
(iii) *CHI: let’s go flying kite. (Sarah, 4;08:20)
The Number of Go-Verb Construction in Children’s Speech:

<table>
<thead>
<tr>
<th>Child</th>
<th>Uninflected</th>
<th>Inflected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GO+V</td>
<td>COME+V</td>
</tr>
<tr>
<td>Abe</td>
<td>135</td>
<td>10</td>
</tr>
<tr>
<td>Adam</td>
<td>38</td>
<td>1</td>
</tr>
<tr>
<td>Eve</td>
<td>150</td>
<td>2</td>
</tr>
<tr>
<td>Nina</td>
<td>53</td>
<td>2</td>
</tr>
<tr>
<td>Sarah</td>
<td>47</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>423</td>
<td>16</td>
</tr>
</tbody>
</table>

These results indicate that American English-speaking children around the age of two already know the morphological restriction on the Go-Verb Construction, or at least are aware that such a restriction might apply. Our findings therefore support the conclusion that GC is indeed operative in this area of inflectional morphology.

4. Grammatical Conservatism with English and Spanish Fragments

4.1. Cross-linguistic Variation in P-questions and Fragment Answers

It is widely known that languages differ with respect to the movement possibilities for prepositional complements (e.g. van Riemsdijk 1978, Hornstein & Weinberg 1981, Kayne 1981, Abels 2003). For example, in everyday spoken English, *wh*-movement of

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8. An anonymous reviewer points out that in order to support our conclusion, we should also demonstrate that the children frequently produce inflected forms of *come* and *go* when these verbs are used in contexts other than *come/go+V*. As a first step towards addressing this concern, we searched each child’s initial transcripts, up to and including the transcript with the FRU of *come/go+V*. We found that all children had novel uses of at least one inflected form even during this early period, before the bulk of the examples counted in (12): Abe – goes; Adam – coming, goes, going, gone, went; Eve – came, coming, gone, going; Nina – goes, going, gone; Sarah – coming, gone, went. A follow-up study, now in progress, will provide a statistical comparison of the rate of inflection in the *come/go+V* construction versus other contexts, in the transcripts following the FRU.

9. This section is an improved and expanded version of (Sugisaki & Snyder 2010).
a prepositional complement strands the preposition, while in Romance languages like Spanish, the preposition has to be “pied-piped” along with the *wh*-word.

(13) **English:** Preposition-stranding (P-stranding) possible

a. Who was Peter talking *with* t ?

b. ?? With whom was Peter talking t ? [Odd, in colloquial English]

(14) **Spanish:** P-stranding impossible / Pied-piping obligatory

a. * Quién hablaba Pedro *con* t ?

   \[ \text{who} \quad \text{was-talking} \quad \text{Peter} \quad \text{with} \]

b. Con quién hablaba Pedro t ?

   \[ \text{with} \quad \text{who(m)} \quad \text{was-talking} \quad \text{Peter} \]

A study by Merchant (2004) revealed that the same point of cross-linguistic variation has an effect on fragment answers to prepositional *wh*-questions (“P-questions”). Fragment answers are answers to *wh*-questions which consist of a non-sentential XP like the (a) examples in (15) and (16), which nevertheless convey the same propositional content as a fully sentential answer like the (b) examples.

(15) Who did she see?


b. She saw John.

(16) When did he leave?

a. After the movie ended.

b. He left after the movie ended.

According to Merchant (2004), when the *wh*-phrase in a question is a complement of a preposition, the corresponding fragment answer can be either a ‘bare’ DP or (at least marginally) a PP in English, as shown in (17). In sharp contrast, only PP answers are permitted in Spanish, as illustrated in (18).

(17) **English:** Who was Peter talking with?

a. Mary.

b. ?? With Mary.

(18) **Spanish:** Con quién hablaba Pedro?

\[ \text{with} \quad \text{who(m)} \quad \text{was-talking} \quad \text{Peter} \]

a. * María.

b. Con María.
This contrast between English and Spanish is part of a larger cross-linguistic generalization that Merchant (2004) has found: bare-DP answers to P-questions are found only in those languages that permit P-stranding. The results of Merchant’s cross-linguistic survey are summarized in (19).


<table>
<thead>
<tr>
<th>Language</th>
<th>P-stranding?</th>
<th>Bare-DP Answer?</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Swedish</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Norwegian</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Danish</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Icelandic</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Greek</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>German</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Yiddish</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Czech</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Russian</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Bulgarian</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Hebrew</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

In order to account for this cross-linguistic correlation between P-stranding, on the one hand, and bare-DP answers to P-questions on the other, Merchant (2004) argues that fragment answers have fully sentential syntactic structures: these answers are derived by A’-movement of the fragment to the clause Peripheral position in the syntactic component, followed by an operation of ellipsis at PF, as illustrated in (20). Since fragment answers involve leftward A’-movement under this analysis, the grammatical constraints governing P-stranding will be operative in these structures as well. Thus, the ban on bare-DP answers to P-questions in Spanish is immediately accounted for.

(20) a. Derivation of (17a):
   a. In syntax: \[ [\text{Mary} [\text{TP} \text{ Peter was talking with } t ]] \]
   b. In PF: \[ [\text{Mary} [\text{TP} \text{ Peter was talking with } t ]] \]

b. Derivation of (17b):
   a. In syntax: \[ [\text{with Mary} [\text{TP} \text{ Peter was talking } t ]] \]
   b. In PF: \[ [\text{with Mary} [\text{TP} \text{ Peter was talking } t ]] \]
To summarize this subsection, Merchant (2004) observes that fragment answers to P-questions are subject to cross-linguistic variation: while English permits bare-DP answers (and PP answers, to a certain extent), Spanish disallows bare-DP answers. In order to account for this observation, Merchant proposed an analysis in which fragment answers are derived from fully sentential structures through the combination of movement and ellipsis.10

4.2. Grammatical Conservatism with English and Spanish P-questions

Sugisaki and Snyder (2003) examined children’s acquisition of P-questions in English and Spanish (as in (13) and (14), repeated here as (21) and (22)), and found that wh-questions conform to the pattern in the target language as soon as children begin producing them.

(21) English:

a. Who was Peter talking with t ?

b. ?? With whom was Peter talking t ? [Odd, in spoken English]

(22) Spanish:

a. * Quién hablaba Pedro con t ?

   who was-talking Peter with

b. Con quién hablaba Pedro t ?

   with who(m) was-talking Peter

An analysis of ten children’s longitudinal English corpora and four children’s longitudinal Spanish corpora revealed that (i) no child acquiring English ever used pied-piping of prepositions when asking a P-question, and (ii) no child acquiring Spanish ever used P-stranding. Furthermore, among the ten English-learning children, four children (Abe, Eve, Naomi, and Shem) had a statistically significant gap between the point by which she was clearly using both PP complements and direct-object wh-questions, on the one hand, and the point at which she began to use P-questions, as shown in (23).11,12 (For all of the children, PP complements appeared

10. Building on Ross (1969), Merchant (2001) observes that island violations can be remedied by deleting the offending constituent. Then, as an anonymous reviewer points out, a question remains as to why P-stranding violations such as (14a) cannot be repaired by ellipsis involved in the derivation of bare-DP answers (as well as in the derivation of sluicing). For a possible approach to this problem, see Sato (2011).
11. Again, following Stromswold (1996), the age at which a child produced his or her first clear example of a construction (followed soon after by additional uses) was considered to be
earlier than direct-object questions.) Most probably, these four children were actively avoiding P-questions in their spontaneous speech, for a period of up to nine months.13

(23) Children with Statistically Significant Gap (Sugisaki and Snyder 2003):

<table>
<thead>
<tr>
<th>Child</th>
<th>Direct-object Question</th>
<th>P-stranding</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abe</td>
<td>2:05:00</td>
<td>2:07:07</td>
<td>14(.583)11=.037</td>
</tr>
<tr>
<td>Eve</td>
<td>1:08:00</td>
<td>2:02:00</td>
<td>14(.818)48=.009</td>
</tr>
<tr>
<td>Naomi</td>
<td>1:11:30</td>
<td>2:08:30</td>
<td>14(.833)42=.007</td>
</tr>
<tr>
<td>Shem</td>
<td>2:02:16</td>
<td>2:06:06</td>
<td>14(.714)18=.033</td>
</tr>
</tbody>
</table>

4.3. Grammatical Conservatism with English and Spanish Fragments

A very strong test of children’s GC is provided by fragment answers to P-questions. In contrast to prepositional questions, where the P-stranding and pied-piping versions contain exactly the same number of words, the bare-DP answer requires one fewer word than the P+DP answer. If the Spanish-learning child nonetheless favors P+DP answers, then she is actually performing extra labor (articulating a longer phonetic string) in order to achieve GC.

To see whether this strong form of GC is indeed operative, we examined spontaneous-speech data from CHILDES for five children acquiring English (Abe, Adam, Eve, Nina, Sarah), and five children acquiring Spanish (Emilio, Irene, Koki, María, Magín). The corpora we examined are summarized in (24) and (25).14

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12. The p-value was calculated as follows. Abe (for example) produced 11 direct-object wh-questions prior to his first clear use of a P-question. In transcripts slightly later than that first P-question, when Abe asked either a direct-object question or a P-question, 58.3% of the time it was a direct-object question. The probability of producing 11 or more direct-object questions before the first P-question just by chance, under the null hypothesis that P-questions were available to Abe as early as direct-object questions, and had the same likelihood of being used as in slightly later transcripts, was \( p = (1.583)^{11} \approx 0.00264 \). Given that a total of 14 children’s corpora were examined, a Bonferroni correction was applied: Corrected \( p = 14(1.583)^{11} \approx 0.037 \).

13. Among the remaining six children, one child (Allison) did not acquire P-stranding by the end of her corpus, and the other five children (Adam, April, Nina, Peter, and Sarah) did not have a statistically significant gap between the acquisition of direct-object wh-questions and the acquisition of P-stranding (\( p > .05 \)).

14. Our analysis stopped five transcripts after the child’s first fragment answer to a
(24) English Corpora Analyzed:

<table>
<thead>
<tr>
<th>Child</th>
<th>Collected by</th>
<th>Ages</th>
<th># of utterances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abe</td>
<td>Kuczaj (1976)</td>
<td>2;04:24 - 2;08:18</td>
<td>3,110</td>
</tr>
<tr>
<td>Adam</td>
<td>Brown (1973)</td>
<td>2;03:04 - 2;07:00</td>
<td>9,254</td>
</tr>
<tr>
<td>Eve</td>
<td>Brown (1973)</td>
<td>1;06:00 - 2;03:00</td>
<td>12,473</td>
</tr>
<tr>
<td>Nina</td>
<td>Suppes (1973)</td>
<td>1;11:16 - 3;00:03</td>
<td>23,586</td>
</tr>
<tr>
<td>Sarah</td>
<td>Brown (1973)</td>
<td>2;03:05 - 3;05:13</td>
<td>17,881</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td><strong>66,304</strong></td>
</tr>
</tbody>
</table>

(25) Spanish Corpora Analyzed:

<table>
<thead>
<tr>
<th>Child</th>
<th>Collected by</th>
<th>Ages</th>
<th># of utterances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emilio</td>
<td>Serrat &amp; Vila</td>
<td>0;11 - 4;08</td>
<td>7,126</td>
</tr>
<tr>
<td>Irene</td>
<td>Ojea and Llinas-Grau</td>
<td>0;11 - 3;02</td>
<td>12,055</td>
</tr>
<tr>
<td>Koki</td>
<td>Rosa Montes</td>
<td>1;07 - 2;11</td>
<td>4,548</td>
</tr>
<tr>
<td>Maria</td>
<td>Susana López-Ornat</td>
<td>1;07 - 3;11</td>
<td>8,433</td>
</tr>
<tr>
<td>Magín</td>
<td>Carmen Aguirre</td>
<td>1;07 - 2;10</td>
<td>10,916</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td><strong>43,168</strong></td>
</tr>
</tbody>
</table>

In all cases we began at the point when the child’s mean length of utterance (MLU) first reached 2.50 words, to ensure that the child had left the telegraphic stage behind, and could in principle produce both DP’s (which often consist of two words, e.g. *my mother*) and P+DP phrases (which often consist of three words, e.g. *with my mother*). The CLAN program Combo, together with lists of prepositions and *wh*-words in English and Spanish, was used to locate every non-child utterance that could possibly have contained a prepositional question, together with the two utterances that immediately followed. The output was searched by hand to locate all prepositional question.

15. An anonymous reviewer casts serious doubt on the validity of our strategy of starting to count at MLU 2.5: he or she suggests that, if we claim that certain errors are never made, we should not exclude the earlier files in which these errors could have been made. We think that the reviewer’s fundamental point is well-taken. However, if we include those earlier files, we are not sure whether we can distinguish between those bare DP answers that clearly argue against GC and those bare DP answers that stem from whatever general properties of child language limit the length of children’s utterances below three words. In our view, the latter would not constitute clear counterexamples of the GC hypothesis. We thank the anonymous reviewer for bringing this issue to our attention.
of the children's fragment answers to prepositional questions. Results were checked against the original transcripts to exclude imitations, repetitions, and formulaic routines.

The results are summarized in (26) and (27). Remarkably, the children acquiring Spanish overwhelmingly used adult-like P+DP answers from the outset. Beginning at the child’s first fragment answer to a prepositional question, the next five transcripts contained an average of 93.6% P+DP answers to the prepositional questions that they answered with a fragment (range: 83%-100%). In contrast, in the corresponding first five transcripts for each of the English-learning children, both of the options available to adults were employed: On average, children produced a P+DP answer, rather than a bare-DP answer, to only 40.2% of the prepositional questions that they answered with a fragment (Range: 20%-67%). The Spanish-English contrast is statistically reliable (Wilcoxon Rank-Sum test: W(5,5)=15, \( p=.008; \) mean ranks: English 3.00, Spanish 8.00).16

(26) Results for Child English:

<table>
<thead>
<tr>
<th>Child</th>
<th>Types of Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DP</td>
</tr>
<tr>
<td>Abe</td>
<td>1 (50%)</td>
</tr>
<tr>
<td>Adam</td>
<td>3 (75%)</td>
</tr>
<tr>
<td>Eve</td>
<td>1 (33%)</td>
</tr>
<tr>
<td>Nina</td>
<td>11 (61%)</td>
</tr>
<tr>
<td>Sarah</td>
<td>4 (80%)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>20</td>
</tr>
</tbody>
</table>

(27) Results for Child Spanish:

<table>
<thead>
<tr>
<th>Child</th>
<th>Types of Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DP</td>
</tr>
<tr>
<td>Emilio</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Irene</td>
<td>1 (7%)</td>
</tr>
<tr>
<td>Koki</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>María</td>
<td>3 (8%)</td>
</tr>
</tbody>
</table>

16 The contrast is also significant by unpaired \( t \)-test \((t(8)=5.88,\) two-tailed \( p<.001)\), but marginal significance of Levene’s test \((p=.079)\) suggests that the non-distributional Wilcoxon Rank-Sum test (reported in the text) may be more appropriate.
These results for child English and Spanish demonstrate that GC is operative in the domain of fragment answers. Furthermore, in this case GC overrides the general tendency to make omission errors: Spanish-learning children overwhelmingly favored P+DP answers over bare-DP answers, which in turn suggests that they are actually performing extra labor (articulating a longer phonetic string) in order to achieve GC.

One final issue needs to be addressed. As discussed above, when English-learning children begin to produce full, sentential P-questions, these invariably have P-stranding, not pied-piping. Yet, the children’s earliest fragment answers are often PPs, not bare DPs. This is surprising under Merchant’s analysis, because for him PP fragments are derived via pied-piping. If (as seems likely) the young child’s grammar does not yet permit any pied-piping at all, how can it permit PP fragments?

A possible answer is suggested by a recent, *wh*-in-situ analysis of “sluicing” (i.e., elliptical questions, as in *John was talking to somebody, but I don’t know who*) proposed by Kimura (2010). Rather than moving the *wh*-phrase to the left edge of the clause and deleting an XP to its right, which is Merchant’s approach, Kimura proposes that the *wh*-phrase remains *in situ*, and that all the [-*wh*] material in the clause is simply deleted. The English-Spanish contrast with respect to P-stranding / pied-piping in P-questions would be derived from feature percolation (Kimura 2010:56, fn.8): In languages like Spanish, the *wh*-feature obligatorily percolates up to PP, yielding obligatory pied-piping in sentential questions, and a full PP in sluices.

Kimura’s analysis can accommodate fragment answers to P-questions if either the prepositional object or the whole PP in such answers bears a special feature, let’s say [+Focus], that protects it from deletion. The feature-percolation requirement in languages like Spanish would then need to cover [+Focus] as well as [+*wh*]. Instead of undergoing A-bar movement, as in Merchant’s account, the PP/DP could remain *in situ*.

If we adopt this set of proposals, the benefit is that English-learning children’s early PP-fragment answers do not require actual movement with pied-piping. As long as the child’s grammar permits optional feature-percolation up to PP, then whenever the [+Focus] feature percolates and the [-Focus] material gets deleted, a PP-fragment will remain.17

<table>
<thead>
<tr>
<th></th>
<th>Magín</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td>1 (17%)</td>
<td>5 (83%)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th></th>
<th>68</th>
</tr>
</thead>
</table>

17. On our version of Kimura’s approach, we may also need to assume that optional percolation of a [+*wh*] feature to PP is strongly disfavored (for the adult as well as the child)
5. **Concluding Remarks**

In this study we have demonstrated that both children’s Go-Verb constructions and children’s fragment answers to prepositional *wh*-questions conform to the pattern when the result will be overt movement of a larger (PP) constituent. This would account for the general lack of pied-piping in children’s (and for the most part, adults’) English P-questions, while still allowing for the ready availability of PP-fragment questions and PP-fragment answers – neither of which involve movement.

A potential problem for our extension of Kimura’s analysis of sluicing is the following contrast between sluicing and fragment answers with respect to their island (in)>sensitivity:

(i) a. They want to hire someone who speaks a Balkan language, but I don’t remember which.
   b. * They want to hire someone who speaks a Balkan language, but I don’t remember which (Balkan language) they want to hire someone who speaks.

(ii) Does Abby speak the same Balkan language that *Ben* speaks?
   b. No, she speaks the same Balkan language that *Charlie* speaks

According to Merchant (2004), while island violations can be repaired in sluicing as illustrated in (ia), these effects persist even after ellipsis in the case of fragment answers, as exemplified by (iia). While the *wh*-in-situ analysis of sluicing by Kimura (2010) immediately accounts for the absence of island effects in this construction, our *in-situ* analysis of fragments faces the question of why fragment answers to P-questions exhibit island effects, despite the absence of movement.

A possible answer comes from a careful examination of Merchant’s example (iia). Note that the ellipsis “straddles” the focused word *Charlie*, in the sense that there is unpronounced material both before and after. If we eliminate this property, we see that ellipsis in a fragment answer actually can repair an island violation:

(iii) [Context: John and Bill are friends attending a wedding reception. Earlier, when Bill was not present, John saw their mutual friend Abbie speaking to a woman whom he did not recognize. Now Bill is trying to help John identify her.]
   Bill: Did Abbie speak to the woman who’s sitting next to *Ben*?
   John: No, *Charlie*. OR John: No, next to *Charlie*.

The native English-speakers we polled accepted both versions of John’s fragment answer, although some preferred the full-PP version. All speakers rejected the corresponding *wh*-questions, however:

(iv) a. ** Who did Abbie speak to the woman who’s sitting next to ___?
   b. ** Next to whom did Abbie speak to the woman who’s sitting ___?

We take this evidence to show that Merchant’s claims in this specific area merit re-examination, and that we might in fact be correct in extending Kimura’s version of his approach to ‘fragment’ answers.

Yet, an anonymous reviewer points out that our example in (iii) does not constitute a minimal pair with (ii), and hence we should examine an example like (v):

(v) Does Abby speak the same Balkan language that is spoken by *Ben?* (??) No, *Charlie*

For the speakers we have consulted, judgments range from “fully acceptable” to “degraded, but better than (ii.b)” A full exploration of this issue is left to future research.
predicted by the GC hypothesis. In the case of the Go-Verb construction, children acquiring American English almost never made the co-mission error of inflecting either *come/go* or the following verb. In the case of fragment answers, while English-learning children produced both bare-DP and PP answers, Spanish-learning children largely restricted their answers to PPs.

These findings provide new evidence for GC, and thereby bolster the utility of spontaneous speech data: When a child goes abruptly from never using a surface construction to using it frequently and correctly, we are entitled to conclude that she has acquired the final grammatical (or perhaps lexical) pre-requisite for the adult construction. (If the child sometimes employed temporary, incorrect analyses to guide her speech, we would almost surely see an abundance of co-mission errors.) As a direct consequence, the longitudinal records of children’s spontaneous speech become an extremely valuable testing ground for theories of cross-linguistic variation.

References


