Null Subjects in Child Wh-Questions*

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1. Introduction

Is there a deep structural relationship between the Optional Infinitive (OI) and Null Subject (NS) stages? We will provide evidence to support the suggestion of Wexler (1992, 1994 footnote 44) that nonfinite verbs in the OI stage of early child English grammatically license a null subject, a suggestion further developed in a theory of the OI stage presented in Wexler 1995. The evidence we shall display emerges from the particular pattern of null subjects that exists in declarative sentences and wh-questions.

Hyams (1986) proposed that the omission of subjects in child English represented the missetting of the null-subject parameter. In Italian and other null-subject (pro-drop) languages, subjects may generally be omitted, subject to certain pragmatic constraints. In English and other non-null-subject languages, subjects may generally not be omitted. Work in generative grammar (e.g., Rizzi 1982) has assumed that a property of the INFL system licenses null subjects in null-subject languages, whereas the corresponding property of the INFL system in English does not license such subjects. For example, one might claim that agreement, perhaps represented by an AGR node, licenses null subjects in Italian but not in English.

The possibility that there is a missetting of the null-subject parameter has led to much speculation about why such missetting should occur, speculation which has not received a satisfactory answer. Moreover, it would be quite an important property of the learning of parametric systems if in fact such missetting occurred. One purpose of this paper is to argue that there is no missetting of the null-subject parameter in early English and other non-null-subject languages. Rather, null subjects are largely a result of the OI stage. If this conclusion turns out to be true, and there is actually no missetting of the null-subject

* We thank the Research Training Group in Language Acquisition and Computation (funded by NSF grant #DRI9113607) for providing an excellent research atmosphere. Thanks also to Carson Schütze, Kevin Broihier, and Jenny Ganger for helpful comments and suggestions. This research was conducted while HSB was a student at MIT.

1 The suggestion that null subjects are related to the OI stage rather than to a misset parameter was first made in Wexler 1992, 1994. Since then there have been a number of papers which agree with this conclusion, in various ways, including Rizzi 1994b, Roeper and Rohrbacher 1995, and Sano and Hyams 1994.
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A major discovery concerning early child language is that children in many languages go through an Optional Infinitive (OI) stage (Wexler 1992, 1994). In this stage, the child produces nonfinite root verbs along with finite ones. Crucially, the finite and nonfinite verbs occur in different distributional contexts; it has been shown that finite verbs and only finite verbs move in child sentences to positions to which finite verbs move in the adult language. Thus, Wexler concluded that children in the OI stage actually "know" the difference between finite and nonfinite morphology, despite the fact that they are willing to omit TENSE in some sentences demanding it.

It is an open question exactly in which sense TENSE is omitted from nonfinite root sentences. Certainly the surface tense marking is omitted. The question is, though, exactly what is missing from the representation, the structural description, of the nonfinite root sentence. As Wexler (1992, 1994) argued, some representation of TENSE other than the surface phonology had to be omitted; this is clear because the nonfinite root verb appears in the position of nonfinite verbs. Thus, it is not a simple phonological "error." But exactly what is missing? Is it the TENSE node? The projection headed by TENSE? Or simply a TENSE feature?

Wexler (1995) (see also Harris and Wexler in press) suggests that in the nonfinite sentences the entire TENSE projection, including the head TENSE, is missing in the nonfinite root (OI) sentences. One advantage to such an assumption is that it explains why the infinitival morpheme to, which is often taken to exist in the head of nonfinite TENSE, is missing in the OI sentences. Probably the results that we attain here can be carried out with a number of different assumptions about what aspect of TENSE is missing in OI sentences. For example, it is possible that in OI sentences, the TENSE projection exists, but that the passive/universal features which make the projection finite are missing. In this paper we will not go into the question of whether this assumption, or the assumption of Wexler (1995) that the entire TENSE projection is missing, is best.

Wexler (1992, 1994) suggested that null subjects in child English (and in child versions of other non-null-subject languages) might be related to the OI stage, rather than to a null parameter. In particular, it seems natural to suggest that root nonfinite verbs license null subjects, since in general nonfinite verbs license empty subjects. For example, consider control constructions such as (1):

(1)  
a. Mary expects [e to leave]

The empty subject e of (1a) (traditionally called PRO) is licensed by the nonfinite TENSE of to leave. But the finite TENSE in (1b) does not license an empty subject in English, and the sentence is ungrammatical. (The standard assumption is that in "null-subject" languages finite TENSE licenses a particular kind of empty subject: pro; English is not a null-subject language, so pro is not licensed by finite TENSE in English.) Whatever the exact grammatical explanation, it is generally assumed that nonfinite TENSE licenses a null subject: PRO. Thus, we might look to the existence of root infinitives to explain the presence of null subjects in early child language, specifically during the OI stage, when such nonfinite TENSE is rampant.

Wexler (1992, 1994) argues that the characterization of the Optional Infinitive stage should be extended to English, despite the fact that morphologically one cannot distinguish the infinitive from the verb stem in English. Thus, he claims that when children produce forms like (2) they are showing the key characteristic of the OI stage—they are omitting TENSE.

(2)  
a. she go
b. she not go
c. she going

In (2a), the (3rd singular) present TENSE morpheme -s has been omitted. In (2b), TENSE has been omitted so that do-insertion, which is allowed only when there is an unbound TENSE morpheme, does not occur. In (2c), TENSE has been omitted so that be is not required. (The assumption is that be is semantically empty and only inserted to bind TENSE.) In addition, Harris and Wexler (in press) provide much empirical justification for the assumption that early English represents the OI stage; we will not review that evidence here (for further evidence, see Rice, Wexler, and Cleave in press).

Note that we are not attempting here to argue for any particular grammatical characterization of the empty subject of nonfinite verbs. One possibility is a characterization in terms of null-case (Chomsky & Lasnik 1991). Alternatively, Wexler (1995) proposes that the TENSE projection is omitted from the OI structures (for reasons that we will not delve into here) and that the lack of TENSE means that in fact no case has to be assigned to the subject position. On his analysis, the empty subject does not in fact need case of any kind—the case filter is not part of the Minimalist framework. That is, there is no UG principle that requires that all DPs have structural case, so long as there are no unchecked features.

Let us try to specify these considerations a little more precisely, mentioning alternative ways of working them out. First, we can divide the different possible TENSE features in a sentence into 3 kinds: TENSE[+finite], TENSE[-finite] and ~TENSE. The third, ~TENSE, corresponds to the simple lack of a TENSE projection at all, what we are assuming for the OI sentences. The first (TENSE[+finite]) is the standard, Nominative-assigning finite TENSE. The second (TENSE[-finite]) is the TENSE found in the standard "infinitival" constructions in adults, for example in control sentence. It comes in English with a to morpheme, which we assume, again following standard assumptions, fills the head of TENSE.
Following Minimalist assumptions, TENSE[finite] assigns null case. This is the case that is borne by only one kind of noun phrase, an empty one. Thus, the standard assumption is that the only kind of NP that can be drawn from the lexicon with null case is the empty NP.

Since OI sentences do not contain $\theta$, we have suggested, following Wexler (1995), that the T projection is entirely missing. Thus, no case features—neither NOM nor NULL—are assigned in OI representations to the subject position. There is no structural case. A default morphological case is assigned to a visible NP which is the subject of an OI (i.e., a sentence with no TENSE projection). As Wexler (1995) points out, the subject of a small clause has default case assigned to it, at least in English. That is, subjects of small clauses are non-NOM. If small clauses are like OIs in that there is no TENSE projection (a fairly standard assumption), then it is natural in a Minimalist framework to assign default morphological case (i.e., not structural case) to the subject of a small clause.2

What kind of case, if any, is assigned to an empty subject of an OI? Since there is no TENSE projection in an OI—not even a nonfinite TENSE projection—there is no TENSE-assigning element. Thus, the empty subject does not have any structural case assigned to it. A more general question is, what kinds of phi features, if any, does the empty subject of an OI have? At first sight it would appear as if the empty subject (let us call it PRO) of an OI must have phi features, because it is interpreted correctly—that is, the empty subject refers to a particular person and a particular number. Thus, one possibility is that the PRO subject of an OI has phi features, but these features do not have to be checked in any way (see Chomsky 1995).

Another possibility is that in fact the PRO subject of an OI does not have phi features. Rather, PRO is interpreted through the discourse—that is, it is co-indexed with something in the discourse and picks up its interpretation through this co-indexation. This manner of interpretation is familiar, for example, from the case of certain reflexives. If this PRO does not have phi features, then there is nothing to check, and no case needs to be assigned.

We will not take a position here on the appropriate mechanism. We simply wish to point out that it is natural to assume that a representation without TENSE will be one in which the subject can grammatically have a null subject.

If all null subjects in child English were only a result of being licensed by nonfinite verbs, then we would expect to see no null subjects with finite verbs in child corpora. This is probably too strong a conclusion. Although we have not performed a precise count of null subjects given finite and nonfinite verbs, it is easy to find null subjects of finite verbs. There have been a number of proposals to the effect that child null subjects may be some kind of “Topic-Drop” (de Haan and Tjonger 1988; Hyams & Wexler 1993; Wexler 1992, 1994) or “Diary-Drop” (Haegeman 1990, Rizzi 1994a), and we will assume that these proposals can account for the null subjects of finite verbs. In particular, we will assume that there is a kind of Topic-Drop, which accounts for finite null subjects.

That is, we suggest that there are two kinds of null subjects in the language of children in the OI stage who are speaking non-null-subject languages. First, there is the kind of null subject that is licensed by a nonfinite verb. Second, there is the kind that represents some kind of Topic-Drop, and may occur with finite verbs and (possibly) also with nonfinite verbs.

If finite verbs only allow null subjects which are a result of Topic-Drop, but nonfinite verbs allow both Topic-Drop and nonfinite tense licensed null subjects, then we expect a higher proportion of null subjects with nonfinite verbs than with finite verbs. This is exactly what we find in other non-null-subject languages.

To take the example of German, Poeppel and Wexler (1993) studied one child, Andreas, in the OI stage. As predicted by the properties of this stage, it is virtually always the case that finite verbs occur in second (V2) position and nonfinite verbs occur in final position. Poeppel and Wexler found that for finite verbs Andreas produced about 9% null subjects (17 of 197 utterances), whereas for nonfinite verbs he produced about 35% (13 of 37 utterances) null subjects.

In Dutch, Haegeman (in press) shows that one child (Hein, 28–33 months) has 85% null subjects with OIs but 32% null subjects with tensed verbs. Clearly, in German and Dutch, nonfinite verbs (and we refer here to root verbs, products of the OI stage) are much more likely to allow a null subject than are finite verbs. We suggest that the small number of null subjects with finite verbs reflects a certain amount of Topic-Drop.

In OI French, it is well-known that nonfinite verbs allow many more null subjects than do finite verbs. Pierce (1989, 1992) was the first to examine such data, and showed that while there are plenty of pronominal subjects with finite verbs, there are almost none with nonfinite verbs. We reproduce her table for four subjects here:

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2 Alternatively, it might be that the subjects of small clauses check off Accusative Case against the higher verb. If some version of this proposal works out, it might explain why subjects of small clauses cannot be empty: empty NPs do not have Accusative Case. A proposal such as this would be supported by observations that subjects of small clauses are Accusative even in languages in which default case is Nominative.
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Table 1
Number of Finite and Nonfinite Pronominal- and Null-Subject Utterances in Four French Subjects

<table>
<thead>
<tr>
<th></th>
<th>Finite</th>
<th>Nonfinite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daniel</td>
<td>1,8,1-11,1</td>
<td></td>
</tr>
<tr>
<td>Null Subjects</td>
<td>247</td>
<td>273</td>
</tr>
<tr>
<td>Pronominal Subjects</td>
<td>104</td>
<td>14</td>
</tr>
<tr>
<td>Grégoire</td>
<td>1,9-2,3,0</td>
<td></td>
</tr>
<tr>
<td>Null Subjects</td>
<td>158</td>
<td>108</td>
</tr>
<tr>
<td>Pronominal Subjects</td>
<td>143</td>
<td>3</td>
</tr>
<tr>
<td>Nathalie</td>
<td>1,9,3-2,3,2</td>
<td></td>
</tr>
<tr>
<td>Null Subjects</td>
<td>90</td>
<td>131</td>
</tr>
<tr>
<td>Pronominal Subjects</td>
<td>162</td>
<td>7</td>
</tr>
<tr>
<td>Philippe</td>
<td>2,1,3-2,3,0</td>
<td></td>
</tr>
<tr>
<td>Null Subjects</td>
<td>90</td>
<td>34</td>
</tr>
<tr>
<td>Pronominal Subjects</td>
<td>196</td>
<td>3</td>
</tr>
</tbody>
</table>

(Adapted from Pierce 1992: 110)

As can be seen, there are abundant pronominal subjects with finite verbs—for some of the children, there are even more pronominal subjects than null subjects—and crucially, there are almost no pronominal subjects with nonfinite verbs. This is an extremely strong effect. (The reason that the appropriate comparison to null subjects is pronominal subjects is that null subjects are assumed to appear in the same interpretive contexts as pronominal subjects (e.g., Hyams and Wexler 1993). If it is crucial in discourse to specify a lexical subject, then neither a null nor a pronominal subject would be expected. At any rate, in our results later in this paper, we show comparisons of rates of null subjects to both pronominal subjects and to pronominal and lexical subjects combined.)

It may be somewhat more difficult to evaluate in French our claim that there are more null subjects with nonfinite than with finite verbs because French subject pronouns are clitics. It may be, as Pierce proposes, that subject pronouns in French only occur together with agreement, and thus with TENSE. On the other hand, French children, as we have seen, use a large number of null subjects with nonfinite verbs, and *something* must allow these. If we accept that the null subjects are licensed by nonfinite TENSE, then we can understand how children can produce such utterances. If we are to assume that the parameter has been misset so that finite TENSE licenses null subjects in early French, we still must ask why nonfinite TENSE allows null subjects. In other words, we need to assume that nonfinite TENSE licenses null subjects in any case.

Turning to *wh*-questions, note that we expect only one kind of null subject to appear with them. Suppose that some *wh*-phrase appears in Spec,C. This implies that no other phrase can appear in Spec,C. In English, Topics must appear in Spec,C. Therefore, if the *wh*-phrase is already in Spec,C, the sentence can contain no Topic. Thus, no phrase can be deleted by Topic-Drop. Thus, the kind of null subject which is a result of Topic-Drop will not be possible with *wh*-questions. On the other hand, if a *wh*-question has a nonfinite verb, then there is no reason for this nonfinite verb not to license a null subject. So, we do expect null subjects with *wh*-questions, but only those of the kind that are licensed by nonfinite verbs. Thus, all null subjects in *wh*-questions should have nonfinite predicates.

Thus far, we have predicted that *wh*-questions can contain null subjects. Moreover, since we assume that null subjects in declaratives can be the result of either Topic-Drop or licensing by a nonfinite verb, whereas null subjects in *wh*-questions can only be the result of licensing by a nonfinite verb, we predict that there will be more null subjects in declaratives than in *wh*-questions.

A further prediction, somewhat more subtle, concerns the expected outcome of a change in one of the factors responsible for null subjects. In particular, we know that there is a large reduction over time in the possibility of nonfinite verbs in root sentences. Since we predict that nonfinite verbs license many of the null subjects in declaratives, and all of them in *wh*-questions, we expect that as nonfinite verbs decrease, so will null subjects in both declaratives and *wh*-questions. In this study we did not count proportions of finitennis for declarative verbs. However, we predict that proportions of null subjects should follow the same temporal patterning for both declarative sentences and *wh*-questions. That is, if there is a significant plummeting of null subjects in declarative sentences, there should be a synchronous descent in *wh*-questions. 3

3 For a suggestion that there are topic drop null subjects in English children, see Hyams and Wexler (1993). Carson Schütze (p. c.) points out to us that a *wh*-phrase is usually considered to be a focus, not a topic, since a topic is old information and a *wh*-phrase is usually new information. Thus, we would not expect the *wh*-phrase itself to delete by Topic-Drop. At any rate, there would be no way for a phrase other than the *wh*-phrase to delete, since the existence of the *wh*-phrase in Spec,C prevents there being a topic in the sentence.

4 We are ignoring in this prediction any possible change in the proportion of topic-drop null-subjects; that is, the prediction is based upon the drop-off in null-subjects licensed by infinitives, given that OIs drop-off. One could expect a somewhat more complicated pattern if there were a drop-off in topic-drop null-subjects. At this point we do not know if children use more topic-drop null-subjects than do adults. At any rate, we expect that there are far more null subjects of infinitives than of finite sentences, so that the major effect over-all will be due to the drop-off in null-subjects licensed by infinitives. Thus we expect the temporal parallelism of declarative and null null subjects mentioned in the text.
Rizzi (1994b) has proposed that the Optional Infinitive stage is the result of *Truncation*, which means that the child can start a derivation at some point in the functional hierarchy below CP. In particular, Rizzi assumes that the child is missing only the assumption that Root = CP—he can start the derivation anywhere in the hierarchy, but once a category is used, all categories which it dominates must also be used. Rizzi assumes that null subjects for children in non-null subject languages may occur when the subject is the specifier of a root (as in Diary Drop, Riegelman 1990). *Wh* questions (non-subject) have the specifier of their roots filled with something other than a subject, namely the wh-phrase. Thus, *Truncation* predicts that *wh*-questions may not have null subjects, and preliminary support for this prediction is presented in Rizzi 1994b. Of course, *in situ* *wh*-questions would allow null subjects; we will not discuss this possibility here.

Alternatively, let us suppose that *OIs in children are not necessarily missing a higher CP level. Perhaps just TENSE is missing, as suggested by Wexler (1992, 1994). Then we could not construe all null subjects in child English (or other non-null subject languages) as the (empty) specifier of a root. Thus, we would not conclude that null subjects in child English would be impossible in *wh*-questions. That is, there should be null subjects in *wh*-questions.

Thus, we decided to count null subjects of *wh*-questions in child English to see which prediction—*Truncation* or TENSE omission—received further support. Quite simply, in the first case, *wh*-questions would not have null subjects; in the second case, they would. Moreover, if TENSE omission were correct, whatever process was responsible for null subjects should be manifest in both declarative sentences and *wh*-questions. We know that null subjects ultimately diminish to a very low proportion of adult utterances in English. Thus, we decided to count null subjects in declaratives as well, so we could determine if the plummeting in declarative null subjects was paralleled by a plummeting in *wh*-question null subjects. The counts for declaratives also allowed us a baseline in order to examine whether the proportion of null subjects in declarative sentences was similar to that in *wh*-questions.

Roeper and Rohrbacher (1995) counted null subjects in *wh*-questions for Adam’s CHILDES data (Brown 1973; see MacWhinney & Snow 1985), and found that there were many null subjects in these questions, but that they appeared only with nonfinite verbs, not with finite verbs, accepting Wexler’s (1992, 1994) proposal that certain forms in children’s English utterances represent the lack of TENSE. They used this result to argue against *Truncation*. We shall replicate this result here with additional children. We shall also provide comparisons of the plummetings of null subjects in *wh*-questions and declarative sentences. Roeper and Rohrbacher’s work first led us to tabulate the finiteness of the verbs of *wh*-questions with null subjects that we had counted.

(3) Summary of Predictions:

a. Null subjects will exist in *wh*-questions.

b. There will be proportionally fewer null subjects in *wh*-questions than in declaratives.

c. The proportion of null subjects in *wh*-questions will plummet concurrently with that in declaratives.

d. *Wh*-questions with null subjects will not be tensed (as in Roeper and Rohrbacher 1995).

2. Method

Analyses of the utterances of Adam, Eve, Sarah (Brown 1973), and Peter (L. Bloom 1970) from CHILDES (see MacWhinney & Snow 1985) were performed in order to test the above predictions.

For the entire Eve corpus (1:5,12-2:2,11) and for the first 20 files of the Adam corpus (2:3,3-3:0,11), all *wh*-questions were isolated and examined in order to detect the presence of null subjects and of +/- TENSE. In addition, the null subjects in all declarative phrases were examined. We also analyzed the corpora of Sarah (2:3,7-4:2,1) and Peter (1:11,7-2:1,12) only with respect to the proportions of null subjects in *wh*-questions.

2.1 Wh null-subject analysis

For each file, the fraction of valid *wh*-questions that had a null subject was calculated. The number of “possible nulls”—*wh*-questions with pronominal subjects (e.g., where he goes?)—was counted and added to the number of *wh*-questions with null subjects. This total was used as the denominator in the above calculations.

Roeper and Rohrbacher provide a theory based on Speas 1994, which we will not discuss here.

Roeper and Rohrbacher did not do counts of null subjects in declaratives, so they could not compare drop-offs of null subjects in *wh*-questions to those in declaratives or to the over-all number of null subjects in declaratives versus *wh*-questions.

The reason that we did not do a full analysis of Sarah and Peter is that they had so few *wh*-questions that it would have been impossible to apportion their data meaningfully into finite versus nonfinite verbs and to compare to the proportions in declarative utterances. We decided to count their null subjects in *wh*-questions in order to see if they existed at all.

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5 Roeper (1991) displayed some *wh*-questions with null subjects in English from the CHILDES database. This was a suggestive result, but there were no systematic counts, and thus no way of knowing whether these represented a grammatical possibility for the children, or were merely performance errors. Valian (1991) first claimed that there were almost no null subjects of non-subject *wh*-questions. We do not know why there should be a difference between Valian’s counts and ours. Perhaps her subjects’ *wh*-questions occurred mostly at a later age, when the children were past the OI stage.

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7 Roeper and Rohrbacher did not do counts of null subjects in declaratives, so they could not compare drop-offs of null subjects in *wh*-questions to those in declaratives or the over-all number of null subjects in declaratives versus *wh*-questions.

8 The reason that we did not do a full analysis of Sarah and Peter is that they had so few *wh*-questions that it would have been impossible to apportion their data meaningfully into finite versus nonfinite verbs and to compare to the proportions in declarative utterances. We decided to count their null subjects in *wh*-questions in order to see if they existed at all.
fraction. The assumption is that only a pronominal subject might be the pragmatic equivalent of a null subject.\footnote{We also counted \textit{wh}-questions with lexical subjects and computed rates of null subjects in \textit{wh}-questions out of all \textit{wh}-questions, including lexical subjects.}

Excluded from the analyses were subject \textit{wh}-questions (e.g., \textit{who goes there?}), \textit{wh}-questions with lexical subjects, and incompletely transcribed, uninterpretable, directly repetitive, or ambiguous utterances. All utterance tokens rather than merely singular types were included.

### 2.2 \textit{Wh} finiteness analysis

As for the null-subject analysis, the fraction of \textit{wh}-questions with +TENSE verbs was determined for each file. The "possible finite" denominator included all finite (+TENSE) utterances plus all utterances which should have been tensed but unambiguously were not. These primarily included verbs used in 3rd singular contexts without the 3rd singular marker –s (e.g., \textit{where go?}) and missing copula verbs, (e.g., \textit{where going?}). (See Wexler 1992, 1994 for an analysis which treats these as missing TENSE.) Utterances were counted as +TENSE if they contained a modal verb or a verb with an overt tense inflection; these included –s, ed, and irregular finite verbs (finite forms of \textit{be} and \textit{do}; also possessive has). Except for the later transcripts, there were not many modal or past-tense forms.

### 2.3 \textit{Wh} null-subject and –TENSE analysis

In order to determine directly the co-occurrence of null subjects and –TENSE in \textit{wh}-questions, utterances (already coded as finite or "possible finite," null or "possible null") were recounted into a 2x2 matrix representing the null/non-null and finite/nonfinite dimensions.

### 2.4 Declarative analysis

In order to make a strong claim about the grammaticality of null subjects in \textit{wh}-questions, a direct file-by-file comparison was made between the fraction of \textit{wh}-questions with null subjects and the fraction of declarative utterances with null subjects. Null subjects were counted for declaratives in the same manner as for \textit{wh}-questions (i.e., as a fraction of null plus pronominal subjects), with the additional codicil that imperatives (e.g., \textit{bring me cookie}) were excluded from the null counts.\footnote{If the removal of the subject of a declarative sentence would generate a phrase that could be interpreted as being imperative (e.g., \textit{he bring me food} ⇒ \textit{bring me food}), the sentence was not counted as a "possible null."} TENSE/-TENSE was not counted for the declaratives in this study.

### 3. \textit{Wh} Null Subjects

#### 3.1 Some telling examples

Without further ado, it must be averred that null subjects are abundantly present in \textit{wh}-questions. Before presenting the numbers and figures which make the case clear, we shall put forth a few examples which demonstrate that null subjects in \textit{wh}-questions seem to represent a genuine grammatical option for young children, rather than a mere performance fluke or the result of a few fixed phrases.

In (4), we see two utterances of Adam, one following directly after the other in the actual transcript:\footnote{The explanation of (4a) as following from a "performance" limitation, rather than from a state of Adam's grammar, would have to assume that there was some kind of random fluctuation in Adam's performance abilities, so that he could not produce the subject in (4a), but immediately afterward could. The assumption underlying the use of pairs like (4a, b) to argue against performance accounts is that such statistical fluctuation is implausible. In the particular case of (4a, b) we also point out that, in addition to the subject being added to (4b), TENSE is also added; this correlation is exactly what our account predicts, and that a performance account cannot accommodate.}

(4) a. where go?
   b. where dis goes?

It is clear from this example that there is a null \textit{dis} in (4a), which is fully expressed in (4b), a likely result of the inflection present in (4b).\footnote{These examples are analogous to the "replacement sequences" of Hyams (1986) demonstrating the existence of null subjects in declarative sentences.}

Other examples demonstrating the same point can be seen in Adam's corpus. One rather extreme example demonstrating the sheer robustness of null subjects in \textit{wh}-questions can be seen in (5):

(5) ADAM: (singing) Twinkle little star.
   ADAM: How \text{____} wonder you are.
   MOTHER: It's how I wonder what you are.
   ADAM: How \text{____} wonder Mommy are.

Even when singing a memorized ditty and presented with a helpful dose of negative evidence, Adam insists upon omitting the requisite \textit{I}.\footnote{Of course, it is not clear that an utterance like (i) is a \textit{wh}-question, rather, probably not.}

(i) how I wonder what you are

But it is possible that \textit{how} is in Spec.C, which is the relevant point. The question here is analogous to the question of whether topics (e.g., (iiia)) in English are in Spec.C; usually they are taken to be so. We suggest that \textit{how} in (iiib) is in Spec.C, analogous to (iiia).
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The mathematical basis underlying this juvenile recalcitrance? Let us proceed to some numbers, in order to tell the story more compellingly.

3.2 Null subjects in \textit{wh}-questions and declaratives

Figure 1 shows two graphs for Adam. First, it shows the proportion of null subjects out of all non-lexical subjects (i.e., null and pronominal subjects) in declarative utterances as a function of age in days. Second, it shows the proportion of null subjects in \textit{wh}-questions as a function of age in days.

![Graph showing the proportion of null subjects in declaratives and \textit{wh}-questions](image)

As is well known (see, for example, Hyams and Wexler 1993), Adam has a profusion of null subjects. One striking result is that until about 1,025 days (File 14), the proportion of null subjects in declarative sentences is quite high and roughly constant, varying mostly between 80 and 95%. At any rate, there is no systematic decrease. Between Files 14 and 19 (1,025 to 1,090 days), the proportion of null subjects in declarative sentences shows a marked and steady decrease, winding up at about 15%. (This fraction stays roughly constant through File 24, the last file we counted. Because of this, data from Files 21 and higher are not reported here.)

\begin{itemize}
  \item a. \textit{Beans, I like.}
  \item b. \textit{How you eat?}
\end{itemize}

The point we make in (5) depends only on whether \textit{how} is in Spec.C.

\textsuperscript{14} Hyams and Wexler (1993) counted every other file for Adam. On the files which both we and Hyams and Wexler counted, we obtained comparable figures for the declaratives.

\textbf{Wh Null Subjects}

In other words, over a period of fewer than 75 days there is a large, systematic drop in the proportion of null subjects in declaratives, from a point at which the majority of the utterances have null subjects to a point at which very few of them do. This rather quick decrease, after 7 months of recording, shows a rather remarkable shift, and seems likely to be indicative of a change in Adam's grammar. We will return to a discussion of this change.

Now let us consider the null subjects in Adam's \textit{wh}-questions, also shown in Figure 1. First, note that there are null subjects with \textit{wh}-questions. The proportions of \textit{wh}-questions with null subjects are distinctly higher than zero for many files. Second, there are somewhat fewer null subjects for \textit{wh}-questions than for declaratives (the non-\textit{wh} forms); this is evident beyond the early files (where ceiling effects and small numbers of \textit{wh}-questions conspire to mask the differences; that is, the small number of \textit{wh}-questions in the early files masks what might be a smaller than 100% rate of null-subjects for \textit{wh}-questions). Third, the proportion of null subjects in \textit{wh}-questions decreases to a very low number over time. Fourth, note the striking observation that the proportions of null subjects over time in \textit{wh}-questions seem to parallel the proportions of null subjects in declaratives. Although it seems that the drop in the proportion of null subjects in \textit{wh}-questions occurs slightly before that for declaratives (the shift appears to begin by File 12), the proportions calculated from Files 12 and 13 suffer from a paucity of "possible nulls" (only 7 and 11, respectively, while other Files vary from 16 to 55), rendering them unreliable. For this reason, we will consider the shift from frequent to infrequent null subjects to occur, conservatively, from File 11 (975 days) to File 19 (1,090 days), a period of 115 days, for both declaratives and \textit{wh}-questions. In Table 2, we show the fraction of null subjects in Files 11 and 19 for declaratives and \textit{wh}-questions. As we will discuss, the fact that the large plummeting in proportion of null subjects occurs simultaneously for \textit{wh}-questions and declaratives suggests that there is a common underlying mechanism licensing (at least some) null subjects in declaratives and \textit{wh}-questions.

\begin{table}
\centering
\begin{tabular}{|c|c|c|c|}
\hline
\textbf{File} & \textbf{Age} & \textbf{Declaratives} & \textbf{Wh-Questions} \\
\hline
11 & 2,7,26 & 91% (189/208) & 94% (15/16) \\
19 & 2,11,21 & 16% (28/180) & 2% (1/54) \\
\hline
\end{tabular}
\caption{Fraction of Null Subjects in Declarative Sentences and \textit{Wh}-Questions (Excluding Lexical Subjects) in Files 11 and 19 for Adam}
\end{table}

In Figure 2, for completeness, we show the proportion of null subjects in declaratives calculated as a fraction of all valid declaratives, that is, including null, pronominal, and lexical subjects. Similarly we show the proportion of null subjects in \textit{wh}-questions as a fraction of all valid \textit{wh}-questions, including null, pronominal, and lexical subjects. The overall pattern of results is the same as when we only counted pronominal subjects, although the fractions are lower when lexical subjects are considered (and the problem of low denominators for
Figure 2

Fraction of Adam's wh-questions and declarative sentences that have null subjects, calculated with respect to pronominal- and lexical-subject utterances.

Files 12 and 13 no longer exist—note the coincidence of the drop in declarative and wh-question null subjects, as well as the consistently larger proportion of null subjects in declaratives than in wh-questions, and we will not discuss these data any further.

Let us now turn to the analyses of Eve's data. Eve has many fewer wh-sentences than does Adam, and a file-by-file graph of null subjects in wh-sentences would not be meaningful, because there would be a large number of entries based on only one data point. Therefore we will present Eve's data in tabular form. In Table 3 we present the data for declarative and wh-question null subjects. As is well known (see for example Hyams and Wexler 1993), Eve has many null subjects in declaratives. These proportions decrease over time and seem to show a particularly large drop from File 10 (55% nulls) to File 11 (17% nulls), although the drop does not appear as dramatic as Adam's does.

As for wh-questions, in her early stages, before the significant drop in declarative null subjects, Eve does not have a large number of wh-questions. Nevertheless, there are significant numbers of null subjects in her early wh-questions. Moreover, the null subjects in wh-questions decline dramatically at the same point that null subjects in declaratives plummet to their residual figure, that is, after File 10. The proportion of null subjects in File 1 through 10 compared to Files 11 on are shown in Table 4.

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15 As for Adam, Hyams and Wexler (1993) counted every other file for Eve. On the files which both we and Hyams and Wexler counted, we obtained comparable figures for the declaratives.

---

Table 3

<table>
<thead>
<tr>
<th>File</th>
<th>Age</th>
<th>Declaratives</th>
<th>Wh-Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,5,12</td>
<td>88% (15/17)</td>
<td>— (0/0)</td>
</tr>
<tr>
<td>2</td>
<td>1,5,26</td>
<td>75% (18/24)</td>
<td>— (0/0)</td>
</tr>
<tr>
<td>3</td>
<td>1,6,9</td>
<td>80% (33/41)</td>
<td>— (0/0)</td>
</tr>
<tr>
<td>4</td>
<td>1,6,23</td>
<td>89% (40/45)</td>
<td>— (0/0)</td>
</tr>
<tr>
<td>5</td>
<td>1,7,6</td>
<td>80% (24/30)</td>
<td>83% (5/6)</td>
</tr>
<tr>
<td>6</td>
<td>1,7,27</td>
<td>87% (27/31)</td>
<td>100% (1/1)</td>
</tr>
<tr>
<td>7</td>
<td>1,8,10</td>
<td>64% (30/47)</td>
<td>— (0/0)</td>
</tr>
<tr>
<td>8</td>
<td>1,8,24</td>
<td>61% (38/62)</td>
<td>100% (5/5)</td>
</tr>
<tr>
<td>9</td>
<td>1,9,7</td>
<td>50% (19/38)</td>
<td>0% (0/2)</td>
</tr>
<tr>
<td>10</td>
<td>1,9,21</td>
<td>55% (28/51)</td>
<td>100% (3/3)</td>
</tr>
<tr>
<td>11</td>
<td>1,10,4</td>
<td>13% (12/93)</td>
<td>0% (0/3)</td>
</tr>
<tr>
<td>12</td>
<td>1,10,18</td>
<td>18% (25/131)</td>
<td>6.7% (1/15)</td>
</tr>
<tr>
<td>13</td>
<td>1,11,8</td>
<td>15% (10/66)</td>
<td>14% (2/14)</td>
</tr>
<tr>
<td>14</td>
<td>1,11,22</td>
<td>12% (20/161)</td>
<td>0% (0/24)</td>
</tr>
<tr>
<td>15</td>
<td>2,0,12</td>
<td>10% (18/159)</td>
<td>0% (0/12)</td>
</tr>
<tr>
<td>16</td>
<td>2,0,26</td>
<td>6.4% (6/94)</td>
<td>0% (0/10)</td>
</tr>
<tr>
<td>17</td>
<td>2,1,9</td>
<td>11% (5/45)</td>
<td>0% (0/6)</td>
</tr>
<tr>
<td>18</td>
<td>2,1,23</td>
<td>7.9% (13/164)</td>
<td>0% (0/10)</td>
</tr>
<tr>
<td>19</td>
<td>2,2,1</td>
<td>10% (13/127)</td>
<td>0% (0/6)</td>
</tr>
<tr>
<td>20</td>
<td>2,2,21</td>
<td>10% (5/51)</td>
<td>14% (1/7)</td>
</tr>
</tbody>
</table>
There are only 17 wh-questions through File 10, but the fact that 14 of them have null subjects suggests strongly that these are grammatical for Eve. Moreover, the large decrement (to 4%) from File 11 on indicates that there has been a change in Eve's grammar, and this corresponds to the decrement in declarative null subjects. Again, these parallel plummetings for null subjects in declaratives and wh-questions suggest that there is a single mechanism for (at least some of) the null subjects in these two classes. Finally, as in Adam, comparison of null-subject proportions in wh-questions and declaratives (examining only the later files, when the numbers for wh-questions are large enough to provide reliable proportions) reveals more null subjects for declaratives than for wh-questions.

Again, for completeness, in Table 5 we show the proportion of null subjects in declaratives calculated as a fraction of all valid declaratives, that is, including null, pronominal, and lexical subjects. Similarly we show the proportion of null subjects in wh-questions as a fraction of all valid wh-questions, including null, pronominal, and lexical subjects. Again the overall pattern of results is the same as when we counted only pronominal subjects, although the fractions are lower when lexical subjects are considered, and again we will not discuss these data any further.

Let us now turn to Sarah's data. We broke up the analysis of null subjects in wh-questions for Sarah into 2 time periods (Files 1–37, age 2;3,7 to 3;0,18 and Files 38–90, age 3;0,27 to 4;2,1). We selected File 37 because that is where there seemed to be a large drop-off in null subjects, and File 90 is the occasion of Sarah's last null subject (she produced no null subjects in her 166 wh-sentences from File 91 through File 135 (age 4;2,9 through 5;1,6)). For Files 1–37 Sarah had 12 null subjects out of 29 total wh-questions (lexical subjects were included in addition to pronominal subjects) (41%) and for Files 38–90, she had 8 null subjects out of 96 wh-questions (8%).
Hilary Sara Bromberg and Kenneth Wexler

Wh-questions in the early stage are thus very infrequent for Sarah. The result showing that there are null subjects at this stage is suggestive, but given the small numbers, not conclusive.16

Turning to Peter, we also separated his data on null subjects into two time periods at the point where there appeared to be a decrement in null subjects in wh-questions. The first period consists of Files 1–5 (1;11–17–2.2,13) and the second of Files 6–13 (2.3–2.8,12). In the first period, Peter had 7 null subjects out of 23 wh-questions (including lexical subjects) (32%) and in the second, he had 3 null subjects out of 84 wh-questions (4%). Thus, for Peter, as for the other children, null subjects do exist in wh-questions, and there is a decrement over time, which may be rather sharp. For Peter, as for Sarah, there are very few wh-questions, so that the data, while suggestive and consistent with Adam and Eve's data, is not by itself definitive.17

We can conclude that all told, the data show that there are a significant number of null subjects in wh-questions and that they plummet in a parallel fashion with null subjects in declaratives (with residual null subjects higher for declaratives than for wh-questions).

3.3 Finiteness and null subjects in wh-questions

We now turn to the analysis of data from Adam and Eve concerning whether the null subjects in wh-questions essentially appear only in nonfinite contexts, which is our hypothesis. Let us start with Adam.

First, in Figure 3 we see that the proportion of finite (tensed) wh-questions increases over time,18 as we expect in the OI stage (Wexler 1994). At the same time, the overall proportion of null subjects decreases. There is a strong negative correlation (r = −.60, p < .004) between the proportion of finite and null-subject wh-questions over time.

In order to determine whether there is an exact causal relation between finiteness and null subjects, we need to look more closely at the relationship of these two variables within sentences. Table 6 shows the numbers of null and pronominal subjects for finite and nonfinite verbs. Note the extremely small number of null subjects in tensed sentences (2/119, or 2%) compared to the

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16 As we mentioned, given the small numbers of wh-questions in the early period, we did not undertake the large effort of analyzing Sarah’s declarative sentences for null subjects. To support a claim that null subjects existed for declaratives but not for wh-questions, one would have to show that from file 38 (3.0,27) on a large proportion of declaratives had null subjects, which seems unlikely.

17 As for Sarah, we did not calculate the null subjects in declaratives for Peter. To make a case that there are no null subjects in wh-questions for Peter, but that there are for declaratives, one would have to show a large proportion of declarative null subjects in the second period for Peter.

18 The large 50% figure for the first file represents 4 utterances and therefore should not be taken as meaningful.

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Figure 3
Fraction of Adam’s wh-questions that are tensed and have null subjects, calculated with respect to pronominal subject (excluding lexical subject utterances).

Table 6
Finiteness of Null and Pronominal Subjects in Adam’s Wh Questions

<table>
<thead>
<tr>
<th></th>
<th>Finite</th>
<th>Nonfinite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Null</td>
<td>2</td>
<td>118</td>
</tr>
<tr>
<td>Pronominal</td>
<td>117</td>
<td>131</td>
</tr>
</tbody>
</table>

We wanted to ensure that this result was not an artifact of tensed verbs increasing in later files as null subjects decrease, but rather reflected an actual causal relationship between these factors. Thus, we cleared Adam’s data into two time periods between Files 14 and 15, in the middle of the drop from high to low null-subject frequency. In the first period he had extremely few tensed wh-questions. These data are displayed in Table 7. Crucially, even in the early (2.3 to 2.9) stage, when Adam hardly used tense, the tensed wh-questions almost never had null subjects, while almost all the null subjects occurred in untensed utterances. Similarly for the second (2.10–3.0) period, when tense was used more frequently, all of the finite utterances had a non-null subject, while all of the null subjects occurred in nonfinite utterances. The data are quite striking; finite tense prevents a null subject in a wh-question for Adam, but nonfinite tense
allows null subjects. The corresponding data for Eve are presented in Tables 8 and 9.

Table 7
Finiteness of Null- and Pronominal-Subject
Wh-Questions in Files 1–14 and 15–20 of Adam

<table>
<thead>
<tr>
<th>Finite</th>
<th>Nonfinite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Files 1–14</td>
<td></td>
</tr>
<tr>
<td>Null</td>
<td>2</td>
</tr>
<tr>
<td>Pronominal</td>
<td>21</td>
</tr>
<tr>
<td>Files 15–20</td>
<td></td>
</tr>
<tr>
<td>Null</td>
<td>0</td>
</tr>
<tr>
<td>Pronominal</td>
<td>96</td>
</tr>
</tbody>
</table>

Table 8
Finiteness of Null- and Pronominal-Subject
Wh-Questions in Eve

<table>
<thead>
<tr>
<th>Finite</th>
<th>Nonfinite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Null</td>
<td>1</td>
</tr>
<tr>
<td>Pronominal</td>
<td>43</td>
</tr>
</tbody>
</table>

Table 9
Finiteness of Null- and Pronominal-Subject
Wh-Questions in Files 1–10 and 11–20 of Eve

<table>
<thead>
<tr>
<th>Finite</th>
<th>Nonfinite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Files 1–10</td>
<td></td>
</tr>
<tr>
<td>Null</td>
<td>0</td>
</tr>
<tr>
<td>Pronominal</td>
<td>3</td>
</tr>
<tr>
<td>Files 11–20</td>
<td></td>
</tr>
<tr>
<td>Null</td>
<td>1</td>
</tr>
<tr>
<td>Pronominal</td>
<td>40</td>
</tr>
</tbody>
</table>

Overall, Eve produces a null subject only once out of 44 (2%) tensed wh-sentences, but she produces 18 null subjects out of 77 (23%) untensed wh-sentences. TENSE clearly prevents null subjects, whereas nonfinite sentences allow them. Although the numbers are small when we break Eve down into two periods, we see that the effect still holds. In Files 1–10, Eve produces no null subjects out of 3 tensed wh-questions, but all of her 14 untensed wh-questions have null subjects. Although the absolute numbers of wh-questions are small, the almost categorical results strongly support the conclusion that TENSE prevents null subjects and nonfinite sentences allow them. The same result holds for Files 11 to 20 (1 null subject of 41 finite utterances and 4 null subjects of 63 nonfinite utterances), although the numbers of null subjects are very small. Crucially, we still have a difference. 2% of her tensed wh-questions have null subjects, and 6% null subjects for untensed sentences—i.e., 3 times as high a proportion of untensed wh-questions are null as of tensed wh-questions—and 80% of her null-subject utterances are nonfinite.

Clearly, tensed wh-questions have a far smaller proportion of null subjects than do untensed wh-questions. Moreover, this result is not due to an artifact from two variables changing as a result of increasing age. Rather, we have to conclude for Adam and Eve that tensed wh-questions allow null subjects much less frequently than do untensed questions.

Recall that for Peter and Sarah we did not tabulate the wh-questions with non-null subjects, so we cannot calculate a base rate of tensing with non-null subjects. Thus, we will just look at their null-subject wh-questions to see how many of them were tensed, recalling that we expect the proportion to be close to zero.

Of Peter’s 10 wh-questions with null subjects, it is unclear phonetically for one of them whether it is tensed. The other 9 are all untensed. Clearly, Peter’s data (100% untensed) conforms to prediction (3d). No matter how much Peter is tensing wh-questions with non-null subjects, it is unambiguous that the rate for null subjects is smaller, since it is zero.

Sarah had 20 wh-questions with null subjects. 15 of these had untensed verbs, 3 had tensed verbs and 2 had the modal should, which normally would be considered finite. The 3 finite examples are given in (6):

\textbf{Wh Null Subjects}

\textit{It is unclear why there is such a small percentage of null subjects for nonfinite verbs in wh-questions for Files 11–20 of Eve. If nonfinite verbs license null subjects to such a large extent in the earlier files, why do they license them to such a smaller extent in later files? Perhaps the kinds of verbs that we considered to be nonfinite in Eve included some that were finite in some basic sense; that is, perhaps some kinds of verbs that appear to be nonfinite are some kind of surface omission that we should not count as nonfinite. Perhaps this type of verb increases in the later files. Another possibility is that, although grammatically licensed, the null subjects of nonfinite root verbs contain a pragmatic violation. The older child may have matured with respect to this pragmatic competence. Note that the percentage of null subjects of nonfinite verbs also decreases in the later files of Adam, though not to nearly so low a level as Eve. We will leave the issue here, awaiting further research.}
null subject which is not licensed because it is in a Specifier of Root position, or because it is a Topic, but because the verb is nonfinite. As we discussed in Section 1, such an assumption predicts the results in (7).

An important issue that remains is the status of null subjects of finite verbs. They only occur, as we stated, in declaratives. We assume that they represent a kind of Topic-Drop, as suggested by Hyams and Wexler (1993) for all null subjects (but here we suggest this in particular for the null subjects of finite verbs). Since we assume that a Topic must be in Spec,CP position, if the sentence is a wh-question, there can be no other topic in Spec,CP. That is, by definition, we cannot have a sentence with the same position occupied by both a wh-form and another topic that can be dropped. Thus, we predict that even if children have a Topic-Drop process resulting in null subjects with finite verbs, this process will not operate in wh-questions. Thus, there will be no null subjects of finite wh-questions.

Indeed, much evidence exists to support the claim that there is a Topic-Drop process in young children in the OI stage. In languages like Dutch and German, which are not null subject languages, children drop Topics, but not subjects which are not in Topic position. See Wexler 1994 for a review of some of this evidence (in particular de Haan and Tuinjman 1988). Of course, the adult languages in those cases also have a Topic-Drop process (of somewhat different strengths in the two languages). Does English have such a process? Not one so clearly manifest, though one could perhaps find examples to support a weak process. That is, it is well-known that even English can drop its subjects when they are topics, as in the (8b) rejoinder to (8a), or in diary contexts exemplified in (9).

(8) a. what happened to Mary?
   b. ... went away for a while.

(9) a. ... pulled a piece of skin off my lip last night.
   b. ... felt a joy yesterday, ... soon clouded.

S. Plath, "Journals" (McCullough 1982)

It may be the case that children in English are performing Topic-Drop with finite sentences in a way which the adult language allows, except that the children may be performing it in a wider range of contexts, including those insidious for adults. If indeed this is true, we will be able to reduce the differences between English-speaking children in the OI stage and adults to the following.
Further Predictions:

a. The OI stage allows nonfinite verbs where the adult requires finite verbs (and thus null subjects of these nonfinite verbs are allowed as a matter of grammatical principle).

b. Young children are less discriminating than adults as to the variety of pragmatic contexts in which they will allow null topics.

In short, most of the properties of null subjects are simply a reflection of the OI stage; the residue is interesting with regard to pragmatic considerations. Clearly, further analysis of these residual cases would be useful.

Why do null subjects plummet at the same point of time in declaratives and wh-questions (7c)? We attribute this, as we have stated, to the withering away of the OI stage. When root nonfinite verbs become very infrequent, the null subjects licensed by nonfinite verbs will be eliminated, both in declaratives and wh-questions. Thus, we expect a synchronicity in the slumpings of null subjects in declaratives and wh-questions.

The question that remains is: why does the child ever exit the OI stage? That is, why does TENSE become obligatory in root contexts? The only answer that has been proposed to date is the maturation of tense, as suggested by Wexler (1992, 1994) and in much of the literature that follows. Thus, the decline of null subjects will be the result of the maturation of the requirement that TENSE is obligatory. 21

Before we conclude we should point out the ramifications of our data and analyses for what Hyams and Wexler (1993) called Output Omission Models (OOM) of null subjects in early English. For example, P. Bloom (1990), following L. Bloom (1970), proposed that subjects are omitted in early speech in English because children’s memory was limited and they could not produce all the elements of their representations. Hyams and Wexler (1993) presented much evidence against this model. Our data adds yet further arguments against OOM. First, as Hyams and Wexler pointed out, the existence of null subjects with wh-questions argues against the assumption of OOM that it is elements in first position in a sentence that are mostly omitted, because of processing difficulties with first position. We have demonstrated the existence of a large number of null subjects with wh-questions; thus, the assumption of OOM is undermined.

Wh Null Subjects

Even more strikingly, note that OOM (or any model that assumes that subjects are dropped under memory pressure from other morphemes) predicts that the more elements there are in a VP, the more likely it is to omit the subject. Thus, when TENSE is added to a verb, it should make it more likely that a null subject appears than if TENSE is omitted. We have demonstrated for wh-questions that exactly the opposite result holds; null subjects are impossible with tensed wh-questions, and quite likely with untensed ones, directly contradicting the predictions of OOM. As Hyams and Wexler (1993) pointed out, the “grammatical” account of null subjects makes a number of correct empirical predictions which are impossible for the “performance” account to match; we have added to these.

5. Conclusion

Much of the null-subject phenomenon in early child language (when the adult language is not a null-subject language) is due to the existence of the OI stage, to its untensed sentences. These distinctive properties of early child language may thus be integrated into a unified system. The Null Subject stage becomes more understandable when we know that infinitives license null subjects. Such integration from the study of child language may provide important insights for syntactic theory in general, a welcome result.

Moreover, we have evidence that the null-subject parameter has not been misset in early English (or German, French, Dutch, and other non–null-subject languages). English-speaking children in the OI stage know that their language is not a null-subject language, that is, one where null subjects are licensed by AGR. We will not review the evidence here, but it appears that Italian-speaking children also know that their language is a null-subject language (for example, wh-questions with finite verbs and null subjects are allowed (Rizzi 1994b); also, there are more null subjects in child Italian than in child English (Valian 1991)). Thus, there is evidence that at quite an early age, Italian children have set the null-subject parameter to “yes” and English-speaking children have set it to “no.”

The null-subject parameter thus interpreted is consistent with Wexler (1995), who proposes that Very Early Parameter Setting (VEPS) holds, arguing that by the very earliest observed stages, (that is, the beginning of the production of multi-word utterances, around 18 months), basic inflectional and/or clause structure parameters have been correctly set. These include the V to TENSE parameter, the V to C parameter, word order parameters, and, as we argue in this paper, the null-subject licensing (AGR) parameter.

Recent work on language acquisition reveals a very different picture of the Null Subject stage than had previously been put forth. The discovery of the existence of the Optional Injitive stage has led to a broader perspective on the interrelationships between grammatical processes. Young children know a great deal not only about Universal Grammar but also about particular parameter-set-
tings. They are also hosts to other distinctive characteristics, such as the properties of the OI stage. Elaboration and extension of these characteristics will be crucial to subsequent research.

References
