Chapter 9

Null subjects and root infinitives in the child grammar of French

Lucienne Rasetti

Introduction

Recent work on language acquisition has revealed that certain particularities of early speech are not independent or isolated manifestations of individual grammars. Apparently unrelated phenomena sometimes follow analogous developmental patterns, suggesting not only that there are links among them, but also that such phenomena might constitute different manifestations of the same underlying process and could thus be amenable to a more primitive property of the grammar in question. In this respect, a topic which has received considerable attention in the literature on acquisition is the relationship between the distribution of null subjects and matrix infinitive clauses in the grammar of two-year-olds.

As is well known, part of the spoken production of children learning non-null subject languages such as English or French consists of sentences in which the subject has been dropped. These null subjects are attested very early (usually around 20–22 months) and gradually disappear before the child reaches three years of age.

(1) a. want more Naomi 1;10;17 (Pierce 1989: 75)
b. est pour Marc Nathalie 2;3;2 (Lightbown 1977)
is for Marc

Another distinctive property of early speech is the use of non-finite verbs in contexts disallowed by the target grammar, i.e. matrix clauses. These structures are attested in several languages and are generally referred to as 'optional' or 'root' infinitives.[1] Like early null subjects, they tend to disappear sometime after the child's second birthday.

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The general picture which emerges from the literature on these topics is that null subjects tend to cluster with root non-finite forms in early grammars. This has led some researchers (Sano and Hyams 1994; Bromberg and Wexler 1995, among others) to regard null subjects of optional infinitives as the central aspect of subject omission in child speech and to argue in favor of a direct cause–effect relationship between both phenomena. Other studies (Rizzi 1992, 1994a, 1994b; Haegeman 1995a, 1995b, 1995c, for example) adopt a wider perspective and derive both the null subject and the root infinitive phenomena from a more primitive property of the child's grammar, the possibility of truncating the structure at different levels of representation.

The aim of this chapter is to examine French data in the light of the proposals above. Using as a basis a detailed analysis of the distribution patterns of null subjects and root infinitives in the grammar of six children from a development perspective, I discuss the following points:

- Null subjects do tend to cluster with root infinitives; however, to what extent are they attested in finite structures? A survey of the data will confirm that, in French, null subjects are robustly attested with unquestionably finite verbs throughout the root infinitive stage, and that they cannot be regarded as a marginal phenomenon in comparison with subject drop in matrix infinitival clauses. Note that, contrary to Auger (1990), Roberge (1986), Zribi-Hertz (1994), Kaiser (1992, 1994) and Pierce (1992), among others, I do not assume French to be a null subject language in which clitics are Agreement markers which replace inflectional suffixes which have almost disappeared in modern spoken French. Instead, I adopt the more standard analysis according to which clitic forms preceding finite verbs are subjects in [Spec,AgrSP] in the syntactic component (Kayne 1984).
- The concomitant disappearance of matrix infinitives and null subjects in general (that is, of finite and non-finite clauses) is generally related to the fact that the majority of root infinitives have null subjects: when root infinitives become rare, null subjects will automatically vanish. But is there any special developmental pattern relating null subjects of finite clauses to root infinitives? Based on a file-by-file analysis of the data, I will argue that the two phenomena follow analogous developmental patterns in which null subjects licensed in finite clauses tend to disappear in parallel with root infinitives. These results suggest that null subjects and root infinitives may be indirectly connected and that the link between the two phenomena is not restricted to a direct cause–effect relationship in non-finite sentences.

- Null subjects of root infinitives are generally treated on a par with the adult null subject of embedded clauses, PRO. However, pre-verbal lexical subjects are apparently licensed in the same environment, which is unexpected given the inability of non-finite verbs to assign Case. It will be shown that lexical DPs in pre-verbal position are relatively rare in the corpus, and that they may be compatible with the formal licensing mechanisms for PRO in root infinitives.

The discussion is organized as follows: section 1 provides an overview of the figures reported in the literature. Section 2 discusses some of the proposals which claim the existence of a direct structural relationship between subject drop and the availability of root infinitives. Section 3 concentrates on the clausal truncation approach. Section 4 introduces the data and section 5 comments on the results. The main conclusions are summarized in section 6.

1 Overview of the figures

It is a well-known fact that children around the age of two produce a large number of matrix infinitive structures which very often lack an overt subject. The examples in (3) are from French, German, Dutch and Flemish.

(3) a. jouer au football Augustin 2;9;30 (Hamann *et al.* 1995)
play-*inf* football
b. hubsauber putzn Andreas 2;1 (Krämer 1993: 203)
helicopter clean-*inf*
c. eerst kleine boekje lezen Hein 2;6 (Haegeman 1995a: 33)
first little book read-*inf*
d. e tore make ((een) toren maken) Maarten 1;11;4
(a) tower make-*inf* (Krämer 1993: 204)

Significant correlation rates have been established for several languages between null subjects and optional infinitives. The general conclusion that may be drawn from the various studies conducted on these topics is that, although null subjects do occur in finite clauses, they tend to cluster with non-finite matrix structures in early grammars. Table 9.1 reproduces some of the figures reported in the literature.

In most of the languages for which data are available, there is a discrepancy between the proportion of null subjects attested with inflected verbs and the proportion of null subjects attested with non-inflected verbs.[2] The figures in Table 9.1 have naturally led to the assumption that null subjects and root infinitives are somehow connected, an assumption reinforced by the apparent similarity between root infinitives and

TABLE 9.1 Null subjects in finite and non-finite sentences

	NS finite	%	*NS non-finite*	%	*Total*
French (Pierce 1989)					
Daniel	150/273	54.9	166/205	81.0	478
Nathalie	90/304	29.6	131/295	44.4	599
Philippe	182/782	23.3	153/194	78.9	976
German (Behrens 1993; Krämer 1993)					
Simone	781/3699	21.1	2199/2477	88.8	6176
Andreas	34/263	12.9	69/101	68.3	364
Dutch (Krämer 1993; Haegeman 1995a)					
Thomas	165/596	27.7	246/267	92.1	863
Heinz	1199/3768	31.8	615/721	85.3	4489
Flemish (Krämer 1993)					
Maarten	23/92	25.0	89/100	89.0	192
Hebrew (Rhee & Wexler 1995)					
(26 children, -*N* cases[3])	252/779	32.3	85/88	96.6	867
Faroese (Jonas 1995)					
O.	8/52	15.4	67/161	41.6	213
Danish (Hamann & Plunkett 1998)					
Anne	366/3379	10.8	394/667	59.1	4046
Jens	742/3173	23.4	539/937	57.5	4110
English (Phillips 1995)					
Adam	34/113	30.1	47/242	19.4	355
Eve	8/86	9.3	17/155	11.0	241

adult (embedded) infinitives with respect to the licensing of null subjects. The next section deals with some of the proposals which argue for a direct relationship between null subjects and root infinitives, whereas section 3 is concerned with an alternative approach which claims the existence of an indirect link between these phenomena.

2 The optional infinitive stage: PRO

In recent work on the topic, the connection between null subjects and root infinitives is expressed in terms of a direct cause–effect structural relationship. For the most part based on important work by Wexler (1992, 1994), some proposals which have been recently put forward in the literature draw a parallel between the subjectless infinitives of child discourse and the adult infinitive structures in which the subject is generally analyzed as PRO. In this framework, null subjects of finite clauses are excluded from any association with root infinitives and must be accounted for independently.

2.1 The optional infinitive stage

Seminal research on child grammars of French (Weissenborn 1988; Pierce 1989, 1992; Déprez and Pierce 1993) shows that finite and non-finite forms are not in free variation in early speech. Finite forms have presumably moved to their correct position, that is, raised to the Agreement Projection, whereas non-finite forms have remained in their base VP position.[4] On the grounds of these observations, Wexler (1992, 1994) explains the use of matrix infinitives by suggesting that the child goes through an early 'optional infinitive' (OI) stage in which, although s/he is aware that movement is obligatory in finite contexts and that infinitival verbs do not raise, s/he does not know that non-finite verbs are ruled out as main verbs. Data from German, Dutch, Swedish, Danish and Norwegian concerning the placement of negation in finite and non-finite structures by children indicate that these languages conform to the pattern observed in French. In English, the 'optional drop' of the third singular present tense marker *-s* is taken as evidence for the existence of an optional infinitive stage: when children optionally drop the present tense morpheme, they are in fact producing a non-finite form consisting of a verbal stem plus a zero infinitival marker, rather than a bare stem only.[5] In Wexler's framework, the optionality of finiteness is related to the possibility of omitting Tense from the clause. It is an open question whether the Tense node, the entire projection, or simply Tense features are missing from the structure. Wexler (1995), for example, suggests that the whole TP is absent from optional infinitives. I do not discuss the issue here.

2.2 PRO as the subject of optional infinitives

Based on the analysis outlined above, Sano and Hyams (1994, henceforth S&H) relate subject omission to the availability of root infinitives: if uninflected verbs are in reality infinitival forms, the verb presumably remains in the VP and does not raise to IP (at LF) to incorporate Agreement and Tense markers. According to these authors, such a structure can license PRO in subject position under a version of the PRO theorem by which this category cannot be governed by a lexically specified head or, following Chomsky and Lasnik (1993), under the assumption that PRO requires null Case which must be checked by a 'minimal Infl', where minimal Infl is understood as being devoid of lexical content.[6] In sentences where morphological affixes are overtly realized, the verb has presumably raised at LF, thus disrupting the environment that might license PRO and requiring the subject to be

TABLE 9.2 Proportion of null subjects with verbs inflected with *-s* and *-ed* (adapted from Sano and Hyams 1994)

Child	*File*	*Age*	-s	-ed
Eve	01–20	1;6 to 2;3	10.0% (5/50)	22.5% (9/40)
Adam	01–20	2;3 to 3;0	25.8% (16/62)	56.5% (13/23)
Nina	13–21	2;2 to 2;4	no figures available	18.8% (3/16)

overt. The reasons for raising (or lack of it) lie in the specification (or non-specification) of the features in Infl, but not in the absence of functional projections.

S&H's hypothesis relies on data suggesting a tendency amongst two-year-olds not to omit the subject in contexts which are intrinsically finite, that is, in sentences containing the verb *be* and in those containing modals. In the standard approach to verb movement (Pollock 1989; Chomsky 1991), the overt Agreement features of inflected *be* indicate that this verb has raised to Infl, disrupting the environment that would license PRO and therefore requiring a lexically realized subject. In fact, S&H find very few examples of null subjects with inflected forms of *be*. In sentences with the third person singular *is*, they counted 13/114 null subjects for Adam, 2/50 for Nina and 0/109 for Eve; in sentences with first person singular *am* (5 tokens) or plural *are* (126 tokens) no null subjects were attested for any of the three children.[7] Data from Valian (1991) confirms the prediction that null subjects should not occur with modals, which are inherently finite in English and presumably generated under Infl. In a cross-sectional study of 21 children, she finds that the rates of non-overt subjects in sentences containing modals vary from 1% to 6%, whereas the rates of null subjects overall for the same children in the same period are considerably higher.

S&H note, however, that there are null subjects in contexts in which a lexical verb bears finite inflection (*-s* or *-ed* morphemes). Table 9.2 is adapted from their Tables 4 and 6.

In order to maintain their hypothesis despite the relatively high rates of subject omission in tensed clauses, S&H suggest that these markers can be regarded as participial affixes which associate to the verb in an Aspectual Projection (AspP) below IP, allowing the [Spec,IP] position to remain available for PRO. I come back to this proposal in section 5, where I discuss its implications for French.

Bromberg and Wexler (1995, henceforth B&W) also base their account on Wexler (1992, 1994), and argue in favor of a deep structural relationship between the optional infinitive stage and the null subject stage. Given that non-finite verbs generally license null subjects in adult grammars, it is expected that matrix infinitive verbs should also license empty subjects. Thus they suggest that the existence of root infinitives explains the presence of null subjects in early child language, specifically during the optional infinitive stage. They do not take a position concerning the appropriate licensing mechanism, nor do they argue for a specific grammatical characterization of the null subject of infinitives, but they assume that a representation without Tense is one in which the subject can be null.

Although they have not performed a precise count of null subjects given finite and non-finite verbs[8], B&W note that not every null subject is a result of the availability of tenseless clauses, and they assume that proposals in terms of topic or diary drop (Rizzi 1992, 1994a, 1994b; Haegeman 1995b, 1995c) can account for null subjects of finite sentences. Thus they conclude that there are two kinds of null subjects: one which is licensed by uninflected verbs, and the other which is licensed by inflected (and possibly uninflected) verbs.[9] If both can appear in uninflected contexts, it is natural that null subjects are attested at higher rates with root infinitives. Note that it is not clear why the second type of null subject should be licensed by both inflected and uninflected verbs. If null subjects of root infinitives are not always PRO-like, there are fewer reasons to believe in a strict cause–effect relationship between null subjects and root infinitives in the sense of B&W. Observe also that one would still have to define which non-finite environments are available for PRO, and which are available for a topic/diary drop type of subject omission. Finally, it remains to be seen if the null subject of a root infinitive can really be PRO, or PRO-like. Whereas formal licensing of PRO in such contexts is admissible, its interpretative properties are less straightforward.[10] Besides, the fact that lexical subjects may occur in the same environment as early null subjects, in finite clauses but perhaps also in root infinitives, also casts doubts on an analysis in terms of PRO, given that PRO and lexical subjects are usually in complementary distribution. These issues will be discussed in section 5.3 in connection with French.

According to B&W, then, the occurrence of null subjects with uninflected verbs is the result of the availability of root infinitives, but what is the source of null subjects of finite sentences, i.e. why does the child assume that such structures are a legitimate option in his/her grammar? B&W suggest that Dutch and German children drop topics because the adult languages also have a topic drop process.[11] As for English, although it does not exhibit a topic drop strategy, there are constructions such as (4) and (5) which suggest that the child could be dropping topics in finite sentences in a way allowed by the adult language, but in a larger number of contexts.[12] Both examples are taken from B&W (1995:243).

(4) ___ felt a joy yesterday, ___ soon clouded. S. Plath, *Journals* (McCullough 1982)

(5) What happened to Mary?
___ went away for a while.

In summary, the clustering of early null subjects with matrix infinitives observed in Table 9.1 has led some researchers to assimilate the null subject of root infinitives to the PRO subject of adult infinitives and to regard the early null subject phenomenon as dependent upon the availability of root infinitives. Null subjects of finite clauses are excluded from the connection with root infinitives and must therefore be accounted for independently. These analyses have been proposed for English. I do not discuss the English data, but come back to the implications of this approach for French in section 5.

3 Truncation: null subjects and root infinitives

Rizzi (1994b) proposes that every well-formed utterance in the adult grammar has a CP as the top node.[13] The principle requiring that CP be the root of a clause may not be fully operative in early stages and the child will then select another category lower than CP as a legitimate starting point of the derivation. Such a category may be the bare VP, AgrOP (cf. Haegeman 1995a), or the maximal projection of the head corresponding to the infinitival morpheme, the Infinitive Phrase (IP) of Kayne (1991). A detailed analysis of these choices is not relevant here; the important point is that TP and higher projections are absent from the structure and the verb will appear in its infinitival form.[14] In addition, the child may also choose to truncate the structure at the AgrSP level, in which case s/he will create the appropriate environment for a null subject in the specifier of a finite root clause. The reader is referred to Rizzi (1992, 1994a; see also this volume) for a detailed account of these null subjects. I briefly summarize it below.

As an empty category, the null subject must comply with the identification and formal licensing requirements of the Empty Category Principle (ECP):[15] it must be chain-connected to an antecedent. However, it has been noted that the null subject appears to be limited to the specifier position of the root in child grammars of non-null subject languages: it is incompatible with *Wh*-movement and subordinate clauses.[16] Given that it occurs in the higher specifier position of the clause, it is not c-commanded by any maximal projection and therefore it is not bound by any potential antecedent in the structure. If we interpret the ECP as obligatory only if virtually satisfiable, that is, only if the empty category is actually c-commanded by a phrase, the null subject in the specifier of the root will be exempt from the identification requirement. In such an environment it is therefore licit. However, if a CP is projected, the null subject cannot survive in [Spec,AgrSP] since [Spec,CP] will be a potential antecedent position, but not a suitable one. Thus the absence of null subjects in [Spec,AgrSP] of *Wh*-questions and embedded clauses is expected.

If truncation can account for the availability of root infinitives and for the licensing of null subjects in finite sentences, both phenomena should follow similar developmental patterns: the principle requiring that CP be the root being inoperative in the early stages, the child can truncate the structure at either level, below TP or at AgrSP, possibly within the same given stage of his/her development, giving rise both to matrix infinitive clauses and to null subjects in finite contexts. Thus the relationship between root infinitives and null subjects should be manifested not only in non-finite clauses, as proposed by Sano and Hyams (1994) or Bromberg and Wexler (1995), but also, and most significantly, in finite clauses. A detailed study of these patterns in Dutch and Danish has been carried out by Haegeman (1995c) and Hamann and Plunkett (1998) respectively, who show that there is an interaction between root infinitives and null subjects of finite clauses in that both decrease simultaneously. Based on these findings, I provide an extensive analysis of a corpus of French language which suggests that a similar connection is attested in this language.

4 The data

4.1 The corpus

Spontaneous productions of six children are examined in this chapter: Augustin, Marie, Daniel, Nathalie, Philippe and Jean. The recordings and transcripts of Augustin's production (from 2;0;2 to 2;9;30) were carried out by two students of the *Faculté de Psychologie et Sciences de l'Education (FAPSE)* of the University of Geneva.[17] Marie's corpus consists of twelve files ranging from 1;8;26 to 2;3;3. The recordings were done on a fortnightly basis by Marie's parents in their home in Geneva.[18] Both children are studied in the framework of the interfaculty project *Language et Communication* conducted at the University of Geneva. Daniel's and Nathalie's corpora have kindly been made available by Patsy Lightbown.[19] They consist of five files for Daniel (from 1;8;1 to 1;11;1) and seven files for Nathalie (from 1;9;3 to 2;3;2). The Philippe corpus is available on the CHILDES database.[20] I have selected the first twelve files, from 2;1;19 to 2;6;20. Jean's corpus consists of four files of 45 minutes each, recorded and transcribed by myself. The small size of this corpus is due to the fact that the child was already leaving the null subject/root infinitive stage in the first two

recording sessions, at ages 1;7;16 and 1;8;24. Additional sessions were therefore considered superfluous in the framework of the present study.

The reader may refer to Tables 9.5–9.10 in the appendix to this chapter for details concerning ages and recording intervals for all children.

4.2 Methodology

The same criteria were used in the analysis of the six corpora. Only spontaneous utterances were taken into account, and partial or full repetitions of adult speech were ignored except when modified by the child. Immediate repetitions of the same utterance by the child were also eliminated.

Null subject utterances are those in which no subject is lexically realized, not even in post-verbal position.[21] Utterances in which any missing portion could be interpreted as the subject were discarded. Overt subjects include pronominals, so that null subject rates overall are calculated against all types of overt subjects. Constructions with bare participles were counted separately. Homophonous infinitival and participial forms have been distinguished according to discourse context: non-finite forms referring to an action or state 'non-completed' are regarded as infinitival, whereas forms referring to a completed action are taken as participial. Both infinitival and participial forms are very often preceded by a 'proto-syntactic device' (PSD),[22] a monosyllabic place-holder, usually a vowel, that presumably fills the position of an auxiliary or modal verb, of the subject, or perhaps both. Thus a sentence such as *[e] demand[e] à la dame* (Augustin 2;9;2) could mean either *(j')ai demandé* ('I have asked') or *(je) veux/vais demander* ('I want to/will ask'). Although the context might provide some indication of the interpretation intended by the child, I have chosen to eliminate these utterances from my counts.

Large portions of Nathalie's production consist of utterances containing the expression *nya-nya*, used to signify 'eat' or 'food' indistinctly. Pierce (1989, chapter 3, fn. 5) follows Lightbown (1977), who based her interpretation on the context and on translations offered by Nathalie's mother. I have discarded all the utterances containing this word so as to avoid ambiguity, even if this exclusion has entailed a considerable reduction of the corpus.[23] No similar phenomenon has been attested in the production of the five remaining children.

Some of the results presented in this chapter seem to differ rather heavily from those obtained by Pierce (1989) for Daniel, Nathalie and Philippe. Although part of Nathalie's production is discarded here and the figures for Philippe come from different files from those selected by Pierce (i.e. Phil 01–04, 07, 09 and 11), the discrepancies are not immediately accounted for. A detailed comparison of these figures is outside the scope of this chapter, but notice that, in her classification of types of subjects, Pierce (1989) appears to include bare participles in the non-finite category (e.g. *tout mangé Patsy*, 'ate all Patsy') whereas here only root infinitives are taken into account. Besides, the totals regarding utterances considered for Daniel for the same files, and also for Philippe where the files are identical, do not coincide. These observations show that the criteria used for the analysis of the data in Pierce (1989) are probably distinct from the one adopted in the present chapter.

5 Results

5.1 Null subjects in finite clauses

The results obtained from the analysis of the six children's production conform to the general picture presented in Table 9.1: subject drop in root infinitives is higher than in finite sentences. As shown in Table 9.3, 88.7% of all uninflected verbs have null subjects whereas finite verbs license null subjects in 26.4% of the cases. A breakdown among age ranges is presented in the appendix.

In spite of the discrepancy between finite and non-finite verbs with regard to the licensing of null subjects, these figures provide clear evidence that null subjects are not only possible, but attested in approximately a quarter of all finite clauses. Work by Pollock (1989) has shown that, in the adult grammar of French, all finite verbs raise to Agreement and Tense heads in order to incorporate (check) inflectional morphology. Child production seems to conform to this pattern, as it has been observed that children are able to distinguish finite from non-finite structures at a very early age by correctly placing the verb in relation to the negative marker *pas*.[24] The phrasal structure generally adopted for French in the literature is the one proposed by Belletti (1990) for Italian, in which the order of the relevant functional projections is AgrP/NegP/TP/AspP. This implies that an inflected verb followed by *pas* is necessarily in Agr^0, and therefore unlikely to have

TABLE 9.3 Null subjects in finite and non-finite declarative sentences (bare participles excluded)

	Finite null subjects	%	*Non-finite null subjects*	%	*Total utterances*
Augustin	157/585	26.8	66/71	93.0	656
Marie	154/560	27.5	130/134	97.0	694
Daniel	191/408	46.8	189/227	83.3	635
Nathalie	92/303	30.4	52/69	75.4	372
Philippe	322/1397	23.0	225/246	91.5	1643
Jean	22/303	7.3	8/8	100.0	311
Total	**938/3556**	**26.4**	**670/755**	**88.7**	**4311**

raised from the VP to an Aspectual Projection as suggested by Sano and Hyams (1994) for English. An AspP would have to be lower than TP, therefore also lower than NegP, and sentences in which the negation marker is preceded by a tensed verb (*mange pas*, 'eats not') would remain unaccounted for. Given that all inflected verbs in French raise to the highest inflectional projection, and since the rate of null subjects in such contexts is important, it is hardly the case that subject omission can only take place in non-finite structures in this language. Besides, assuming the projection of an AspP implies postulating a construction which would be specific to the early grammars of English at a certain stage, and which is not necessarily found either in the target language or in early grammars of other languages.

These empty subjects cannot of course be PRO because they occur in the same environment in which overt DPs are found, that is, finite contexts. Given that PRO and lexical DPs are usually in complementary distribution, we are led to conclude that subject omission in finite clauses cannot be assimilated to subject drop in non-finite contexts.

In addition, the results presented in Table 9.3 are not compatible with Bromberg and Wexler's (1995) suggestion of an exaggerated use by children of a topic drop process which is available in the adult language because French exhibits no such construction.[25] I have examined adult speech in six of the files which constitute the corpus[26] and it turned out that, of 2150 declarative sentences, only 14 had null subjects, 3 of which were repetitions of the child's utterance by the adult. Among the 11 cases left, 7 were instances of null subjects with the verb *falloir* ('be necessary'), a verb which has the idiosyncratic property of licensing expletive null subjects in colloquial French as well.[27] This leaves us with the insignificant rate of 4 null subjects for 2150 utterances.

5.2 Finite null subjects and root infinitives

Is there any particular developmental pattern connecting null subjects of finite clauses to root infinitives in French? The synchronous drop-off of null subjects and matrix infinitive structures is apparent from the various studies which have dealt with these and other related topics, but to what extent is this parallel decrease attested in the French corpus under analysis?

In trying to answer these questions, the distinction made between finite and non-finite clauses is essential. Given that most root infinitives show subject omission, the concomitant disappearance of null subjects and root infinitives could be an effect of the discrepancy between finite and non-finite structures with regard to the licensing of null subjects. If PRO (or whatever the grammatical characterization of the empty subject of infinitives is) does indeed result from the availability of root infinitives, the parallel decrease is not interesting in itself. Rather, it is expected as an immediate consequence of the fact that infinitive verbs

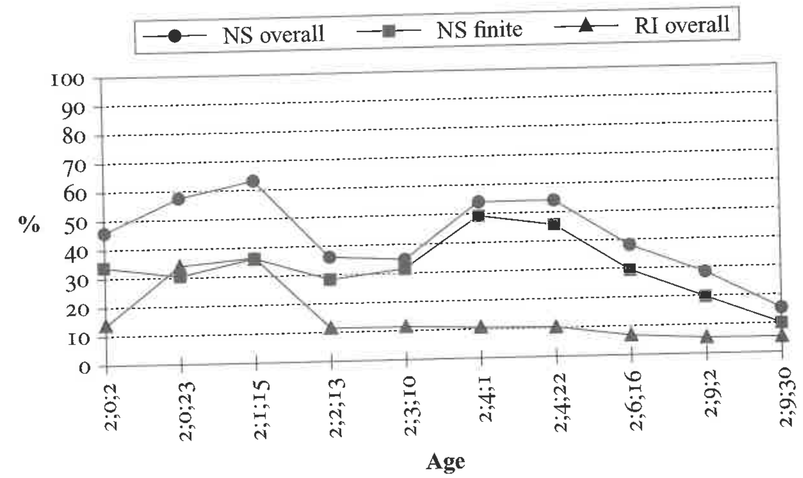

FIGURE 9.1 Null subjects and root infinitives in Augustin's production

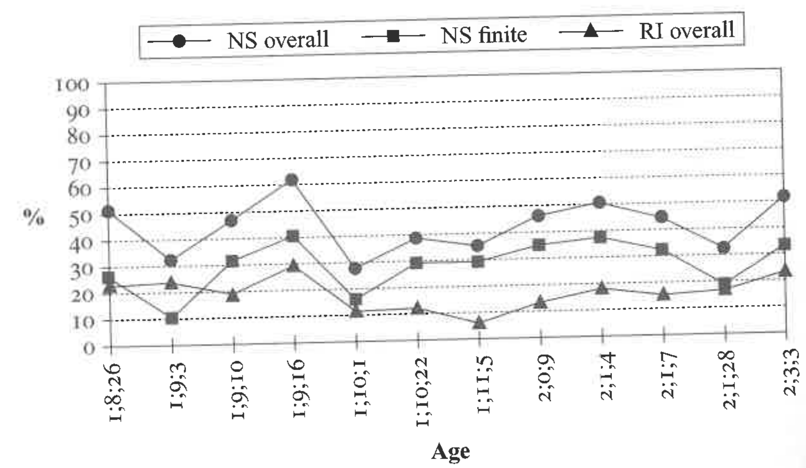

FIGURE 9.2 Null subjects and root infinitives in Marie's production

automatically license null subjects: when root infinitives become infrequent, null subjects will tend to disappear in parallel fashion. On the other hand, a similar correspondence observed in finite sentences considered separately will suggest the existence of a more complex pattern, since there is no apparent direct link between subject omission in tensed clauses and the availability of root infinitives.

Figures 9.1–9.6 show the development patterns of (a) null subjects overall, (b) null subjects in finite sentences and (c) root infinitives overall.

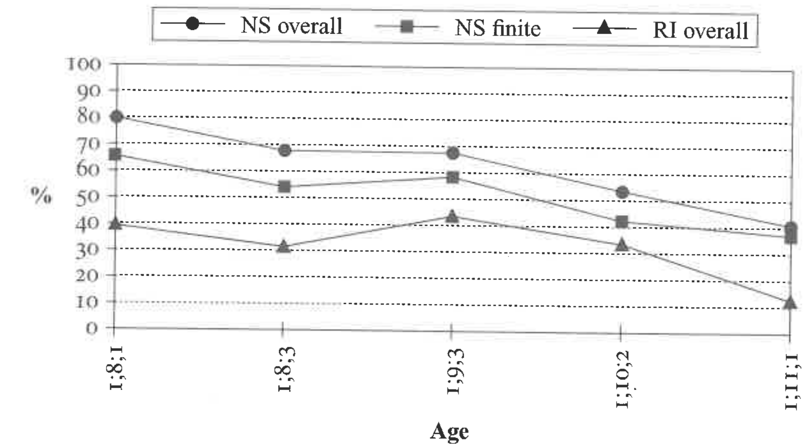

FIGURE 9.3 Null subjects and root infinitives in Daniel's production

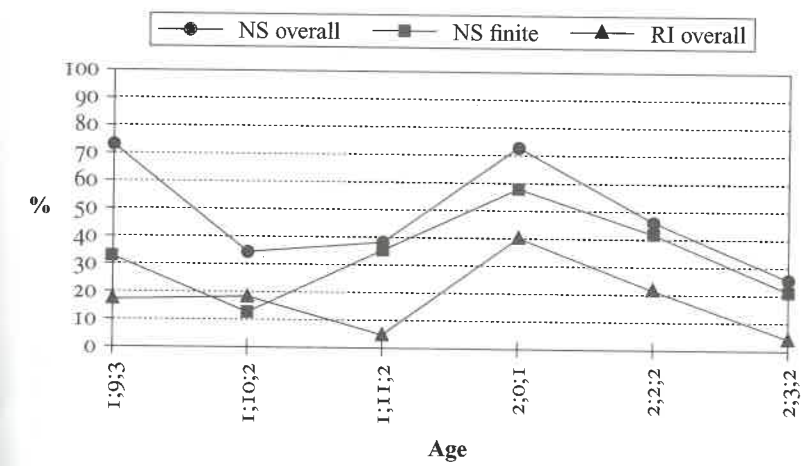

FIGURE 9.4 Null subjects and root infinitives in Nathalie's production

Raw figures and percentages for each child at each point of development are provided in the appendix.

Although the relatively small corpora hardly allow providing the charts above with a quantitative dimension, the property which is truly significant is the simultaneity in the stable drop-out of the phenomena.[28] The general picture which emerges from the graphs appears thus to be compatible with the truncation hypothesis as discussed in section 3.

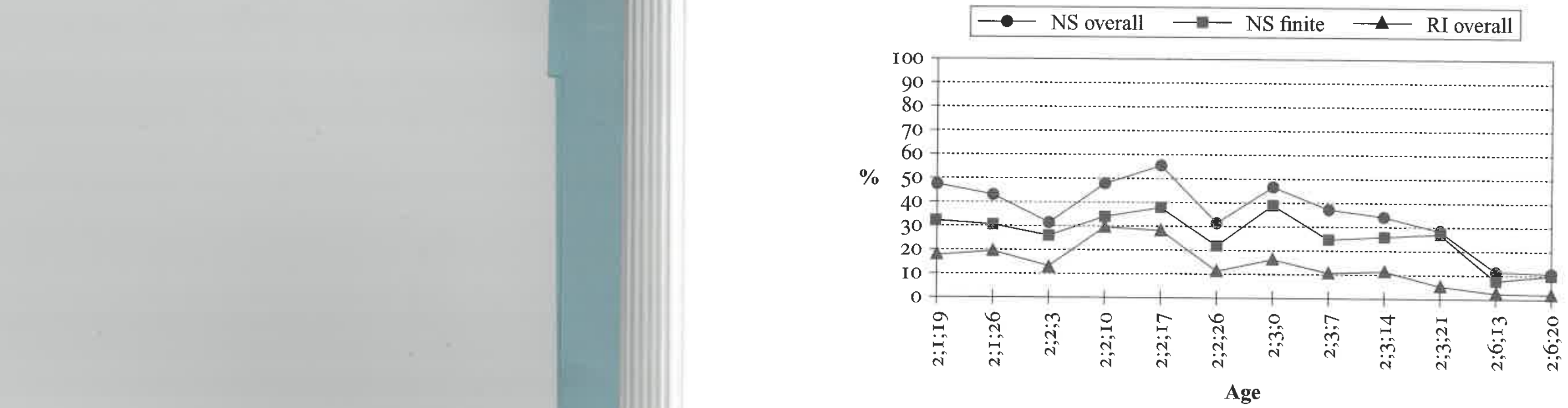

FIGURE 9.5 Null subjects and root infinitives in Philippe's production

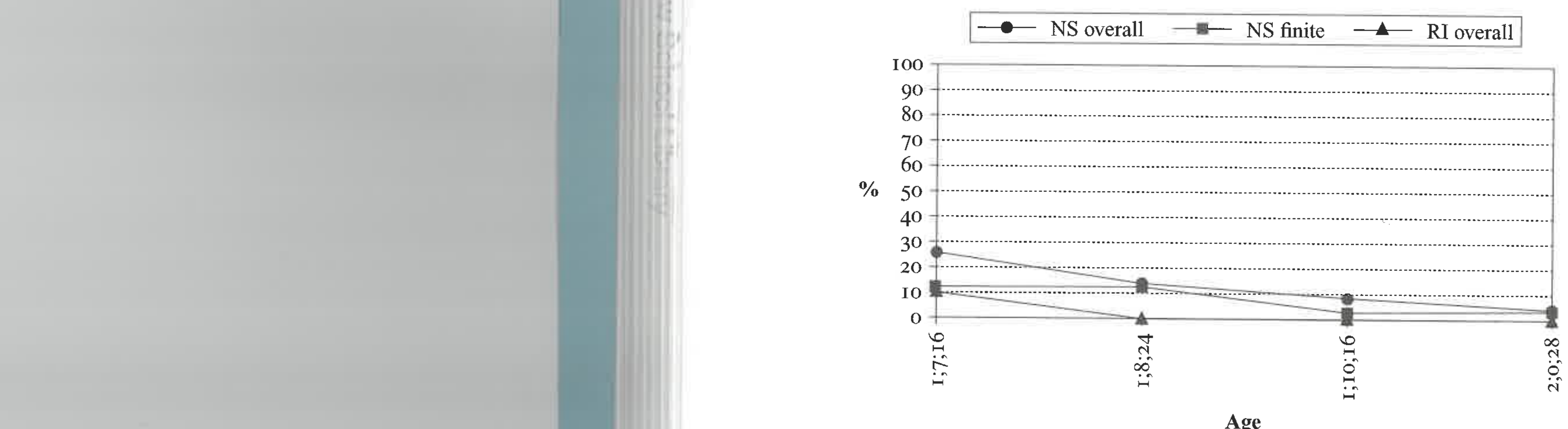

FIGURE 9.6 Null subjects and root infinitives in Jean's production

With some variation, subject drop in finite clauses and the use of matrix infinitival structures tend to disappear in parallel from the production of the six children under study. These findings also confirm evidence provided by Haegeman (1995c) and Hamann and Plunkett (1998) for Dutch and Danish respectively. Haegeman (1995c) examines the production of three Dutch children at the relevant stage, and finds a sharp parallel

TABLE 9.4 Root infinitives and finite null subjects in final stages

Child	*Age (last file)*	*Root infinitives (%)*	*Finite null subjects (%)*
Augustin	2;9;30	6.3	10.7
Marie	2;3;3	23.1	33.3
Daniel	1;11;1	13.2	37.2
Nathalie	2;3;2	4.5	21.9
Philippe	2;6;20	2.1	9.9
Jean	2;0;28	–	3.7

between the development of initial non-overt subjects and of root infinitives. Similar results are obtained by Hamann and Plunkett (1998) in their analysis of the use of null subjects by two Danish children. In fact, on the basis of large corpora, these authors establish that the profile of subject omission in finite utterances almost exactly matches that of root infinitives.

If null subjects of finite sentences and root infinitives derive from the non-operativeness of the principle requiring CP to be the root of a representation, it is expected that both phenomena will take place at the same period of development and that their evolution in time will be similar. The data examined above provide confirmation of this prediction. The existence of root infinitives in the spoken production of these children suggests that truncation is available at TP level and higher, hence subject drop in finite clauses is available as well. When root infinitives drop off, so do null subjects.

Note however that there is a one-way implication, since the availability of null subjects does not necessarily entail the availability of root infinitives. Indeed, null subjects of finite clauses appear to last a little longer than root infinitives.[29] In this respect, the six children display the same behavior: Jean, for example, who is practically out of the root infinitive stage from the beginning of the recordings, is still dropping a few subjects in subsequent files. The percentage of root infinitives decreases as low as 2.1% for Philippe in the last file, whereas subjects at the same stage are dropped up to 9.9%. Table 9.4 provides an overview of root infinitive and null subject rates in final stages. These figures suggest that, while truncation at TP level is practically no longer an option for the child, some form of CP truncation still remains possible. This means that when TP is projected, it is not necessarily the case that CP = root has become entirely operative, given that a structure can still be truncated at AgrSP level. As noticed by Haegeman (1995b), this is the situation in diaries, where null subjects, but not root infinitives, are attested. For a while, then, the child grammar appears to correspond to the adult one in that null subjects, but not root infinitives, are allowed. Some remarks concerning this apparent match between early and adult grammars are in order though. First, subject omission occurs in different contexts. Second, early null subjects, contrary to diary empty subjects, do not remain as a productive option and it is not clear why both grammars should converge only for a short period of time.

How could we explain, under a truncation approach and without any additional stipulations, that CP truncation lasts longer than TP truncation? Rizzi (this volume) suggests that our system of linguistic computation is constrained by an interplay between principles of structural economy and categorial uniformity. While a principle of structural economy limits the amount of structure to be used in a syntactic computation, a principle of categorial uniformity requires that a given semantic type be realized by a unique canonical structure. In early grammars, contrary to adult systems, structural economy prevails over categorial uniformity, whence the occurrence of truncated structures (assuming, as before, that the canonical realization of the proposition is CP). Once the child masters embedded declarative clauses, which are necessarily realized as CP, the issue of uniformity arises, leading to the adoption of CP as the root. Under these assumptions, there is no reason why matrix infinitives should disappear before root AgrSP clauses. It is not implausible, however, that the tension between the two principles mentioned above is resolved in successive steps. It could thus be the case that the principle of categorial uniformity is enforced in a progressive manner in early systems, gradually countering structural economy. The more 'economical' structures would be the first to disappear from the child's grammar, followed by the AgrSP root clauses, which are 'less economical' and closer to CP. The remaining null subjects of root AgrSP structures would then be accounted for.

5.3 Some notes on the subject of root infinitives

The data above reveal that subject drop in early French is attested in finite clauses, and that it is implausible that the null subject in such contexts could be assimilated to PRO. However, subjects are omitted in the majority of non-finite utterances in the corpus, namely 88.7%, a fact which may be compatible with an analysis of the empty subject of root infinitives in terms of PRO. Given that non-finite verbs license PRO subjects in adult French, and under the assumption that adult and child grammars differ minimally, a unified analysis should be welcome. However, a close investigation of the properties of PRO raises some points which warrant discussion.

Like any empty category, PRO needs to comply with specific requirements regarding its distribution and identification. For reasons of space, I will only deal here with some observations regarding its formal

licensing, a detailed analysis of its interpretative properties being intended for future work. In the standard analysis (Chomsky 1981:124–131)[30] PRO must be ungoverned for theory-internal reasons and can only fill the subject position of an infinitival clause. More recently, Chomsky and Lasnik (1993) have proposed that PRO can bear null Case, assigned or checked by a minimal Inflection, that is, an inflectional head lacking Tense and Agreement features. In both cases, the position in which one or the other requirement may be satisfied is Spec of IP or AgrSP. Assuming similar structures for root infinitives and adult infinitives, a sentence such as (6a) would be represented as in (6b).

(6) a. aider maman (Augustin 2;4;22)
help-*inf* mummy
b. $[_{\text{AgrSP}}$ PRO $[_{\text{TP}}$ $[_{\text{VP}}$ aider maman $]]]$

The status of TP is unclear: it might be empty, underspecified or absent altogether. The issue will not be discussed here, but notice that under the truncation hypothesis, the licensing of PRO in [Spec,AgrSP] cannot take place. If the structure is indeed truncated below TP, PRO would have to sit under a lower Spec, presumably [Spec,VP]. A priori, nothing prevents this possibility, especially if we take into account the VP-internal subject hypothesis according to which subjects are base-generated in [Spec,VP] and then moved to [Spec,AgrSP] for Case reasons. Given that the child does not project the upper layers of the structure, PRO cannot raise and must remain in its base position. Since a verb which stays within the VP is necessarily uninflected, it might well be able to check the null Case required by PRO, although according to Chomsky and Lasnik's (1993) proposal it is a minimal Infl and not an uninflected verb which checks or licenses null Case. Now, if the [Spec,AgrSP] or, under the truncation approach, the [Spec,VP] position is one in which no Case or null Case is assigned, then sentences such as (7) need to be accounted for.

(7) a. maman manger (Daniel 1;8;1)
mummy eat-*inf*
b. on ôter[31] (Augustin 2;3;10)
we-*Nom* remove-*inf*

Given the Case Filter and the Visibility Condition,[32] *maman* in (7a) is presumably Case-marked, but since Case is almost never visible in French (except in the pronominal system), we can only suppose that *maman*, as a subject, is marked Nominative. On the other hand, Case is visible in (7b), as subject clitics are overtly assigned Nominative. In both examples, given the inability of non-finite verbs to assign or check a Case other than null Case, it must be concluded that the infinitival verb is not the Case assigner and that Case in (7) is present independently of assignment by Inflection.[33] Alternatively, Case-assignment mechanisms may be partially or fully non-operative at this stage. These possibilities have already been raised in the literature; they are briefly summarized here, but the reader is referred to the work cited below for more detailed accounts.

It might be possible that overt subjects of matrix infinitives are not assigned Case in the syntax and that, instead, they are spelled out as the least-specified member of their paradigm. The existence of default or inherent Case mechanisms in child language has been suggested, among others, by Bromberg and Wexler (1995), Haegeman (1995a), Radford (1995), Rizzi (1994b) and Wexler (1995).[34] It has also been argued (Friedemann 1993/1994, Radford 1990) that the Case Filter is not fully operative in the early stages, and that overt subjects occur in Caseless positions. Assuming that the Case Filter applies to DPs and not directly to NPs, and supposing that children do not necessarily project the functional category DP, then bare NPs can do without Case. Alternatively, it could be that at least some of these subjects are dislocated or topicalized elements filling an A′-position (Friedemann 1993/1994) and bearing inherent Case.

Aside from the issues regarding the Case properties of overt subjects in infinitives, the utterances in (7) may seem incompatible with the truncation hypothesis (under the assumption that the subject should sit under [Spec,AgrSP], considering that under this approach no structure should be projected above the non-finite verb if the clause is truncated below TP level). On the other hand, if we assume the VP-internal subject hypothesis and some mechanism that does not require the standard specifier–head agreement relation for the assignment of Case, these subjects could remain in [Spec,VP], or in the specifier position of another projection relatively low in the structure (InfP or AspP), and the sentence would still be truncated at higher levels. At any rate, and as we shall see, quantitative considerations become crucial in this respect, and the problematic examples are rather rare. Therefore, before trying to account for pre-verbal subjects of root infinitives, let us examine their distribution more closely.

Sentences such as (7b) are seldom attested in French: in the entire corpus under analysis here, only 10 examples of the sort were found (5 for Augustin, 3 for Daniel and 2 for Philippe),[35] which corresponds to 1.3% of all root infinitives. Note that subject clitics are nevertheless used productively with inflected verbs: approximately one third of all finite sentences have subject clitics (see Table 9.12 in the appendix). Sentences such as (7a), in which a lexical DP surfaces pre-verbally, are less rare, but still unusual. I have counted 30 instances in the entire corpus, representing 4% of all root infinitives.

In addition to Nominative clitics and lexical DPs, we also find occurrences of non-Nominative pronouns such as (8).

(8) moi aller à la maison (Daniel 1;10;2)
me go-*inf* home

Non-Nominative subjects are attested in only 1.7% of all root infinitives. It should be noted however that of the 13 tokens containing a non-Nominative pronoun such as *moi* ('me') or *toi* ('you'), 11 come from Daniel's corpus. This child resorts to a special strategy not attested in any of the other children with similar frequency. The other two examples come from Marie's corpus.

In sum, of 755 root infinitives, 30 (4%) have pre-verbal DP subjects which are supposedly Nominative, 10 (1.3%) have Nominative clitics, and 13 (1.7%) have non-Nominative pronouns. The majority of subjects are of course non-overt, as seen before (670 or 88.7%), and the remaining 32 are post-verbal (4.2%). The breakdown among children is provided in Table 9.11 in the appendix. The low percentages of pre-verbal subjects with root infinitives and their distribution in the corpus suggest that these strategies cannot be considered as true grammatical options for every child, especially if we take into account the following facts: (a) the majority of pre-verbal DP subjects come from Daniel's and Nathalie's files, 13 and 10 tokens respectively; besides, 9 out of Nathalie's 10 pre-verbal lexical subjects come from a single file (Nathalie-6), and (b) half (or maybe all) of the Nominative clitics may be reanalyzed as proto-syntactic devices. On the whole, then, these sentences appear to be isolated cases and suggest the existence of special strategies specific to one child or another at a certain stage of development. Their scarcity also makes plausible the hypothesis of performance errors or even transcript mistakes. Interpreted as such, they cannot be viewed as a serious challenge for an analysis in terms of PRO for the empty subject of root infinitives. On the other hand, if these utterances are indeed made available by the child's grammar and do not constitute performance errors, we can still admit truncation at higher levels with the subject remaining internal to the VP as discussed above.

Subjects are not the only kind of pre-verbal material present in early infinitives. We also find several examples of what have been called by Bottari *et al.* (1992) 'proto-syntactic devices' (PSD). These entities have been defined as monosyllabic place-holders which perform the role of rudimentary functional categories when appearing in front on nouns, past participles, adjectives or infinitives. A PSD preceding an infinitive is illustrated in (9a). They can also stand for true arguments and be treated on a par with projections of true lexical categories when filling the place of a clitic pronoun,[36] for example in (9b).

(9) a. [ə] chercher cabane (= vais? je vais?) (Marie 1;11;5)
(will? I will?) get-*inf* hut
b. [e] veux nounours (= je?) (Marie 2;0;9)
(I?) want-*inf* teddy-bear

We do not exactly know what a PSD placed before an infinitive verb stands for. It might be that it fills the position of a modal verb which is normally required in this type of construction,[37] but it might also stand for the subject, or perhaps for both the modal and the subject.[38] Although the presence of a PSD necessarily implies the projection of additional structure, it is hard to tell at this stage how much structure is being projected and what the status of a null subject is in such an environment. At any rate, a PSD does not necessarily exclude PRO, especially if we assume that additional positions are available in the structure.

In sum, the structural environment of root infinitives appears to allow the occurrence of PRO. If the structure is truncated below TP level, PRO can remain under [Spec,VP] and have its null Case checked by the non-finite verb. Lexical subjects which eventually surface pre-verbally fill Caseless positions or are Case-marked independently and, as such, do not interfere with an environment which is suitable for PRO. Besides, they are extremely rare. Thus it might well be the case that children's infinitives are similar to adult's with respect to the syntactic licensing of a PRO subject, except for the fact that, under the truncation hypothesis, PRO does not raise to [Spec,AgrSP] for lack of a target position for movement. On the other hand, the fact that lexical subjects may appear in such environments (although very infrequently) might argue against such an analysis, given that PRO and lexical subjects are usually in complementary distribution. A careful analysis of the interpretative properties of null subjects in root infinitives as well as in finite clauses is expected to provide further arguments for or against the view that null subjects of root infinitives are indeed PRO.

6 Conclusion

This chapter has dealt with questions related to subject drop and the use of root infinitives by two-year-olds. A detailed analysis of the production of six French-speaking children has illustrated the following points. First, early subject drop is attested in approximately a quarter of all finite sentences comprised in the French corpus examined here, indicating that the phenomenon should by no means be considered a marginal one, nor be regarded as an overgeneralization of an adult option, given that adult French does not allow the phenomenon in any spoken register. Second, the distribution pattern of null subjects in finite sentences is analogous to that of root infinitives. The development of these phenomena across time is similar in that both tend to drop off simultaneously.

This tendency is attested in the production of the six children examined here and strongly suggests the existence of a specific link between the two phenomena which can reasonably be accounted for by a version of the clausal truncation hypothesis put forward by Rizzi (1992, 1994a, 1994b). Third, it seems to be the case that the structural environment of root infinitives actually allows PRO subjects. However, while licensing conditions for PRO might be fulfilled in root infinitives, a careful examination of the interpretative properties of these null subjects should provide additional arguments for or against this hypothesis.

Appendix

Distribution of subjects and root infinitives

TABLE 9.5 Null subjects and root infinitives in Augustin's spoken production

File	*Age*	*NS overall*	*%*	*NS finite*	*%*	*NS RI*	*%*	*RI overall*	*%*
Augustin-1	2;0;2	23/50	46.0	14/41	34.1	7/7	100	7/50	14.0
Augustin-2	2;0;23	15/26	57.7	5/16	31.3	9/9	100	9/26	34.6
Augustin-3	2;1;15	12/19	63.2	4/11	36.4	7/7	100	7/19	36.8
Augustin-4	2;2;13	15/41	36.6	10/35	28.6	5/5	100	5/41	12.2
Augustin-5	2;3;10	12/34	35.3	9/28	32.1	1/4	25	4/34	11.8
Augustin-6	2;4;1	34/62	54.8	26/53	49.1	6/7	85.7	7/62	11.3
Augustin-7	2;4;22	31/57	54.4	22/48	45.8	6/6	100	6/57	10.5
Augustin-8	2;6;16	40/106	37.7	27/91	29.7	8/8	100	8/106	7.5
Augustin-9	2;9;2	42/147	28.6	26/131	19.8	9/9	100	9/147	6.1
Augustin-10	2;9;30	23/142	16.2	14/131	10.7	8/9	88.9	9/142	6.3

TABLE 9.6 Null subjects and root infinitives in Marie's spoken production

File	*Age*	*NS overall*	*%*	*NS finite*	*%*	*NS RI*	*%*	*RI overall*	*%*
Marie-1	1;8;26	37/72	51.4	10/38	26.3	16/17	94.1	17/72	23.6
Marie-2	1;9;3	24/75	32.0	5/46	10.9	16/18	88.9	18/75	24.0
Marie-3	1;9;10	27/58	46.6	13/41	31.7	10/11	90.9	11/58	19.0
Marie-4	1;9;16	21/34	61.8	9/22	40.9	10/10	100	10/34	29.4
Marie-5	1;10;1	10/36	27.8	5/31	16.1	4/4	100	4/36	11.1
Marie-6	1;10;22	19/50	38.0	13/44	29.5	6/6	100	6/50	12.0
Marie-7	1;11;5	23/65	35.4	17/58	29.3	4/4	100	4/65	6.2
Marie-9	2;0;9	31/68	45.6	19/55	34.5	9/9	100	9/68	13.2
Marie-10	2;1;4	42/82	51.2	23/62	37.1	15/15	100	15/82	18.3
Marie-11	2;1;7	23/52	44.2	13/40	32.5	8/8	100	8/52	15.4
Marie-12	2;1;28	39/122	32.0	16/90	17.8	20/20	100	20/122	16.4
Marie-13	2;3;3	27/52	51.9	11/33	33.3	12/12	100	12/52	23.1

TABLE 9.7 Null subjects and root infinitives in Daniel's spoken production

File	*Age*	*NS overall*	*%*	*NS finite*	*%*	*NS RI*	*%*	*RI overall*	*%*
Daniel-1	1;8;1	88/110	80.0	31/47	66.0	40/44	90.9	44/110	40.0
Daniel-2	1;8;3	94/138	68.1	33/61	54.1	40/44	90.9	44/138	31.9
Daniel-3	1;9;3	78/115	67.8	24/41	58.5	45/51	88.2	51/115	44.3
Daniel-4	1;10;2	100/186	53.8	49/114	43.0	48/63	76.2	63/186	33.9
Daniel-5	1;11;1	79/190	41.6	54/145	37.2	16/25	64.0	25/190	13.2

TABLE 9.8 Null subjects and root infinitives in Nathalie's spoken production

File	*Age*	*NS overall*	*%*	*NS finite*	*%*	*NS RI*	*%*	*RI overall*	*%*
Nathalie-1	1;9;3	16/22	72.7	3/9	33.3	4/4	100	4/22	18.2
Nathalie-2	1;10;2	11/32	34.4	3/23	13.0	5/6	83.3	6/32	18.8
Nathalie-3	1;11;2	8/21	38.1	7/20	35.0	1/1	100	1/21	4.8
Nathalie-4	2;0;1	40/55	72.7	15/26	57.7	19/22	86.4	22/55	40.0
Nathalie-5	2;1;1	7/17	41.2	1/6	16.7	3/5	60.0	5/17	29.4
Nathalie-6	2;2;2	50/108	46.3	31/73	42.5	13/24	54.2	24/108	22.2
Nathalie-7	2;3;2	40/155	25.8	32/146	21.9	7/7	100	7/155	4.5

TABLE 9.9 Null subjects and root infinitives in Philippe's spoken production

File	*Age*	*NS overall*	*%*	*NS finite*	*%*	*NS RI*	*%*	*RI overall*	*%*
Philippe-1	2;1;19	58/123	47.2	25/78	32.1	19/22	86.4	22/123	17.9
Philippe-2	2;1;26	68/158	43.0	34/111	30.6	27/31	87.1	31/158	19.6
Philippe-3	2;2;3	57/184	31.0	36/143	25.2	19/23	82.6	23/184	12.5
Philippe-4	2;2;10	81/168	48.2	30/90	33.3	46/51	90.2	51/168	30.4
Philippe-5	2;2;17	53/96	55.2	22/58	37.9	26/27	96.3	27/96	28.1
Philippe-6	2;2;26	53/168	31.5	25/113	22.1	18/19	94.7	19/168	11.3
Philippe-7	2;3;0	70/151	46.4	38/98	38.8	25/25	100	25/151	16.6
Philippe-8	2;3;7	28/76	36.8	13/54	24.1	8/8	100	8/76	10.5
Philippe-9	2;3;14	55/161	34.2	28/108	25.9	18/18	100	18/161	11.2
Philippe-10	2;3;21	44/150	29.3	34/126	27.0	9/9	100	9/150	6.0
Philippe-11	2;6;13	31/277	11.2	20/247	8.1	7/9	77.8	9/277	3.2
Philippe-12	2;6;20	21/193	9.9	17/171	9.9	3/4	75.0	4/193	2.1

TABLE 9.10 Null subjects and root infinitives in Jean's spoken production

File	*Age*	*NS overall*	*%*	*NS finite*	*%*	*NS RI*	*%*	*RII overal*	*%*
Jean-1	1;7;16	20/78	25.6	8/65	12.3	8/8	100	8/78	10.3
Jean-2	1;8;24	9/64	14.1	8/63	12.7	–	–	0/64	–
Jean-3	1;10;16	6/70	8.6	2/66	3.0	–	–	0/70	–
Jean-4	2;0;28	5/110	4.5	4/109	3.7	–	–	0/110	–

Distribution of subjects in root infinitives

TABLE 9.11 Distribution of subjects in root infinitives

Child	*Total root infinitives*	*Pre-verbal DP*	*Non-Nominative pronouns*	*Nominative clitics*	*Null subjects*	*Post-verbal DP*
Augustin	71	0	0	5	66	0
Marie	134	1	2	0	130	1
Daniel	227	13	11	3	189	11
Nathalie	69	10	0	0	52	7
Philippe	246	6	0	2	225	13
Jean	8	0	0	0	8	0
Total	**755**	**30**	**13**	**10**	**670**	**32**
% of RI		**4.0**	**1.7**	**1.3**	**88.7**	**4.2**

Distribution of subjects clitics in finite clauses

TABLE 9.12 Distribution of subject clitics in finite clauses

Child	*Clitics*	*Finite clauses*
Augustin	207	585
Marie	169	560
Daniel	42	408
Nathalie	68	303
Philippe	586	1397
Jean	70	303
Total	**1230**	**3556**
% of finite clauses	**34.6**	

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Notes

1 Terminology proposed by Wexler (1992, 1994) and Rizzi (1994b) respectively. I use both terms indistinctively here.

2 According to Phillips (1995), the generalization does not extend to English. Notice also that in Faroese and Danish the discrepancy is less important than in the other languages.

3 Hebrew is partially *pro*-drop, i.e. the personal pronoun is obligatorily dropped only in 1st and 2nd persons, non-present tense. In all the other contexts, the subject must be phonetically realized. Rhee and Wexler refer to the 1st and 2nd person morphology as bearing *+N* features which can license null subjects, and to the remaining ones as being *-N* and therefore unable to license an empty subject. The figures in Table 9.1 refer to the *-N* cases, that is, illegitimate instances of subject drop.

4 Inflected verbs precede the negative marker *pas* (*mange pas*, 'eat(s) not') whereas non-inflected verbs follow *pas* (*pas manger*, 'not eat-*inf*'). See Weissenborn (1988), Pierce (1989, 1992) and Déprez and Pierce (1993).

5 I do not discuss the evidence for the assumption that English represents the OI stage (see also Harris and Wexler 1996; Rice *et al.*, 1995). This analysis of uninflected sentences in English raises some problems, though. As noted by L. Rizzi (class lectures 1996), English 'root infinitives' seem to differ from root infinitives of other languages in many respects:

- they are compatible with preposed *Wh*-elements (see Bromberg and Wexler 1995; Roeper and Rohrbacher 1995)
- they license overt subjects in a proportion comparable to inflected clauses (see data from Phillips 1995 in Table 9.1)
- they are still attested when subjects are no longer omitted
- when the subject is overt, it may bear both default or non-default case (see Schütze and Wexler 1996a,b).

6 Note that in Chomsky and Lasnik (1993), a minimal Infl checks null Case when it lacks Tense and Agreement features. The idea that a minimal Infl might be viewed as lacking lexical content is suggested by S&H.

7 Adam and Eve, see Brown (1973); Nina, see Suppes (1973).

8 But see Phillips (1995).

9 This distinction is also proposed by Krämer (1993), although in different terms: true *pro*-drop (finite sentences) vs. apparent *pro*-drop (non-finite sentences).

10 Cf. L. Rizzi, class lectures 1996.

11 But Haegeman (1995c) shows that in Dutch the empty subject of early speech is structurally different from the adult one.

12 As a matter of fact, the distribution of the null subject in diaries, exemplified in (4), suggests that this element should be assimilated to the early null subject phenomenon rather than to a topic drop strategy: like early null subjects, null subjects in diaries are limited to root contexts and, contrary to null topics, they can be expletives and quasi-arguments. Moreover, there are no null objects (which could be analyzed as instances of topic drop) in diary registers. In addition, the null subject allowed in informal speech in English (5) also appears to be similar to the null subject in diaries. Therefore, if both (4) and (5) can be assimilated to the early null subject phenomenon, the child will not be 'dropping topics'. The reader is referred to Haegeman (1995b, 1995c, this volume) for a detailed discussion of null subjects in written and spoken registers.

13 See Rizzi (1994b, this volume) and Haegeman (1995b, 1995c) for discussion.

14 Observe that Rizzi's (1994b) truncated approach to root infinitives converges with Wexler's (1994) proposal in admitting tenseless clausal representations in early grammars. For Wexler, though, the properties of the optional infinitive stage are derived from the primitive assumption that the child can omit Tense from the representation. For Rizzi, these tenseless representations are not a primitive property of these grammars, but arise from the non-operativeness of the principle requiring the CP to be the root.

15 See Rizzi (1990) for the relevant version of the ECP.

16 Rizzi (1992, 1994a, 1994b), Crisma (1992) and Levow (1995) for French. Roeper and Rohrbacher (1995) and Bromberg and Wexler (1995) obtain different results for English *Wh*-questions, but not if the finite/non-finite distinction is taken into account. In finite structures the results are clearly the same (see Rizzi this volume for a brief discussion).

17 Christelle Girod and Isabelle Schindeholz. They were subsequently checked by three students of the *Faculté des Lettres*, Nathalie Martinez, Daniela Renggli and myself. See Hamann *et al.* (1995) for details.

18 Transcripts were also carried out by five students of the *FAPSE*, Nathalie Bernoud, Angela Cicoira, Joëlle Cretton, Emanuelle Lehr and Sylvie Mayoraz, and subsequently checked by myself.
19 Lightbown (1977).
20 Suppes *et al.* (1973).
21 Post-verbal subject structures in French can be analyzed as instances of right-dislocation (Labelle and Valois 1996), or as a construction in which the verb has raised to an Inflectional Projection (in finite clauses) or to a Inf(initive) Projection (in root infinitives), leaving the subject behind in a left- or right-branching [Spec,VP] (Pierce 1989, 1992). Post-verbal subjects can also be accounted for as filling a right-branching [Spec,VP] in a structure where the verb raises to IP if inflected, or remains in the VP if uninflected (Friedemann (1993/1994). All these analyses require an empty element in the specifier position of AgrSP in compliance with the Extended Projection Principle (EPP). While the empty (pre-verbal) subject of an utterance containing a post-verbal subject may well be a null constant, its identification is perhaps different from the null constant of a null subject utterance. In the first case, the subject can be identified clause-internally, perhaps through a chain, whereas in the second the subject is discourse-identified. This is the reason why the two types of structure are treated separately. It should be noted however, that clause-internal identification is not guaranteed, since the post-verbal subject presumably does not c-command the empty subject (see Friedemann, this volume).
22 Cf. Bottari *et al.* (1992).
23 If we consider *nya-nya* as a verb in all the cases in which the context allows it, we have the following percentage of *nya-nya* utterances in each file: 67.6% (N1), 46.0% (N2), 52.9% (N3), 8.8% (N4), 26.1% (N5), 13.4% (N6) and 9.7% (N7) of all verbal utterances selected for analysis.
24 See note 4.
25 French does have constructions like the English examples (4) and (5) in special written registers such as diaries, notices on commercial products and informal notes (examples from Haegeman 1995b):

(i) Me donne son nom, son adresse et les heures de train pour venir chez elle (Paul Léautaud, *Journal particulier*, p. 44: 6.2.1933)
me gives her name, her address and the hours of the train to come to her
(ii) Se boit très frais (Coca-Cola tin)
se-reflexive drinks very fresh
(iii) Préparons les copies (e-mail message, 1993)
prepare (1pl) the copies

The observations mentioned in note 12 carry over to French.
26 Daniel-1, Daniel-5, Nathalie-1, Nathalie-7, Augustin-2, Augustin-9.
27 It is possible that expletive *il* in general may be non-overt in colloquial speech (M.-A. Friedemann, p.c.). Note however that, according to the native-speakers consulted on the matter, null subjects with the verb *falloir* are preferred to the examples in (i) and (ii), which are more marked.

(i) ?Paraît qu'il est parti
seems that he has left

(ii) ?M'est arrivé une chose bizarre
me arrived a thing strange
Something strange happened to me

28 Marie at age 2;3;3 is an exception, although in the preceding files her behavior corresponds to that of the other children. The subsequent transcripts (as well as file number 8 at age 1;11;18) were unfortunately unavailable at the time of printing. Note also that Nathalie-05 contained an extremely small amount of data and has not been included in the chart (see Table 9.8 in the appendix).
29 Some types of root infinitives such as answers to questions and jussives are also expected to last; however, the use of a matrix infinitive in such contexts is adult-like and is therefore not taken into account in the present discussion.
30 On PRO, see also Bouchard (1984:165–210), Bresnan (1982), Chomsky (1986:119–131), Koster (1984), Manzini (1983), Mohanan (1985) and Williams (1980).
31 It will be seen that utterances such as (7b), in which a weak subject pronoun occurs with an infinitive, are rarely attested. They are cited here for the sake of completeness.
32 The Case Filter states that every phonetically realized NP must be assigned (abstract) Case. The Visibility Condition requires that a chain is visible for theta marking if it contains a Case position (see Chomsky and Lasnik 1993 for a brief explanation).
33 It is a well-known fact that infinitives can have lexical (Nominative) subjects in some languages. European Portuguese is the classic example (from Raposo 1987):

(i) Eles aprovarem a proposta será difícil
They-*Nom* to-approve-*Agr* the proposal will be difficult
'It will be difficult for them to approve the proposal'

Note that the non-finite verb is inflected for person, and that Case assignment is arguably associated to the presence of the agreement morpheme on the verb. This kind of structure is absent from adult French, and it is implausible that children have access to such a strategy. Besides, if this mechanism were available in early French, we would have to explain why only a few root infinitives have overt subjects in pre-verbal position.
34 On default Case, see for example Halle and Marantz (1993).
35 As noted by Hamann *et al.* (1995) in their detailed study of Augustin's acquisition of the French pronominal system, all the cases involve the impersonal subject clitic *on* ('people', 'we'). They suggest that some or even all the cases could be reanalyzed as being instances of the proto-syntactic device [o], found elsewhere in the corpus, rather than a genuine occurrence of the subject clitic.

(i) on ôter (three times) (2;3;10)
'we' take-*inf* out
(ii) on jouer aux (pe)tites autos (2;4;1)
'we' play-*inf* with small cars

(iii) on mettre sur ça (2;9;30)
'we' put-*inf* on this

Philippe's utterances also involve the pronoun *on*:

(iv) on en mettre là (2;6;13)
'we' of-this put-*inf* there
(v) des animaux on tuer (2;6;20)
some animals 'we' kill-*inf*

Daniel, on the other hand, uses the personal pronoun *elle* ('she') and *je* ('I'). One of the examples is unclear, although it has been analyzed as an instance of *je* ('I').

(vi) moi [jə] prendre ə petit joujou (1;10;2)
me I take-*inf* small . . .
(vii) elle tenir celui-là (1;11;1)
she hold-*inf* that one there
(viii) moi je mettre (1;11;1)
me I put-*inf*

36 Bottari *et al.* note that these elements could also be considered as functional categories, although they do not discuss the issue any further. This is the case, for instance, of subject clitics treated in terms of agreement markers.
37 *Aller* ('go'), *devoir* ('must') *falloir* ('be necessary'), *pouvoir* ('can'), *vouloir* ('want'). These are lexical verbs which can nevertheless function as modals.
38 This is certainly a phenomenon which deserves further study, as suggested by its frequency. For example, Marie and Augustin produce respectively 56 and 65 PSDs with infinitival forms.

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Chapter 10

Remarks on early null subjects

Luigi Rizzi

1 Introduction

In recent years, an increasing number of theoretical linguists has started to pay serious attention to language development. Why is this? Decades of pioneering work by theoretically oriented psycholinguists have conclusively shown that language development presents a highly structured mix of elements of continuity and discontinuity with respect to adult systems. This mix is extremely attractive for the theoretical linguist. Continuity, which clearly is the prevailing factor, makes sure that developmental evidence will bear on the object of inquiry that the linguist cares about, the study of systems constrained and made possible by the human language faculty. Discontinuity is what makes development interesting for us: we can reasonably hope that development will allow us to see properties that are not immediately accessible to observation in adult systems, thus allowing us to identify and explore neglected areas of the grammatical space defined by Universal Grammar.

It is not surprising that this growth of interest coincided with the consolidation of the principles and parameters models of UG in the mid eighties. Parametric models introduced a theoretical language well adapted for the comparisons of systems fundamentally cast in the same mold, but diverging on some structurally well-defined points. On top of making available certain technical tools for comparing languages, they renewed an interest in and a taste for comparison by showing that not only language invariance but also language variation was amenable to rigorous, theory-guided study. It was only natural to try these models out on development, another domain showing limited variation within fundamental boundaries of uniformity. The same methodology used for the comparison of adult languages was successfully extended to developing systems. It proved useful to extend the ordinary tools of adult