Apparent non-nominative subjects in L1 French*

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1 Introduction and background

Young French speaking children often produce sentences like (1), where both the apparent subject and the verb are realised in a non-target-like fashion: the apparent subject is not in the nominative case, and the verb is not finite.

(1) moi mettre ça comme Pol. (Max 2;3.20)[1]
me put$_{-FIN}$ that like Pol
'I (want to) put it like Pol.' (meaning derived from context)

The non-target-like realisation of subjects by children has often been linked to the lack of finiteness of the verb. It is well established that the majority of non-finite root verbs occur without a subject (for child French, see e.g. Rasetti 1996). Two types of non-finite root verbs are distinguished in the literature: 'true' Root Infinitives (henceforth RIs) (Rizzi 1994b), which typically bear non-finite morphology, and what could be referred to as 'default' RIs, where the verb does not bear non-finite morphology, but is not fully inflected either (see e.g. Schütze & Wexler 1996; Schütze 1997). In child French, RIs are either infinitivals (as in (1)) or past participles used in a context where the adult language would require a finite verb.[2] French RIs have been shown by Pierce (1992) not to raise across negation, which indicates that they are analysed by the child as non-finite. Partially inflected forms ('default RIs') are also attested in this language, as will be discussed in section 3. Each type of RI (strictly non-finite and not fully finite) is associated with a different rate of subject realisation.

Children's realisation of subjects in the early stages of acquisition has been much studied in the literature (for L1 French, see e.g. Ferdinand 1996). Two claims in particular are relevant to the present analysis: (i) Children acquiring non-pro-drop languages go through a *null subject* stage, when they omit subjects where the target grammar would require one (see e.g. Rizzi 1994a; Rhee & Wexler 1995). It is often claimed in the literature that null subjects occur predominantly with Root Infinitives (Rasetti 1996), but this has been disputed for child French by Plunkett & De Cat (2001); (ii) Children's subjects can initially surface in non-nominative case (as seems to happen in (1)). Schütze & Wexler (1996) argue that this happens only with verbs that are not fully inflected, more specifically when the Agreement head is underspecified as will be explained presently.

[1] The age of the child is given as "years;months.days".

[2] Some researchers further distinguish RIs *stricto sensu* from root participles (e.g. Legendre, Hagstrom, Vainikka, & Todorova 1999), as illustrated in (i).

(i) moi vu. (Max 1;11.0)
me seen
'I (have) seen (one).'

In this chapter, this extra distinction will not be made. Note that the majority of verbs are of the -er class and that the form such verbs is ambiguous between infinitival and participial morphology because both are pronounced with a final [e].

This chapter proposes an evaluation of the latter claim in the light of the former, with special attention devoted to the 'wider picture' of subject realisation in French.

French has three ways of expressing a subject referent overtly: as a subject clitic (2.a), as a *heavy subject* (as in (2.b)),[3] or as a *dislocated subject* (i.e. a left- or right-peripheral XP coindexed in most cases with a resumptive subject clitic,[4] as in (2.c)-(2.d)).

(2) a. Ils sont fous.
they are mad
'They're mad.'

b. Les Belges sont les plus braves.
the Belgians are the most brave
'The Belgians are the bravest.'

c. **Rosalind**$_i$, elle$_i$ est illustratrice.
Rosalind she is illustrator
'Rosalind is an illustrator.'

d. C'$_i$ est le numéro neuf, **sa maison**$_i$.
it is the number nine her house
'Her house is number nine.'

In French, nominative case is not distinguishable from default case on DPs. There is no visible case distinction between the subject *les Belges* in (2.b) and the dislocated elements *Rosalind* or *sa maison* 'her house' in (2.c) and (2.d). The picture is different with pronouns. In dislocated positions, pronominals appear in their strong form, which can be considered to be in the default case in French (as argued by Schütze 1997). As a consequence, strong pronouns are banned from the canonical subject position, where nominative case is assigned / required. There are two exceptions to this 'rule': the pronoun *ça* 'that' can appear in the subject position in all varieties of French; and third person singular *lui* can appear in that position (with a neutral intonation) in Canadian French, as illustrated in (3). In European French *lui* can only be in the subject position if it bears contrastive stress.

(3) et lui s' appelle Fernand le pélican. (Catherine, C)[5]
and him REFL calls Fernand the pelican
'And that one's called Fernand the pelican.'

[3]The term *heavy subject* is used in this chapter to designate a non-clitic element in the subject position.
[4]In some cases the resumptive can be a non-clitic element, as in (i).

(i) La crème$_i$, ça$_i$ sent bon.
the cream it smells nice
'Cream smells nice.'

Clear cases of dislocated elements are in bold throughout the chapter. I assume that subject clitics have full argument status in spoken French (see De Cat 2002 for arguments to that effect and for a discussion of the various diagnostics for dislocated elements in that language).

When investigating apparent non-target-like realisation of the subject, it is important to consider all the possibilities offered by the target grammar. Hence the strong pronoun in (1) could be either a non-nominative subject in the subject position (i.e. a strong pronoun surfacing instead of a clitic, in an attempt at producing a structure like (4.a)), or a dislocated subject with a missing resumptive (i.e. an attempt at producing a structure like (4.b)).

(4) a. je vais mettre ça comme Pol.
I will put$_{-FIN}$ that like Pol
'I'll put it like Pol.'

b. **moi**, je vais mettre ça comme Pol.
me I will put$_{-FIN}$ that like Pol
'I'll put it like Pol.'

I propose to evaluate these two analyses on the basis of spontaneous, longitudinal data from three monolingual children — which will be introduced in section 2. Either Apparent Heavy Subjects (henceforth AHSs) in non-finite contexts (like *moi* 'me' in (1)) are true subjects in a genuine subject position, or they are dislocated subjects with a missing resumptive clitic. The former option requires an account of the target-deviant possibility of licensing non-nominative subjects (e.g. along the lines of Schütze & Wexler 1996). The latter postulates that these AHSs surface in the default case (which, in French, is only visible on strong pronouns), outside of the subject position. It will be argued that any non-nominative AHS in child French is a left-dislocated subject with a missing subject clitic, both in cases like (1), where the verb is unambiguously non-finite, and in cases like (5) where the verb is apparently finite but might be argued to be a 'default' RI on the basis of the fact that such verb forms do not display unambiguous agreement morphology.

(5) moi tire ça. (Max 2;1.25)
me pull$_{?FIN}$ that
'I'm going to pull that.'

Support for the dislocation hypothesis is provided on the basis of quantitative, distributional evidence, and a preliminary acoustic analysis of the data. The analysis proposed completes the picture outlined by Ferdinand (1993, 1996) and Labelle & Valois (1996), who showed that target-deviant postverbal 'subjects' are in fact target-like right-dislocated subjects with a missing resumptive clitic (i.e. a null subject).

[5]The letter following the name of adult speakers indicates the country of origin: B for Belgium, C for Canada, F for France.

2 Data and methods

The data set used for the present analysis contains production from three children: Max (Canada) and Anne (France) from the York corpus, and Tom (Belgium), from the Cat corpus.[6] Each child was video-recorded fortnightly for half an hour, usually at home, over a period of 18 months. The transcriptions were made where possible by the observer, and later checked and coded by another native speaker of French (myself).

The main period under investigation corresponds to the core of the null subject stage (for an analysis based on the same corpora, see Plunkett under review). This period was chosen so that the null subject factor could be taken into consideration, and because non-nominative AHSs almost exclusively occur during that stage. I have considered data up to the time when children only omit subjects in 5% of obligatory contexts. After that, a few isolated cases are still found in the data for a little while, but only in particular contexts, which I will consider in section 4.5.

The developmental profiles of the children at the relevant period are sketched in Table 1. The MLUw in this table corresponds to the Mean Length of Utterance in words, excluding utterances consisting of only *oui* 'yes', *non* 'no' or non-words such as *ah, oh, euh, m, mm.*

	Max	**Anne**	**Tom**
Onset			
Age	1;9.19	1;10.12	2;1.11
MLUw	1.136	1.875	2.506
End of null subject stage			
Age	2;9.12	2;10.18	2;6.22
MLUw	3.748	3.897	3.015
Total number of files			
	26	23	13

Table 1: Ages and MLUw at the null subject stage

The transcription were done according to the CHAT system (MacWhinney 2000). The following conventions were adopted: (i) # indicates a short pause; (ii) the verbal ending *-E* stands for the [e] sound, which is ambiguous between infinitival and participial morphology in verbs of the first class; (iii) commas indicate syntactic junctures (e.g. what was perceived by the coder as a dislocation — see section 4.3); (iv) parentheses contain unpronounced strings; (v) the letter *e* stands for an 'embryonic' element (i.e. a sound roughly corresponding to a schwa in the child's pronunciation, in a slot normally occupied by a function word. See Bottari et al. 1992; Bohnacker 1999; Peters 2001); (vi) yy stands for an unintelligible word (followed by a rough phonetic transcription); (vii) 0 indicates a missing element.

[6]The York corpus was collected under the direction of Bernadette Plunkett (ESRC grant #R000 22 1972). It contains data from Belgium, France and Canada. The Cat corpus was collected by myself, and contains longitudinal data from Belgium and cross-sectional data from Belgium and Canada.

The data was coded according to a variety of factors. Any element coreferential with the intended subject and appearing preverbally in the absence of a subject clitic was coded as an AHS. Factors coded for included: the nature of the AHS (strong pronoun, DP, or other), the presence of an intervening element (e.g. a dislocated element like *là* 'there') between the AHS and the verb (thus indicating that the AHS is clearly a left-dislocated subject), the presence of a subject clitic, and the degree of finiteness of the verb (see section 3.1). Embryonic elements were treated as follows: if an embryonic element was the only element in a verb slot, the token was discarded (as potentially containing no verb); if an embryonic element was clearly in a modal slot, i.e. between a subject clitic and a verb with non-finite morphology, the token was discarded (as unclear between finite or non-finite); if an embryonic element was clearly in a subject clitic position (before a finite verb), it was coded as a subject clitic; if an embryonic element was in a position that could host either a subject clitic or a modal, the assumption was that the embryonic element was an embryonic modal and the token was discarded (See De Cat (2002) for arguments supporting this treatment of embryonic elements). Excluding these tokens did not affect the results significantly.

As illustrated in the examples below, non-nominative AHSs appear at the two-word stage (6.a). They are attested throughout the null subject stage, and very sporadically after that (6.e). They occur both with non-finite forms (6.a), (6.b), and with finite-*looking* forms (i.e. forms that do not bear non-finite morphology but may nonetheless be non-finite, according to Schütze & Wexler 1996, for reasons to be explained shortly) (6.c), (6.d), (6.e).

(6) a. moi vu. (Max 1;11.0)
me seen
'I (have) seen (one).'

b. toi # apportE ça. (Max 2;6.12)
you bring$_{-FIN}$ that.
'You (must/should/can) bring that.'

c. ça est 0 drapeau. (Anne 2;2.0)
that is flag
'That's a/the flag.'

d. et moi a gagné. (Tom 2;4.8)
and me have$_{+FIN3p.sg.}$ won
'I've won.'

e. mais moi veux mettre ça. (Anne 3;5.4)
but me want$_{+FIN}$ put$_{-FIN}$ that
'But I want to put that one.'

Instances of AHS that are ambiguous as to their case marking also occur, where a DP expressing the subject immediately precedes the verb:

(7) Fifi # pas allE dans l' eau. (Max 2;0.0)
Fifi not go$_{-FIN}$ in the water
'Fifi can't go in the water.'

During the null subject stage, the highest proportion of AHSs is found in non-finite root clauses, as detailed in Table 2, but overall, most AHSs appear with finite-looking verbs. A refinement of what counts as finite or non-finite clauses will be discussed in section 3.1.

	Non-finite root clauses		**Finite-looking clauses**	
Pronominal AHSs	**13%**	(43/336)	2%	(81/3713)
Non-pronominal AHSs	4%	(13/336)	2%	(84/3713)

Table 2: Distribution of AHSs at the null subject stage

In section 3 and section 4, I concentrate on the analysis of AHSs for which case is visible (as in (6)). However, the analysis of pronominal AHSs can be carried over, to an extent, to a number of non-pronominal AHSs, as argued in De Cat (2002).

3 Hypothesis 1: Pronominal AHSs are true subjects in the default case

Subject case errors in child language have been reported in the literature since the 60's (e.g. Gruber 1967; Valian 1991; Vainikka 1993). One proposal in particular makes clear cross-linguistic predictions as to which types of case errors should be expected. It is presented in Schütze & Wexler (1996); Schütze (1997); Wexler, Schütze, & Rice (1998) as the Agreement and Tense Omission Model (ATOM). The core idea is that in child grammar, the two Inflection heads may be underspecified independently of each other. When the Agreement head is underspecified (as indicated by a '-' in Table 3), the subject is predicted to surface in the default case.[7] Non-nominative subjects are claimed not to be due to a lack of knowledge of the case system or of the nominative-assigning property of Agr: both are part of the child's grammar from early on (as argued in detail by Schütze 1997). Rather, the presence of non-nominative subjects is said to result from the underspecification of Agreement. Nominative case can only be assigned to the subject when Agreement is fully specified. Whether the verb looks finite or non-finite depends on the other Inflection head: Tense. Whenever Tense is fully specified, the verb looks like a finite verb: it is expected to undergo raising in languages like French, and it does not bear overt non-finite morphology. By contrast, whenever

[7]Schütze (1997) does not consider that AgrS is an independent head. Rather, he argues that the Agreement features are on the Tense head. Instead of Agreement, he introduces *Accord*, which is defined as the presence of agreement features on the verb and of case features on the subject. I will leave aside here the question as to whether AgrS should be considered an independent head (as in Pollock 1989; Belletti 1990; Chomsky 1993) or whether it consists of features on Tense (as in Chomsky 1995; Schütze 1997). If the latter possibility is to be retained, an "empty" AgrS would correspond to the absence of AgrS-features on Tense.

Tense is underspecified, the verb surfaces as a RI (a true RI in the case of French). Schütze (1997:263-271) also argues that the presence of null subjects is dependent on Tense, and not on Agreement: whenever Tense is underspecified in the child's grammar, a null subject will be possible. The matrix of theoretical possibilities of specification of the Inflection heads is as in Table 3.

Agr	**Tns**	**Subject**
-	-	Default case or null
-	+	Default case
+	-	Nominative case or null
+	+	Nominative case

Table 3: Theoretically possible (under)specifications of Agreement and Tense

Under the ATOM, tensed verbs may still allow null subjects under pragmatic licensing, a possibility I will not dwell on as it goes beyond the scope of the present chapter.

3.1 Patterns of Agreement and Tense specification in child French

In (child) French, subject clitics themselves never appear in a case other than nominative (no such error has been attested in the literature, to my knowledge — where e.g. an accusative clitic would appear in the subject position). Schütze (1997:250) argues that strong pronouns are the default form of pronoun in French, and that they are expected to surface when Agreement is underspecified. The relevant paradigms are given in Table 4. First person plural clitic *nous* 'us' is not considered here, as it is not used as a subject clitic in spoken French (at least not in colloquial French, which constitutes the input to the children studied here); the third person singular subject clitic *on* 'we' is used instead, sometimes in conjunction with a dislocated pronoun *nous* 'us'. *On* 'one' is also used as a genuine third person singular (especially as an impersonal), but it does not have a corresponding strong pronoun in such cases.

Person	**Nominative clitic**	**Strong pronoun**
1^{st} sg.	je	moi
2^{nd} sg.	tu	toi
3^{rd} sg.	il, elle, on	lui, elle, $\emptyset$
1^{st} pl.	on	nous
2^{nd} pl.	vous	vous
3^{rd} pl.	ils, elles	eux, elles

Table 4: Nominative clitics and strong pronouns in spoken French

The ATOM predicts that in child French, whenever the subject is realised as a pronoun, it will surface as a nominative clitic when Agreement is fully specified, and as a strong pronoun when it is not.

3.1.1 Agreement morphology with tensed verbs in French

Before examining the paradigm of verbal Agreement morphology as it is instantiated in child French, it is important to remember that the input available to the child can only provide him/her with audibly perceivable distinctions between forms. As a consequence, only audibly distinct agreement morphemes can be taken into account in this analysis. The possibility of distinguishing between forms on the basis of liaison only (as in *tu es une chipie* [tyɛzynʃipi:] 'you are a scoundrel') was discarded, because liaison between the verb and the following word is rare in spoken French, especially in the familiar register, and no systematic transcription of liaison was carried out for the corpora investigated here.

A note on the status of subject clitics is called for at this point, as it has been claimed that in spoken French, these elements are agreement morphemes on the verb (e.g. Roberge 1990; Zribi-Hertz 1994). Against such a claim, Côté (1999, 2001) convincingly argues that a morphological analysis of subject clitics is untenable for Unmarked Spoken French, i.e. the varieties of French that do not allow for a true quantifier to be used as a subject coindexed with a subject clitic, as in (8). She argues that the data in the Leveillé corpus (Suppes, Smith, & Leveillé 1973) (available via CHILDES—MacWhinney 2000) falls within this category, as does her own native variety: Montreal French (which also corresponds to the input to which Max of the present study is exposed).

(8) *Personne, il est venu.
nobody he is come

All the data investigated here comes from unmarked varieties of spoken French, as demonstrated in De Cat (2002). Consequently subject clitics will be analysed as 'true' subjects, and only verbal suffixes will be considered to be marks of agreement with the subject.

The paradigm of verbal agreement morphology is very impoverished in spoken French. Ferdinand (1996) argues that for the most part, this paradigm consists of what might be classified as *elsewhere* forms. Following Halle & Marantz (1993), she defines *elsewhere* forms as underspecified in the lexicon with respect to particular features (person and number in this case). This allows *elsewhere* forms to be compatible with more than one feature specification on an element such as a subject, with which the verb is expected to agree. In the adult language, I assume that *elsewhere* forms are specified for person and number. Later in acquisition, when all over-use of *elsewhere* forms have disappeared, I assume that the child also has specified person and number features on these forms.

In Table 5, *elsewhere* forms are indicated in phonetic transcription. Specified forms only appear in their orthographic spelling. Three verb types are distinguished on the basis of the number of persons with agreement morphology distinct from the third person singular form. These three types need only be distinguished in the present of the indicative, though, since in all the other tenses attested in the present corpora, the spread of elsewhere forms

is identical in the agreement paradigm of all verb types. Periphrastic tenses do not receive special mention in this table, as Agreement is marked on the auxiliary, which is itself in the present tense: in the *passé composé*, the present form of *avoir* 'to have' or *être* 'to be' is combined with a past participle, as in (9.a); in the *futur proche*, the present form of *aller* 'to go' is combined with an infinitival, as in (9.b).

(9) a. C'est déjà fini.
it-is already finished
'It's over already.'

b. On va manger dehors.
we will eat outside
'We're going to eat out.'

Second person plural is hardly used by children at the ages relevant in this study, but has been included in this table on account of its presence in the input. The second person plural marking is phonologically indistinguishable from the infinitival form for verbs of the *-er* class, and in the case of *allez* 'go'. Only a clear context or the presence of a subject clitic can distinguish between the two. However as the children studied only attempted to use the former when the null subject stage was almost over, and only in very rare occasions, this homophony has not been problematic.

		-er, -oir	-ir, -re, vouloir	être, avoir, aller
present	1 p.sg	[*pl*œ : *r*]	[*vø*]	vais
	2 p.sg.			[*va*]
	3 p.sg.			
	2 p.pl	pleurez	voulez	allez
	3 p.pl.	[*pl*œ : *r*]	veulent	vont
imperfect	1 p.sg.		[*vulɛ*]	
	2 p.sg.			
	3 p.sg.			
	2 p.pl.		vouliez	
	3 p.pl.		[*vulɛ*]	
future (synthetic)	1 p.sg.		voudrai	
	2 p.sg.		[*vudra*]	
	3 p.sg.			
	2 p.pl.		voudrez	
	3 p.pl.		voudront	
subjunctive (present)	1 p.sg.		[*vœj*]	
	2 p.sg.			
	3 p.sg.			
	2 p.pl.		veuillez	
	3 p.pl.		[*vœj*]	

Table 5: Verbal agreement morphology in spoken French

Ferdinand (1996) argues that children acquiring French start by using only *elsewhere* forms, i.e. over-extending their use to the whole paradigm. Evidence for the *elsewhere* status of third person singular in child French (glossed as *els.* in the examples) comes from the fact that the only errors of agreement observed between the verb and the features of the subject are cases where an apparently third person singular form of the verb is used while the φ-features of the (intended) subject are non-third-singular, as in (10) (see Ferdinand 1996).

(10) a. il$_i$[8] va regarder la yy [%pho: fEm] tous les deux$_i$. (Max 2;5.29)
he will$_{els.}$ watch the (?) all the two
'The two of them will look at the (?).'

b. 0 est là, **les dames**. (Anne 2;7.16)
is$_{els.}$ there the ladies
'The ladies are there.'

c. et **moi**, j' a gagné. (Tom 2;4.8)
and me I have$_{els.}$ won
'I've won.'

The use of default person and number features on the verb suggests that in cases like (10), Agreement is not fully specified. Following Schütze & Wexler (1996), the finite-*looking* form of the verb is due to the full specification of Tense, while Agreement remains underspecified.

When all the details of the French morphological paradigm are taken into account, it becomes clear that verb forms displaying overt agreement with the subject are quite rare in spoken French. Given that the second person plural is hardly attested at all in the corpora studied here, and that most verbs are of the *-er* class (i.e. the one with the smallest number of specified forms), only a small number of verbs can be expected to indicate whether the child is marking verbal agreement: *être* 'to be', *avoir* 'to have', *aller* 'to go', *vouloir* 'to want', and the rare instances of verbs from the *-ir* and the *-re* class (like *faire* 'to do', *dormir* 'to sleep') that are used by the child. But to complicate matters further, even with those more richly inflected verbs, second and third person singular will have to be discarded from the analysis, as they are homophonous (see Table 5). The first instances of clearly agreeing verbs appear around 2;1 in the present corpora.

When the *elsewhere* form is "incorrectly" used instead of a specified form (as would be required by the target grammar), Agreement will be argued to be underspecified. When a specified form is correctly used, Agreement will be argued to be fully specified. But in the majority of cases, because the *elsewhere* form fills most of the paradigm, the verb form will have to be treated as ambiguous with respect to agreement marking.[9]

[8] It is impossible to distinguish between *il* and its plural counterpart *ils* in this context, as the following word starts with a consonant, which impedes liaison, if any — Canadian French even allows for the absence of liaison between ils/elles 'they' and the following verb when the latter begins with a vowel.

[9] Cases like (i) have also been treated as ambiguous with respect to the specification of Agreement in Max's data, given that in adult Canadian French, the forms *va* and *vais* alternate for the first person singular.

The features of the intended subject were recovered as follows: (i) from the features of either a subject clitic, a dislocated DP coreferential with the subject, or an AHS; (ii) from those displayed by adjectives modifying the subject or by participials with the auxiliary *être* 'be' (but only participials that are not of the first verb class and certain adjectives display audible marks of agreement with the subject); (iii) from the features of a reflexive clitic on the verb, when distinct from the default *se*; (iv) from the context, where possible. Agreement mismatches between a dislocated element and the verb were the most common in the present data.

Although the specification of Agreement alone is sufficient to predict whether nominative is assigned to the subject, the specification of Tense also has to be taken into account. In particular, an important question to address is whether Agreement can be specified when Tense is not in child French.

3.1.2 Agreement morphology with untensed verbs in French

According to the ATOM, finite morphology on a verb is due to the specification of Tense. Three "levels" of Tense specification can arguably be distinguished in the French data (although only the first two are strictly relevant to the present discussion of the ATOM): (i) non-finite verbs (bearing non-finite morphology), (ii) finite verbs in the present tense, (iii) finite verbs marked for a tense other than present.

The clearest case of Tense underspecification is that of true RIs, where a verb bears non-finite morphology and does not raise to INFL (as indicated by the fact that it follows the negation *pas* 'not', cf. e.g. Pierce 1992; Ferdinand 1996). Schütze (1997:fn 83, p.250) entertains the possibility that non-finite agreeing forms could exist in French. In that language, infinitives cannot bear morphological marks of Agreement, but past participles can. In French, past participles with the auxiliary *être* 'to be' can in principle agree with the subject.[10] Participles used with *avoir* 'to have' need not concern us here as they never agree with the subject.

One might therefore postulate (i) that RIs are always [-Tns,-Agr] when bearing infinitival morphology (as in (1)) or in cases where the target grammar would require the *avoir* auxiliary (as in (6.a)) and (ii) that RIs are possibly [-Tns,+Agr] when consisting of a participial that would require the *être* auxiliary in the target grammar as in (11). The ATOM would predict pronominal AHSs to appear in the former case but not the latter.

(i) moi va faire un truc de magie. (Max 2;3.20)
me will$_{els.}$ do a trick of magic
'I'll do a magic trick.'

[10]This has been claimed not to be the case in certain spoken varieties (e.g. Sportiche 1996). Participle agreement with the subject is attested in the input received by the children in the present study.

(11) 0 parti xx. (Anne 1;11.29)
gone ?

The problem, once more, is that in most instances, it is impossible to tell if the RI is an infinitive or a past participle (as in (6.b)), and when it is clearly a participle, whether it is marked for agreement or not, given that most forms are homophonous with respect to gender and number. It is impossible to hear the difference between masculine singular *vu*, feminine singular *vue*, masculine plural *vus* and feminine plural *vues*.[11] I have found no instance of root participle clearly agreeing with the subject out of 336 RIs in the present data.

A question needing to be raised with respect to the ATOM is how it would be syntactically possible for RIs to license subjects at all. Two facts make this problematical for the French data. First, RIs do not undergo verb raising and may not involve the projection of T (cf. e.g. Rizzi 1994b). Second, the element expressing the subject of the RI nearly always appears higher than the negation particle *pas* in this and other corpora (e.g. Pierce 1992; Ferdinand 1996; Phillips 1996). If such elements really are subjects, they must therefore appear higher than NegP, presumably in [spec,TP]. The question then is: how can a lexically empty T license a subject in its specifier?[12]

If AHSs with true RIs turn out not to be heavy subjects but dislocated DPs coreferential with the (missing) subject, no special mechanism needs to be postulated to account for the licensing of these subjects with RIs.

Let us now turn to verbs with finite morphology. At first, the only finite-looking verbs attested are in the present tense (as also observed by e.g. Meisel 1994; Labelle 1994; Ferdinand 1996). In the overwhelming majority of cases where negation is present, the verb appears before it, which is standardly taken to indicate that finite-looking verbs raise to an Inflection head in child French (see e.g. Pierce 1992). However, this does not entail that verbs in the present tense are interpreted as 'truly' tensed by the child at that point. Ferdinand (1996) proposes that initially, verbs in the present tense are marked simply [+tense], but not for any specific tense.Accordingly, one could argue that morphologically present verbs in child French are initially not fully specified for Tense.

For the purpose of this analysis, although present tense verbs may not be fully specified for Tense features, I will assume that any finite-looking verb is [+Tns] (this is the option adopted by Schütze (1997) for child French).[13] This will however not be taken to mean that

[11] In certain dialects (e.g. Belgian French) a slight lengthening of the vowel can be observed with the feminine forms, but this is not clearly discernible in all cases.

[12] In De Cat (2002) I show that the York and Cat corpora do not give any reason to believe that such licensing is possible.

[13] A different view is adopted by Jakubowicz, Nash, & Van der Velde (1999), who argue that an additional functional projection is required for *passé composé:* on that analysis, present verbs are finite but do not contain a Tense projection. Analysing verbs in the present tense as [-Tns] would increase the proportion of (finite-looking) non-finite verbs in the present corpora. This would have no bearing on the expected case of the subject of such verbs, but would predict an overall higher rate of null subjects with finite-looking verbs.

such verbs are interpreted as present tense by the child, in the sense discussed in Ferdinand (1996).[14]

I will assume that periphrastic tenses (as illustrated in (10.a)) are [-present], in spite of the fact that the auxiliary is itself in the present tense (this is compatible with Jakubowicz et al. (1999), but goes against Ferdinand (1996)). This has no direct bearings on the present study, as I take both present and 'non-present' finite-looking verbs to be [+Tns]. I would just like to point out here that verbs are not automatically marked for Agreement if they are not in the present of the indicative, as indicated in Table 5. Cases like (12) have been analysed as [+Tns,? Agr] due to the fact that the agreement suffix on the verb is not audibly distinct from that of the *elsewhere* form.

(12) (je) mettais les pieds dans l'eau. (Anne 2;4.2)
(I) put$_{imp.els.}$ the feet in the water
'I used to put my feet in the water.'

Evidence for the *elsewhere* status of third person singular forms of 'non-present' verbs is particularly clear in (13), extracted from data from another child of the York corpus who was otherwise excluded from this analysis on the grounds that she had already passed the null subject stage at the beginning of the recordings. In (13.a), a 1^{st} person singular clitic appears together with the elsewhere form *prendra* instead of the expected *prendrai*.[15] In (13.b), a 3^{rd} person plural subject clitic appears with the elsewhere form *sera* instead of the expected *seront*.

(13) a. mais quand on part, je prendra mon parapluie. (Léa 2;11.18)
but when we leave I will-take$_{els.}$ my umbrella
'But when we leave, I'll take my umbrella.'

b. et quand ces deux jours+là sera fini, on sera +//. (Léa 3;5.17)
and when these two days-there will-be$_{els.}$ finished we will-be
'And when these two days are over, we'll be...'

In contrast, in cases like (14), where the agreement suffix is audibly distinct from the *elsewhere* form, both Tense and Agreement will be taken to be fully specified.

However, even then, the underspecification of Tense is not sufficient to account for the null subject stage, as illustrated later in the text by (14), (20), and, if the present analysis is correct, (15), where the subject is missing in spite of the full specification of Tense.

[14]The Tense specifications of verbs in the present is crucial for analyses aiming at distinguishing the acquisition of Tense from that of Agreement in child French (e.g. Legendre, Hagstrom, Vainikka, & Todorova 1999). Initially, the only verbs displaying agreement morphology are all in the present tense. The choice of whether to analyse such verbs as [-Tense] (because present would be seen as default), or as [+Tense] (because of the absence of non-finite morphology and of the presence of verb raising) becomes a crucial one, as under the latter assumptions, one would be forced to conclude that the acquisition of Agreement cannot be distinguished from that of Tense in early child French.

[15]The ATOM predicts that cases like this do not exist, where a subject clitic appears with a non-agreeing verb. I come back to this in section 3.3.

(14) ai cassé bonhomme. (Tom 2;1.13)
have$_{1p.sg.}$ broken man
'I've broken the man.'

In section 3.2, the various combinations of Agreement and Tense (under)specification are explored in relation to child French.

3.2 Predictions of the ATOM for child French

As we have seen in section 3.1.1, verbs displaying unambiguous audible agreement morphology are rare in spoken French, especially in the early child data. Below are detailed the cases where the value of Agr is unambiguous. Ambiguous cases will be presented in Table 7.

Table 6 shows the clear cases of INFL feature specification. For each combination of features, a description of the verb form is given, followed by an example. The numbers refer to attested examples given in this and other sections. The *subject φ-features* are those of the intended subject, which may be altogether absent when Tense is underspecified. '≠ *elsewhere*' in that column indicates that the subject φ-features are incompatible with the *elsewhere* form of the verb. For a detail of what such forms are, see Table 5. The case mentioned in the last column is that predicted by the ATOM: nominative where Agr is fully specified, default where Agr is underspecified.

Finiteness	**Description**		
	Examples	**Subject φ-features**	**Subject case**
[+Tns,-Agr]	finite-looking verbs lacking expected specific agreement morphology		
	moi va, moi a mangé (6.d) (10) (13)	≠ *elsewhere*	default
[+Tns,+Agr]	finite-looking verbs with specific agreement morphology		
	je suis, ils vont aller (14) (20) (21.a) (21.b)	≠ *elsewhere*	nominative

Table 6: Clear Tns/Agr feature combinations as predicted by the ATOM for child French

Combinations including [-Tns] were excluded from the clear cases (and hence from Table 6), because verbs bearing non-finite morphology cannot bear (overt) agreement morphology at the same time in spoken French. We have seen in section 3.1.2 that the specification of Agreement is not audible on the vast majority of verbs bearing non-finite morphology. [-Tns] verbs therefore have to be treated as ambiguous with respect to their Agreement specifications.

It is important to note that for Agreement to be visible, the φ-features of the intended subject have to be incompatible with the *elsewhere* form of the verb. So only cases like *je vais* 'I go', *ils veulent* 'they want', where the agreement morphology is audibly distinct from the *elsewhere* form, can be unambiguously analysed as [+Agr], while cases like *je veux* 'I want',

tu vas 'you go', have to remain [?Agr]. The ambiguous combinations of feature specifications are presented in Table 7.

Finiteness	**Description**		
	Examples	**Subject φ-features**	**Subject case**
[-Tns,?Agr]	verbs with non-finite morphology		
	(moi) mangE, (toi) allE (1) (6.a) (6.b) (7)	any	default (or nominative?)
[+Tns,?Agr]	finite-looking verbs with default agreement morphology		
	moi/je mange (5) (6.e) (12) lui/il va (6.c) (19) (19.a)	= *elsewhere*	default or nominative

Table 7: Ambiguous Tns/Agr feature combinations as predicted by the ATOM for child French

For the purpose of this evaluation of the ATOM, the crucial cases to be considered are those where the specification of Agreement can be morphologically identifiable. This means discarding the bulk of the data, as the majority of finite-looking verbs are *elsewhere* forms with respect to Agreement. According to the ATOM, Agreement is underspecified when a finite-looking verb displays 'incorrect' agreement morphology, which is only visible when the features of the intended subject are not compatible with the *elsewhere* form of the verb. Whenever a verb is inflected with specific Agreement morphology, Agreement is said to be fully specified.

The predictions of the ATOM for child French are as follows: (i) if a verb lacking the required agreement morphology has a realised subject, the latter will surface in the default case; and (ii) non-nominative subjects do not occur with verbs marked for specific agreement; All preverbal strong pronouns (and DPs) expressing the subject could be genuine subjects under that hypothesis, in which case they are expected not to receive a dislocation intonation.

3.3 Child French does not behave as predicted under the ATOM

The data from the York and the Cat corpora contradict the predictions of the ATOM. Non-nominative AHSs do occur with verbs clearly marked for [+Agr] and nominative subjects do occur with verbs clearly lacking Agreement morphology.

3.3.1 Non-nominative AHSs *do* occur with fully specified Agr

The ATOM predicts that whenever a verb bears specific agreement morphology, the subject will surface in the nominative case. Non-nominative subjects are thus totally unexpected in such cases. Contrary to this prediction, unambiguously agreeing verbs do appear with a pronominal AHS, as in (15).

(15) moi ai cassé ça là. (Anne 2;2.0)
me have$_{1p.sg.}$ broken that there
'I've broken that.'

Among the verbs appearing with a(n apparent) subject, the proportion of pronominal AHSs with unambiguously agreeing verbs is strikingly similar to that of pronominal AHSs appearing with the rest of the [+Tns] verbs: 2% and 3% respectively.[16] Given this, I believe that cases like (15) should not be treated as noise in the data. An extra argument to that effect will be provided in section 4.5, where it is shown that late cases of pronominal AHSs (as illustrated in (16)) occur exclusively in the rare configurations still allowing null subjects (while the core of the null subject stage is by then over).

At that stage, agreement mismatches between the features of the (intended) subject and the morphology of the verb have almost totally disappeared from the child's speech. It is thus extremely likely that by then, finite-looking verbs are [+Agr] even when they (correctly) surface as an *elsewhere* form (as in (16)). This renders cases like (16) comparable to (15) given that in both instances the verb is fully finite and appears with a pronominal AHS.

(16) a. mais moi veux mettre ça. (Anne **3;5.4**)
but me want$_{+TNS}$ put$_{INF}$ that
'But I want to put that one.'

b. moi veux pas ranger. (Max **2;9.12**)
me want$_{+TNS}$ not tidy-up$_{INF}$
'I don't want to tidy up.'

I conclude that, if the pronominal AHSs in (15) are analysed as subjects, such cases constitute counter-evidence to the ATOM.[17]

3.3.2 Nominative subjects *do* occur with underspecified Agr

Whenever Agreement is underspecified, the subject is predicted by the ATOM to surface in the default case. However, this is not what we find in child French.

The evidence presented below is crucial, as it rests on the only uncontroversial (and unambiguous) cases where Agreement is underspecified: cases where a finite-looking verb

[16]The proportion of pronominal AHSs found with finite-looking verbs is of 4/204 with [+Tns,+Agr] and 77/2795 with the rest of the [+Tns] verbs. A Fisher exact test revealed no significant difference between the two distributions.
An anonymous reviewer wonders why the proportion of pronominal AHS with [+Tns,+Agr] verbs is so low and suggests it would be much higher if calculated over root declaratives only. I have two points to make to that respect. Firstly, no such effect is to be expected under the ATOM: what is relevant is the inflection of the verb, not the status of the clause or the utterance type (note also that the bulk of the data consists of root declaratives anyway). Secondly, contrary to what the reviewer in question appears to believe, the very same data sample has been used to calculate the proportions reported throughout section 3.3. The differenciating criterion between the various subsamples is the inflection of the verb, as defined by the ATOM.

[17]Note that if pronominal AHS are analysed as dislocated subjects with a missing resumptive, the occurrence of such examples in child French does not bear on the ATOM one way or the other.

lacks the expected specific agreement morphology (i.e. where the φ-features of the intended subject are incompatible with the *elsewhere* form in which the verb appears). I have found 25 such cases in the two corpora under investigation. Out of these 25 cases, only 3 appear with a pronominal AHS (as in (6.d)), while 15 (= 60%) appear with a (nominative) subject clitic (as in (17)).

(17) a. **moi**, j' est pas méchant. (Tom 2;4.8)
me I is$_{els.}$ not nasty
'I'm not nasty.'

b. **moi aussi**, je va monter. (Anne 2;9.15)
me too I will$_{els.}$ go-upstairs
'I'll go upstairs too.'

These results also go in the opposite direction to what the ATOM predicts: in child French, an underspecified Agr licenses nominative subjects in the majority of cases. This is summarised in Table 8.

Type of subject	**Proportion among all [+Tns,-Agr] verbs**	
Pronominal AHSs (default case)	**12%**	(3/25)
Other AHSs (unclear case)	8%	(2/25)
Subject clitic (nominative case)	**60%**	(15/25)
No subject	20%	(5/25)

Table 8: Subject distribution among verbs under [+ Tns] [- Agr] in child French

We have seen that in child French, (i) Agreeing verbs cooccur with non-nominative AHSs (to the same extent that such subjects occur with other finite-looking verbs), and (ii) Clearly non-agreeing verbs do license nominative subjects much more often than non-nominative subjects. Faced with this evidence, we have to conclude that the ATOM is untenable, and that it is not the underspecification of an inflection head that accounts for the default form in which pronominal AHSs appear in child French.

Incidentally, the same conclusion would have to be drawn under a morphological analysis of subject clitics, according to which these elements are agreement markers without argument status (e.g. Auger 1994). Note that under that analysis, what counts as an agreeing verb becomes problematic: is the presence of the clitic sufficient, or is specific morphology on the verb also required in cases where it would be in the adult language? In the former case, the presence of a subject clitic would be the sole indicator of agreement, and cases like (18.a), (18.b) and (18.c) would be analysed as agreeing, as opposed to cases like (18.d), (18.e). In the latter case, agreement would only be marked when both the clitic and specific morphology are realised on the verb, hence considering cases like (18.b), (18.c) (18.d) and (18.e) as non-

agreeing, as opposed to cases like (18.a).[18]

(18) a. j' ai mangé.
I have$_{1p.sg.}$ eaten

b. j' a mangé.
I have$_{els.}$ eaten

c. je mangE.
I eat$_{-FIN}$

d. ai mangé.
have$_{1p.sg.}$ eaten

e. a mangé, **moi**.
have$_{els.}$ eaten me

Under the assumptions of the morphological analysis of subject clitics, only one prediction of the ATOM could be tested, as there would be no clear nominative subject in spoken French. This prediction is that non-nominative subjects never appear with [+Agr]. It would be contradicted even more clearly than under the assumptions held in the present analysis. Indeed, if the presence of a subject clitic indicates that the verb is [+Agr], the proportion of non-nominative AHSs appearing with an agreeing verb would rise to 11% of [+Tns] clauses.

In section 4, I propose that there is no need to postulate a special mechanism or restriction impeding nominative case assignment in child French, because pronominal AHSs are all left-dislocated elements coindexed with a null subject.

4 Hypothesis 2: Pronominal AHSs are dislocated subjects with a missing resumptive

The occurrence of pronominal AHSs in child French (as in (6)) has been noted before in the literature (e.g. Pierce 1992; Ferdinand 1996; Legendre et al. 1999), but it was generally assumed that such elements could not be in the subject position because they were clearly not in the nominative case.In particular, Ferdinand (1996:201-202) has argued that, given the absence of (other) non-adult-like case assignment in child French, strong pronouns could not be in the subject position, and that, consequently, they had to be in a peripheral position.[19]

[18]Legendre et al. (1999) adopt an intermediary position, whereby the presence of either a subject clitic or an agreement suffix on the verb is taken to be sufficient indication that Agreement is specified. Hence in (18), only (18.e) would be argued to be non-agreeing. Note however that forms like (18.b) and (18.d) are both ungrammatical in adult French. Treating them as agreeing in child French would have to be backed up by theoretical arguments, but Legendre et al. (1999) do not address this issue.

[19]Ferdinand argued that in finite sentences in child French (i.e. when the verb did not bear non-finite morphology), preverbal *moi* 'me' was always in [spec,FocusP]. This is disputed in De Cat (2001).

4.1 There are clear dislocated pronominal subjects in child French

Unambiguously left-dislocated elements expressing the subject are attested in child French from very early on. In these cases, the dislocated element (which can be a strong pronoun or a DP) is coindexed with a resumptive clitic as in (19).

(19) a. et **ça**, c' est là. (Anne 2;2.30)
and that it is there
'And that one is there.'

b. et **toi aussi**, t' as tapé # comme ça. (Tom 2;3.22)
and you too you have hit like that
'You've hit like that too.'

c. **da(lmati)en**, c' est lui. (Max 2;3.6)
dalmatien it is him
'That one's the Dalmatian.'

It has also been established (on the basis of Ferdinand 1993, 1996; Labelle & Valois 1996) that child French allows for the subject to be right-dislocated, even in the absence of a resumptive clitic (20).

(20) (j') ai gagné, **moi**. (Tom 2;1.11)
(I) have$_{1p.sg.}$ won me
'I've won.'

Given the independently attested existence in the children's grammar of subject left-dislocated and of subject right-dislocations coindexed with a null subject, it is plausible that (pronominal) AHSs be subject left-dislocations with a missing resumptive clitic. The frequent occurrence of left-dislocated pronouns coindexed with a subject clitic (as in (21)) supports this hypothesis (exact figures will be given shortly in Table 9).

(21) a. **moi**, je vais là. (Max 2;4.18)
me I go$_{1p.sg.}$ there
'I'm going there.'

b. **moi**, j' ai dormi. (Tom 2;4.9)
me I have$_{1p.sg.}$ slept
'I've slept.'

4.2 Predictions of the dislocation analysis of AHSs

I have argued in De Cat (2002) that dislocated elements are base-generated by adjunction to IP or CP in adult French, and that they are interpreted as the topic of the clause / sentence in

which they appear. This is true of left- and right-dislocated elements alike.[20] Children display from the earliest attested stages clear signs of competence in the encoding and decoding of topics by means of dislocation (De Cat 2002). A certain level of similarity between subject left-dislocations and subject right-dislocations in child French can thus reasonably be expected. More specifically, with respect to the present analysis, it is likely that if pronominal AHSs are in fact left-dislocated subjects, they will behave to an extent like right-dislocated subjects: we can expect that the rate of omission of subject clitics at the null subject stage will not be significantly different whether the dislocated subject appears in the left- or the right-periphery of the clause. Section 4.4 will show that this is indeed the case. Another prediction if non-nominative AHSs are dislocated subjects is that their prosody will be that of left-dislocated pronominal subjects, to the extent that the specificity of their prosody can be defined. This will be investigated in section 4.3.

To sum up, a dislocation analysis of child French pronominal AHSs predicts that (i) the acoustic profile of pronominal AHSs is similar to that of left-dislocated pronouns; (ii) pronominal AHSs behave like other subject dislocations in a period P of development, from a distributional point of view. More specifically, we should expect no significant difference in the rate of subject clitic omission between clauses containing a pronominal AHS and clauses containing a right-hand pronominal subject topic.

4.3 Acoustic evidence

There is still little consensus as to the best way to describe and analyse the prosody of left-dislocated elements in spoken French. However, most of the studies I have come across argue that such dislocated elements do receive a distinctive prosody (Deshaies, Guilbault, & Paradis 1992; Guilbault 1993; Rossi 1999; Mertens, Goldmann, Wehrli, & Gaudinat 2002), and that left-dislocated subjects are prosodically distinct from heavy subjects (Rossi 1999).

In De Cat (2002), I have closely examined prosodic diagnostics to distinguish left-dislocated from heavy subjects in spoken French on the basis of three types of approaches: that of Deshaies et al. (1992) and Guilbault (1993), that of Mario Rossi (Rossi 1971, 1972, 1981, 1999) and that of Piet Mertens (Mertens 1987, 1993, 1997; Mertens et al. 2002). The first approach investigates the relevance of various arbitrarily chosen traits as characteristic of left-dislocation prosody. The other two integrate the prosody of left-dislocated elements within a coherent system aiming at describing and explaining the prosody of spoken French. A short introduction to these two approaches is therefore called for before addressing the diagnostics in question.

Mario Rossi's work follows the morphological approach to intonation, in the tradition of the Prague school. Within this approach, left-dislocation prosody is defined and identified by

[20] Overall, the rate of left- or right-dislocation of subjects is the same in adult French, across dialects: 7% of clauses contain a left-dislocated subject, and 8% of clauses contain a right-dislocated subject (out of a total of 4030 coded clauses from the adults of the York and Cat corpora).

a bundle of traits or *intonemes*, according to various parameters (intensity, time, melody). Such traits should thus not be considered in isolation. Rossi's research is based on a fine-grained acoustic analysis of the data, whereby variations in each parameter are measured in terms of *Perception Units* (PU). One PU corresponds to the minimum difference in a given parameter that can be perceived by the human ear, in naturalistic speech.[21] In a nutshell, left-dislocated elements are identified by the following intonemes:

- F^0 (i.e. fundamental frequency or pitch) dominating the utterance and characterised by a rise of at least 3 PUs on the accented (i.e. stressed) syllable of the left-dislocated element. The peak of the rise reaches the Infra-High or High level of the speaker's range.[22]
- Lengthening of approximately 5 PUs on the accented syllable.
- Peak of intensity on the vowel of the accented syllable.

Piet Mertens' theory (Mertens 1987, 1993, 1997; Mertens et al. 2002) is situated at the interface between syntax and prosody. It follows the distributional approach to intonation. The core idea is that prosody is determined by the presence of intonation markers. These markers correspond to combinations of *tones* (or height morphemes) and syllables (i.e. localisation points). The whole model is based on a multi-layered representation of prosodic structure, where each layer results from the combination of units from the preceding level. The levels directly relevant to the present purpose result of: (i) the combination into syllables (which can be stressed or not), (ii) the combination into Intonation Groups (IGs), and (iii) the combination into packages.

An IG corresponds to a sequence of syllables bearing a unique stress or *final accent*. In French, the syllable bearing this accent is the only one that can be lengthened and it contains two tones (one on each mora).[23] The composition of the French IG is given in (22), where sequences in square brackets indicate optional parts. NA stands for 'non-accented syllable', IA for 'syllable bearing the initial accent' and FA for 'syllable bearing the final accent'.

(22) IG $\longrightarrow$ [[NA] IA] [NA] FA [NA]

A package is the result of the combination of two or more IGs. This grouping is done according to the rule given in (23).

[21] *Une unité de perception est égale à une fois le seul de perceptibilité (ou seuil différentiel) du paramètre considéré.* (Rossi 1999:212).

[22] The *range* of a speaker is the total melodic span covered by his/her voice in spoken language (e.g. Rossi 1999). In the three approaches to the prosody of French left-dislocation discussed here, the notion of *dominance* has to be understood in terms of 'quantity', not structural superiority — e.g. an element X dominates Y in pitch if X is higher than Y.

[23] The mora is a subword prosodic constituent smaller than the syllable, used to analyse the metrical structure of speech.

(23) For any two successive IGs: if the tone in the FA position of the last IG dominates that of the first IG, then there is an embedding effect of the first IG with the second. Otherwise, the two IGs are independent (juxtaposition). (Mertens 1993:3)

Dominance is defined according to the tone of the syllable bearing the FA (Final Accent). The tone of a syllable corresponds to the *level* associated to that syllable. Four levels are distinguished: infra-low, low, high and extra-high. These levels are relatively defined (contrary to what is done in Rossi's approach). The passage from one level to the next is marked by a major interval (typically 5 semitones). Within a given level, minor intervals (typically 3 semitones) can create a heightening or a lowering.

The delimitation of IGs and packages is largely dependent on the speaker's choices. An example of grouping into packages is given in (24.a). The square brackets indicate the grouping into packages. The sequences l...l etc inside the brackets correspond to the IG. In this example each IG ends on a FA, indicated by two capital letters.

(24) a. la lecture n'était pas un niveau auquel on s'intéressait quand on faisait
[l.....l HH] [l.....l HH] [l.....l HH ll/LL] [\l.....l HH] [[l.....l/LL
une théorie de la littérature. (adapted from Mertens 1993)
\l.....l HH] l.....\l L-L-] [24]

The underlying assumption of this model is that there is a certain level of congruence between prosody and syntax. Intonation boundaries define a structure that cannot be mapped one-to-one onto the syntactic structure, but it nonetheless respects syntactic structure (Mertens et al. 2002).

An acoustic analysis of spontaneous speech across dialects of French suggests the following diagnostic procedure to distinguish the prosody of heavy subjects from that of left-dislocated subjects:[25]

(25) To distinguish left-dislocated from heavy subjects on the basis of their prosody:
   a. If the IG of the element in question gets combined with the following IG into a package, that element must be a heavy subject
   b. If such combination does not take place, the element in question will be taken to be a left-dislocated subject if:
      (i) there is a pitch rise of more than 3 semitones (culminating) on the last syllable of that element (the rise can be smaller in utterances with very little pitch variation overall)

[24] In Mertens' notation, *l* stands for 'low' and *h* for 'high'. Capital letters indicate that the syllable is stressed. Sequences l....l involve only low tones. The '-' sign indicates that the pitch reaches the lowest level in the speaker's range. The / and \ signs indicate heightening and lowering within a given level. See Mertens (1987) for details. I have indicated the grouping into packages on the same line as the grouping into IGs.

[25] Space limitations prevent me from going into the detail of this analysis. The reader is referred to De Cat (2002).

(ii) the last syllable of that element is strongly prominent, either in terms of intensity or in terms of duration

(iii) a 'Medium-High-Low' contour (illustrated in Figure 1) is observed on the last syllable of that element and the following two syllables

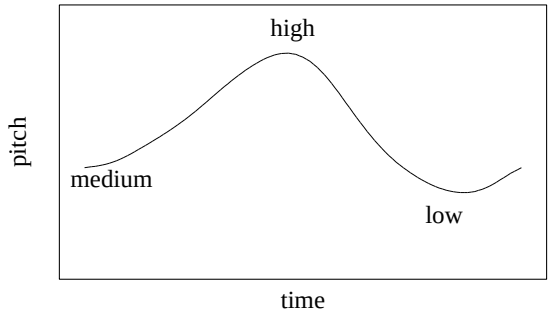

Figure 1: The 'medium-high-low' contour of left-dislocation prosody

Point (25.b.i) cannot be relied on in most cases where the dislocated element is monosyllabic because there is usually no room within a single syllable for such a pitch rise.

4.3.1 The prosody of dislocated subjects in adult spoken French

The preliminary analysis carried out on the present corpora was based on a random sample of 20 utterances from adults and children, each containing either a heavy subject, a left-dislocated subject adjacent to its resumptive clitic, or (in the case of children) a pronominal AHS. All the examples presented here come from the same recording session involving a child (Lisette) and her mother (Audrey), both natives of Montreal,[26] so as to control for interferring factors such as dialectal differences or recording conditions (the recordings were made at home, with no control over background noise or echo level).

I will present three pairs of sentences from the speech of Lisette and her mother. The first and second pairs of sentences contain the same left-dislocated element (*ça* 'that' and *moi* 'me' respectively). The third pair compares a pronominal AHS from Lisette's speech with a strong pronominal subject in her mother's.

The first two pairs of sentences clearly show that the prosody of left-dislocated pronominal subjects is similar in the speech of Lisette and that of her mother. The first pair of sentences involve dislocated *ça* 'that'. In all the examples, a prosodic description is given on the second

[26]This data was collected in Montreal in June 2000, with a minidisk recorder Sony MZ-R91 and a boundary microphone Sony ECM-F8. The sound files were subsequently converted into wave files (22,050 Hz). The data from the York corpus was also used in this analysis, but I have chosen not to present it here due to its inferior sound quality. Too much background noise was picked up in these recordings, and as a result, the pitch traces are more sketchy. The results were nonetheless similar to those presented here.

line, following Mertens' (1987; 1997) model.

(26) a. **ça**, c'(es)t un super livre. (Mother)
[HH] [l H \h LL]
'That's a brilliant book.'

b. **ça**, c' est jaune. (Lisette 2;9)
[/LL] [l /LL]
'That's yellow.'

The prosody of the adult sentence (26.a) is as in Figure 2, where the thick line represents the pitch trace (or F^0), measured in semitones,[27] and the thin line the intensity, measured in decibels.

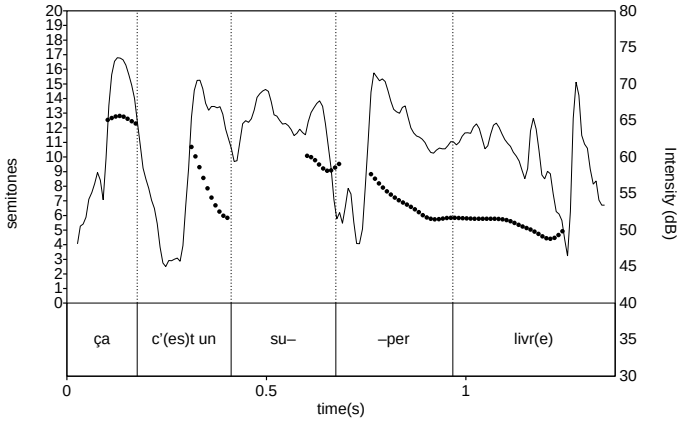

Figure 2: The prosody of left-dislocated *ça* 'that' (spontaneous, Audrey)

Although there is no clear rise in pitch on the left-dislocated element itself (which is to be expected, given that it is monosyllabic and starting with a voiceless consonant), the pitch of this element dominates the whole sentence, and is situated in the high register of this speaker's range. It is followed by a substantial drop in F^0 (5.5 semitones). Note that this sentence is emphatic, and that consequently the pitch variation will be exacerbated. The prominence of the left-dislocated element is further enhanced by a peak of intensity (the highest of the sentence). The dislocated element does not get combined with the following IG into a package (because the Final Accent (FA) of the latter does not dominate that of the former). This is compatible with the fact that left-dislocated elements are prosodic islands.

The prosody of the corresponding child utterance is given in Figure 3.

[27] 0 semitone represents the lowest pitch the speaker reaches in spontaneous (recorded) speech. The value of level 0 was calculated on the basis of 5 minutes worth of extracts from the speaker in question, including very quite moments as well as lively, loud and more high-pitched ones. All calculations were done using the sound analysis programme Praat, written by Paul Boersma (http://www.fon.hum.uva.nl/praat).

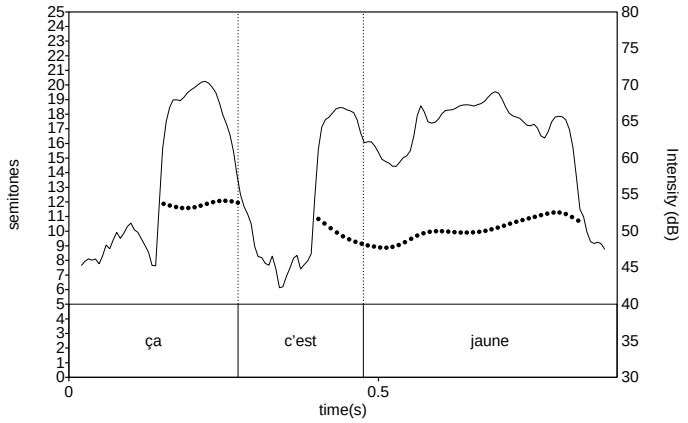

Figure 3: The prosody of left-dislocated *ça* 'that' (spontaneous, Lisette)

The left-dislocated subject *ça* in Figure 3 is not as prominent in pitch as its counterpart in Figure 2, but the pitch trace of the sentence as a whole is fairly flat, so no substantial variation is to be expected.[28] The relatively small pitch prominence is compensated by a clear intensity peak on the left-dislocated element (the highest in the sentence). The pitch of *ça* is not dominated by that of the next IG's final accent. This is compatible with a left-dislocation analysis of *ça*.

The second pair of sentences involve a left-dislocated *moi* 'me' expressing the subject.

(27) a. **moi**, j' aimerais que tu m' expliques parce que (...)[29] (Mother)
[/HH] [l /LL] [\l.....l HH] l.....l
'I'd like you to explain because...'

b. **moi**, je veux aller chez Solène. (Lisette 2;9)
[H+H+] [l...../l] [h /HH l.....\l L-L-]
'I want to go to Solene's!'

[28]Note that the little rise occuring at the end of the very last syllable is situated on the consonant (it is due to an enumeration intonation), not on the syllable nucleus, where the F^0 is measured.

[29]The adjoined clause introduced by *parce que* 'because' has not been included in the acoustic analysis because it would make the sentence too long for clear presentation in a single figure. The pitch of the remainder of the sentence is lower than that of *expliques*, so there could be no grouping of the first part of the sentence (the matrix clause) with the following part into a bigger package.

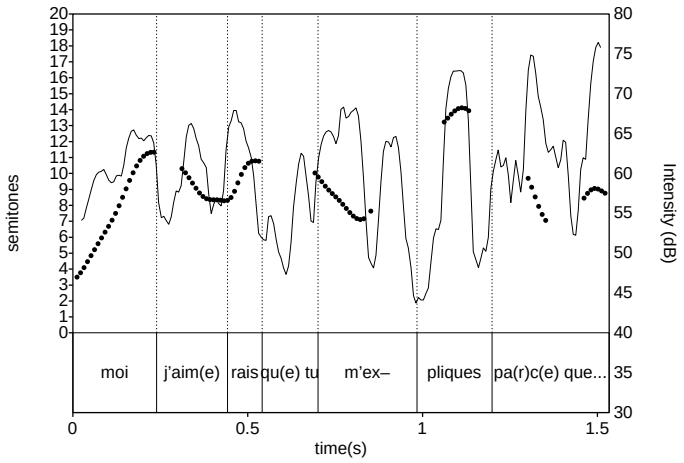

Figure 4: The prosody of left-dislocated *moi* 'me' (spontaneous, Audrey)

There is a considerable rise in pitch (7.7 semitones) on the left-dislocated element, as shown in Figure 4. The pitch of *moi* is not dominated by that of the following IG,[30] which is to be expected given that dislocated elements are prosodic islands. Figure 5 shows the prosody of the child sentence in (27.b).

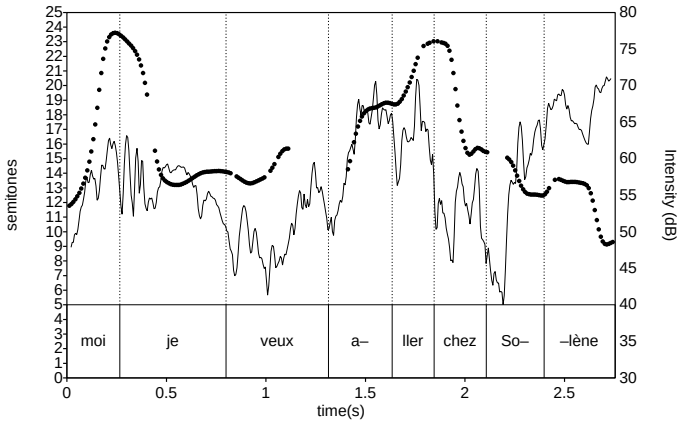

Figure 5: The prosody of left-dislocated *moi* 'me' (spontaneous, Lisette)

The rise in pitch (11.8 semitones) on the left-dislocated *moi* in Figure 5 is even bigger than that in the comparable adult sentence. The pitch on the nucleus of *moi* dominates even the high pitch on the emphatic *aller* 'go' and is clearly in the highest register of the speaker. As expected, left-dislocated *moi* does not get combined with the following IG given that the

[30]The relevant IG ends on *aimerais*, not on *expliques*, as indicated by the square brackets.

dominance condition is not met.

Let us now turn to the third pair of sentences, where a strong pronominal subject in the adult's speech is compared to a pronominal AHS in the child's speech. The possibility of having a strong pronoun in the subject position of a finite sentence in adult French is allowed only with third person *lui* 'him'.[31] In Canadian French, such a *lui* can refer to inanimates as well as animates (which is not possible in European French).

(28) a. lui est plus pâle. (Mother)
[L/L] [l.....\l /LL]
'That one's paler.'

b. moi en a. (Lisette 2;9)
[HH] [l LL]
'I've got some.'

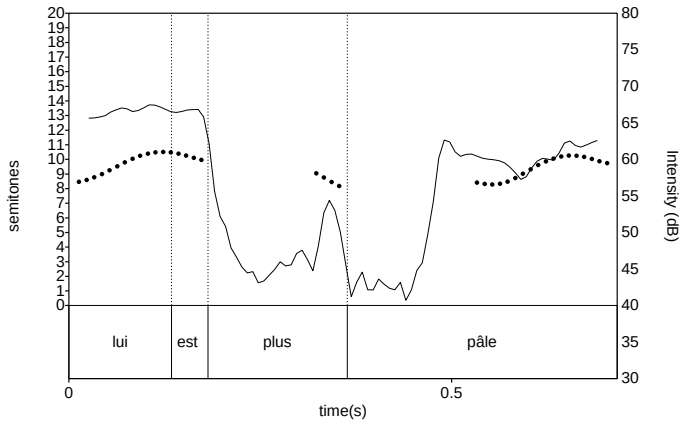

Figure 6: The prosody of a strong pronominal subject (spontaneous, Audrey)

There is a small rise of 2 semitones on the sentence-inital *lui* in Figure 6. However, the pitch of *lui* remains marginally lower in average than that of the next IG's FA syllable. Note also that there is no drop of F^0 after the strong pronoun: the pitch remains constant on the copula (from a perceptive point of view, given that a variation of less than one semitone is not perceivable by the human ear, as argued by Rossi 1971). The strong pronoun is thus in the subject position in this sentence.[32]

Figure 7 gives the prosody of the sentence in (28.b). This sentence contains a pronomi-

[31] It is not allowed with a stress-bearing *ça* 'that', and as far as I can tell unattested with a stress-bearing *elle* 'her' in the present corpora.

[32] Other examples from the adult Canadian data showed a clear combination of the strong pronominal subject's IG into the following IG. Example (28.a) was the only of its kind in the session from which the present data was extracted.

nal AHS and a tensed verb lacking specific agreement morphology. Under the ATOM, the pronominal AHS is expected to occupy the canonical subject position. If this is the case, the prosody of this element should resemble more that in Figure 6 than that of all the other elements observed so far (which were clearly left-dislocated). There is a rise in pitch of only 2.4 semitones on the strong pronoun, i.e. hardly more than the one observed in Figure 6. However, in this case, there is a clear drop of F^0 after this element (5.7 semitones), and the pitch of *moi* dominates that of the rest of the sentence (leaving aside the *oui* 'yes' at the beginning of the sentence). There is also an intensity peak on *moi*, the highest of the sentence. The strong pronoun can thus not be combined with the following IG, which is compatible with the status of prosodic island. We have to conclude that in this case, the prosody indicates that the strong pronoun is dislocated rather than in the subject position.

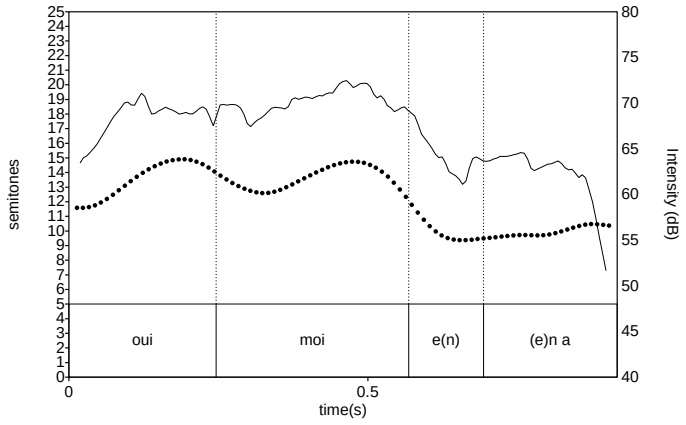

Figure 7: The prosody of an AHS (spontaneous, Lisette)

This preliminary analysis has shown that the prosody of left-dislocated subject pronouns in the speech of Lisette was similar to that of those elements in the speech of her mother. It has also shown that in the absence of subject clitic, a preverbal strong pronominal expressing the subject can have a clear left-dislocation prosody, even when the verb unambiguously lacks agreement morphology. This indicates that at least some cases of pronominal AHSs are in fact left-dislocated subjects with a missing resumptive clitic. It also suggests that all pronominal AHSs could be dislocated in that way. This is what I argue for in section 4.4.

4.4 Distributional evidence

As suggested in section 4.2, a dislocation analysis of pronominal AHSs predicts a certain degree of similarity between these and right-dislocated pronominal subjects. In De Cat (2002), I argue that left- and right-dislocated pronominals are topics alike. It can therefore be expected that the rate of realisation of subject clitics will not be significantly different whether the

dislocated pronominal subject appears on the left or on the right. This is indeed what we find, as detailed in Table 9.

Strong pronouns interpreted as the subject	**With coindexed clitic**		**Without a coindexed clitic**	
TIME 1				
Left-dislocated	25%	(3/12)	75%	(9/12)
Right-dislocated	35%	(6/17)	65%	(11/17)
Total		(9/29)		(20/29)
TIME 2				
Left-dislocated	72%	(310/431)	28%	(121/431)
Right-dislocated	70%	(99/141)	32%	(42/141)
Total		(409/572)		(163/572)

Table 9: Subject clitic realisation in sentences with a pronominal subject dislocation

The data in Table 9 has been subdivided into two periods, determined on the basis of the emergence of obviously agreeing verbs.[33] This table clearly shows that pronominal AHSs are comparable with right-dislocated pronominal subjects: in both cases, across the periods, the same proportion of strong pronominals expressing the subject cooccur with a subject clitic. No significant difference in the rate of the appearance of nominative clitics is observed, whether the strong pronoun is left- or right-peripheral. Statistical significance was computed for Time 1 with a Fisher exact test, due to the low number of tokens in some cells. The p value found was 0.431, which means that there is a greater than 40% chance of wrongly rejecting the null hypothesis (according to which these distributions would be the same). For Time 2, the Chi-square test was used, yielding similar results: $\chi^2 = 0.153$; $p < 0.7$). Pronominal AHSs are thus best treated as left-peripheral elements coindexed with the (sometimes null) subject.

4.5 Additional evidence

Additional evidence in favour of a dislocation analysis of pronominal AHSs comes from the fact that these elements are almost exclusively attested during the core null subject stage. Crucially, after that period, the only cases of pronominal AHSs that are attested occur in a very limited number of contexts, which correspond exactly to the contexts still licensing (target-deviant) null subjects. Compare (16), repeated below as (29), with (30). Such cases typically involve what are standardly treated as control verbs with an intended first person subject.

[33]The first instance of a spontaneously produced unambiguously agreeing verb was taken to indicate the onset of Time 2. This is not meant to imply that Time 2 coincides with the acquisition of subject-verb agreement. Further analysis of the data is required to determine when subject-agreement is fully acquired, which is beyond the scope of this chapter. See Plunkett (under review) for an analysis of the null subject phenomenon based on the acquisition of agreement feature distinctions.

(29) a. mais moi veux mettre ça. (Anne 3;5.4)
but me want$_{+TNS}$ put$_{INF}$ that
'But I want to put that one.'

b. moi veux pas ranger. (Max 2;9.12)
me want$_{+TNS}$ not tidy-up$_{INF}$
'I don't want to tidy up.'

(30) a. (je) vais aller chercher euh +//. (Max 2;9.12)
(I) will go get er
'I'm going to get ...'

b. (je) peux tourner la page? (Tom 3;0.6)
(I) can turn the page
'Can I turn the page?'

These 'late' examples suggest that pronominal AHSs in child French are only attested where there is a null subject. This is exactly what is expected under the dislocation analysis proposed in this chapter.

5 Conclusion

Apparent non-nominative subjects in child French have been shown to be best analysed as left-peripheral subjects with a missing resumptive. What seemed to be a correlation between non-nominative subjects and lack of finiteness of the verb is in fact a by-product of the correlation between null subjects and lack of finiteness.

Schütze & Wexler's (1996) ATOM, which links the licensing of non-nominative subjects in child grammar to the underspecification of Agreement, has been shown not to be tenable, given that the cross-linguistic predictions it makes are not borne out in child French: (i) non-nominative AHSs occur when Agr is fully specified (to the same extent that they do with Tensed verbs in general), and (ii) nominative clitics occur in the majority of cases where Agr is clearly unspecified.

The presence of apparently target-deviant non-nominative subjects in child French turns out to be target-compliant use of left-peripheral subjects. Like adults, French speaking children only assign nominative to the subject of their finite sentences. Like adults, they frequently produce subject dislocations — and these are attested from the onset of word combination (as shown in De Cat 2002). The difference between child and adult language in this context is restricted to the well-known but not fully understood null subject phenomenon in language acquisition.

References

Auger, J. (1994). *Pronominal Clitics in Québec Colloquial French: A Morphological Analysis*. PhD thesis. University of Pennsylvania.

Belletti, A. (1990). *Generalised Verb Movement*. Torino: Rosenberg & Sellier.

Bohnacker, U. (1999). *Icelandic plus English: Language differentiation and functional categories in a successively bilingual child*. PhD thesis. University of Durham.

Bottari, P., Cipriani, P., & Chilosi, A. (1992). Proto-syntactic devices in the acquisition of Italian free morphology. *GenGenP 0(1-2)*. 83–101.

Chomsky, N. (1993). A minimalist program for linguistic theory. In Hale, K. & Keyser, S. J. (eds.), *The view from Building 20: Essays in linguisitcs in honor of Sylvain Bromberger*. Cambridge, MA: MIT Press. 1–52.

Chomsky, N. (1995). *The Minimalist Program*. Cambridge, MA: MIT Press.

Côté, M.-H. (1999). *Issues in the Analysis and Acquisition of Clitics in (Spoken) French*. Ms. MIT.

Côté, M.-H. (2001). On the status of the subject clitics in child French. In Almgren, M., Barreña, A., Ezeizabarrena, M.-J., Idiazabal, I., & Mac Whinney, B. (eds.), *Research on Child Language Acquisition. Proceedings of the 8th Conference of the IASCL*. Somerville, MA: Cascadilla Press.

De Cat, C. (2001). Investigating the left periphery in child French: A reply to Ferdinand (1996). In *Research on Child Language Acquisition. Proceedings of the 8th Conference of the IASCL*. Somerville, MA: Cascadilla Press.

De Cat, C. (2002). *French Dislocation*. PhD thesis. University of York.

Deshaies, D., Guilbault, C., & Paradis, C. (1992). Prosodie et dislocation à gauche par anaphore en français québécois spontané. In A. Crochetière, J.-C. B. & Ouellon, C. (eds.), *Actes du XVe Congrès international de linguistique*.

Ferdinand, A. (1993). Subject dislocations in French child language. *HIL Manuscripts*. 54–64.

Ferdinand, A. (1996). *The Development of Functional Categories - The Acquisition of the Subject in French*. vol. 23 of *HIL Dissertations*. The Hague: Holland Academic Graphics.

Gruber, J. (1967). Topicalisation in child language. *Foundations of Language 3*. 37–65.

Guilbault, C. (1993). Dislocation à gauche et prosodie en québécois spontané. *Dialangue 4*. 34–38.

Halle, M. & Marantz, A. (1993). Distributed morphology and the pieces of inflection. In Halle, K. & Keyser, S. (eds.), *The View from Building 20: Essays in linguisitcs in honor of Sylvain Bromberger*. Cambridge, MA: MIT Press.

Jakubowicz, C., Nash, L., & Van der Velde, M. (1999). Inflection and past tense morphology in French SLI. In *Proceedings of BUCLD 23*. Somerville, MA: Cascadilla Press.

Labelle, M. (1994). Acquisition de la valeur des temps du passé par les enfants francophones. *Revue québécoise de linguistique 23(1)*. 99–121.

Labelle, M. & Valois, D. (1996). The status of post-verbal subjects in French child language. *Probus 8(1)*. 53–80.

Legendre, G., Hagstrom, P., Vainikka, A., & Todorova, M. (1999). *Partial constraint ordering in child French syntax*. Ms. John Hopkins University.

MacWhinney, B. (2000). *The CHILDES database:Tools for analyzing talk*. Mahwah, NJ: Lawrence Erlbaum Associates.

Meisel, J. M. (1994). Getting FAT: Finiteness, Agreement and Tense in early grammars. In Meisel Jurgen, M. (ed.), *Bilingual First Language Acquisition: French and German Grammatical Development*. Amsterdam: John Benjamins. 89–129.

Mertens, P. (1987). *L'intonation du français. De la description linguistique à la reconnaissance automatique*. Doctoral thesis. Katholieke Universiteit Leuven.

Mertens, P. (1993). *Intonational grouping, boundaries, and syntactic structures in French*. Ms. KUL.

Mertens, P. (1997). De la chaîne linéaire à la séquence de tons. *TAL (Traitement Automatique des Langues) 38(1)*. 27–51.

Mertens, P., Goldmann, J.-P., Wehrli, E., & Gaudinat, A. (2002). La synthèse de l'intonation à partir de structures syntaxiques riches. *TAL (Traitement Automatique des Langues) 42(1)*.

Peters, A. (2001). Filler syllables: What is their status in emerging grammar?. *Journal of Child Language 28(1)*. 229–242.

Phillips, C. (1996). Root Infinitives are finite. *Proceedings of BUCLD 20(2)*. 588–599.

Pierce, A. (1992). *Language Acquisition and Syntactic Theory: A Comparative Analysis of French and English Child Grammars*. Dordrecht: Kluwer.

Plunkett, B. (under review). Early peripheries in the absence of C. In Adger, D., De Cat, C., Plunkett, B., & Tsoulas, G. (eds.), *Peripheral positions*. Oxford: Oxford University Press.

Plunkett, B. & De Cat, C. (2001). Root specifiers and null subjects revisited. In Do, A. H.-J., Domínguez, L., & Johansen, A. (eds.), *Proceedings of BUCLD 25*. Somerville, MA: Cascadilla Press. 611–622.

Pollock, J.-Y. (1989). Verb movement, universal grammar and the structure of IP. *Linguistic Inquiry 20(3)*. 365–424.

Rasetti, L. (1996). Null subjects and root infinitives in the child grammar of French. *Geneva Generative Papers 4(2)*. 120–132.

Rhee, J. & Wexler, K. (1995). Optional Infinitives in Hebrew. In Schütze, C., Ganger, J., & Broihier, K. (eds.), *Papers on Language Processing and Acquisition*. vol. 26. Cambridge, MA: MITWPL. 383–402.

Rizzi, L. (1994a). Early null subjects and root null subjects. In Hoekstra, T. & Schwartz, B. (eds.), *Language Acquisition Studies in Generative Grammar*. Amsterdam: John Benjamins. 151–176.

Rizzi, L. (1994b). Some notes on linguistic theory and language development: The case of

Root Infinitives. *Language Acquisition 3(4)*. 371–393.

Roberge, Y. (1990). *The syntactic recoverability of null arguments*. Montreal: McGill-Queen's University Press.

Rossi, M. (1971). Le seuil des glissandos ou seuil de perception des variations tonales pour les sons de la parole. *Phonetica 23*. 1–33.

Rossi, M. (1972). Le seuil différentiel de la durée. In Valdman, A. (ed.), *Papers in linguistics and phonetics to the memory of Pierre Delattre*. The Hague: Mouton. 435–450.

Rossi, M. (1981). Intonation, énonciation, syntaxe. In Rossi, M., Di Cristo, A., Hirst, D., Martin, P., & Nishinuma, Y. (eds.), *L'intonation, de l'acoustique à la sémantique*. Paris: Klincksieck. 184–234.

Rossi, M. (1999). *L'intonation. Le système du français : description et modélisation*. Paris: Ophrys.

Schütze, C. T. (1997). *INFL in Child and Adult Language: Agreement, Case, and Licensing*. PhD thesis. MIT.

Schütze, C. T. & Wexler, K. (1996). Subject case licensing and English root infinitives. In Stringfellow, A., Cahama-Amitay, D., Hughes, E., & Zukowski, A. (eds.), *Proceedings of BUCLD 20*. Somerville, MA: Cascadilla Press. 670–681.

Sportiche, D. (1996). Clitic constructions. In Rooryck, J. & Zaring, L. (eds.), *Phrase Structure and the Lexicon*. Studies in Natural Language & Linguistic Theory. Dordrecht: Kluwer Academic. 213–276.

Suppes, P., Smith, R., & Leveillé, M. (1973). The French syntax of a child's noun phrases. *Archives de Psychologie 42*. 207–269.

Vainikka, A. (1993). Case in the development of English syntax. *Language Acquisition 3(3)*. 257–325.

Valian, V. (1991). Syntactic subjects in the early speech of American and Italian children. *Cognition 40(1-2)*. 21–81.

Wexler, K., Schütze, C. T., & Rice, M. (1998). Subject case in children with SLI and unaffected controls: Evidence for the Agr/Tense Omission Model. *Language Acquisition 7(2-4)*. 317–344.

Zribi-Hertz, A. (1994). The syntax of nominative clitics in Standard and Advanced French. In Cinque, G., Koster, J., Pollock, J.-Y., Rizzi, L., & Zanuttini, R. (eds.), *Paths Towards Universal Grammar: Studies in Honor of Richard S. Kayne*. Georgetown Studies in Romance Linguistics. Washington, DC: Georgetown University Press. 453–472.